

General Notes on the Propagation  
of Dicotyledons. A.



## General note on the propagation of the Acanthaceae.

The Acanthaceae, though standing somewhat isolated by reason of their botanical characters, yet are allied closely to the cohort in which they are placed (Personales) (1) by reason of their ease of vegetative propagation (2). The facility with which Acanthads strike from stem cuttings at almost any season is a characteristic of nearly every plant in the order, notwithstanding the fact that many are hardwooded e.g. Barleria. (A few exceptions are Geissomeria, Graptophyllum.) Vegetative propagation by stem cuttings is thus the most usual method of increase. Division is thus also employed e.g. Acanthus &c. Root cuttings will strike easily in the case of Acanthus montana (3). Leaf cuttings have also been successful with Acanthus montana (4). See also below note.

Propagation by seed is also used for Acanthus, Thunbergia &c. (see under genera) but not so extensively as vegetative methods.

(1) see Table of Dicot. Orders.

(2) esp. also general notes in Scroph. Solan. and Gesneraceae.

(3) confirmed. // see also Chap III. and Figs — // also under Acanthus.

(4) confirmed. // see also Chap II. p —

General Literature . on Culture and Propagation of Acanthaceae.

The Book of Gardening. Stove Plants . London 1900.

Greenhouse and Stove Plants. T.Baines.

Propagation and Improvement of Cultivated Plants. P.169. Burbidge

The Propagation of Plants. A.S.Fuller.

See also general articles under each genus.

note. Stingl (Flora 1908) tried experiments with leaf cuttings of the following 7 species. Goldfussia glomerata, G. isophylla, Strobilanthes Deyerianus, Sericographis Moehickii, Gendarussa vulgaris, Gaoutheum nervosum, Beloperone Amberstiae. Copious rooting occurred, but no shoots were obtained.

Gen. Lit

Acanthaceae - An Annotated List of Species

in cultivation Col. R. H. Beddome. Vol. XXXIV p. 54.

ACANTHACEAE

VEGETATIVE

PROPAGATION

usually at about any section in stem, cut.

a. Stem cuttings easy - young sprout, root after several days in water.

b. Leaf cuttings also.

c. Root cuttings also.

d. Division of roots in spring.

SEED.

SPECIES.

Most Common in Horticulture

- Adiantum*
- Bignonia*
- Maranta*
- Tradescantia*
- Impatiens*
- Physalis*

LITERATURE.

General notes on the culture and propagation of Acanthaceae

902-2-72 / 9-9-97

927-2-81 / 9-20-97

925-2-97 / 9-20-97



DHATODA. Youn. - Stone shrubs.

ADHATODA. Loam, fibry peat + sand.

I - cuttings easy in spring. preferably young side shoots.

II -

III. - *cydoniaefolia*. most common.

IV. Gen. articles - G23.11.93. / G24.2.83.  
G26.12.03

APHELANDRA R.Br. - Stone evergreen shrubs.  
Loam. peat and sand.

I - stem cuttings easy spring. best of young side shoots.  
usual mode of propagation.

II - seedlings preferable in some species (*A. aurianticaea*, Rozyli.).  
sometimes seed not available. (*A. cristata* etc.)

III - *aurianticaea*. G31.3.85.  
G5.3.87.

*Chamissoniana* G28.9.89  
G23.7.04

*Cristata* G1.11.79.

*dubia*, *fascinator*, *Leopoldi*, *nikens*. G10.1.91  
G9.12.93  
G28.12.95

IV. Gen. Lit.

Gen. Art. on Culture and Prop.?

G24.2.72

G1.2.90

G4.3.76

G17.8.95

G17.11.83

G5.3.87

STASIA. Bl. - Slove evergreen shrub.

ASYSTASIA. - peat loam + sand.

I - young stem cuttings strike freely in spring or summer.

II -

III - scandens. 925.8.00. = Henfreyia scandens.

bella 922.6.01. 930.7.92

918.4.85.

91.8.85

97.6.90. = Mackaya bella.

IV. Gen: Articles. see under bella above - the most common species.

BARLERIA. Linn. - slove evergreens.  
- Rich loam + peat.

I - cuttings of young wood strike easily in spring or other season.

II -

III - flava.  
Leichtensteiniana.

BELOPERONE. Nees. - slove evergreen.  
- loam - leafmould. Sand + peat.

I - young cuttings in spring.

II -

III - violacea.

BLEPHARIS. Juss. - slove or greenhouse.  
- peat and loam.

I - easy from young cuttings - for shrubby species.

II - seeds for annuals and biennials. e.g. linearifolia (annual)  
Capensis (biennial)

III - Capensis. procumbens  
linearifolia. to.

IV

BRILLANTAISIA Pal. Beauv. - Stove evergreen shrubs.  
- Rich loam and peat.

I - young cuttings in spring. easy.

II -

III - ovariensis B.M. 4717. (fig.)

CHAERANTHEMUM. Nees. - Stove plants.  
- peat and loam.

I - young cuttings in spring. easy.

II -

III - pictum

Reyriehii variegatum. (Fig. B.M. 5557.)

CROSSANDRA. Salisb. - Stove evergreen shrubs -  
- peat and loam.

I - Cuttings strike freely at any time of year.  
Young best in spring or early summer.

II -

III -

flava.

guineensis

undulacifolia

91.8.03

920.8.87

924.9.97 +

IV - General Article on Culture on proto 915.12.83.  
See also lit. on Stove plants +.

CYSTACANTHUS. T. And. - Stove evergreen herb.  
- Sandy loam + fibry peat.

I - young cuttings easy in spring or summer.

II -

III - furgida - only species.

DIANTHERA. Linn. - stove greenhouse and hardy herbs.  
- Peat + Loam.

- I. young stem cuttings easy.
- II. for americana?
- III. americana.  
ciliata  
Pohliana.

DICLIPTERA. Juss. - Stove + greenhouse.  
- Loam + peat with leaf soil.

- I. young stem cuttings of young after growing shoots or side shoots in spring.
- II. seeds in spring for annuals. e.g. hexangularis.
- III. not of much horticultural interest.  
Sueviana. (greenhouse).

ERANTHEMUM. Linn. - greenhouse + stove.  
- peat + loam.

- I. young stem cuttings in spring or summer, usual method.  
leaf cuttings also (see Fig — Chap II.).
- II.
- III. atropurpureum.  
nigrum  
pulchellum  
tricolor etc.
- IV. See gen. list on Stove Shrubs.

FLITONIA - Coem. - stove perennials  
- Rich sandy loam + peat.

- I. a. half-ripe cuttings of shoots.  
b. division.
- II.
- III. gigantea - Verschaffeltii.



## GRAPTOPHYLLUM. Nees.

- slow evergreen.  
- peat and loam.

I. Cuttings of rather firm shoot. - slow to propagate.

II.

III. hortense. (The Caricature Plant.)

## GEISSOMERIA. Lindl.

- slow evergreens.  
- loam peat / sand with little lime

I. half-ripe cuttings in summer.

II.

III. coccinea / longiflora.  
B.M. 4158.  
(fig)

## GYMNOSTACHYUM. Nees.

- slow evergreens.  
- loam + sandy peat.

I. stem cuttings young in spring or summer. easy.

II.

III. ceylanicum. B.M. 4706.  
venustum.

## HYPOESTES R.Br.

- slow decid. + evergreen.  
- Peat + loam.

I. stem cuttings easy in spring.

II.

III. sanguinolenta B.M. 5511. (evergreen.)

## JACOBINIA Moric.

- slow shrubs.  
- peat + loam.

I. stem cuttings easy at any time.

III. Ghiesbreghtiana.

## JUSTICIA Link.

- stove plants.
- peat bloom.

I. young <sup>cuttings</sup> wood. side <sup>root.</sup> apical shoot. very freely.  
- very fast growers.

II. seeds for annuals and biennials.

III. Calycotricha 93.11.94 / 910.1.91 / Lod. Bot. Cab. no. 165.

bicolor - Lod. Bot. Cab. no. 165, for (fig.)

flavicomis - 98.9.00.

nervosa - Lod. Bot. Cab. no. 146.

speciosa - 911.1.79 / 96.12.84 etc.

IV. Gen. Lit. see on Stove Plants.

## LANKESTERIA Lindl.

- stove evergreen shrubs.
- peat bloom.

I. - stem cuttings easy - young shoots.

II. -

III. Barteri.

hispidula.

## LEPIDAGATHIS Willd.

- stove evergreen.
- Fibry sandy loam, peat bloom.

I. Cuttings of young shoots in spring easy.

II. -

III. one species cristata.

## LIBONIA C. Koch

- stove shrub.
- Fibry loam + peat - damp to

I. Cuttings of tips of shoots in spring, flower in about 3 years, and make good plants.

II. -

III. floribunda 92.3.95 / 926.12.96 / 96.4.01.  
912.1.95 / 917.2.00. etc.

perichosiensis (hybrid.) 926.3.81 / 95.1.95.

IV. Gen. Article on Culture + Prop. 920.9.90.

## OTACANTHUS. Lindl.

- stove shrub.
- fibry loam, leaf-moss & peat.

- I. easy by stem cuttings in spring or summer.
- II.
- III. *caeruleus* the only sp. <sup>common</sup> in cultivation.

## PERISTROPHE. Nees.

- stove herb. perennials.
- peat & loam.

- I. cuttings from tops of shoots in spring - best.
- II.
- III. *angustifolia aurea variegata* G21.8.80.  
*lanceolata*  
*speciosa* G23.1.04.  
G24.3.00.

## PETALDIUM. Nees.

- stove evergreen climber.
- sandy fibry loam, & little peat.

- I. stem cuttings. easy in spring.
- II.
- III. *barkeri* *barteriodes*. B.M. 4053 (fig.).

## PHLOGACANTHUS. Nees.

- stove evergreen.
- loam & peat.

- I. easy. stem cuttings in spring to -
- II.
- III. *asperulus - curviflorus*.

## RHINACANTHUS. Nees.

- stove evergreen shrub.

- I. easy by stem cuttings. any season.
- III. *communis*. (Rug-bark Root). B.M. 326.

RUELLIA. Nees.

{ - Stove shrubs.  
- fibry loam - leaf mould + peat.

I. Cuttings in spring easy.

II.

III.

colorata.

formosa G 24.5.90.

Herbsti G 21.12.89

maerantha G 26.11.92. / G 19.12.03.

G.C. 19.11.98

G.C. 28.12.01.

macrophylla. Portellae etc.

IV. - see Gen. lit on Stove shrubs p -

SANCHEZIA. R. & Pav.

{ - Stove, sub-shrubs.  
- Loam + peat.

I. Cuttings of young shoots strike easily.

II.

III.

longiflora.

nobilis.

✓ nobilis variegata  
= n. glaucophylla

G 18.2.99.

SCHAUERIA. Nees.

{ Stove shrub.  
- Loam + peat.

I. stem cuttings easy.

II.

III.

calycotricha  
flava.

STROBILANTHES. Bl.

{ - Stove shrubs.  
- fibry loam + sandy peat.

I. - easy from stem cuttings in spring.

II.

III.

callosus.

dyerianus G.C. 4.4.96 / G 26.2.98 / G 23.4.04.

gossypinus / isophyllus.

IV. Gen. lit on Stove Plants

THUNBERGIA Linn. f.

- stove evergreen climber.  
- fibrous, peat, rotten dung, thin soil

I. Cuttings of young shoots. in spring or summer.

II. seeds freely in cultivation also.  
sow in spring.

III. *alata* (921.4.00).

*affinis* / *coerulea* / *erecta* (920.10.83) - / *fragrans*.

*grandiflora* (917.10.03 / Gard. Bot. Cab. no. 334.)

*Harrisi* / *laurifolia* (93.11.77.) / *natalensis*.

*mysorensis* 928.9.78. etc.

IV. Gen. Art. on culture & Prop. 927.5.93.

see also lit. on Stove Plants. p.

THYRSACANTHUS, Nees.

- stove evergreen.  
Peat & loam.

I. stem cuttings at any time. spring best.

II.

III.

*Schomburgkianus* G.C. 18.6.98 / B.M. 4851.

*Rutilans*

915.4.76 / 929.9.83 / 916.3.95

919.3.81 / 926.11.92 / 912.9.03. etc.

IV. Gen. lit. see above on *rutilans*.

also on Stove Plants.

General note on the Propagation of Amarantaceae.

Members of the Cockscomb family are wellknown plants in ~~N~~ horticulture, on account of the distinct character of their foliage, and the feathery tufts of their flowers. The majority are annuals, and are consequently best raised from seed which is usually freely produced e.g. Gomphrena, Amarantus, Celosia. This is the common mode of propagation.

Vegetative propagation is however also employed.

- Stem cuttings succeed fr<sup>e</sup>o Aerua, Alternanthera, Iresine and Celosia pyramidalis.

- Propagation by root cuttings is the usual method for Trichinium Manglesii. They have not been investigated for other species.

- Leafcuttings have been examined in the genus Iresine by Löhr (1) and Lindemuth (2) Lindemuth also tried leafcuttings of Amarantus caudatus, Iresine Lindeni, Achyranthus Verschaffelti and Celosia cristata. Roots were obtained in a period varying to 10-20, but shoots were only obtained after 5 weeks in the case of Iresine Lindeni. (2). Stigzel obtained a few weak roots, from the cut surface on

General Literature. Baines. LOC. cit.

Burbidge.

(1) Löhr. Scw. Bib.

(2) Lindemuth. - 1905.

(3) G. Stigzel 1908

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Eraser ..

Florists' Bibliography -

C. H. Payne F.R.H.S. p. 18. "Annuals & Biennials".

for further literature.

AERUA. Forsk - stove herbaceous.

- I. a. stem cuttings - easy in spring or summer.  
b. division of roots.

II.  
III. javanica -  
✓ scandens - (creper.).

ALTERNANTHERA. Forsk. - stove greenhouse plants.  
Light rich loam.

- I. Cuttings in spring - or in August for following spring - 917.4.75 910.9.92.  
914.4.77.  
97.2.85.  
927.8.92.

II.  
III. amœna. spectabilis  
aurea nana  
purpurea.

IV. Gen. lit. see under cuttings above -  
also under Gen. Note, p-

AMARANTUS. Linn. Hardy annuals.  
Rich loam.

- I.  
II. Seeds in March inside or April outside grow easily.  
III. Caudatus (Love Lies Bleeding.)  
hypochochryaenus (Prince of Wales's Feathers.)  
saliifolius.

IV. Gen. lit. 923.1.92.  
93.9.81.

also lit. under Gen., Note on Propagation -

## CELOSIA. Linn.

{ - mostly annuals. hardy + stove.  
light rich soil.

- I.  
II. Seed sown in spring for early flowering + bedding.  
in August for late blooming.
- III. *cristata*.  
*pyramidalis* + vars. *aurca*, *ignea*.  
*variegata*.
- IV. Gen Articles. 95.12.74. | 916.4.81.  
912.2.76. | 913.3.86.  
92.9.76 | 94.4.91. 926.5.94.  
929.3.79 | 97.4.00.

## GOMPHRENA. Linn.

{ <sup>st hardy.</sup>  
Stove plants.  
Rich soil.

- I. a. stem cuttings for shrubby sp. e.g. *villosa*.  
b. division for perennials.
- II. Seed for annuals e.g. *perennis*, *globosa* etc.
- III. *coccinea* / *globosa* / *perennis* / *pulchella* etc.

## IRESINE. P. Br.

{ half hardy perennials.  
Sandy loam, leaf mould + peat

- I. a. Cuttings in autumn for spring. root easily.  
b. Division in spring.
- II. Seed also in gentle heat.
- III. *aurca-reticulata*.  
*Herbstii*  
*Lindeni*.



PLEUROPETALUM Hook.

} Stone shrub.  
Sandy loam - leafmosses + peat.

I. Easy from cuttings in spring.

II.

III. *costaricense*. only species.

TRICHINIUM R.Br.

} Australian Greenhouse.  
Sandy loam + little peat.

I a) Root cuttings common method of increase in Sept.

9 31.8.72.  
9 31.12.81  
9 4.8.83.

Roots are fleshy, so cut in pieces, will propagate, though somewhat slow (Chap III. Root cuttings —).

- cuttings of flower stems also, but do not make satisfactory plants

II. Seeds - the only certain method with root cuttings.

III. *Manglesii* - only well known species  
*alopeuroideum* etc.

IV. Gen. Lit.

9 2.8.02.

9 9.2.84.

} Gen. Art. on Culture  
and Propagation.

General note on the Propagation of the Ampelidae.

The Ampelidae are an order of both horticultural and commercial interest, as supplying the various species of Grape (*Vitis*) and the many beautiful climbers as *Ampelopsis* &c.

Like most climbers, the Ampelidae are easy to propagate vegetatively, and the various methods are used as more certain and more speedy in result, in preference to propagation by seed. (1) Seed is employed for obtaining hybrids (2) but it is usually found from experience that plants raised from seed degenerate (3) Practically all vegetative methods are employed. Layers, cuttings grafting budding, in the case of the Vines.

Stem cuttings succeed, both young apical cuttings and pieces of older stem with eyes.

Root cuttings have been successful with *Vitis*<sup>4</sup>(2). They have not been investigated for other species.

Leaf cuttings have also been investigated. Lindemuth(4) tried leaf cuttings of *Ampelopsis quinquefolia*, *Cissus discolor*, and *Vitis vinefera*. Rooting was obtained in 11 days for *Cissus*, 16 for *Vitis* and 25 for *Ampelopsis*, inserting in August. No shoots were obtained in his experiments. (6). Both roots and shoots

have been obtained by Mr. L. Stewart on Leafcuttings of *Vitis*

*voineriana*. (1) See gen. lit. esp. Thomas. (5) Lindemuth loc. cit.  
(2) See Barron. Chap III. Hybridizing Vines. (6) See Chap II. Dicots  
(3) Tod p. 30. (4) with Mr. L. Stewart R. B. G. Soc.

Gen. Lit. Vinegrowing in England H.M. Tod. 1912.

Burbidge on Vines.

T. Baines on *Cissus*.

Book of Gardening. on Fruit Culture p. 1006. Grapes.

(See over for literature)

Vine Culture + Propagation Literature contd.

- A.E. Barron - Vines and Vine Culture 1892.  
Chap II. p. 7-16. (for culture + prop.) -
- J.J. Thomas - American Fruit Culturist 1897. p. 342. -
- W.C. McCollom - Vines & how to grow them 1912.  
(Heinemann 7/6) -
- J. H. Veitch - Hardy Ornamental Vines.  
J.R.H.S. vol. XXVIII. p. 389. 1903

## AMPELOPSIS. Michx.

hardy decid. Climbers.

I. vegetative prop. easy.

{ young cuttings in spring, e.g. *tricuspidata* ~  
cuttings with eyes. Sept.

- layers..

II.

III. *aconitifolia* / *quinquefolia* / *tricuspidata* = *Veitchii*.

## AMPELOVITIS.

half-hardy decid. climber.

I. may be treated & propagated like vine.

cuttings. young & older with 'eyes', layers..

but no great experience yet as grape-producer.

valuable horticulturally as an ornamental plant.

II.

III. *Davidi* / *intermedia*.

*Romaneti* G.S. 3.92.

## CISSUS. Linn.

stone + greenhouse climber.

I. stem cuttings - best in spring, either young or older shoots with 'eyes'.

II.

III. *discolor*. B.M. 4763.

IV. Gen. lit. see T. Baines -

## LEEA. Linn.

stone shrubs.

I. stem cuttings strike freely - both young & with 'eyes'.

II.

III. *amabilis* G.S. 3.84. (fig in G.C. 1882 p. 493 fig. 77)

*Coccinea* B.M. 5299.

General note on the propagation of the Anacardiaceae.

The order Anacardiaceae is of great economic importance, as nearly every member produces oils, resin, or nuts which are used in commerce. They are more of botanical than horticultural interest in cultivation, as the flowers are usually small and inconspicuous. They are brightly coloured and massed together in species of *Rhus*, and consequently  $\gamma$  this plant  $\phi$  is more grown, though it has the disadvantage, like other plants of the order, of being very poisonous.

The species that produce ~~the~~ nuts Pistacea, Anacardium &c. are raised from seed, but in cultivation, vegetative propagation is the common mode of increase.

Stem cuttings succeed in nearly all genera, although slow in *Mangifera*, *Schinus* &c.

Root cuttings are the common method of propagation in the Sumachs (*Rhus* sp.). They have not been investigated for other genera.

Leaf cuttings have not been investigated.

Gen. Lit. The Nut Culturist. A.S.Fuller.

Watt's Dictionary of Economic Plants. &c.

## ANACARDIUM. Linn.

- slow evergreen tree.  
- rich loam.

- I. stem cuttings, ripe.
- II. seed also.
- III. occidentale - (Cashew Nut) -

## CORYNOCARPUS. Forst. - green house evergreen.

- I. cuttings & layers.
- II. seeds also. These are poisonous raw, but farinaceous cooked.
- III. laevigatus

## MANGIFERA. Burm.

- slow evergreen.  
(econ. rather than hort. import.)

- I a. stem cuttings nearly ripe.  
b. layers.  
c. grafting - most suitable for cultivated plants.  
induching - method in India.
- II. Seed rarely produces in this country: seldom propagated by seeds because do not keep long after making. 9.11.10.73.  
Seedlings sometimes variable. Journ. Hort. Soc. 1861.  
Seed - good method if seed selected.
- III. indica (Mango).
- IV. Gen. Art. 9.11.10.73. / Watt's Diet. of Economic Plants.  
9.25.4.85.  
- Indian Mangos - (C. Maries) J. R. H. S. vol XXVI p. 758. 1901.

## MELANORRHEA. Wall. - slow evergreen - economic.

- I. Cuttings of ripe shoots.
- II.
- III. usitatisima (valuable for its black wood in native country I. Indies but more for poisonous black varnish.)

PISTACEA. Linn. greenhouse. - or half-hardy.

- I. a. easily from stem cuttings.  
b. layers.
- II. also seeds.
- III. lentiscus (producing resin - mastick) -  
terebinthus (turpentine-tree) -  
vera (Pistacia Nut).
- IV. G13.10.77. d Nut Culturist.  
G27.10.77 also Watt.

RHUS. Linn. - hardy decid. trees or shrubs. greenhouse / stone

- I. easily from stem cuttings.  
{ Root cuttings for nearly all species of Rhus. G21.4.77.  
- suckers for R. typhina tr. G9.2.89.  
- layers also.
- II. seeds also.
- III. totinus G9.2.89 / G28.11.91 tr.  
glabra laciniata G16.3.72  
typhina G5.9.85.  
Toxicodendron G25.1.90.  
radicans  
venenata tr.
- IV. G19.8.82 / G29.9.88  
G20.2.86 / G9.2.89.

SCHINUS. Linn. - greenhouse evergreen.

- I. hard wooded. stem cuttings are somewhat slow (molle) -
- II. seed germinates easily.
- III. molle (Pepper tree) G17.5.84  
dependens.
- IV. Gen. Art. molle. G17.5.84.

SEMERCARPUS Linn. f.: slow evergreen -  
(economic. black juice used for marking clothes.)

I. Cuttings of ripe shoots in spring.

II - seeds also

III. cuneifolium.  
anacardium (Marking Nut-tree.)

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SPONDIAS Linn. - slow evergreen.

I. Ripe cuttings. wood rather hard.

II.

III. dulcis (Sweet Stakeite apple) -  
lutea (Jamaica Plum).

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General note on the Propagation of the Anonaceae.

While of importance economically in countries such as India&c. where they grow naturally, the Custard Apples and other members of the Anonaceae are not of great importance in horticulture.

Vegetative propagation by means of stem cuttings is the most usual method employed for their increase in cultivation, as seeds are not always obtainable.

Leafcuttings and root cuttings have not been investigated.

General Literature. Watt.Dict. of Economic Plants.

ALPHONSEA. Hook. f. slow evergreen.

I. stem cuttings.

II.

III. curtisii  
cylindrica  
elliptica.

ANONA. Linn. - slow evergreen.  
(Economic) -

I. ripe cuttings in April.

II. when obtainable.

III. Cherimolia 911. 4. 74 (note) -

Squamosa

palustris

muricata

reticulata.

IV 93. 3. 77. + Watt's Diet... Vol I. p. 258 seq.

ARTABOTRYS. R. Br. - slow evergreen.

I. cuttings of ripe wood in spring.

II.

III. grandifolius.  
odoratissimus  
suavolens.

ASIMINA. Adans. - half hardy - + greenhouse.

I. cuttings.  
grafting.

layering - general method in summer.

II. seeds also - require protection until some size.

III. triloba. 91. 7. 76 (Papaw or Custard Apple) -  
918. 9. 80.

IV. Lit. on Economic Plants.

EUPOMATIA. R.Br., - greenhouses evergreen.

- I. cuttings of ripe shoots. in spring.
- II. seeds in spring in heat.
- III. *Bennettii*  
= *laevina* of B.M. 4848.

MONODORA. Kun. - stove trees.

- I. ripe cuttings in spring.
- II. also.
- III. *myristica* (Calabash Nutmeg)  
only species.

POLYALTHIA. Bl. - stove trees.

- I. cuttings - halfripe in spring.
- II.
- III. *longifolia* (rapid growth).  
*macrophylla* (roots strongly aromatic).

VI  
General note on the Propagation of the Apocynaceae.

45  
While in nature, the Apocynaceae are mainly increased by means of their seed, which are so well adapted for their dissemination it is found that in cultivation, plants in this order rarely bear fruit. Artificial fertilization is therefore often necessary where seed cannot be obtained by importation &c.

The Apocynaceae, like the Acanthaceae are however so readily increased by means of stem cuttings, that this mode of propagation is preferred to that by seed, and is the common mode of increase for nearly all genera.

In one or two cases, where shoot cuttings are not available so speedy, root cuttings have been employed with success (see Haemadictyon) and Tabernamontana also.

Grafting is a mode of vegetative sometimes employed for delicate varieties of Dipladenia, and Allamanda, on to stocks of strong varieties.

Propagation by means of leaf cuttings have not yet been investigated.

General Literature. Book of Gardening / Stove Plants C. Bennett).  
T. Baines.  
Burbidge.

ACOKANTHERA. G. Don.

- greenhouse shrubs.

- I. stem cuttings better than seedlings: strike readily.
- II. seedlings easy - but not satisfactory - rampant habit of resulting plant.
- III. spectabilis. 97.7.77. / 927.1.00.  
Shunbergi. 925.8.83.
- IV. Gen. Art. 921.1.88.

ADENIUM Röm. & Schult.

- greenhouse evergreen.

- I. young or half-ripe shoot cuttings in spring.
- II -
- III. obesum.

ALLAMANDA. Linnaeus

- stove evergreen climbers.

- I. stem cuttings. easy at any time.  
Grafting employed for *A. grandiflora* - *grandiflora* on *A. cathartica*.  
Unsat. on own roots. (Resulting plants better than from cuttings - (though slow, for *A. grandiflora violacea* -).
- II. also. G.C. 5.3.04.
- III. cathartica | grandiflora - violacea.  
Hendersoni | Schottii. | Williamsonii.
- IV. 917.4.78. | 911.7.96. | 915.86.  
915.1.76. | 920.4.78 | 921.11.91  
924.4.86 | 922.7.82. |  
921.2.03. | | 4c.

See also Lit. on Stove Plants.

ALSTONIA. R.Br. - slow evergreen shrubs.

I. Cuttings of shoots in heat.

II .

III . *venenata*  
*scholaris*.

IV .

AMSONIA Walt.

- <sup>or half hardy</sup> hardy herbaceous perennials.

I. Cuttings in summer.  
division of roots in spring or summer.

II . also in spring.

III . *salicifolia*  
*tabernamontana* -

ALYXIA . R.Br.

- slow shrubs.

I . Cuttings of ripe shoots in summer -

II .

III . *daphnoides* B.M. 3313.  
*succifolia* B.M. 3312 - *Richardsoni*..

APOCYNUM. Linn.

- hardy herbaceous perennials.

I. division in spring -  
Suckers..

II . seeds in spring.

III . *androsaemifolium* B.M. 280.  
*hypericifolium* .

ARDUINA, Mill.

Synonym of *Canissa*.

BEAUMONTIA Wall.

- slow climbers

- I. easy culture - cuttings in spring of half-ripe wood - also layers.
- II. when obtainable.
- III. grandiflora B.M. 3213.
- IV. G 24.9.87  
G.C 20.6.03.

CARISSA Lin.

- slow shrubs.

- I. stem cuttings easy - ripe wood.
- II.
- III. grandiflora. B.M. 6307.  
Sphaerocarpa.

CARPODINUS R.Br.

- slow evergreen climber.

- I. cuttings of half-ripe shoots.
- II.
- III. dulcis only species.

CERBERA Lin.

or pseudonse -  
slow plants.

- I. young shoots well dried at base & inserted in rough material
- II. ?
- III. ovata.  
Thevetia B.M. 2309.
- IV.

CLITANDRA Benth.

- slow.

- I. stem cuttings.
- II.
- III. Arnoldiana. (new rubber plant?)

# DIPLADENIA

- stone evergreen turners

I. easy culture + prop. young growths in summer.

II. also employed for hybridising.

III. atro-purpurea G 25.11.93 Sanderi.

G 10.9.98

G 25.8.00.

boliviana G 19.6.97 / G 13.2.86. \*

breyarleyana G 23.5.74.

IV. Gen. Art. on culture to

G 3.7.78. / G 12.8.93

G 21.7.83 / G 27.3.97

G 22.5.86 / G.C. 26.3.98.

# ECHITES Micro

- stone house chambers

I. easy by stem cuttings in spring.

II.

III. francisca B.M. 4547.

stellaris / suberecta B.M. 1064.

# HAEMADICTYON Lindl

- stone houses

I. cuttings of shoots.

also root cuttings. root more easily than shoots.

II.

III. nutans

IV. G 10.11.83.

# ICHTHOCARPUS R.Br.

- stone evergreen turners

I. cuttings of small side shoots in April.

II.

III. frutescens.



KICKSIA. Bl.

Stove shrub.

- I. stem cuttings
- II. seed for africana - (rubber-yielding) -
- III. africana

KOPSIA. Bl.

- Stove evergreen shrub.

- I. Cuttings of ripe shoots root readily.
- II.
- III. fruticosa B.M. 4220.

LANDOLPHIA.

- Stove shrub.

- I. Cuttings root readily
- II.
- III. ovaricaria

MANDEVILLA.

- Stove evergreen climber.

- I. Cuttings of small side shoots
- II.
- III. suaveolens. B.R. 1840. 7.

MELODINUS. Forst.

- Stove climber.

- I. easy by stem cuttings half-ripe in summer.
- II.
- III. monogynus  
scandens.

NERIUM. Linn.

- Greenhouse.

- I. cuttings half-ripe very easy, ripe in bottles of water strike quite easily.
- II.
- III. oleander (Pest. Mag. Bot. thezauriflorum) Bot III. p. 73.

OCHROSIA. Juss.

- slow evergreen trees.

I. cuttings half ripe shoots easy.

II.  
III. borbonica -  
elliptica

ODONTADENIA. Benth.

- slow scandent shrub.

I. cuttings of young shoots

II. seeds also.

III. speciosa B.M. 4825. *Dipladenia Harrisii*.

PACHYPODIUM. Lindl.

- greenhouse evergreen.

I. cuttings of young shoots in spring. Dried at base before insertion  
II. also division of their fleshy tuber-like roots.

III. succulentum.  
tuberosum.

PARSONSIA.

- greenhouse climber

I. easy by cuttings of side shoots - in summer.

II.

III. albiflora - = heterophylla -

PLUMIERA. Linn.

- slow evergreen shrubs & trees

I. cuttings of ripe shoots in spring.

II.

III. acuminata B.M. 3952.

bicolor

Jamesoni B.M. 4751

to -

PRESTONIA. R.Br.

Slow evergreen twiner

I. cuttings of half-ripe stubby side shoots

II.

III. tomentosa  
glabrata

RAUWOLFIA, Linn. - slow evergreen shrubs.

I. cuttings of points of shoots. 6. side shoots in summer.

II.

III. densiflora-  
nitida Rod. Bot. Cab. 339.  
temipolia B.M. 2440.

ROUPELLIA, Wall. Hook & Benth.

- Climbing slow plant.

I. cuttings of young shoots.

II.

III. grava B.M. 4466.

Cream Fruit. 929.7.82 (note.) 919.5.94 (note.)

STROPHANTHUS - P. DC.

- slow evergreen shrubs.

I. few cuttings of half-ripe shoots.

II.

III. few species are in cultivation " so poisonous.

capensis B.M. 5713.

ledicini to.

TABERNAMONTANA, Linn.

- slow evergreen.

I. stem cutting half-ripe in early summer.

also root cutting. (see Gen. note on Prop. also Chap III.)

II.

III. camassa -  
coronaria fl. pl. / gratissima / wallichiana,  
(91.9.83.) / heterophylla. / to.

IV. 9.8.9.83 (general.)

THEVETIA, Linn.

- slow evergreen shrub.

I. cuttings in spring.

II.

III. nerii folia &c.

# THYRSACANTHUS Benth.

- slow evergreen shrubs

I. cuttings of half-ripe shoots in summer,  
or young cuttings in spring.

II .  
III . bracteolatus / callistochyph.  
ludicus B.M. 5062. etc.

# TRACHELOSPERMUM Lem.

- greenhouse evergreen climber

I. young cuttings in temp 75. 80°.  
or ripe cuttings in autumn.  
Plant of slow growth T. jasminoides.

II .  
III . jasminoides only varietal species cultivated.  
94.12.78 / 931.7.80  
931.7.78 / 93.5.84 etc.

Variety angustifolium.

# VINCA Linn.

or slow.  
- hardy evergreens.

I. stem cuttings in summer or autumn. - ripe wood. - young shoots  
- division of stools in spring. for slow varieties.

II . seed easy also 96.9.79  
96.8.82.

III . acutiloba. / minor tm. fl. pl.  
alba. / rosea  
elegantissima / etc.

IV .  
92.8.79.  
933.9.87  
913.10.83  
913.5.93

General note on the Propagation of the Araliaceae .

The Araliaceae are an order closely allied to the Cornaceae and furnish both hardy and greenhouse shrubs.

Propagation in the order is usually effected vegetatively as the plants are mainly slow growing. The various vegetative methods are employed e.g. division in Gunnera, and cuttings.

Stem cuttings succeed for most genera. (Young stem cuttings or cuttings of lateral shoots will often succeed in difficult species e.g. Oreopanax dyctifolia, where older stem cuttings fail)

Root cuttings are a common method of increase in the Araliaceae and like the Boraginaceae (1) succeed in most of the plants in the order.

Layering is used for species of Ivy..

Grafting is also a common method of Propagation, especially in the Ivy (2) and it is found that cuttings grafted on pieces of roots often succeed better than cuttings of the roots themselves

Leafcuttings of Hedera helix have been tried by Lindemuth (3).

He found that rooting place after some three weeks, but that no shoots were formed. Other genera have not been investigated.

(1) see Gen. Note under Boraginaceae.

(2) see gen. art. under Hedera.

(3) Lindemuth 1905.



FATSIA. Dene. & Pl. - Half hardy shrubs or trees.

- I. Stem cuttings - but not for *papyrifera*.  
root. cuttings for *japonica*. 913.7.89  
926.7.73.
- II. Seeds not produced very freely: usually imported from  
continent, sown in spring, as soon as it arrives
- III. *japonica* = *Aralia sieboldii*.  
*papyrifera* = *Aralia papyrifera* 9 8.6.72  
9 17.9.81
- IV. Gen. Art. 927.1.00. / 921.4.94.

HEDERA. Linn. - Hardy climber.

- I a. Stem cuttings. ripe for common *Ivies*. 916.6.83.  
rather slow of growth. / Tree *Ivies* not so well as climbing but cuttings often preferred to grafting, as suckers often produced 918.4.  
- slips inserted in north border in sandy soil  
I kept moist during autumn.
- b. grafting - especially for variegated kinds & delicate varieties 97.  
on *arborescens* as stock.
- c. layers - most *Ivies* layer themselves naturally.
- II. ?
- III. *helix* and varieties such as *digitata*, *hastata*, *lucida*,  
*marmorata*, *raegneriana*, *pedata*, *variegata* to  
*dentata* 94.1.90.  
*miniata* to.
- IV. Gen. Articles on Culture and Propagation, & varieties of *Ivy*.  
97.3.74. | 927.12.90 | 913.4.95.  
9 16.7.81. | 928.2.91. | 91.2.02  
913.12.90 | 918.3.93 |           tc. to.
- See also lit. under Gen. Note. on *Araliaceae*.

HEPTAPLEURUM Gärtn. - Stove evergreens.

I - cuttings -  
+ grafting.

II -

III. polybotryum  
venulosum var. erythrotaehyp.

MERYTA Forst. - Stove evergreens.

I. Cuttings. *M. Sinclairii* easily from cuttings.  
Others slower. usually grafted - like *Aralias*  
grafting + layering.

II also from seed.

III. *Reuhani* = *A. reticulata*

*latifolia* = *A. macrophylla*.

*Sinclairii* (Puka Tree) G.C. 19. 11. 88 only distinct species.

*Sonchifolia* = *A. sonchifolia*.

OREOPANAX Dene. & Pl. - Stove evergreens.

I. cuttings in heat.

II.

III. *Andreanum*  
*dactylogolium*

PANAX Linn.

- Stove, greenhouse & hardy <sup>tree or shrub</sup> evergreen.

VI. - stem cuttings in spring & summer.

root-cuttings (see Chap III).

- suckers.

II -

III. *Balfourii* / *laciniatum* / *Victoriae* etc.  
*fruticosum* / *plumosum*

IV. See list on Stove Plants.



SCHEFFLERIA. Forst. Slove.

I. Cuttings.

II.  
III.  
IV.

TREVESIA. Vis. Slove shrubs.

I. stem cuttings root readily.

II.  
III.

eminens  
palmata.

General not on the Propagation of Aristolochiaceae.

The Aristolochiaceae is a small but important order, furnishing the curious climbing stove species of Aristolochia. The odour of these plants is generally foetid, but in Asarum it is fragrant. The Aristolochias are usually raised from seed, though stem cuttings are also employed (~~SEE~~ Aristolochia ). Leaf cuttings have not been investigated, nor have root cuttings

ARISTOLOCHIA. Linn. - hardy. greenhouse + stove climber.

I. readily from stem cuttings. young succulent shoots apt to jump-off.  
G29.1.76 / 99.12.99 / G.C. 12.8.99.

~~best~~ for stove species

division - for hardy herbaceous vars. e.g. *clematidis*, *sagittata* to  
layering - also employed for hardy varieties.

II. Seed is the best & easiest method.  
Sown in spring. 99.12.99.

III. *elegans* (stove) - *goldiana* (stove.)  
*arborea* (stove) - *gigantea* (stove)  
*barbata* (stove) - *serpentaria* (hardy)  
*Curtisii* (stove) - *tricaudata* (stove) etc.

IV. Gen. Articles G29.1.76 / 99.6.86 / 99.11.96. etc.  
G6.10.77 / 9.11.79

ASARUM. Linn. Hardy herbaceous.

I. division in summer for *europaeum*. etc.

II. Seed for *caudatum*. G25.6.92.

III. *caudigerum* / *maeranthum* / *Thunbergi* (greenhouse) G28.11.88.  
*europaeum* / *proboscideum* / = *Heterotropa asaroides*.

IV. G2.5.85.

General note on the Propagation of the Asclepiadaceae.

Most of the Asclepiadaceae may be reproduced vegetatively quite easily by means of stem cuttings, which are generally made of side shoots. As in the Apocynaceae the seed are not so frequently used for propagation.

Vegetative propagation is also effected by tubers in some species, division in others.

Leaf cuttings have been tried with Hoya, Ceropegia, Asclepias, etc. and have been successful (See Chap. II Leaf-Cuttings. Dicts.) (see below\*.)

According to Lindemuth(1) leaves of Hoya carnososa taken in August gave roots after 22 days but no shoots. Taken in February Hoya gives shoots as well as roots (2).

Root cuttings have not been investigated.

(1) Lindemuth 1905.

(2) G.C. —

(3) F. Stiel 1908.

\*- Ceropegia woodii can be increased from leaf cuttings. Stiel (3) in his experiment took 30 cuttings with stalk, 30 without. 48 of these bore roots, and after some time produced relatively large tubers & the thickness of the leaf considerably increased. When the leaf-stalk was split, he found that 2 tubers were produced.

## ARAUJA. Brot.

- stove evergreen climber.

= *Phyianthus*  
*Schubertia*.

I. Cuttings for of firm side shoots in summer.

II. Seeds in heat. - *A. albens* germinates freely. It is difficult from cuttings.

III. *graveolens*.

*albens* 918.8.83

99.10.75

*sericifera* 931.10.96

922.11.96

## ASCLEPIAS. Linn.

- Hardy herb. greenhouse & stove.

I. <sup>(young)</sup> stem cuttings, easy in spring.

- division of roots of hardy herbaceous, stove & greenhouse -  
of tubers (*tuberosa*).

II. Seed also in spring.

for in *tuberosa* (flowering plant obtained from seed in 2 yrs.)  
& *curassivica* etc.

III. *curassivica* 923.8.02. / *gigantea* *salicifolia*  
*decumbens/ameua/* / *mexicana*  
*nivea* 927.11.80. / *parvifolia* etc.

IV. Gen. lit. 927.11.80

921.11.85.

## CALOTROPIS. R.Br.

Stove evergreen shrub.  
(Pharm.)

I. young cuttings or half ripe strike easily in spring.

II. seeds in spring.

III. *gigantea* (Mudar plant of India - juice is fungicidal.)

## CARALLUMA. R.Br.

Stove evergreen.

I. stem cuttings dried - then laid on stony soil.  
underground shoots best G.C. 9.1.04.

II.

III. Munbyana adscendens.  
Marlothii. crenulata

## CEROPEGIA. Linn.

greenhouse + stove. climbers.

I. stem cuttings at any season.  
side shoots in spring best.

- division of tubers for tuberous sp. e.g. C. woodii.
- leaf cuttings for C. woodii etc.

II. not often employed.

III. debilis G.C. 13.4.01.  
elegans  
Sandersoni.

Stapeliodes.

Woodi G.C. 8.02

G.C. 30.7.04.

28.5.04

IV. G 23.10.86  
G 24.7.80.

also literature on Stove Plants.

## CRYPTOSTEGIA. R.Br.

- climbing stove evergreen.

I. cuttings root readily spring.

II.

III. grandiflora  
madagascariensis.

DISCHIDIA, R.Br.

Stove evergreen trailers.

I. cuttings in summer.

II.

III. nummularia.  
bengalensis.

DUVALIA, Haw.

greenhouse succulent perennials.

I. Cuttings of shoots in spring. well dried - before in section.

II.

III. angustiloba.  
polita B.M. 6245 etc.

ECHIDNOPSIS Hook. f.

greenhouse succulent.

I. cuttings of shoots in spring. well dried before insertion.

II.

III. cuneiformis.

GOMPHOCARPUS Linn.

greenhouse evergreen.

I. cuttings of young apical shoots. or young side shoots in spring.

II. seeds in heat.

III. sinuatus G 21. 10. 93.  
fruticosus

IV.

GONOLOBUS Michx.

hardy, greenhouse to stem trailers.

I. cuttings of young shoots for greenhouse & stove.  
II. division for all kinds - espec. hardy.

II. seeds in heat.

III. hirsutus crispus fr.  
viridiflorus.

HOYA. R.Br. - stove evergreen twiners.

I. stem cuttings - soft steebly shoots after flowering best.  
leaf cuttings also. but take a long time. (see Chap II. Leaf Cuttings)

II. not common.

III. australis.

bella.

carnea. } 919.4.79.

cumingiana 97.2.85 (note). &c.

imperialis

sphaerophylla }

913.6.96

IV. Gen. Art. 99.10.80.

920.1.83.

927.12.84.

95.5.88.

also lit. on Stove Plants.

HOODIA. Sweet. greenhouse succulent perennials.

I. stem cuttings. allowed to dry in sun then in stony soil.

II. seed also.

III. species *Bainii*  
*Gordonii*.

IV.

HUERNIA. R.Br. greenhouse evergreen succulents

I. stem cuttings in sprays. well dried before insertion.

II. seed - not usual.

III. species *barbata*  
*brevirostris*  
*longiquosa* &c.

IV.

OXYPETALUM. R.Br. = *Tweedia*. Stove evergreen Climbers.

I. easily from cuttings - in spring. half-ripe.

II. not common. seeds in heat in spring.

III. *caeruleum* = *Tweedia caerulea* 918.9.86.

*Solanoides* = *Tweedia pubescens*.



OXYSTELMA. R.Br.

- slow evergreen climber.

- I. stem cuttings, half size in spring.
- II - not common.
- III. esculentum.
- IV.

PERGULARIA. Linn.

- slow evergreen climber.

- I. cuttings of young shoots in spring - side shoots best. Gc. 18.9.03.
- II. not common
- III. odoratissima  
sanguinolenta.

PERILOCA. Linn

- hardy decid. twiner.

- I. stem cuttings easy in spring.  
- layers in autumn.
  - II. not common.
  - III. gracea most common
- 97.2.85  
923.7.87 (note)  
922.7.99.

PHILIBERTIA. H.B.K.

- slow evergreen twiner.

- I. cuttings of firm side shoots in spring.
- II. not common.
- III. campanulata  
grandiflora.

PHYSIANTHUS. Mart. & Zucc.

- slow evergreen climber.

- I. cuttings of firm side shoots in summer
- II. seeds also in leaf.
- III. albus.  
auricomus.

RAPHISTEMMA. Wall.

stone climber

I. cuttings of young shoots - side shoots best.

II. ?

III. ciliatum

SARCOLOBUS. R.Br.

stone evergreen twiner.

I. Cuttings of short firm side shoots in summer.

II. globosus.

SARCOSTEMMA R.Br.

stone evergreen climber.

I. cuttings of point of shoot - liable to damp off - if care not taken.

II.

III. Brunonianum. etc.

SCHUBERTIA.

stone evergreen twiner.

I. of easy culture - stem cuttings easy.

II. also seed.

III. grandiflora.

930.7.87.

913.10.88.

etc.

IV. 910.11.83

916.3.89.

etc. also on Stone Plants.

STAPELIA. Linn.

greenhouse evergreen.

I. stem cuttings in spring - pieces dried - then in pure sand -

II. seed easily in spring 92. 11.8.00.

hisuta minor - result doubtful unless sown at once 91.11.73.

III. cupularis / hisuta / gigantea 927. 7.72. / variegata etc.

IV. Gen: Art. 926.7.73 / 917.12.81.

94.9.97

STEPHANOTIS - Dup. Thon.

- Stone Evergreen hammers

I. Cuttings of side shoots in spring.

Cuttings flower better than seedling plants in floribunda.

II. seedling plants do not usually flower so well at first.

III. floribunda - only valuable species. G.C. 28.4.00.

G 1.9.94.

G 9.5.74.

G 19.4.84

G 17.1.91.

G 20.5.93.

G 24.9.98.

IV. Gen. Articles on prop. and culture.

G 19.10.78 (Steph. for baskets) - G 28.12.95

G 25.7.85 ( " " cutting) - G 24.9.98

G 17.3.94 (free-flowering Steph.)

Pruning: Culture of Stephanotis

Culture of "

to do.

Betha Chaudler

General notes on the Propagation  
of Dicot. Orders. B.



General note on Basellaceae.

The Basellaceae is sometimes separated as a distinct order (1) It is of little horticultural importance. Some of the plants are used as stove border plants, and Basella alba is a climber with inconspicuous flowers. B. rubra is used for spinach in the East Indies. The various other species are biennials. All are increased freely from seed.

(1). Engler Prantl.

General note on the propagation of the Balanophoraceae.

The Balanophoraceae are an order of no horticultural interest, as they are tropical leafless parasites living on the roots of trees.

Balanophora and Cymotium<sup>no</sup> are the chief genera. The fleshy underground tubers and rhizomes might serve for vegetative propagation if attached to the host, but have not been investigated.

---

Balanopsidaceae.

The order includes but one genus, Balanops of no horticultural interest.

Batidaceae.

The Batidaceae are also a monotypic order, containing Batis, the various species of which are shore plants } e.g. Batis maritima. Of no horticultural value.

General note on the propagation of the Begoniaceae.

In the small order of the Begoniaceae, <sup>composed of two genera (Begonia & Hildebrandia)</sup> the Begonias occupy a most important place. They are easy of culture and propagation, and being so free flowering are extremely popular in horticulture.

To obtain a large stock, and to perpetuate particular varieties such as Rex types &c. vegetative propagation is largely employed. Increase in this way is effected by means of stem cuttings (especially for erect & growing species e.g. insignis and fuchsiodies), suckers and tubers.

Leaf cuttings are the general mode of propagation for all Begonias. (1)

Root cuttings in the Begoniaceae would not be practicable, as the roots are fibrous, both in the tuberous and the nontuberous species.

Bulbs which are produced in the axils of the leaves in many species e.g. diversifolia, discolor, bulbifera, are often used for propagation as they develop more rapidly than seeds planted under the same conditions. (2).

Propagation by seed is also extensively employed for obtaining hybrids. Much hybridization work has been carried out with Begonias <sup>and tuberous</sup> especially those of the Rex type (3). The unit factors for obtaining hybrids according to Mendel's law have not been yet worked <sup>out</sup> (4).

General Literature. How to grow Begonias G.A. Farini 1897.  
Begonia culture for Amateurs B.C. Ravenscroft. date  
Bulbs and Tuberous rooted plants 1893. Allen.

See also general literature and general articles.

(1) See Chap II. Leaf-cuttings.

(2) Poinville - Begoniaceae.

(3) See Poinville re. for varieties.

(4) Journ. Roy. Hort. Soc. 1910-11. vol XXXVI.

Mendel's Pr

BESONIA. Linn.

— Stone evergreen shrubs.

VEGETATIVE

PROPAGATION. - stem cuttings - root very rapidly esp. fibrous rooted Begonia any season. 99.2.00

- leaf cuttings - very easy at any time (see Chap II)

- tubers - for tuberous rooted Begonias. 99.11.01  
911.11.76

- Suckers also.

vegetative propagation better than seedlings on whole.

SEED.

- seedlings vary - irreg. in growth G.C. 3.2.00.

used for true species not for hybrids.

- seedling a quick method of testing tuberous Begonia though not for other kinds 97.9.78.

SPECIES.

- hybrid tuberous see 914.10.76.

913.11.75 (tuberous Begonia)	918.9.86	95.3.92
929.4.76	911.8.88	930.11.95
914.10.76	920.7.89	920.3.97
911.11.76	92.4.92	to do -
92.11.78	917.6.93	
919.2.81	922.7.93	
93.3.83	913.7.95	
94.9.86	99.11.89 (winter flowering Begonia)	
97.2.81	931.1.91	

IV General Arts & LITERATURE.





General note on the Propagation of the Berberidaceae.

and *climbers*

The Berberidaceae are an order of mainly small shrubs, of great horticultural interest and importance, not only for the beauty of the pendent flowers, but for the red colouring of the autumn foliage.

Many of the plants in the order are hardy evergreens e.g. Mahonia and are valuable on that account .

Vegetative Propagation by means of cuttings, layers, and suckers is almost exclusively used for special special varieties and hybrids. It is interesting to note that seedless forms of Berberis vulgaris (used in Preserves) must be grafted or increased by cuttings, as suckers often often fail to reproduce the seedless form (1).

Leaf cuttings are impracticable in the majority of cases as the leaves of most species of Berberis are small.

Root cuttings have not been investigated.

Propagation by seed, which is abundantly produced, is the best and most usual method of increase. (2). Some work in hybridization especially in Berberis and Epimedium has been effected.

Gen. Lit. Ornamental Shrubs. L.D.Davis. 1899. p.110 &c.  
*See also General Literature on Propagation.*

- (1) *Rosbridge*
- (2) *general articles under Berberis.*

## ACHLYS, DC.

1. stem cuttings?
2. ?
3. triphylla. only species in cultivation 927.8.81  
but flowers small & inconspicuous 910.5.90.  
not of horticultural importance.

## AKEBIA, DCne.

half hardy  
Evergreen climber.

1. stem cuttings in spring or summer.

side shoots best 910.5.84.

less liable to decay 910.4.80

root cuttings also. but not usually used as shoots strike so readily. 94.6.87

2. not often produced.

3. quinata.  
(lobata).

4. See Art. 927.2.97  
930.4.04.

## BERBERIDOPSIS Hookf.

— (hardy evergreen climbing shrub)

1. Young stem cuttings in spring.  
layering in autumn.

2. seeds in spring.

3. Corallina - very ornamental - hardy flowering shrub.

4. C. & W. (see See v. Lit)

# BERBERIS. Linn.

- hardy shrubs -

1. layers - 9/19.5.83  
Cuttings for *B. Thunbergii*. early 9/11.12.97  
Sweetens + other veget. means better for *Mahonia* group.
2. best from seeds for true *Berberis*  
(cuttings + layers for hybrids) 9/31.1.03  
9/7.2.03  
9/21.3.03.
3. *dulcis* *sinensis*  
*Darwinii* *Thunbergii*.  
*empetrifolia* *nepalensis*  
*stenophylla* - *conceivina* to to  
*Wallichiana*
4. 9/14.5.98 (*B. Darwinii*)  
9/10.1.74 9/31.1.03 9/3.3.88 (*Mahonias*)  
9/8.6.89 9/7.2.03 9/10.6.82  
9/23.3.89 9/21.3.03  
9/17.12.87 9/23.3.89 9/1.1.76 (*Mahonias*)

# BONGARDIA. - C.A. Mey

(hardy tuberos perennial)

1. like *Cyclamen* from tuber?
2. seed.
3. *Rauwolfii*.  
*Leontice altaica* = *Bongardia*
4. 9/19.4.79  
9/19.8.76.

DECAISNEA. Hook & Thoms.

(greenhouse shrub).

1. stem cuttings.
2. imported seeds.
3. of no great horticultural, though of botanical interest.  
insignis, Fargesii 918.5.01.
4. 98.4.82 (insignis)  
920.5.87

EPIMEDIUM. Linn.

(hardy herbaceous perennials)

1. Epimediums notably ragged in appearance except diphyllum.  
division of roots.
2. by seed also.
3. pinatum  
aeratum  
diphyllum = Aceranthus diphyllum -  
violaceum  
niveum 927.4.95.
- 4.

HOLBOELLIA. Wall. = Stauntonia DC.

(hardy & greenhouse climber)

1. cuttings of half-ripe shoots in summer. G.C. 18.6.98  
and in spring. 930.4.87.
2. also seed. from which however fruit not often produced?
3. latifolia = Stauntonia latifolia 926.10.78 +.
4. 9

JEFFERSONIA. Barton

(hardy herbaceous perennials)

1. division of tuberous roots. if clumps are large.
2. when ripe. if sown immediately give good result.
3. biata = diphylla.  
B.M. 1513.

LARDIZABALA. R. & P.

(hardy evergreen climber.)

1. Cuttings of half-ripe shoots. in summer.
2. seed ?
3. biternata
- 4 914.1.99.

LEONTICE. Linn.

(? herbaceous perennial)

1. from tubers like Bongardia & division.
2. also seeds.
3. aetnaica Alberti.  
Vesicaria Leontopetalum.  
chryso-gonum.
4. 924.4.80.

MAHONIA see under BERBERIS. —  
Nutt.

NANDINA. Thunberg.

— (greenhouse evergreen shrub)

1. ripe shoots strike without heat in summer 92.2.01.  
but slow 9c. 18.7.71.
2. not often produced.
3. domestica
- 4.

PODOPHYLLUM. Linn.

— (hardy herbaceous perennial)

1. division of roots.
2. seed rubbed out from pulp with sand + dried — then sown in loam in greenhouse 917.9.57
3. Smodi : peltatum : vesicifera.

VANCOUVERIA. Moench & Dene.

— (hardy herbaceous perennial)

1. division of roots.
2. ?
3. lexandra 97.7.00 / 920.6.96. etc.

General note on the Propagation of the Bignoniaceae.

The Bignoniaceae are composed of mainly climbing shrubs or trees with showy trumpet shaped flowers.

Vegetative propagation is more commonly used in this order than sexual methods, as artificial fertilization is sometimes necessary to obtain seed, <sup>most of the plants not ripening seed here.</sup> ~~flowering and~~ <sup>from seed</sup> moreover, in some genera, development is slow, flowering plants not being usually produced until 2-3 years after sowing (see Bignonia). In such genera however as Incarvillea, Catalpa propagation by seed is an easy and speedy method and in Eccremocarpus <sup>plants</sup> young usually flower the same year that they are sown.

Vegetative propagation in the Bignoniaceae is effected by division, layering, cuttings of the roots and shoots, and grafting on the stem and root. As many of the plants in the order are characterised by thick roots e.g. Kigelia, Catalpa, Spathodia, propagation is often effected by means of root cuttings (1).

Leaf cuttings have not been investigated in the order.

(1) see Chap III. Root Cuttings.

Gen: Lit. -

ADENOCALYMNA. Mart. - stove evergreen climber.

1. stem cuttings in heat. (see Chap I. Fig. —).
2. - of callus.
3. nitidum.  
Comosum B.M. 4210.
4. 915.7.99. (nitidum)  
96.8.87

AMPHICOME. Royle. - greenhouse herbaceous.

1. stem cuttings in sprays.
2. seeds also: somewhat slow for arguta - do not flower till 2nd yr  
- also weakening of plants to let it ripen seed. Paxt. Mag. Bot. p. 79
3. arguta. Paxt. Mag. Bot.  
Imodi 916.5.85. / B.M. 4890.

ANAMAEPAEGMA. - stove evergreen.

1. stem cuttings in heat.  
(see Chap I. Fig. — for callus formation.) -
2. -
3. racemosa.



# BIGNONIA. Lin.

- stove evergreen climbers  
very ornamental.

1. stem cuttings readily. - best young side shoots in summer.  
} root cuttings easy for venusta, capitata etc. 926. 2. 98  
} grafting - on to same species as stock  
or Catalpa syringaeifolia. \* 922. 4. 82.

2. Seed also for unguis. to but slow. 917. 5. 84.  
Plants do not bloom till 4-5 yrs. old.

3. Cherese. 917. 9. 87 (note.) -  
grandiflora.  
purpurea. 931. 8. 89  
radicans = Tecoma (which see) -  
Tuesdiana - 913. 5. 02 (note.) -  
venusta Paxt. Mag. Bot. p. 123.  
do do.  
capitata (handy) -

4. 917. 6. 76. / 91. 10. 92  
91. 7. 91. / 92. 6. 02 to.

also Lit. on Stove Plants. to.

# CAMPSIDIUM. Seem. & Reiss

- stove climber  
ornamental.

1. stem cuttings ?
2. seeds imported from Fiji Is.  
for filicifolium -
3. Chileae -  
filicifolium -

## CATALPA. Tuss.

- Stove

1. stem cuttings of ripe shoots in autumn. G.C. 3.8.01.  
(see Chap I. Fig. for callus formation.)  
- root cuttings. Common espec. for N. Amer. sp. 922.7.82.  
layers. in autumn for Amer. sp.
2. easy from seed: should not be allowed to become too dry. Seed germinates in 3-4 weeks, after planting in heat.
3. bignonioides. 92.8.90. / 927.8.92 / etc.  
guinensis / hybrida. /  
Synnigraefolia 922.7.82 / 913.8.87 / 927.10.88.  
speciosa 92.1.86.
4. Gen. Arts.  
9 30.7.81. | 9 11.9.89 | 9 10.3.00.  
9 23.8.84. | 9 28.7.94. |  
9 13.8.87 | G.C. 4.4.96 |

## COLEA. Boj.

- Stove evergreen shrubs.

1. cuttings of ripe shoots in autumn.
2. -
3. floribunda  
undulata.

## CRESCENTIA Linn.

- stove evergreen trees.

1. ripe cuttings - autumn.

2. seeds for alata. Cucurbitaria L.

3. not of horticultural interest, ∴ require to grow so large before they flower.

Cucurbitaria (The Calabash Tree) - B.M. 3430 } both cauliflorous.  
macrophylla - B.M. 4822.

4.

## DELOSTOMA D. Don.

- Stove trees.

1. stem cuttings ripe - in autumn.

2. - seed. ?

3. dentata.

## DOLICHANDRA Cham.

- greenhouse climber.

1. stem cuttings ?

2. -

3. cyananchoides.

## ECCREMOCARPUS Ruiz & Pav.

Leaf hardy <sup>evergreen</sup> climber.

1. stem cuttings in Aug. kept during the winter will flower well.

2. Roots may be protected or kept over winter then planted out

2. easy from seed in <sup>Feb. or</sup> March. sown in heat.  
with flower same year.

3. Scaber. 921.7.94 / 924.7.97 / 95.9.03.

GLAZIOVA. Bur.

- Stone

1. stem cuttings ?
2. -
3. baubiniopsis . 930.7.81 (note)

INCARVILLEA. Juss.

- Hardy perennials mostly, except *I. sinensis* etc.

1. tubers for *I. Delavayi*.  
division of roots for hardy sp.  
cuttings ?
2. seed germinates freely in heat.  
(*grandiflora*, *Delavayi* etc.) G.C. 12.8.99.
3. *Delavayi* 96.9.07  
98.9.00.  
*grandiflora* 98.7.99 (note) - .  
*variabilis* etc.
4. 926.12.85. / 926.11.98 / 924.8.99.

JACARANDA. Juss.

- stone evergreen trees

1. difficult from cuttings. G.M. 20.1.83.  
best: half-ripe shoots in summer,
2. easy from seed. (*mimosifolia*.) 924.1.80.
3. *mimosifolia* - { 924.11.80  
*lomentosa* - { 917.4.97

## KIGELIA DC.

- Stove

1. stem cuttings. (Kuid.)  
also root cuttings. (M.S.S.) -
2. -
3. ?

## NYCTICALOS. Leym. & Bwind.

- Stove shrub climber

1. stem cuttings ?
2. -
3. Thomsoni. (stove climber.)

## PHYLLARTHON DC.

- Stove evergreen shrub

1. Cuttings of short side shoots - - Season?  
or pieces of ripe wood in summer
2. -
3. Bojeriana.

## PITHECOCTENIUM. Mart.

- Stove climber

= Anamaepaqua.

1. stem cuttings ripe in summer,
2. -
3. muricatum  
Clematideum: Anam. Clem.  
Carolinae.

4.

## SPATHODEA P. Beauv. - Stone evergreen trees & shrubs

1. - stem cuttings - side shoots best in spring.  
- root cuttings, easy. (see Chap III. Trips — )  
+ p —
- 2 -
- 3 - Campanulata - B.M. 5091.  
tc.

## TABEBUIA Gom.

- Stone trees & shrubs.

1. stem cuttings - young or pieces of ripe wood.
- 2 -
3. Palmen.  
spectabilis -

## TECOMA

## TABERNAMONTA Linn. - Stone evergreens

1. stem cuttings half-ripe in summer.  
(For callus production see Chap I. p — )
- 2 -
3. Barteri B.M. 5859.  
longiflora B.M. 4484.  
tc.

## TECOMA. Juss.

- hardy, greenhouse + stove climbers.

1. stem cuttings, usually. Young or half-ripe shoots in summer.

root cuttings easy esp. for radicans. 919.10.89

layers, also for T. radicans. 911.10.98.

grafting also employed.

2. seeds are slow. (cuttings are bettr.)

e.g. in T. Smithi - plants raised each year from cuttings  
flowers with greater certainty 917.1.03.

3. capensis . 919.10.89 / 911.10.90 / 913.10.91 / 922.10.92.

jaeminoides 919.8.93.

radicans . 926.11.98 / 914.10.82 / 918.11.99.

Smithi 913.7.95 / 917.11.03.

to.

4. 931.1.85. / 919.7.90 (radicans.) 96.5.99.

## TOURRETIA. Louq.

- hardy climber

1 -

2. generally treated as annual - seeds sown  
in spring -

3. Lappacea B.M. 3749.

General note on the Propagation of the Bixineae.

The Bixineae are a small order composed mainly of shrubs. <sup>and Bixa</sup> Azara ~~is~~ <sup>are</sup> perhaps of the most horticultural interest.

Vegetative propagation by means of stem cuttings is not difficult and is usually preferred to that by seed.

Leaf cuttings have not been investigated. can also be used

Root cuttings succeed with Idesia polycarpa. They have not been

investigated for other genera, except Bixa, which can also be increased from roots. (1)

(1) An. L.S. R.B.S.

Gen. Lit.



## ASERIA. Hochst.

1. ?
2. imported seed.
3. Caffra (Keiapple.) G2. 18. 9. 97.  
of S. Africa.

## AZARA. Ruiz. & Pav.

(hardy & half-hardy evergreen shrubs).

1. Cuttings of half-ripe shoots in summer. G25. 12. 86.  
layers also G30. 4. 04.
2. -
3. dentata.  
Gilliesii G12. 2. 81 (note). a rapid grower.  
integripolia  
microphylla. hardy species G23. 10. 80 -  
Serrata -
4. Gen Arb. G19. 10. 78 / G1. 2. 96.

## BIXA. Linn.

- Slow evergreen trees.

1. Cuttings of half-ripe shoots in summer -  
make flowering plants earlier than seedlings do.
2. seed also.
3. orellana. B.M. 1456.

## COCHLOSPERMUM Kunth.

- stove evergreen.

1. Cuttings of ripe shoots in spring in heat. (April)
2. Make better plants.
3. Gossypium.  
Gillivraei.

## FLACOURTIA Comm.

- stove evergreens.

1. Cuttings of half-ripe shoots in April.
2. -
3. Not often seen except in botanical gardens.
4. Cataphraeta etc.

## HYDNOCARPUS Gaertn.

- stove

1. -
2. ?
3. cucurbitaria  
Curtisii  
nana etc.
4. New Indian Plants. (Ann. Roy. Bot. Gard. Calcutta vol 5.)

## IDESIA Maxim

- hardy tree.

1. Stem cuttings - more difficult. half-ripe shoots in spring or autumn.  
root cuttings freely for I. polycarpa also.  
season (autumn).
2. Sown & in <sup>light</sup> heat in spring germinate easily.
3. polycarpa - 914.3.74.  
↓ p. var. crispata.

LUDIA. - Lam.

- stone evergreen shrubs.

1. cutting of half-nipe shoot - in summer.
- 2 -
3. heterophylla.  
sessilifera.

ONCOBA. Forst.

- at Kew.

1. ?
- 2 - ?
3. Kraussiana - 917.6.82 (note).  
spinoza.

General note on the Propagation of the Boraginaceae.

Many of the plants in the order Boraginaceae are of little use in the garden e.g. Cynoglossum Symphytum, Borago as their habit of growth is so coarse and rampant, and their flowers are not conspicuously beautiful. Many of the genera however, are more compact and are suitable for rockeries &c.

The Boraginaceae, as an order, like its near ally the Convolvulaceae (1) is characterised by a remarkable ease of vegetative propagation. Some of the plants are annuals, and seed is abundantly produced e.g. Mertensia <sup>en</sup> Lithospermum &c. In some cases, notably that of Myosotis even where vegetative propagation is easy and speedy, increase by seed is to be preferred. (2).

As a general rule however, the Borages are easily and usually raised by means of cuttings, both of stem and root.

Root cuttings strike easily for nearly all species in the order (3).

Leaf cuttings have been tried with Heliotropum peruvianum by Lindemuth (4)

Rooting occurred within 8 days inserting in August, but no shoots were obtained. More recently Stingl (5) tried leaf cuttings of Myosotis palustri

and obtained roots within 5 weeks on all 20 cuttings inserted from the cut surface. // Also 32 out of 40 leaf cuttings of Verbena officinalis root

ed in 12 days also from the cut surface. No shoots were obtained (6).

(1) see Table of Dicot. Orders p — / (3) see Chap III. Root Cuttings p — (5) Stingl. Flora 1908.

(2) see under Myosotis p — / (4) Lindemuth loc. cit.

Gen. Lit.:-

## ANCHUSA. Linn.

- Ornamental hardy annuals  
biennials + perennials.

1. Stem cuttings for perennials, in spring or autumn -  
or root cuttings - easily (see Chap III. list.) - in autumn.  
Division - common method for perennials, e.g. *A. italica*.  
in spring/autumn.
2. seed for annuals hybrida, amara &c -  
& biennials. capensis B.M. 1872.  
in spring.
3. *capensis* - *italica*  
*affinis* - *unicamata* &c. &c.
4. 931.8.78 / 931.7.97 / 95.8.99.

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## ARNEBIA. Jorsk.

- hardy herbaceous.

1. Stem cuttings - best of side shoots, spring.  
Division in spring or autumn.  
(root cuttings - easily. (see Chap III.) -  
offsets also for *A. echioides*.)
2. also from seed, though not produced in great  
abundance.
3. *Echioides*. B.M. 4409. 911.9.80 / 911.7.91.  
917.9.81 / 912.5.94  
*Greffithii* B.M. 5766. (annual).

## BORAGO Linn.

- hardy plants, annuals & perennials.

1. <sup>stem</sup> Cuttings easily.   
 division more common for perennials.

2. naturally from seed - many sp. annuals.

3. cordata / laxiflora <sup>pl. Bm. 1798</sup> / officinalis  
cretica / longiflora

<sup>sp.</sup> not of great importance: Flowers are beautiful, especially of laxiflora, but foliage very large & coarse - More suitable for wild than cultivated garden.

## CACCINEA Sav.

- dwarf hardy perennial.

1. ~~§~~ division and cuttings?   
 at Kew.

2. also. (nuts very large.)

3. glauca.

## CERINTHE Linn.

- mostly hardy annuals, all except C. maculata -

1. division for C. maculata. root-cuttings? (fleshy roots.)

2. usual in April.

3. aequalis: maculata <sup>(perenn.)</sup>; minor: retorta.  
glabra: longiflora: major: to <sup>(Wax Plant)</sup>

4. 9.10.9.81.

9.19.3.92

9.5.3.92 (Honeywort.) plate of C. retorta.

## COLDENIA. Lin.

Stove  
hardy trailing annual.

1. -
2. seeds in heat in March.
3. procumbens.  
<sup>isaf.</sup> hispida = *Sida hispida*.

## CORDIA. Lin.

- Stove evergreen trees & shrubs.

1. stem cuttings strike easily in heat in spring.
2. - also.
3. decandra : *Sebestena*  
Nivea : *Superba*.  
not seen often in cultivation.
4. 910-3-77. (note).

## CYNOGLOSSUM. Lin.

- hardy plants.

1. stem cuttings easy. -  
usual method division of roots.  
root cuttings? (fleshy roots) -
2. also spec. for annuals. 1 biennial
3. nervosum B.M. 7513.  
officinale  
omphalodes etc.

Species are coarse-growing: flowers are dark & not very  
conspicuous in some species, but they are paler in  
virginicum & cheiranthium etc.

# ECHIUM. Linn.

- hardy & greenhouse plants.

1. stem cuttings for shrubby Echinums, in spring  
e.g. callithyrum. - plants flower earlier than if from seed.  
layers also in summer of young shoots.

division for perennials.

2. also, produced in great abundance in some species  
e.g. plantagineum (annual).

3. arborescens. fastuosum -  
Candicans. plantagineum -  
callithyrum. rubrum. (rocky) -

4. G 9.2.76.  
G 12.4.90.  
G 19.11.92.  
G 18.5.01.

tc.

# ERITRICHIMUM. Schrad.

(hardy or half hardy perennial & annual.)

1. stem cuttings not very successful in this country.  
(Thurber in Geneva) -  
division in spring.
2. seeds for most species.
3. nana. (difficult to establish.) delicate alpine. Arn. 5853.  
barbigerum. (annual).
4. G 26.9.96 (E. nanum).  
G 28.5.04. "  
G 18.6.04. "  
G 4.6.98. "



before Tritichium.  
EHRETIA, Linn.

— greenhouse evergreens.

1. stem cuttings in spring. (April.)
2. also.
3. serrata B.R. 1097.  
trimpolia  
to.

EXARRHENA, DC.

— at Kew.

1. cuttings ?
2. -
3. macrantha - yellow flowered Boragin. not well known <sup>but</sup> at Kew

HELIOTROPUM Linn.

store greenhouse  
hardy <sup>annuals</sup>. biennials + shrubs

1. stem cuttings at any season - but spring cuttings best. Autumn for shrubs + biennials.
2. seed also, but do not come true for varieties.
3. Capense  
convolvulaceum Bm. 5615. } <sup>hardy.</sup> annuals  
peruvianum. and Garden varieties such as  
White Lady, President Garfield, Miss Nightingale to h.
4. 9.11.6.04  
9.29.9.01.  
9.3.11.00.

also see lit. on shrubs - to.

## LINDELOFIA Lehm.

- hardy perennial herbs.

1. division usually - species will very easy to grow in this climate, but in sandy loam, easy to flower freely.
2. seeds germinate easily.  
freely produces in spectabilis. - but specimens <sup>from seeds</sup> do not flower until 2nd season after sowing.
3. longifolia 918.5.95 / 922.5.97.  
spectabilis 926.6.86.  
B.R. 1840. (50).

## LITHOSPERMUM Linn.

Annuals, <sup>perennials</sup> biennials & shrubs.

1. stem cuttings half-ripe in autumn or summer, for division for perennials.  
Leaf cuttings also (see Chap II, p. )  
perennials & shrubs.
2. seed for annuals & biennials in April.
3. caulescens: rosmarinifolium.  
graminifolium: petraeum: prostratum. etc.
4. 911.10.84 | 96.2.92. | 95.1.95. | G.C. 13.10.00.  
927.12.84 | 929.7.93 | 917.6.99 |

## MACROTOMIA DC.

(Kew.)

(greenhouse perennials)

1. Cuttings? not likely to succeed, since plants object to transplanting.
2. seeds for cephalotes. but difficult to manage 920.3.99.
3. Beuthamii G.C. vol IV. 1888 p. 15. B.M. 7003.
4. cephalotes: echiodes.

## MEGACARYON. Boiss.

1. cuttings?
2. from seed. (grown by Mr. Boyd from Mr. Thompson of Ipswich.)
3. orientale. G.C. 2.10.97  
= *Echinum orientale* Linn.

## MERTENSIA Roth.

- hardy herbaceous perennials.

1. division. in spring or autumn -  
of easy culture. (except one or two species.)
2. the usual method, by seed in spring.
3. *alpina* - *sibirica*  
*maritima* (diff.) *virginica* (diff.) -  
to -
4. 911.6.81. / 920.11.80.  
913.8.87 / 94.12.80.

## MOLTKIA - Lehm.

- hardy herbaceous perennial.

1. division. in spring -
2. also seed. in spring.
3. *petraea*. B.M. 5942.  
*caerulea*.

## MYOSOTIDIUM. Hook.

- half-hardy herb. perennial.

1. division. difficult to cultivate ∴ impatient of  
root disturbance.
2. seed in Sept. in frame. then in cold greenhouse then potted off in  
March 914.12.89.
3. nobile only sp. B.M. 5137.  
926.5.83 / 918.12.86.

## MYOSOTIS Linn.

- hardy annuals + perennials.

1. division for perennials - in spring.  
stem cuttings for rarer species, but seeds better.  
Cuttings unreliable - seeding plants flower better. 931.10.96.
2. seeds best method, in spring or autumn.
3. azonica (seeds. P.M. 4122).  
rupicola: dissitiflora.  
palustris to to.
4. 

915.4.82	927.12.84	931.3.83
94.8.77	91.11.84	911.10.84
917.2.77	930.3.78	99.5.96
92.1.86	91.7.82	to to

## OMPHALODES Mönch

- hardy annuals + perennials.

1. division in spring, but not till about 3 yrs. old.  
Stem Cuttings. Sometimes better than seed for perennials.  
e.g. luciliae (seed slow) -
2. seeds for annuals e.g. linifolia to -  
Sometimes does not ripen e.g. luciliae.
3. linifolia (annual) -  
luciliae: longifolia: Kramerii: berna.
4. 915.8.91 (dandelworks) -  
929.12.77.  
95.7.79  
915.9.88.  
916.6.94.

## ONOSMA. Linn.

- herbaceous perennials.

1. Stem cuttings in early summer<sup>e.g.</sup> for albo-rosea or spring.  
(tauricum does not produce seed in this country.)  
Division, usual.
2. Seeds general method, when once established -  
from increase by self-sown seed. in  
annuals. seed in April.
3. albo-rosea (a little difficult, sensitive to damp & fog) -  
echinoides: pyramidalis  
stellatum: tauricum.
4. 929.5.86 | 926.6.97 | 913.9.02.  
92.9.93 | 920.7.95 |

## PARACARYUM. Boiss.

- biennials or perennials -  
half-hardy.

1. Stem cuttings in spring or autumn.
2. Seeds also in spring.
3. angustifolium (rockery) -  
Hazara - G.C. 18.7.99.  
mysotoides.

## PULMONARIA. Linn.

- hardy herbaceous perennials

1. division the usual method - plants easy of cultivation
2. Seed also.
3. avenense alba. rubra 921.3.03.  
officinalis: virginica 926.12.86  
Saecularata picta  
to.
4. 918.11.99 / 923.6.94.

## RINDERA. Pall.

1. -
2. Sown from seed.
3. lanata = *Cyphomattia lanata*. G24.5.02  
G7.6.02.

## SYMPHYTUM. Linn. - hardy perennials.

1. root cuttings. (See Fig - Chap III. p -) -  
and easily by other vegetative methods. Rapidity of increase,  
inclined to be too rampant.  
- division in spring. usual method of increase -
2. also.
3. officinale. tuberosum  
bohemicum. caucasicum.  
The various species are suitable for Wild Garden only or in  
most shady situations, where other plants will not grow.
4. G25.8.94 (Comfrey for the Wild Garden).

## TOURNEFORTIA. Linn. (greenhouse & stove shrub)

1. stem cuttings young in spring or summer.
2. - ?
3. heliotropoides G20.10.83.  
cordifolia to.  
Species not very ornamental -
4. G9.3.89.

TRICHODESMA. RB.

- stove annuals -

1 -

2 - seed -

3 - indicum -

Scottii.

zeylanicum. rather coarse-growing. P.M. 4280.

T. zeylanicum was formerly only one much grown, but large flowers & more compact habit of T. Scottii make it a more desirable plant.

General note on the Bruniaceae.

The Bruniaceae are a small order <sup>difficult to cultivate.</sup> of ~~no horticultural~~ importance. The plants belong to S. Africa and may be looked upon as heathlike Saxifrages with the flowers usually arranged in capitula. The plants in the order are Berzelia, Brunia, Staavia, and Thamnea. all lowgrowing and of ericoid habit. (1).

General note on the Burseraceae.

A small order, but of interest economically as containing plants which produce fragrant resins. Boswellia Carteri is the tree which produces frankincense (1) Other species of interest botanically are B. socotrana, ameero. (2) serrata and elongata. Various species of Bursera e.g. spinosa, gummifera Canarium, Balsamedendron (Commiphora) sp. and Dacryodes are of interest also as producing gums which are used as incense. They are propagated by stem cuttings in cultivation.

(1) see under Boswellia

(2) B. amero is occasionally found in cultivation.

Gen. Lit. Enumeration of the Bruniaceae. R. A. Dikmer.  
(Journ. Bot. Lond. vol L. 1912.).



## AMYRIS

- evergreen stov. trees.

1. stem cuttings in spring.
2. -
3. *balsamifera*: Plumieri.  
*brazilensis*: *toxifera* -

## BALSAMODENDRON

- stov. trees

1. cuttings of ripe wood in spring.
2. -
3. *madagascariense*  
= *Commiphora madagascariensis* -

## BOSWELLIA Rox

- stov. trees

1. cuttings of half-ripe shoots in spring or summer.
2. -
3. *Carteri*.  
*glabra*  
*serrata* -

## CANARIUM. Linn.

- stov. trees

1. cuttings of half-ripe wood in spring -
2. -
3. *Commune* -
4. -

## DACRYODES Vahl:

stov. tree

1. stem cuttings ?
2. -
3. *hexandra* - (gum used as incense.) G.C. 7.8.97.

after Borwellia -

## BURSERA. Jacq.

store trees.

1. stem cuttings half ripe - in spring & summer.

2 -

3. gummifera: serrata -

ameero: elongata -

TC -

Beatha Chanter

Notes on Propagation of  
Dicotyledonous Order. C  
to Compositae.



## General note on the Propagation of the Cactaceae.

The Cactaceae <sup>found in desert regions, particularly the dry <sup>districts</sup> region of South America</sup> are an unique family, requiring methods of culture and propagation peculiar to themselves. Though formerly not greatly in favour on account of their appearance the plants are now much more grown and prized for their large showy flowers.

Their xerophytic habit, indicated by the fleshy stems and spiny leaves (except Pereskia, Cereus Greggi and others) make them especially adapted for vegetative propagation. Any portion if of sufficient size, broken off from the main stem or branches placed in favourable conditions will usually root and multiply. Vegetative propagation is therefore the quickest method of reproduction, though many have to be raised from seed as they are slow of growth, and the stems are very thick and dry. Grafting is also a common method. The most usual stocks are Cereus and Pereskia for Epiphyllum. Many species of Cacti are found to strike better if not on their own roots and grafting is also a means of forming large and shapely specimens as in the Epiphyllums.

Offsets are a method of propagation used in many Mammillarias and in the rare species Leuchtenbergia &c.

Stem cuttings are used for varieties. Phyllocactus, Rhipsalis

Pereskia also species of Cereus and Opuntia are increased in this way. Cuttings are found to give flowering specimens much earlier than seedlings as is usually the case ( ).

Root cuttings have not been investigated.

Leafcuttings are impracticable except in the case of the leafy genera such as Pereskia. These have so far not been investigated.

Propagation by seed is frequent. Growth is slow especially in the initial stages. But seed is usually produced in some species and should be sown as soon as ripe in sand. For obtaining hybrids the Cactaceae with their large flowers and distinct stamens and pistils lend themselves particularly well and much hybridization has been done especially with species of Phyllocactus, Cereus and Epiphyllum.

Gen Lit. F.T. Palmer Culture des Cactées (A.Goin Paris.)

-Castle. Cactaceous plants.

H. Allnutt. The Cactus and other tropical Succulents 1877.

W. Watson. Cactus Culture for Amateurs especially Chap. 14 on Propagation.

E. Schelle. Handbuch der Kakteenkultur. Stuttgart 1907. E. Ulm

Worsley. Hybrids among the Amaryllideae and Cactaceae.

(Loud. Rep. Genet. Roy. Hort. Soc. 1906.)

For new species and notes on Cacti see

Blühende Kakteen. Monatsch. f. Kakteenkultur Neudamm.

Cactus Journal (Croucher &c. &c.)

Plant World. Tucson. Arizona (Lloyd, Macdougall. &c.)

Hardy Cacti & other Succulents. E.A. Bowles. J.R.H.S. vol. XXXIV,  
p. 24.

ECHINOCACTUS La + son

CACTACEAE, I.

CEREUS · Haw.

above greenhouse succulents

VEGETATIVE

PROPAGATION.

- Stem cutting easy. <sup>at base</sup> after being dried : 914.4.88.
- <sup>old or young</sup> shoots.
- Grafting for sp.
- Effects for candidaus.
- root? in C. Greggii.

SEED.

- Cereus sp. are usually raised from seed.

SPECIES.

- triangularis 910.11.00.
- Wittii (climber) 9.1.00.
- gigantens 917.11.00.
- candidaus, speciosissimus.
- peruvianus
- Greggii. (large tuberous root).

Gen Art. on Cacti  
LITERATURE. generally  
(see also Gen. note).

95.6.75.	911.4.85	912.1.01
923.10.75.	914.4.88	930.11.01
913.8.81.	923.3.89	98.3.02
924.12.81	928.7.00	98.8.03
913.1.83	911.6.98	etc etc

ECHINOCACTUS. Lk + Otto.

- cool greenhouse

I. offsets - 920.4.77. - slow in being produced. water must be withheld until formed.  
grafting generally, on *C. tortuosus* or *colubrinus* for smaller *Echinocacti*  
*C. peruvianus* + *gummatus* for larger.

II. Seed usual method of increase.

III. *Swipsoni*: *texensis* 923.1.86.  
(hardy)  
*phaeiceus*: *viridiflorus*.

III. 97.4.77. / 915.12.77.

ECHINOCEREUS Engelm.

greenhouse

I + II. propagation like *Cereus*, under which usually included.

III. *Pentlandi*: *flammea* 928.2.80.  
*pectinatus* *Eyresii* 931.7.86.  
*rupestris*  
*Gonacanthus* 918.11.82.

IV. 918.11.82.

EPIPHYLLUM. Pfeiff.

I. stem cuttings - well dried + pieces of stem root easily grafted. usually on *Pereskia aculeata* 99.5.96.  
or better *P. bleo* 9.C. 10.4.97.

*Cereus Macdonaldiae* also recommended as stock as its stronger growth makes it a better support & the resulting plant is found to flower better 925.7.85.

II. Seed also?

III. *coccineum*: *Bridgeri*: *Ruekerianum*: *Russellianum*  
*Superbum*: *tuncatum*: *violaceum* to

IV. 930.10.75 / 99.5.96  
914.2.85 / 910.4.97.

LEUCHTENBERGIA. Hook.

- greenhouse succulents

I. offsets.

II. seeds?

III. principis.

(only species. rarely met with.)

925. 7. 74 (note).

MAMMILARIA. Haw.

- greenhouse succulents

I. offsets at point of mammae

923. 3. 72 / 914. 3. 74 / 98. 6. 78.

grafting for best kinds of Mammillaria.

e.g. encigera, scopa + bars, declivis to.

Cereus tomentosus, serpentinus as stock. Remember plant  
cheaper + finer (Purbridge).

II - seeds?

III. elephantidens 923. 3. 72.

floribunda: gracilis: pusillus: Scheeri: sulcata.

IV. 922. 5. 86 / G.C. 5. 9. 96.

MELOCACTUS. Linn.

- greenhouse succulents

I. Large plants difficult to establish in this country.

grafting. 97. 9. 72. (see also F.J. Palmer.)

II. seeds - which are contained in quantity in caps.

III. communis (Turk's Cap.) 974. 8. 72.

910. 11. 77.

IV. 914. 11. 03.

also F.J. Palmer (see Gen. Lit. at beginning of order).



OPUNTIA. Haw.

- greenhouse succulent.

- I. stem cuttings. in spring. laid in sun till rooted - then potted & carefully watered. G20.4.72.
- young cuttings of Rafinesquei G6.5.93 / G24.10.95.
- separated joints also G.C.12.1.01.

II. seed ?

- III. arborescens : monacantha. subulata.
- argentea : leptocaulis var. longispinis xanthostema G28.7.01
- glauca : Rafinesquei -

- III. G.C. 4.6.98 / °
- G.C. 8.10.98
- G.C. 1.12.01.

PERESKIA Quel.

- I. stem cuttings. at any season -
- aculeata + Rls grown for stocks in grafting - G28.8.85.
- (see Epiphyllum.) -

II. also.

- III. aculeata -
- Rls G10.10.96.
- Cychnidiflora G23.8.84.

IV. -

PHYLLOCACTUS - Lk.

- I. Stem Cuttings - should be well dried for <sup>greenhouse + stove succulents</sup> a few days before  
in section 93.8.98.
- II. Seeds - hybrids <sup>have been</sup> produced in abundance -
- III. agatha: latifrons  
Crenatus. strictus (night. flowers etc.)  
delicatus
- IV. 921.9.89.  
931.5.90.

RHIPSALIS - Gärtner.

greenhouse succulents.

- I. stem cuttings in May - laid in soil till rooted 920.4.72.  
all grow freely except R. sarmentacea 924.1.85.
- II. seed.
- III. Salicornioides - crispata  
rhombica - houletiana 92.
- IV. 924.1.85.

General note on Calycanthaceae.

The Calycanthaceae are a small order of shrubs consisting of two genera, found in Japan, California, and North America. The order is allied with the Magnoliaceae and Anonaceae through the spiral structure of the flowers, and the presence of the oil-glands, but the relationship is possibly closer with the Rosaceae from which it differs in having simple opposite exstipulate leaves.

Propagation in nature from the appearance of the fruit is evidently effected through the agency of birds.

In practice seed is the best method of increase when it is obtainable, but artificial fertilisation is often necessary.

Vegetative propagation is thus resorted to in both the genera of this Order. Propagation by stem cuttings is very slow and difficult. Other methods, layering and grafting are thus more common, though also slow. Leaf cuttings in such slow growing plants would be impracticable. Root cuttings might afford a means of increase especially as stem cuttings are so slow. They have not been investigated.

CALYCANTHUS. Lin.

hardy shrub.

I. Stem cuttings. Difficult.

Grafting. generally employed. 918.10.73 / 912.7.90.

or layering in summer. 95.4.79. / 918.3.82 / 919.7.84. / 92.7.04.

or suckers. 922.4.82.

II. Seeds do not ripen well. - best by veget. methods & although artificial fertilization neces. to obtain seeds.

III. floridus.  
glauco.  
laevigatus  
occidentalis.

CHIMONANTHUS. Lindl.

hardy shrub.

I. Stem Cuttings. slow. Considered difficult see 93.1.96 / 912.8.99.

layers. the usual method: very slow. take about 2 years before sufficiently rooted to be moved. 99.4.81 / 95.3.04.

Suckers. after plant is cut down 918.2.99.

II. seed also. 916.7.92.

III. fragrans.

vars. praecox.  
| grandiflora.

General note on Calyceraceae.

The order Calyceraceae is not an order of horticultural importance. it has a close relationship to the Compositae and contains the genera Acicarpa, Boopis and Calycera, found in South America, chiefly in Chili.

---

Campanulaceae.

The Campanulaceae are a large order containing plants of varying habit. The majority are annuals and perennials, though there are shrubs of curious Sempervivum-like appearance, e.g. Campanula Vidalii, and tree-like palms also in the order. The plants are scattered all over the world, but attain their highest development in the West and South hemispheres. The alliances are through the Lobelias with the smaller orders Stylideae and Goodenaceae, and on the other side with the Compositae.

In Cyphia sp. the fleshy roots and in Canarina Clermontia the berries, are edible.

General note on the Campanulaceae. contd.

The Campanulaceae is a large order important in horticulture, comprising as it does so many hardy, border, and herbaceous plants with large conspicuous flowers. In the Giant Bellflower Ostrowskia, the flowers are sometimes as large as four to six inches across. Many are rock plants, and are prized for their profusion of bell-like flowers, and graceful habit.

Propagation is effected in nearly every genus by seed, which is usually freely produced. From their size and shape, and the honey secretion at the base of the style, the flowers are admirably adapted to cross fertilisation in nature, by bees and other insects, and in cultivation offer a good field to the hybridiser. Hybrid Campanulals such as C. Hendersoni, Smithii, have been produced (1).

The seed for annuals is sown in early spring; somewhat later for biennials.

Vegetative propagation is not so extensively employed throughout the order. To retain a good colour strain however, as in Lobelias, or for the increase of particular varieties, cuttings are often preferable to seed. They are the usual mode of propagation for shrubby species of Campanulaceae, for example Centropogon.

Root cuttings are not practicable except in the tuberous species. Leaf cuttings have not been investigated.

CAMPANULACEAE .1.

ADENOPHORA, Lich.

- rock plant - not much known in gardens.

I - division not recommended as disturbance of roots kills plants.

II - seed - the only sure method - easy in spring.

III - coronifolia.

denticulata.

lilifolia 9.12.8.99.

polymorpha 9.12.9.03.

CAMPANULA - Linn.

(rock plants to - hardy ann. & perennials)

I - stem cuttings easy in spring.

best to keep variegation in Balchiniana.

- division for perennials, most usual method.

- suckers for C. pyramidalis, but not so good as seedlings.

II - for annuals & biennials in April.

results not always true: worthless for *carpathica* var. *pelviformis*.

III - abietina 9.1.8.97.

alpina.

Balchiniana 9.19.6.97.

Barrellieri 9.19.9.85.

carpathica laetiflora 9.13.10.00.

garganea 9.9.6.00.

isophylla 9.17.9.92 / 9.28.9.95.

mirabilis 9.8.12.98.

pyramidalis 9.12.6.80.

etc etc.

IV - 9.28.8.75 (The Harebells)

9.19.10.95 (Genus Campanula from a Gardeners Point of view)

9.20.4.01 (Genus Campanula)

Dwarf Campanulas 9.29.3.02 + continuation.

Dwarf Campanulas 927.6.01 - 917.8.01  
 (H. Correvon) 920.7.01 | 97.9.01  
 927.7.01 | 928.9.01

Alpine Campanulas 926.7.02.  
 (G. Reuthe)

Canterbury Bells as Pot Plant 929.3.02 / 94.5.07.

Mountain Campan: for Gardens 913.5.99.  
 (M. Correvon).

Doubtful Species of Campanulas 926.4.02.

Tall Bellflowers 97.3.74.

Choice Hairbells 928.8.86.

Annual + Biennial Hairbells 98.7.93.

- Annotated List of the Species of Campanula. J.R.H.S. vol. xxxii. p. 190

- Campanulas (M. Pritchard) J.R.H.S. vol. xxviii. p. 98 1902.

CAMPANUMEDIA. Blume.

I. Division.

II. the usual method.

III. celebica : gracilis.

CANARINA. Linn.

I. Division of thick fleshy roots in spring + summer  
 or stem cuttings - young shoots in heat.

II. also.

III. Campanula Bot. Cab. 376.



CENTROPOGON Presl.

Stove

I. no difficulty by stem cutting, if of well ripened wood.  
Young cutting also.  
92.2.01 / 90.3.9.04  
94.16.02

II. ?

III. *Lueyanus* 921.2.88.  
924.12.87  
*fastuosus.*

CLINTONIA Dougl.  
= *Downingia*

I. ?

II. best from seed in spring

III. *pubescens* 926.2.81.  
*elegans.*

CODONOPSIS Wall.

I.

II. the usual method.  
*rotundifolia* (annual)

III. *convolvulacea* 924.3.00.  
*ovata* 90.12.8.99 / 90.18.9.97.  
*rotundifolia* var. *grandiflora.*

## CYANANTHUS. Wall.

- I. Division of fleshy roots - but not desirable.  
stem cuttings in spring & summer.
- II. seed which sows freely.  
in warm dry summers.
- III. -incanus. 99.8.79/913.9.79.  
lobatus 920.10.00/919.9.96.
- IV. G.C. 13.8.04 (S. Arnott).

## CYPHIA. Berg.

- I. stem cutting - root readily in cool house.  
tuberous roots - if shoots are cut off - will make new tubers  
for themselves & old plants will make fresh shoots.
- II. seeds.
- III. Gulbosa: volubilis.

## HETEROMA.

greenhouse

- I. stem cutting strike without difficulty in spring.
- II. seeds.
- III. lobeliodes. (greenhouse)  
The Bird plant of Mexico.

## ISOTOMA. Ludd.

- annual.

- I. cuttings easy to preserve plants over winter like *Lobelia*  
920.8.81.
- II. generally treated as annuals.
- III. axillaris (annual)  
herbertii (Stowe) 919.3.87.

JASIONE. Linn.

(ann. bienn & perennials)

I. easy culture.

Division for perennials 921.7.83 (note.) -

II. seed also in spring & autumn.

III. species are suitable for rockeries *humilis*,  
*montana*: & *perennis*.

LAURENTIA. Desr.

(herb. greenhouse plants.)

I. stem cuttings - to preserve plants like *Lobelia*.

II. seed.

III. *erinoides*.

*Carmulosa* 918.11.76. (suitable for moist rockeries) -

LIGHTFOOTIA. L'Hérit.

(greenhouse evergreen shrub)

I. cuttings. young shoots. in spring.

II. seed for annuals in spring

III. *ciliata* -  
*spicata* (Kew).

LOBELIA. Linn.

hardy &  
(half hardy perennials)

I. stem cuttings - best for varieties - do not make good plant for ignea.  
side shoots for *cardinalis*.

Division for most sp. e.g. *perennis*, *fulgens*, *cardinalis*, *splendens*.

Suckers - of old roots for *ignea*.

II. Seeds: best for *gracilis* 911.10.90 k.: often the best for  
herbaceous instead of keeping plant over winter.

- for blue *Lobelias* - seedlings often apt to be straggling  
and not very like,

III. *Cardinalis* 916.10.97.  
*Julgens* 98.9.77.  
*gracilis* 926.11.81.  
*igneo-lutea-purifolia*.

IV. General articles and literature on *Lobelia*.

- Bedding *Lobelias* 94.10.73 / 96.4.78 / 94.10.82 / 98.3.89 / 97.2.91.
- Propagation of *Lobelias* 931.12.84 / 93.9.92 / G.C. 6.2.97.
- + *Lobelias* for stock 928.10.99.
- *Lobelias* from seed 912.1.84 / 94.7.91 / 911.11.99.
- Blue *Lobelias* 912.12.85 / 917.9.98.
- Hybrid *Lobelias* 95.9.85 / 98.10.87 / 98.11.02.

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## MICHAUXIA. L'Hérit.

I -

II. Seed best means of propagation 98.8.91.

Sown in spring.

*M. campanulata* <sup>oides</sup> seed in abundance.

III. *Campauloides*.

*laevigata*

*Tchikatzeffi* 92.8.02 / 96.11.01 / G.C. 20.6.03.

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## MICRODON. (Chois. Scroph. by Engelm. Prall.)

I.

II. usual method.

III

IV

MUSSCHIA, Dum.

- I  
II. seeds sown in little heat - best method.  
III. aurea G 23. 8. 90 (Shrubby)  
Wollastoni

OSTROVSKIA, Rgl.

- I. roots are exceedingly brittle - + fleshy.  
root cuttings?  
II. Seeds germinate quickly, but some time before plants flower  
best method G 19. 12. 03.  
III. magnifica (Giant Bell flower) -  
only sp.  
IV. G 22. 1. 98 / G 18. 12. 97 / G 19. 12. 03.

PHYTEUMA, Linn.

- I. division of roots in spring.  
II. seeds best method - ripen freely.  
III. Cosmosum  
Confusum  
betonicaefolium  
hemisphaericum.  
hemile  
orbicularis  
pauciflorum  
spicatum.

- IV.  
G 17. 1. 03  
G 24. 1. 03.  
G 30. 4. 81  
G 23. 4. 81.  
G 9. 7. 81.  
G 25. 7. 85

LATYCODON. A. DC.

Division of the roots - but risky. - & slow increase -  
stem cuttings also in spring

seeds best method: Comes pretty true for most species 9/4.3.85.

chinese 9/2.6.94

grandiflorum 9/23.3.85.

g. mariesii (Chinese Bell flowers 9/14.3.85.)

Chinese Bell flowers 9/2.6.94.

Bell flowers 9/1.8.96.

Platycodon as Pot Plant 9/8.2.96.

PRATIA. Wedd. p.

I. Division in spring. G.C. 12.2.10.

Cuttings also 9/16.10.75.

II. seeds also.

III. angueata G.C. 12.2.10 / G.C. 11.8.00.

PRISMATOCARPUS L'Herit. p.

I. Cuttings for shrubby species.

II. seeds best method.

III. nitidus = C. prismatocarpus.

ROELLA, Linn.

(greenhouse subshrub  
or herbs).

I. Young cuttings in spring - a little slow, - in heat.

II. seeds

III.

PHOCAMPYLUS. Pohl. (aloe or greenhouse mostly  
perennials -

Not difficult from cuttings in spring - young growing shoots.  
916.1.92/928.10.93.

II. bicolor: Humboldtianus.  
longepedunculatus  
nitidus.

SPECULARIA. Heist.

I. ?

II. seed - annuals.

III. hybrida.  
pentagonia  
speculum.

SYMPHYANDRA. A. DC.

II. seed produces freely - self-sown.

III. Hoffmanni. armena -  
ossetica  
pendula -  
Wanneri 911.6.04.

IV. 92.6.00.  
913.8.03.

IRACHELIUM. Linn.

(perenn. greenhouse shrub)

Cultiv. of young shoots in spring.  
Resulting plants more dwarfed than seedlings. 914.1.99.

II. seed - plants can be treated as annuals.

III. caeruleum 914.1.99 / G.C. 21.6.02.

IV. 914.5.95 (caeruleum).

WAHLENBERGIA. Schrad.

= *Edrianthus*

I. Difficult by division because make long roots,

II. seed best: sometimes e.g. *dalmatica*, takes more than a year to germinate, but self-sown after once established. 926.3.87.

III. *dalmatica*.

*Kitaibela*

*pumiliorum*

*saxicola* 915.12.88.

*liberosa*.

IV. 921.4.77.

915.12.88

911.7.91

930.11.95 (*Edrianthus*).



General note on Candolleaceae.

The Candolleaceae or as they are usually called the Stylidaceae are a small order almost confined to Australia, Tasmania, and New Zealand. As they are nearly all inconspicuous plants of low-growing habit, they are not much prized in the garden. The order includes Candollia, Phyllachne, Levenhookia, Donatia.

Propagation is usually effected by seed.

(See R. B. G. Notes on Donatia).

General note on the Canellaceae.

The order Canellaceae, also known as Winteranaceae is of little interest horticulturally. Economically however, it is of some importance as some of the species for example Canella (Winterana) supply fragrant oils. The species C. Alba, is the one most commonly met with.

Other plants in the order are Cinnamodendron and Cinnamosma.

General note on Capparidaceae.

The Capparidaceae are a shrubby order distributed in tropical and sub-tropical regions, and reaching their highest development in the dry districts of America. The plants may be regarded as tree Crucifers for their relations are very close to the Cruciferae. The many long stamens and projecting stalked ovaries of their flowers, make them somewhat conspicuous among stove and greenhouse plants. The varieties of Cleome especially spinosa alba are very ornamental and are much grown. Some of the plants for example Roydsia possess a delicious perfume. But the order as a whole is not common in cultivation. Capparis spinosa is of economic importance as the young flower buds furnish the Capers of commerce. The stove annuals Cleome polanisia are often seen in cultivation.

Propagation is effected by seed when it is obtainable. Flowering in some of the plants does not occur however, For example Cratoeva except by a copious use of dung in addition to the sandy loam and fibry peat which the members of this order require. The order has not been of sufficient horticultural interest for much hybridisation work to have taken place.

Vegetative propagation is also employed for the shrubby species, Neither leaf nor root cuttings are usually employed though Euadenia may be propagated by cuttings of either root, stem or leaf.

Capparidaceae. 1.

CAPPARIS. Linn.

I. Cuttings: ripe shoots: strike easily  
best mode of propagation.

930.7.87

Suckers also.

99.9.82.

II. Seed also but rarely obtained good

91.1.81.

III. Capparis -

flexuosa Pom. 7248.

spumosa 91.1.81. / 99.9.82 / 900.8.04.

IV. Caper Plants 925.8.77.

CLEOME Linn.

stool  
Annual herb. & shrubs.

I. stem cuttings: ripe wood.

II. Seed freely produced: usual method.

Stool animals, e.g. *C. purpurea* of easy culture.

*C. speciosa* alba not true from seed.

III. Dendroides Pom. 3296.

fungus = spumosa 911.3.82.

rosea -

Speciosa, 9.C. 16.8.02

(purple. & white)

speciosissima 923.11.77.

### General note on Caprifoliaceae.

The Caprifoliaceae are composed mainly of trees and shrubs though herbaceous plants do sometimes occur, e.g. Triosteum, and some species of Sambucus. The plants are native in temperate regions particularly in the Northern Hemisphere. They are only to be found in high altitudes in the tropics. The order is closely allied to the Rubiaceae, and also through Sambucus with the Valerianaceae. The plants in the Caprifoliaceae are important in horticulture since nearly every one is a hardy flowering shrub. For example Abelia, Weigela (Diervilla), Viburnum, Lonicera.

Propagation is effected in some cases by seed when it is procurable e.g. Viburnum, Lonicera, and Sambucus. A few hybrids in these genera have been obtained.

Vegetative propagation is however usually preferred as being a quicker and surer method of increase. Stem cuttings are slow but not difficult for most genera. Root cuttings while possible are not as a rule employed, the resulting plants being often weaker than those raised from stem cuttings. Leaf cuttings have been successful, e.g. but are a comparatively slow method of increase. Layering and grafting are more common methods than cuttings especially for Viburnum sp.

ABELIA. R. Br.

Jacq. Hortogrævenhardy

I. readily stem cuttings half ripe summer + autumn,  
layers in spring.

II. floribunda (greenhouse) 918.5.78.  
III. grandiflora

repens 925.10.84.

934.9.87 & 92.10.89.

915.8.96.

913.10.00.

Serrata - 923.12.99 / 920.10.00.

uniflora -

tripflora - 910.6.82 / 922.6.95.

IV. Abelias 915.7.76.  
99.5.85.  
92.24.9.98.

Coulter & Westell, vol II, p. 61.

ADOXA. Linn.

British plant.

I. rhizome - creeping. -

E. seed: (fruit a drupe - chief visitors are flies attracted by musty  
smell - honey secreted)

III. moschatellina.

not of horticultural value.

ALSEOSMIA. Cunn.

I. macrophylla - (New Zealand.) R.M. 6951.  
II. macrophylla - (New Zealand.) R.M. 6951.  
III. pretty fruited flower.

DIERVILLA Linnaeus.

= WEIGELA Thunberg.

hairy flowering shrub.

I. stem cuttings - in end of summer or autumn -  
of young shoots in sprout  
layers - - season?

Division in winter - side snickers - like groundcover will grow with piece  
of root attached.

II. Seed also: ripen freely: somewhat variable.

III. Amabilis  
= grandiflora.

Florida -

hortensis

middendorfiana -

praecox.

to.

IV. Weigelas §19.6.75.

§ 8.5.80.

§18.3.82.

§18.4.

Weigelas & how to grow them §19.6.86.

Varieties of Weigela §11.5.89.

Tree Weigelas §17.10.74.

Bush Honey suckles - Weigelas §18.1.90  
§14.2.91.

LEYCESTERIA, Wall.

hardy shrub.

I. stem cuttings - half ripe early - autumn.  
Young cuttings in spring.

layers in autumn.

Division like a tobacco plant also

II. Seeds : but do not ripen very well in this country  
in spring 45°-50° in light soil.

III. formosa § 14.3.74  
§ 21.12.95  
§ 22.10.04.

IV. Scrub on leycesteria § 19.2.84  
(formosa) § 15.10.92.  
Coulter & Westell vol II. 67.

LINNAEA, Gronov.

rock garden plant.  
peat or moist soil.

I. Division - creeping rhizome

II. Seed. should be sown as soon as ripe as loss of vitality.  
see § 12.7.79.

III. borealis.  
only species § 1.12.00.



LONICERA. Linn.

hardy flowering shrub

I. Easy stem cuttings - form shoots autumn -  
layers - in autumn.

II. sometimes by seed.

III. flexuosa.

hildebrandiana 916.3.01.

913.8.04.

923.8.02.

hirsuta.

sempervirens 927.4.89.

var. minor 929.9.88.

Standishi

Sullivanti.

IV. Honeysuckles 918.3.89

924.5.90.

Honeysuckles or Doniceras 919.5.77.

Honeysuckles or Woodbines (Monog. by G. Gordon) 913.2.77.

Climbing Honeysuckles 919.7.98

The Twining Honeysuckles 914.4.94.

SAMBUCUS. Linn.

hardy decid shrub

I. Stem cuttings - autumn ready for Golden Elder - & other sp. -  
layers

division for herbaceous -  
single buds as in the Vine - e.g. for Golden Elder.

Captifoliaceae J.

- iii . *canadensis* 93.6.99.
- nigra*.
- racemosa* 971.9.89.
- rac.: *knufolia*.
- var. *Golden Plover* 976.9.85.
  
- iv . *The Elders* 977.1.98.
- Coulter & Westell vol II. 54.

SYMPHORICARPUS. Juss.

hardy decid shrub.

- i . stem cuttings . autumn
- layers . in autumn the usual method
- snakes . also autumn .
  
- ii . Seed also .
  
- iii . *glauca* .
- microphyllus* .
- racemosa* .
- vulgaris variegata* .
  
- iv . *Rabbit proof Shrubs & Trees - The Snowberry* 931.3.88 .
- Coulter & Westell - vol II. 60 .

Cafourpaliaceae 6.

TRIOSTEUM, Linn.

hardy perennial.

I. Stem cuttings - young shoots in summer  
root cuttings? roots are thick & fleshy.  
division in spring.

II. Seed is also frequently ripens.

III. perfoliatum (only species.)  
Fever Root.

VIBURNUM, Linn.

hardy decid

I. Stem cuttings - autumn: half-ripe wood  
layers autumn. Sq. 2.01.  
grafting best for finest varieties.

II

III. lantana.

macrocephalum.

opulus.

plicatum Sq. 2.01.

tinus

tomentosum.

IV

The Viburnums (Monog. W. J. Bean) Sq. 17.11.60.

Viburnus (Monog. W. J. Bean) Sq. 29.7.99.

Coulter & Rose. Vol. II. 56.

General note on the Caryophyllaceae.

The Caryophyllaceae are typically an herbaceous order allied to the Chenopodiaceae, Portulacaceae, Nyctagineae and other members of the Centrospermae. The plants in the order are found distributed over nearly all the earth. They comprise many genera in common cultivation. Many of the freeflowering rock plants Arenaria, Saponaria, Cerastium are to be found in this order. The first place in importance is of course for Dianthus caryophyllatus, the pink or carnation of which now such innumerable varieties are on the market.

Propagation is effected easily for the herbaceous plants by seed which is abundantly produced and usually self sown.

More sure however is the increase by vegetative methods. Division is commonly employed but where the habit of the plants permit it; stem cuttings are used as in the shrubby species Polycarpon tree sp. of Dianthus &c. Layering is the most and sure method for Carnations (see gen.arts. ) The leaves are on the whole and unsuited for cuttings. Root cuttings might succeed for Saponarias and other species characterised by long taproots. No investigation has been recorded.

Caryophyllaceae. 1.

AGROSTEMMA. Linn.

annuals  
hardy perennials

I. division.

Stem cuttings. e.g. for bungeana.

ii for annuals + perenn.

iii bungeana = *Lychnis bungeana*.

*Coronaria*.

*Caeli rosa*.

*flos. Jovis*.

tr -

ARENARIA. Linn.

hardy perennials.

I. division

Cuttings - for *A. montana*. See § 7.7.94.  
§ 29.5.97.

ii seeds, usually self-sown.

slow growing in *A. montana* - § 7.7.94.

iii balearica:

*biflora*.

*Caespitosa*

montana - § 2.12.93.

*norvegica* § 18.6.98.

*purpurascens*.

*virgata*

*berna* to -

iv Arenarias § 17.9.81 / § 16.9.99.  
§ 16.1.86

CERASTIUM. Linn.

hardy annuals &  
perennials  
Suitable for rockery.

I. Division in spring.

Stem cuttings - see 99.6.01.

II. Seed for annuals e.g. perfoliatum  
& perennials.

III. alpinum

Beberstemii

grandiflorum

latifolium

ovatum.

perfoliatum.

IV. The Cerastiums (Monog. W. Drimp.) 99.6.01.

DIANTHUS. Linn.

I. stem cuttings.

& pipings

espec. for tree perko.

e.g. alpinus, Callizonus, deltoides.

layers: the usual method for most species. <sup>end of</sup> summer.

II. Seed - normally abundant, produced except Callizonus -  
not so common as layering.

Caryophyllaceae 3.

DIANTHUS. Contd.

- III . *alpinus* 917.6.82.  
*caesius* 912.1.84  
*cinabarinus* 91.12.84.  
*deltoides* 91.8.04.  
*glacialis* 920.6.85.  
*neglectus* 915.10.04.

- IV . *Layernig Pinks* 919.2.90  
 930.7.92.

- Propagation of *Dianthus* (Pinks & Carnations) - 93.8.78  
 920.9.84. 910.5.84.  
 910.12.87.  
 930.11.95.  
 914.12.95.

- Carnations from Cuttings 918.8.83.

- Tree Carnations 98.2.90 | 921.11.03  
 912.7.90 | 923.4.04.  
 97.3.96 | 926.3.04.  
 92. 26.8.99.

- Carnations from Seed 95.3.92 | 927.9.02  
 93.12.92 | 916.4.04.  
 917.8.95 |

Caryophyllaceae f.

GYP SOPHILA. Linin.

hardy herb.

I. stem cuttings - Carey for root. sp.

Diff. for paniculata flore pleno. (see special note).  
9.15.3.02.

Division

II. Seed for annuals as elegans.  
also for perennials.

III. Cerastioides.

elegans.

muralis.

paniculata -

p. fl. pl. 9.C. 17.8.01

9.15.3.02

9.14.11.03.

[Note - *Gypsophila paniculata* fl. pl. propagated from slips.  
See Fig: of rooted cuttings.]

IV. Notes on *Gypsophila* 9.10.9.87.

LYCHNIS. Linin.

hardy herbaceous.

I. stem cuttings of young shoots in spring -  
also older in autumn.

Division e.g. *splendens plena* -

*hibernans rosi* - cutting in Kaagana?

II. Seeds - <sup>in</sup> most species produced in abundance.  
Self-sown.



LYCHNIS, cont'd.

III. *alpina* 721.1.82.

*fulgens*.

*grandiflora*.

*Haageana*.

*Legascae*.

*pyrenaica* 79.7.87.

*viscaria*.

var. *splendens plena*.

*vespertina plena* 71.8.91.

IV. Chinese Catch flies 71.6.89.

Alpine Catch flies 721.6.84.

716.4.87.

POLYCARPON, Löfl.

Hardy perennials.

I. *stem cultiva*.

II. *seed also*

III. *graphioides*.

*latifolia*.

*tetraphyllum*.

Caryophyllaceae G.

SABINA. Linn.

hardy.  
carpet, bedding.

I division

II, ✓ seed

III, Boydii.

filifera. (for carpet bedding)

aurea

~~prolifera~~.

procumbens. (used as a substitute for grass.)

SILENE. Linn.

I. stem cutting for perena. 1 shrubby. 917.7.97.  
also maritima var. flora plena.

Division..

II. seed freely. spring & autumn.

III. alpestris 94.4.03

arenaria 906.9.03

Elizabethae 924.4.86

926.7.90.

Fortunei.

Hookeri

laciniata.

maritima fl. pl. 924.3.00.

Caryophyllaceae. 7.

SAPONARIA. Linn.

I. stem cutting -- joints of shoot - 178. 6. 84.  
Division for perennials in autumn.

II. seeds should be sown as soon as gathered as short vitality.

III. caespitosa 120. 3. 75.

Calabrica -

glutinosa -

officinalis

ocymoides ... 1 bar: splendidissima 131. 3. 00.

SPERGULA. Linn.

hardy annuals -

II. raised from seed. requires.

III. arvensis L.

sp. not important in horticulture.

SPERGULARIA Pers.

I.  
II.  
III.  
IV.

Caryophyllaceae 8.

STELLARIA Lin.

I. division of roots. if required

II. Seed.

III. holostea - only sp. of any hort. value.

graminea var. aurea - used also for carpet bedding.

TUNICA Scop.

hardy herb -  
rockery.

I. division

II. Seed in sprays early

III. Infertile.

Saxifraga

9 27.11.86

9 15.10.98

9 13.12.02.

General note on <sup>the</sup> Casuarineae.

The order Casuarineae contain the single species genus Casuarina the various species of which are found mainly in Australia but also in tropical Asia. The Casuarinas resemble in outward appearance the Equisetums, but are more allied in structure to the Ephedras. They form an isolated and like the Piperaceae probably a primitive order.

The various species of Casuarina are some economic importance in Australia as producing a red timber hence its name 'Beefwood'. In this country The Casuarinas are grown as ornamental greenhouse shrubs or trees.

Propagation is effected vegetatively by stem cuttings of half ripe wood in spring or better from seed (S) which does not however usually ripen in this country.

Casuarinae. 1.

CASUARINA. Rumph.

hardy.  
green house.

I. stem cuttings half ripe.

II. seed when obtainable.

resulting plants are better than those from cuttings.

III. distyla.

equisetifolia.

quad rivaloris. 929.10.81.

tenuissima.

torulosa.

stricta.

IV. Casuarina 927.6.74  
98.9.77.

Beetha Chander.

C. Note on the Propagation  
of Dicots. <sup>From</sup> Compositae contd. —

Compositae 31.

ERIOCOMA.

= MONTANOA. -

" E. fragrans Fl. Gard. Sweet. Ser. II. vol. I. 44

ERYTHROLAEIA.

= CNICUS.

Conspicuous (Mexican Thistle.) Fl. Gard. Sweet. Ser. I. vol II. 134.

ESPELETIA.

Greenhouse plants.

I. cuttings!

II. seed?

III. argentea Pom. 4480.

Corymbosa 919.5.77.

Sp. have waxy leaves. 913.2.81.

EUPATORIUM.

Greenhouse.

I. suckers. which may be removed & grown as cuttings

stem cuttings at almost any season

II. ?

III. adenophorum 919.5.00.

ageratoides 927.9.84.

grandiflorum 918.2.93. < caudolleanum 95.2.89



Compositae 32.

EUPATORIUM. Cord.

hardy herb.

III . *iaanthinum* 919.3.87.

*petiolare* 92. 15.6.01.

92.12.3.04.

*probum* 99.11.90

912.3.97

910.2.94.

*vernale* 979.7.04.

92.30.1.04.

IV . *Eupatorium* 99.1.97.

922.6.95.

92.21.3.96. 921.4.90

925.3.99. 93.9.81.

*Greenhouse Eupatorium* 913.2.81. 927.12.90

*Eupatorium t. paucis* 913.2.97. 913.2.04

EURYOPS.

92.6.1.00 (Greenhouse)

I . *stem cuttings* . ?

II . ?

III . *Athanasiae* 95.11.98.

*pectinatus* 92.6.94.

914.5.98.

Sp. rarely met with -

Compositae 33.

GAILLARDIA

hardy herb.

See cult. : esp. for varieties.  
Division

seed not a certain method

amblyod on (annual.) 14.2.74

30.8.90

*aristata grandiflora*

*hybrida*

*maxima*

*picta* + vars.  
*grandiflora*

See: Arts. The Gaillardia 21.4.94

Gaillardias 3.9.81

13.12.84

27.12.90

29.3.02

13.8.04

Culture of Gaillardias 29.1.87

Perennial Gaillardias 10.12.87

6.1.00

Gaillardias from seed 19.3.87

Compositae 34.

GALINSOGA.

annual.

from seed very early.

parviflora - (the Kew weed.) G.C. 15.8.96.

tilobata Bm. 1895

GAMOLEPIS.

greenhouse shrub

i. stem cuttings: ripe in summer.

ii. seed also: only way for tagetes.

iii. euryopoides Bm. 6249.  
9.19.8.76.

tagetes - annua (hardy annual.) 7.17.5.84.

GASTROCARPHA.

annual.

ii. seeds

iii. runcinata. Fl. Gard. Sweet Ser. 1. vol. 11. 229.

GAZANIA.

Hardy herb.

Brit. for summer border

i. division for perennials: uniplosa to stem cuttings in August: best side shoots from base of plant or sprout.

ii. seed: esp. for annuals Burchelli, tenuifolia &

iii. bracteata G.C. XV. 1894 p. 630.

Compositae 33.

GAZANIA. contd.

I. *longicauda* 710.10.85.  
718.9.97.

*nivea latifolia* 79.10.97  
715.10.98.

*pygmaea* 70m. 74.5.5.  
725.8.00 (not).

*splendens*. 79.9.82  
714.3.85.  
728.7.94.

II. *Gazanias* (money by N.E. Brown) 727.4.98.  
*Gazanias* 70.9.4.98.

stem cuttings - for shrubby sp.  
Division for perennials.

GAZANIOPSIS.

half-hardy perennial

- I. stem cuttings - summer.
- II. seeds also.
- III. *stenophylla*.

GERBERA

half-hardy perennial

- I. stem cuttings, side shoots in summer.
- II. or seeds. see 70.2.4.04.

Compositae 86.

GERBERA contd.

hardy + greenhouse plants

Crenata B.R. 855.

Jamesoni B.M. 7087.

♀ 12.10.89 < ♀ 29.9.01.  
♀ 4.10.02  
♀ 3.11.03 < ♀ 30.8.07  
♀ 20.8.04. ♀ 6.9.07.

"Sir Michael" ♀ 21.9.01.

viridiflora. ♀ 29.2.96.

IV. Hybrid Gerberas ♀ 18.6.04.

hardy perennial

GNAPHALIUM.

Hardy, greenhouse  
and perennial & shrub

I. stem cuttings - for shrubby sp.  
Division for perennials.

II. seeds for hardy + tender annuals.

hardy annual

III. apiculatum (greenhouse perennial)  
= Helichrysum.

eximium B.M. 300

involveratum B.M. 2587.

GORTERIA.

greenhouse annual  
& perennial

I. stem cuttings for rigens.  
Division

II. seed in spring: rigens scarcely ever ripens seed.

III acaulis ♀ 23.9.82 / rigens B.M. 90.

Compositae 37.

hardy & greenhouse plants.

GRINDELIA.

stem cuttings - sprouts - half ripe: for shrubby, e.g. *Coronifolia glutinosa*.

division for perennials.

seeds for annuals & perennials -

*inuloides* B.R. 248.

*patens* G.C. 24.1.00.

*squarrosa* B.M. 1706.

JAPLOCARPHUS

GUNDELIA.

hardy perennial.

I. division

II. seed

III. *Lownfortii* 921.9.89  
919.6.97.

GUTTIERRIZIA.

hardy annual

IV. seed

III. *Enthamiae* 912.8.99.

*gymnospermoides* B.M. 5155.

GYMNOLOMIA.

hardy ann & perennial

I. division

II. seed

III. *multiflora* 930.9.82. / *uniseriatis* (annual) 91.1.9.00  
*Porteri* 923.2.78 = *Gymnopsis uniseriatis*

Compositae 38

GYNURA

Stem herb. perenn.

I. stem cuttings: summer.

II. seed?

III. bicolor B.M. 5123

Sarmentosa B.M. 7244.

HELENIUM

HAPLOCARPHA

hardy + half hardy perenn.

I. stem cuttings: summer?

II. seed

III. Leichtlini 94.9.86

autumnale 922.6.95.

scaposa 917.10.96.

HAPLOPAPPUS

hardy + half hardy perenn.

I. Division

II. seed

III. croceus 98.6.01 (note).

spirulosus. B.M. 6302. 94.9.97.

HARPALIMUM

I. Division

II. seed

III. rigidum 96.9.83

917.6.99. = Helianthus

922.9.00. rigidus

913.5.99

HAZARDIA.

- I. stem cuttings: Season? (1902, 1903) 1902-06
- II. Seed. 1904-99
- III. detonsa G.C. 29.12.00.

HELENIUM.

Division.  
 Root cuttings: usually unsuccess. but the method is rapid & reliable  
 plants must not be under 2 yrs. old.

- III. stem cuttings? 1904-00
- II. Seeds also
- autumnale G.C. 8.11.02 / 25.9.97
- a. var. superbum 1.10.98
- Stem cuttings 16.9.99.
- (Plate) 1.4.99.

- a. strictum 9.9.99.
- Seed 21.10.99
- 28.10.99.
- 12.5.00.

- decapitatum 13.9.99
- bolanderi 25.8.83.
- 6.7.95.

- grandicephalum striatum 4.9.97.

- multiflorum 16.9.99
- 23.9.99.

- puniflorum 3.9.92
- 14.8.99
- = magniflorum 31.8.01.



Compositae 40.

HELENIUM. contd.

Helenium (monos. by C. Wolke, Dod) 927. 2. 86.

Helenium 91. 4. 99.

HELIANTHELLA.

hardy ann + perennial

I. Division -

II. Seed

III. quinqueversis 914. 4. 00.

HELIANTHUS.

hardy ann + perennial

I. Division

Stem cuttings in spring.

also 'eyes' like this.

(for a large no. cuttings split in half with bud to each piece.)

II. Seed

III. decapetalus 93. 9. 99.

laetiflorus 98. 10. 87.  
922. 10. 98.

lenticularis 9C. 23. 2. 01.

mollis 95. 10. 01.  
921. 9. 01.

multiflorus

- fl. pl. 927. 9. 84  
917. 11. 88.

mu. major 919. 11. 81  
98. 9. 83.

Compositae 41.

III. multiflorus maximus 95.9.91.  
910.9.98  
919.11.98.

orgyalis 919.9.96  
98.10.98

H.P. Moon (Hybrid) 920.10.00  
95.10.01.

IV. Perennial Sunflowers. 94.3.99. (P. Jentius).  
928.10.99

Annual Sunflowers. 925.96 (W. Polwain.).

Cultivation of Sunflowers 916.9.02.

Sunflower as a Field Crop 917.11.00.

Hybrid Sunflowers 918.5.01.

Helianthus Hybrid 915.10.01.

The Sunflowers. 924.1.85 (C. Wolley Dod).

Helianthus rigidus &c. 922.12.88 (C. Wolley Dod).

Hybrid Annual Sunflowers. 919.9.96.

Perennial Sunflowers. 924.8.89 (C. Wolley Dod) -

918.4.91.

915.5.94 (D. Dewar.).

III. contd. argophyllus. 96.10.83  
922.9.77)

cucumerifolius (annual) 930.8.84.  
98.3.90  
910.9.92.

922.9.83  
98.3.84  
950.7.92

HELIANTHUS Contd.

i. Daniel Dewar  
 §25.8.00  
 §10.10.03.  
 §8.10.81 }  
 §27.8.90 }  
 §1.8.03.

*rigidus* Miss Mellish. §30.6.94  
 §15.12.94.  
 §17.9.98  
 §18.8.00  
 §8.9.00.

HELIOPSIS

*rigidus* §27.9.84.  
 §8.9.88  
 §27.10.94.

HELICHRYSUM.

greenhouse mostly  
 perenn. + shrubs

- i. *diversiflorus*  
 stem cuttings in spring; side shoots
- ii. annuals by seed.

iii. *Gulielmi* §8.10.11.00.  
*maeranthia* = *Aphellexis maeranthia* §3.2.77  
 §30.3.78.

*rosmarinifolius* = *Ozotamnus rosmarinifolius*  
 (Snow Tree) §18.8.83  
 §3.11.88  
 §30.7.98  
 §20.8.98.

HELICHRYSUM, contd.

- Some African Helichrysums G.C. 4.11.07
- Three new African Helichrysums G19.4.07 (W. E. Samberton).
- The Greenhouse Cape Dorkaships G21.6.90.

HIDALGOA.

HELIOPSIS.

hardy herb. perennial

- I. Division
- II. Seed
- III. Leaves G22.3.84

- Scabra Latham's var. G26.8.96
- G19.9.96.
- G.C. 4.11.96.
- G17.10.01.
- G26.9.03.

- Scabra pitecheriana G23.9.99.
- G29.8.03
- G10.10.03.

HELIPTERUM, = Astelma

hardy ann & perennial

= Aeroclemin

- I. stem cuttings
- II. seeds from Cape of Good Hope.
- III. eximium G18.12.80 / G2.12.87.
- roseum G1.4.93.
- IV. G16.2.84 / G2.3.01.

HETEROSPERMUM.

(hardy annuals.)

I. seeds in Mass spray.

II. pinnatum  
Xanthi.HIDALGOA.

greenhouse climber.

I. stem cuttings autumn: easy the usual method.

II. seeds also

III. Wrecklii.

(bright red).

90.5.8.99.

99.11.01.

90.4.8.00.

97.12.01.

925.8.00.

922.10.04.

96.10.00.

923.3.01.

HIERACIUM.

hardy herb, perennial

I. Division for perennials.

Stem cuttings for H. fruticosum to summer.

II. seeds also.

III. aurianticum 99.10.97.Bornmulleri 90.13.9.07.subrum 929.9.00.villosum 916.7.89.

923.6.00.

98.6.01.

IV. Hawkweed 911.20.1.83 / Hieracium 929.12.94.

Compositae 45.

HUMEA.

(greenhouse biennial.)

I. stem cuttings: best of side shoots in August.

II. seeds in spring or autumn.

III. elegans. }  
          § 7.6.90.  
          § 29.8.91.  
          § 29.11.02.

(poisonous. - Burns leaves of peach-trees.)

IV. Humeas § 5.7.02.

Culture of H. elegans § 12.5.77.

Humeas affecting Peach Trees. }  
  § 29.8.03.  
  § 07.9.03  
  § 26.9.03.  
  § 17.10.03  
  § 25.6.04.

HYSTERIONICA.

half hardy perennial.  
Cool greenhouse.

I. Stem cuttings: easy: spring.

II. Best treated as annual: seed sown in heat in spring.

III. gracilis = Neja gracilis }  
  § 7.1.85  
  § 5.7.87.

pimfolia = Neja falcata § 15.12.00.

INULA.

I. Division

root. Cuttings for I. oculus Christi: glandulosa. herbs  
more certain & rapid than seedlings.

II. seeds in spring & autumn.

III. ensifolia - 1827.8.98.  
(rockery)

glandulosa - 1826.6.97

grandiflora - 1826.6.97

oculus Christi 1823.1.92  
1827.8.98.

Royleana 1828.10.98  
1830.9.07.

IV. Inula. (C. Wolley, Dod) 1829.1.92.

Inulas 1824.1.96.

A Few of the Best Inulas 1829.7.84.

Cultivated Species of Inulas  
(C. Wolley, Dod) 1829.9.82.

KAULFUSSIA.

annual

II. seed in spring.

III. amelloides. 1827.12.81.

var. kermesiana 1822.1.76.

KLEINIA.

greenhouse succ.  
hardy annuals

i. stem cuttings any season: excellent.

ii. seed?

iii. fulgens. 9.8.7.89.

Galpini. Rom. 4.3.39.

9.3.8.01.

9.5.9.03.

9.17.10.03.

repens 9.17.2.83.

LACTUCA. (Lettuce)

hardy annuals.

ii. seed in early spring in frame

in open in summer bankin.

iii. Cos varieties White Paris Core

Bath Cos

Brown Cos to

Cabbage varieties Early Paris Market

Tennis Ball

White Dutch to

LEONTOPODIUM.

hardy herb perennials.

iv. see lit.: on vegetables.

LASTHENIA.

(hardy annual)

ii. seed in spring in open: or autumn under protection.

iii. glabrata 9.4.9.86.



Compositae 45.

LAYIA

hardy annuals.

II. seed in spring.

III. elegans 911.11.82

98.7.89.

gaillardoides 90.26.7.07.

glandulosa B.M. 6856.  
91.8.85.

IV. platyglossa B.M. 3719.

annuals.

LEONTODON

hardy herb. perennials.

I. Division.

II. seed 90.6.11.97

III. sp. are all weeds  
except Croceum aurantiacum.

LEONTOPODIUM

hardy herb. perennials.

I. Division but not so good as seed.

II. seed best method: easy.

III. alpinum (The Edelweiss) see gen. article.

IV. The Edelweiss . 923.7.81.

95.6.86

97.1.91.

930.8.02.

974.10.03

930.4.04

stone herb. perenn.

Compositae 49.

LEPACHYS.

hardy herb

- I. Division -
- II. seed -
- III. columnaris 96.7.97.
- pulcherrima

LEPTOSYNE.

annuals.

- II. seed -
- III. gigantea - 929.9.00
- 95.17.11.00.
- maritima 920.11.80.99.
- 911.4.96.
- stillmanni 906.11.97
- 911.17.97.

LEUCERIA.

greenhouse herb.

- I. Division - ?
- stem cuttings?
- II. seed -
- III. runcinata = Chabrea runcinata B.M. 4116.

LIATISKUM.

stove herb, perennial

- I. Division -
- stem cuttings?
- II. seed -
- III. uniflorum - Paranephalis uniflorus B.M. 5896.

LIATRIS.

hardy or half hardy perennials

I. Division. in <sup>early</sup> spring: do not form very dense tufts so quickly as some perennials.

II. Seed: best method. refer: for *pycnostachya* - hardy annuals.

III. *borealis* Paxt. Mag. Bot. 27.

*elegans* 915.10.87.

*graminifolia* 917.3.00.

var. *dubia* 911.10.02

91.8.04

*humilis*.

*pycnostachya*. 920.10.77.

928.10.82

921.10.99.

*spicata* 90.24.9.98.

*scariosa magnifica*. 912.10.01.

IV. *Polypogon* Steud. *Liatrix* 95.10.95.

*Polypogon* Steud. *Liatrix* 98.1.81.

*Liatrix* 98.4.99.

LINDHEIMERIA.

annual -

II. Seed.

III. *texana*. 92.8.84.

Compositae 51.

LONAS.

inodora see Athanasia annua. 736. 11. 87.

MADIA.

hardy annuals.

ii. Seeds in spring in gentle heat.

iii. elegans Bm. 3548.  
G.C. 25. 7. 74.

MARSHALLIA.

half-hardy herb.

i. Division in spring.

ii. seeds.

iii. Caespitosa 727. 8. 81.  
73. 9. 81.

MATRICARIA.

hardy ann. & perenn.

i. Division.  
Stem cutting: young shoots spring.

ii. seeds.

iii. eximia grandiflora 730. 3. 72.

inodora 727. 8. 81.

in. fl. pl. 723. 9. 82  
711. 8. 83

720. 10. 88

Compositae 82.

MELAMPIDIUM.

hardy annuals.

i. seed.

iii. ovalifolium.

- divaricatum.

ANTANOA

MICROGLOSSA.

hardy shrub.

i. stem cuttings?

ii. seed also.

iii. albescens Bou. 6672.

♀ 20.7.89

♀ 20.8.04

MOSCHANIA

MICROSERIS.

hardy annual.

ii. seeds in spring.

iii. Lindleyi = Calais Lindleyi.

MIKANIA.

greenhouse climber

i. stem cuttings. half ripe apical shoots  
also "eyes".

ii. seeds.

iii. glomerata 31.1.80.

Scandens 19.9.96.

Scand. variegata 26.5.77

14.9.78.

MONOLOPIA.

hardy annual

i. seed

iii. major Bm 3839.

MONTANOA

Cool greenhouse shrubs

i. stem cutting in autumn.

ii. seeds: spring.

iii. bipinnatifida Gc. 8.72.

heracleifolia Gc. 18.2.99.

mollissima

MOSCHANIA

hardy annuals

ii. seeds in spring: slight heat.

iii. pinnatifida BR. 1864.

MULGEDIUM.

hardy herb.

rocky

i. division in spring

ii. seeds in spring.

iii. albanum = racemosa Gc. 17.9.98.

caeciliae folium Gc. 18.7.99.

DONTOSPERMUM

hardy herb

Compositae 54.

MUTISIA

hardy  
Flora Climbers

- I. stem cuttings: side shoots best see 13.9.84.
- II. suckers also
- III. seed?

III. <u>decurrens</u>	913.9.84.	917.8.01.
(hardy)	913.7.95	97.9.01.
	98.10.98.	920.8.04
	924.2.00	920.2.4.04.
	917.3.00	
	97.4.00.	

brevifolia to 911.10.84.

Clematis 927.7.89

illicifolia  
(greenhouse) -

- IV. Mutisia (decurrens) 922.12.83.
- The Mutisia 95.8.76.

NEVA

half-hardy herb. Compos.

- I. division
- II. seed
- III. gracilis.

ODONTOSPERMUM

hardy herbs

- I. stem cuttings: division?
- II. seeds
- III. mauritanicum = Asteriscus m 91.9.77.
- IV. rotundus 918.12.75.

OLDENBURGIA.

greenhouse shrub.

I. stem cuttings?  
leaves? (only 1 main branch)

II. Seed.

III. arbuscula G.C. 5.9.03  
G.C. 2.1.04.

OLEARIA.

hardy or half-hardy shrubs.

I. stem cuttings <sup>Autumn</sup> late summer in cold frame.  
half-ripe wood: not difficult.  
also young cuttings in spring.

II. seeds also in spring.

III. argophylla - 914.4.83  
919.6.86.

Forsteri G.C. 27.11.97  
917.1.03.

Gunnii = Eurybia Gunnii 93.5.84.  
927.6.89.  
925.4.03  
99.5.03.

Haastii 913.3.87,  
916.8.96.  
920.8.98.  
99.9.99  
92.3.01  
916.3.01  
920.9.02.



Compositae sb.

OLEARIA, contd

III. insignis 131.5.02 / 16.2.04.  
macrodonta 15.7.90.  
17.7.00.  
21.7.00.

mumularifolia 10.5.8.99.

nitida 19.7.04.

ramulosa 123.1.04.  
(greenhouse)

stellulata 10.19.6.97.  
10.5.10.01  
10.19.10.01.

IV. The Olearias 116.5.03.  
(S.W. Fitzherbert)

New Zealand Olearias 117.8.01.  
(C.H. Trethewell)

Daisy Trees (Olearias) 127.11.97.

ONOPORDON.

Hardy biennials

II. Seed: deep sown

III. acanthium 1.3.84.  
1.9.84.  
22.9.84.

arabicum 11.5.89.

polycephalum 17.9.04.

tauricum 19.6.97.

Compositae 57.

ONOPORDON.

The Onopordons 15.10.72.

The Cotton Thistles 17.7.94.  
(W. Goldring.)

OSTEOSPERMUM.

greenhouse evergreen

- I. stem cuttings : half ripe shoots in spring
- II. seed ?
- III. pisiferum

OTHONNA.

greenhouse plant

- I. stem cuttings for shrubby : <sup>spring 1</sup> *strumosa* e.g. *cheirifolia*.  
Layering for strong shrubby.  
Division of roots for perennials.  
Division of tubers for tuberos e.g. *tuberosa* & *balbora*

II. seed also

III. cheirifolia = *Othonopsis cheirifolia* 17.6.02.  
 16.8.90.  
 15.6.97  
 12.6.97.

*crassifolia* 18.9.77.  
 12.10.80.

*trinera* 31.12.98.

PALAEFOXIA.

ann: & perennials.

I, stem cuttings - spring  
division - spring -

II, seed.

III, Hookeriana - P.M. 5549.  
(annual) - 9.10.9.81.  
hardy.

linearis - P.M. 2137 -

PECTIS.

half. hardy annual.

II, seed.

III, angustifolia P.M. 6286.  
9.24.3.77.

PENTACHAETA.

Hardy herb.

I, division?

II, seed.

III, aurea. 9.12.7.84.

PEREXIA.

annual.

II, seed.

III, montana

Sonchifolia 9.28.3.96.

viscosa = Homoianthus viscosus P.M. 5401.

Compositae Sq.

TETASITES.

hardy perennials

= *Jussilago*

I. Division

II. Seed?

III. alpina. S10.12.87.

fragrans. S19.3.81

(Winter Heliotrope) S25.3.82.

= *T. fragrans*. S28.2.85.  
S18.1.02. 90.30.10.97.  
S26.7.02.

hardy annual

IV. Common / Sweet, scented Coltsfoot S3.2.83.

PHOENOCOMA.

shrub

greenhouse & hardy  
fence.

I. Stem cuttings: tips of half-ripe shoots summer.

II. Seed?

III. prolifera. S17.12.87.

p. Barnesii S9.7.98.

PODACHAENIUM.

shrub.

I. Stem cuttings: ripe wood. summer.

II. Seed

III. ardium.

emiers = *Laminanda em.* S20.4.78.

Compositae bo.

PODOLEPIS.

acum. perenn 78 Wund

I. stem cuttings spring.  
Division e.g. *P. gracilis* -

II. Seed for animals e.g. *acuminata*  
*aristata*.

III. *acuminata* B.M. 956.  
*gracilis* B.M. 2904.

PULICARIA.

PODOTHECA.

hardy annual.

II. seed -

III. *graphaliodes* B.M. 3920.

RHODANTHE.

POLYMNIA.

greenhouse & hardy  
perenn.

I. Division.  
stem cuttings?

II. seed / best method.

III. *grandis* 110.10.74.  
*pyramidalis*.

PRENANTHES.

herb. & shrubs  
greenhouse.

I. stem cuttings: summer.

II. seed.

III. (*arborescens* -  
*alba* B.M. 1079.  
*sinuata*

Compositae bl. A.

PROUSTIA

hardy herbaceous  
greenhouse climber

I. stem cuttings: summer.

II. seed.

III. pyrifolia Bu. 5489.

Sc. 20.8.98.

local 926.9.98  
California 921.11.01.

PULICARIA

hardy herb. perennials

I. division in spring.

II. seeds.

III. odora = Inula odora.

RHODANTHE

greenhouse annual

II. seed in spring or autumn.

III. alba.

maculata (hardy)

Mauglesii Sc. 19.2.76.

Sc. 28.6.83.

Sc. 25.6.87.

Sc. 3.6.93.

Sc. 11.7.96.

IV. Rhodanthes Sc. 30.8.79.

Rhodanthes for the Garden Sc. 14.7.94.

Rhodanthes in Pots Sc. 7.5.92.

Sc. 18.7.99.

Overlasting Flowers (The Rhodanthes) Sc. 30.12.71.

RUDBECKIA.

hardy herb. perennials

= OBELISCARIA -  
= LEPACHYS.

I. Division in spring.

II. Seed in early spring.

III. Conspicua ♂ 15.3.02  
♀ 5.4.02  
♀ 5.7.02.  
fulgida ♀c. 3.11.00  
♀ 8.11.02  
♀ 22.10.04.

bicolor ♂ 24.9.98  
♀ c. 10.9.98,  
California ♀ 21.12.01.

grandiflora ♀c. 17.11.00.

herba ♂ 16.10.80 -  
(Black eyed Susan)

laciniata fl. pl. ♂ 8.3.89. ♀ 19.8.99.  
(Golden Glow). ♀ 3.10.96. ♀ 26.8.99.  
♀ 21.11.96. ♀ 13.12.02.  
♀ 18.9.97.

maxima ♂ 25.10.79  
♀ 4.10.84.

nitida ♀ 31.8.95.  
♀ 8.11.02.

Newmanni ♀ 12.12.80  
♀ c. 13.2.97.

occidentalis ♂ 5.10.95  
♀ 12.10.95.

pulcherrima ♂ 30.9.93.

purpurea ♂ 17.9.87 / ♀ 29.8.91.  
♀ 21.9.89

Compositae 63.

- i. pinnata. 930.3.97.
- 924.10.03.
- 922.10.04.

(hairy evergreen  
with young foliage)

Speciosa 95.10.01.

= Newmanni.

Subtomentosa 970.10.00  
924.10.03

tomentosa 924.9.98.

- 10. Coneflowers. 929.4.93 (D. Dewar)
- 915.6.95 (C. Wells, Dod)
- 929.2.96.
- Large Rudbeckias 923.3.95.

(hairy trailing annual)

SALICIA.

Stove Coes green formers.  
hairy herb perennial

- i. stem cultrip: fine side shoots.
- ii. seed?
- iii. scandens B.M. 2062.

purshella B.M. 2062  
the ... 711.12.75



SANTOLINA.

(Hardy evergreens.  
silvery green foliage)

i. stem cuttings. in spring, or better, autumn. 99.6.77.

ii. Seed?

iii. alpina (carpet bedding). 93.8.78.

Chamaecyparissus.

incana (for edging.) 913.9.73.

(Cotton Lavender) 93.8.78.

iv. Propagating Santolinas.

SANVITALIA.

hardy trailing annuals

ii. seeds in spring.

iii. procumbens (Trailing Sunflower)

919.3.84.

915.10.84.

919.3.98

920.6.03.

SAUSSUREA.

hardy herb. perennials

i. Division in spring.

ii. seeds in spring.

iii. pulchella Bm. 2589.

iv. The Saussureas 911.12.75.

Compositae 65.

SCHOE NIA.

has pseudovase animal.  
near forest shade

- ii. seeds.
- iii. *castriana* (Kew) <sup>at</sup> Bm. 4560. 7706.  
923.6.88.

SCOLYMUS.

hardy perennial.

- i. Division in spring.  
root, cuttings? (roots of *hispanicus* eaten as vegetable).
- ii. seeds in spring.
- iii. *grandiflorus* 917.7.97. (Golden Throat.)  
*hispanicus* 928.7.83.  
918.7.85.

SCORZONERA.

hardy herbaceous

- i. Division.  
root, cuttings (see Seibel re).
- ii. seeds.
- iii. *hispanica* (edible roots.)  
*purpurea* Bm. 2796. G.C. 25.2.99.

Compositae 66.

SENECIO

hardy & greenhouse -  
ann: perenn shrubs.

I. Stem cuttings: easy in spring.

Root cuttings for macrophylla. G.C. 9.7.04.

pulegius - 9.10.78  
9.26.8.93.

division, for perennials.

II. seeds for annuals & perennials.

III. auriculatus 9.24.3.00  
9.3.3.00.

adonidifolius 9.12.10.03.

Bleuorum 9.27.9.02  
9.13.8.03.

Compactus 9.28.7.94  
9.5.9.96.

Doronicum 9.20.4.95.  
9.25.6.98.

elegans pomponius 9.17.9.84.

Gaepini 9.12.9.03.

grandiflorus 9.10.2.94.  
9.21.2.03.

9.23.1.04.

japonicus - 9.12.8.82

macroglossa 9.12.8.84.

(Cape Joy 9.10.12.98

Kerman Joy) 9.24.1.03.

hardy perennials

Compositae 67.

SIERRESBECKIA

(hardy annual)

SENECIO contd.

macrophyllum = Ligularia macrophylla 930.10.97  
G.C. 9.7.04.

magnificus B.M. 7803 -

STREPTOM

919.1.01.

915.6.01.

(hardy herb)

Division

platanifolius G.C. 4.1.96.

pulcher 920.11.80.

910.3.94.

915.7.96.

conatum 915.1.98.

91.10.98.

caeniata 928.11.03.

speciosus 914.8.80.

94.6.81.

kerabunthiacum 929.8.91.

(poor plant)

if more suitable for wild than cultivated garden

Senecio

(Allies of the Cineraria) G.C. 11.4.96.

STILYBUM

hardy biennial

SERRATULA

hardy perennials

i. Division

ii. seed

iii. fructoria (Common Sawwort.)

Compositae 68.

SIEGESBECKIA.

(hardy annuals)

ii. seed in gentle heat in April.

iii. orientalis B.R. 1061.

SILPHIUM.

(hardy herb.)

i. Division  
root cuttings see 18.8.91.  
stem cuttings ?

ii. seeds.

iii. connatum 9 20.7.78.

laciniatum 913.9.90

927.8.96

91.8.04

terebinthaceum 129.8.91.

(Roin plant)

Sp. more suitable for wild than cultivated garden  
except laciniatum.

SILYBUM.

hardy biennial

ii. seeds

iii. marianum 18.9.94.

SPHENOCYNE

Compositae 69.

SOLIDAGO.

hardy herb. perennials.

I, division in spring.

II, seeds in spring.

III, Caesia G.C. 19.10.01.

Californica 725.11.93.

nana 74.17.97.

remoralis / prostrata 711.11.93.

rigida 770.12.73.

724.9.81.

shortii 717.1.03.

G.C. 21.5.04.

IV, American Golden Rods 728.12.01.

Golden Rods. 727.1.81.

Wisconsin Golden Rods. 71.12.84.

SONCHUS.

hardy ann & perenn.

I, Division  
stem cuttings.

II, seeds.

III, elegantissimus 717.6.76.  
(table plant)

gummifer Bot. 5219.

SPHENOCYNE

ann & shrubs.

I, Division  
stem cuttings.

II, seed for annuals e.g. speciosa.

III, Chrysantha (shrub) 731.3.83 / 714.4.83  
obovata (annual) Bot. Fort. Max Bot 77.

Compositae 40.

SPIRANTHES.

mostly annuals.

II. Seed.

III. Oleracea.

STEVIA.

greenhouse perennials.  
shrubby.

I. stem cuttings for shrubby.  
division for herbaceous.

II. Seed.

III. glutinosa 85.3.81.

STOKESIA.

half-hardy evergreen

I. stem cuttings

II. division in spring

root cuttings 928.10.98

II. Seed?

III. 930.10.80. Cyanea.

910.10.91

914.11.91

917.11.91

927.6.92

916.12.99

TAGETES.

hardy ann. & perennial.  
shrubby.

I. stem cuttings.  
division

II. Seed in gentle heat in spring.

Compositae 71.

TAGETES contd.

III. Signata pumila . 928.10.82  
(shrub) . 975.11.82  
916.17.82.

IV. The Marigolds . 920.6.96 (W. Goldmire.)  
(Tagetes)

Marigolds - 912.11.84.  
96.8.92.

The French Marigolds - 929.8.74.

French + African Marigolds 927.9.84,  
931.10.91.

Dwarf Marigolds - 916.9.76.

Marigolds as Autumn Flower Borders 914.9.78.

Bedding Forms of Tagetes 920.1.83.

TANACETUM.

hardy herb. perennial

I. stem cuttings in summer -  
division in spring

II. seeds

III. argenteum 919.12.99.



TARCHONANTHUS

greenhouse evergreen

- I. stem cuttings: season?
- II. layers, Lod. Bot. no 382

- III. camphoratus Bot. 389.

TRAGOPOGON

hardy biennial

TELEKIA

hardy herb.

- II. freely from seed

- III. speciosa = Bup thalium cordifolium Pom. 3466.

IRIDI 9.25.8.83  
9.8.8.96

annual & perennial

TETRAGONOTHECA

hardy perennial

- I. Division (1) 9.14.17.01

- II. seed

- III. Helianthoides

IRIXIS

perennial & shrub

TITHONIA

store of annuals

- II. seeds in heat

- III. ta ovata Pom. 3901.

Taget. flora Bot. 591.

Compositae 74.

LUSSILAGO see Petasites.

URCINIA Gärtn.

annual.

II. Seeds in spray & autumn.  
for pulchra & var.

III. anthemoides B.M. 544.

pulchra 920.8.89.  
922.9.93  
923.9.93.

p.var. aurea 926.4.90.

VENIDIUM.

annuals,  
mostly hardy.

I. Division for perennials  
stem cutting

II. Seeds. Calendulaceum may also be treated as annual,  
(perenn.)

III. Calendulaceum 910.6.82  
911.9.83  
916.6.94  
917.8.95

fulgax = calendulaceum 920.7.89.

Speciosum 916.7.89

Wylei 919.9.85.

IV. Veridium 923.6.88.

Compositae 75.

VEISESINA.

Stove or greenhouse perennial

- I. Division
- II. Seed
- III. *calata* Pom. 1716  
*pinnatifida*

VERNONIA.

Hardy greenhouse + stove

- I. stem cuttings for tender sp. e.g. *scorpioides*.  
Young tops:

Division

- II. Seeds for hardy: *taunala*.

- III. *centriflora* (stove) 920.6.74.  
*novboracensis* 918.10.73.  
*pinifolia* = *webbia pinifolia* Pom. 5412  
*podocoma* Blm. 7255.  
*scorpioides* (stove) 91.9.00  
92.18.8.00.

CANTHISPIA

hardy annual

VILLANOVA.

hardy annual.

- II. Seed
- III. *chrysanthemoides* 929.10.81

Compositae 76.

XERANTHEMUM

VITTADENIA.

hardy perennial  
rock work

i Cultiv. season? division

ii seed. also

iii triloba 8.22.10.81

9.1.11.02

WALTZIA.

hardy? annuals

ii Seeds

iii Corymbosa B.M. 5443

Steeziana B.M. 5342

(Poedastips)

WYETHIA.

hardy perennials

i Division

ii seed

iii mollis B.M. 7772

sp. 8.11.7.91

XANTHISMA.

hardy annual

ii seed

iii texana (rare) B.M. 6275

8.22.10.87 (note)

Compositae 77.

XERANTHEMUM.

perenn. <sup>annuals.</sup>

- General note on the Compositae.
- I Division 9
  - II Connaraceae are a comparatively small order widely distributed in Asia, America, parts of Africa, &c. and allied to the Leguminosae and other orders of the Rosales cohort. The order is of little importance as the plants mostly of woody growth are not often met with in cultivation. The order includes Connarus sp. used for "overlashing".

IV Annual Xeranthemum 914-8-97. mainly vegetatively by propagation of these stems.

ZINNIA.

Annuals.

II Seeds in heat. planted out in summer.

III elegans + var. 914-9-89.

Darwinii 922-1-76.

linearis

mexicana

multiflora

haageana &c

IV Zinnias 95-3-81 94-3-99  
 927-3-81 917-8-01.  
 93-5-90  
 920-8-92  
 911-12-95.

Double Zinnias 929-9-88.

Zinnias - Single / double 923-11-78.

Zinnias for Bedding 910-10-85.

French Pompon Zinnias 918-9-86  
 925-9-86.

Zinnias best in large masses

911-4-85

925-4-85

General note on the Connaraceae.

The Connaraceae are an comparatively small order widely distributed in Asia America parts of Africa &c. and allied to the Leguminosae and other members of the Rosales cohort. The order is of little or no horticultural importance as the plants mostly of woody growth are not often met with in cultivation. The order includes Connarus Cnestis and Rourea.

Propagation of these stove shrubs is effected mainly vegetatively by means of stem cuttings. The leaves are simple and leathery and would not afford a practicable means of reproduction. Roots have not been investigated for their power of regeneration.

Connaraceae. 1.

CNESTIS.

Shrub evergreen

I. stem cuttings: ripe: spring.

II. ?

III. glabra.

CONNARUS.

Shrub evergreen  
Shrub.

I. Cuttings: firm: spring.

II.

III. nitidus.

fubescens.

IV.

ROURĒA.

Shrub shrub.

I. stem cuttings: firm shoots spring.

II. -

III. fubescens.

## General note on Convolvulaceae

The Convolvulaceae are an order found in all parts of the world except the coldest regions. It is closely allied to the Solanaceae and Boraginaceae. With one or two exceptions the members of the Convolvulaceae are so rampant in their habit that once established it becomes difficult to eradicate them and growth has in most cases to be checked rather than encouraged. Convolvulus and Calystegia are typical examples of the weedy habit in this order. The Convolvulaceae however furnish many beautiful climbers hardy and tender. Especially beautiful are species of Ipomaea, Convolvulus, Pharbitis hispida, and a species of even the little parasite <sup>Cuscuta</sup> e.g. reflexa is much cultivated for the sake of its pretty flowers, on Pelargonium &c. The other species <sup>C.</sup> Epilinum, <sup>C.</sup> Trifolium, are however regarded as field pests.

Increase by seed is not usually employed since vegetation propagation is so easily effected. Little work has been done in hybridizing the Convolvuluses.

Vegetative propagation is that most commonly employed. Cuttings of ripe and half ripe shoots in spring strike easily. Rhizome cuttings are possible for Con. Scammonia, Exogonium Purga.

Leaf cuttings are not usually employed as a mode of increase. Leaves of Convolvulus arvensis and tricolor were tried by Stingl, (but



without success. In many species the leaves are reduced to mere scales or thorns .

Root cuttings strike with ease in this order (compare Boragineae ) especially among the Bindweeds (Calystegias ). Many of the Roots are fleshy as in I. Batatas.

Grafting is the only other method commonly used. Species of <sup>b</sup>Iomaea<sub>1</sub> especially I. Horsfalliae on roots of Batatas paniculata.

ARGYREIA.

stem or greenhouse  
evergreen climber

i. stem cuttings : half-life : sprout.

ii.

iii. Cymosa.  
hirsuta  
splendens.

CALYSTEGIA.

hardy decid. climber

i. very easy cultivation . usually a weed

Division in sprout . . e.g. C. pubescens fl. pl.

root, cuttings . also increase easily .

stem cuttings :

ii. Seed also easily .

iii. grandiflora  
= sylvatica .

reniformis .

pubescens fl. pl. 17.6.02 14.4.91.

11.8.04

15.10.04 .

Sepium

iv. Greater Bindweed or Hedge Broom 17.12.96 .

Greater Bindweed 19.3.89 .

Convolvulaceae.  
CONVOLVULUS.

hardy & greenhouse  
climbers

I. Division, slow for *C. scammonia*.

Stem cuttings: young shoots easy: - species -  
Q in August e.g. mauritanicus.

II. Seeds for annuals.  
sometimes do not ripen *C. althaeoides*, *scammonia* etc.

- III. *althaeoides*.
- Cantabricus*.
- creosum*.
- grandiflorus*.
- mauritanicus*.
- scammonia*.
- soldanella*.
- tricolor*.

IV. Choice Hardy Perennials 917.1.91.

Convolvulus 917.3.03.

CUSCATA.

parasitic twiner

I. Smallest! Cut will grow if attached to plant.

II. Seed - embryo will grow if attached to host.  
natural mode of increase -

III. *europaea*.  
*reflexa*. (Indian Dodder) 910.12.81 / 912.1.01.

Convolvulaceae 3.

## CUSCUTA. contd.

IV. The Dodders 30.8.79.

Destruction de la Lusente Le Jardin 1897 p.174.

## EVOLVULUS.

hardy + slow frailer

I. division 1  
stem cuttings. (for stoin.)

II. seeds for annuals.

III. hirsutus  
latifolius.

## FALKIA.

I. easy stem cuttings + sprouting 1 autumn.

II. - ?

III. repens.

IV. 8 Falkias 16.2.01.

Convolvulaceae f.

IPOMAEA.

hardy, store of green house  
climbers.

I. stem cuttings: J. Horsfalliae - ordinarily considered difficult but  
success may be obtained by proper choice of cuttings.  
ripe wood: spruce; see §24.5.90 to.

Grafting: on to roots of Batatas paniculata  
(J. digitata) -  
in May & June.

II. Seed best for annuals -

J. batatas + J. horsfalliae do not usually produce seed under  
cultivation, but others easily from seed or cuttings.

III. alataipes.

bona-nox.

digitata

Horsfalliae see §18.8.83 + §24.5.90 for Propagation.

leari also §28.11.74 / §19.3.81  
§12.12.74 / §3.12.81.

purpurea.

quamoclit

Thomsoniana.

IV. Ipomaeas (monog. W. Dallwitz) §18.5.01.

———— (monog. T. Baines) §1.9.83.

Ipomaeas §9.1.86 / §20.8.87 / §10.9.87 / §2.1.04

Garden Ipomaeas §23.8.85.

Ipomaeas out of Doors §12.9.85

Convolvulaceae S.

JAQUEMONTIA.

Emergreen store of  
Jeanhouse Farms

I. Cutting: side shoot sprouting easy

II. Imported seeds e.g. azurea.

III. azurea.  
Canadensis.  
violacea.

IV. 931.17.81. Jaquemontia

NOLANA.

hardy trailing annual

I. seeds: in spring in heat.

III. atricifolia 930.9.93.  
paradoxa violacea  
prostrata

PORANA.

store Emergreen Farms

I. stem cuttings?

II. ?

III. paniculata 917.5.02.  
volubilis.

General note on the Coriariaceae.

*found in the north + south hemisphere*  
The Coriariaceae is a small order of shrubs, <sub>λ</sub> allied to the Empetraceae and Sapindaceae. Beyond the genus Coriaria (q.v.) the plants contained in the order are rarely met with. The Coriarias are half-hardy shrubs, slender and graceful in habit, and are characterised by the fruit-like appearance of the persistent thickened petals. *The flowers are small + greenish + are as well as the berries, poisonous.*  
*For Propagation see under Coriaria.*

Coriariaeae. 1.

CORIARIA.

leaf hardy shrub

I. stem cutting.  
Suckers.

II. Seeds also - (poisonous).

III. Myrsinifolia.

nepalensis - 9.18.10.79  
ruscifolia - 9.13.12.79  
= sarmentosa - 9.26.9.03.

thymifolia - 9.13.7.72.  
(black ink obtained from this species.)

terminalis see G.C. 24.10.03.

IV. Lemnivalca Coriariaeae 9.24.10.03.



General note on Cornacéae.

The Cornaceae are a small order allied to the Araliaceae found in America and Africa but most highly developed in Asia. The plants contained in the order are woody shrubs the only herbaceous <sup>plants</sup> being ~~herbaceous~~ Cornus canadensis and C. <sup>s</sup> Duccisa. Though a small order, the Cornaceae <sup>is</sup> ~~are~~ important in horticulture supplying as it does many hardy flowering shrubs, Cornus mas, Garrya elliptica, Aucubas.. The greatest favourites are perhaps the various species of Cornus especially Cornus florida with its <sup>e</sup> ~~seem~~ing flowers of large showy bracts. The flowers of the Cornaceae are usually small and inconspicuous and the various plants are more grown for their ornamental often variegated foliage in spring and summer and for the brilliant colour of the dying leaves in winter autumn (Cornus sp. Aucuba Nyssa &c. ) Aucuba is one of the commonest of garden shrubs though <sup>not often</sup> ~~is~~ it to be seen with the additional ornament of its red berries (see under Aucuba )

On the whole the plants in the order are slowgrowing. Seed <sup>es</sup> ~~do~~ not always ripen in this country mainly because ~~monoecious~~ plants of one sex only are planted together. Seed must therefore be imported. In most genera germination is slow. Benthamia fragifera, and Garrya elliptica are exceptions for seed is freely produced and easily germinated.

Vegetative propagation is more commonly employed . Layering in autumn is perhaps the quickest method.

Grafting is used for varieties sports or variegated.

Division of the roots as in most herbaceous plants is employed with advantage where there are tufts of roots obtainable as in vars. of Cornus (canadensis ).

Stem cuttings of young or half ripe wood in a cool frame succeed for nearly all genera. Leaf cuttings are somewhat impracticable from their nature. They are possible but are slow in being formed.

<sup>(1)</sup> Lindemuth tried cuttings of *Aucuba japonica* in Aug.. Roots were obtained produced after 36 days but no shoot were formed. Root cuttings have not been investigated

(1) Lindemuth Gartenflora 52.

Comaceae 1.

## ALANGIUM.

Stem evergreen

- I. Stem cuttings easy.  
Root cuttings?: nodulous.
- II. Flowers rarely:
- III. Decapetalum B.M. 4063.  
Hexapetalum

## AUCUBA.

hardy shrub.

- I. stem cuttings Oct. till Feb. 1925-10-84.  
or old pieces with 'eyes' in gentle heat.  
layering, Aug. or Sept. after fertilization. Quickest method.  
grafting, on common Aucuba.  
(Make on few plants to obtain berries.) 11-8-85.
- II. Seeds sown as soon as ripe. 11-4-3-74.
- III. japonica + vars. see gen. arb.  
Variegata
- IV. Aucubas  
927.3.75  
912.2.76  
93.5.79  
912.1.95.  
9e. 12.4.02  
910.5.07.

Cornaceae ?

BENTHAMIA  
= CORNUS.

half hardy shrub

I. layers in autumn.  
stem cuttings ?

II. easy germination of seeds.

III. fragifera 979.3.84  
(The Strawberry tree.) 94.7.88.  
= Cornus 91.11.90  
Capitata. 98.11.90  
927.8.04  
9 15.10.04

CORNUS.

hardy shrubs.

I. stem cuttings: young shoots for sibirica.  
Suckers in autumn.

layering - for Benth. fragifera = C. capitata.  
(but need the usual method.)

division for C. canadensis etc.

II. seeds: imported if not obtainable. C. florida etc.

III. canadensis 926.12.91.  
923.9.93.

Capitata see Benthamia fragifera.  
florida 918.2.87 / 912.3.98.  
mas 916.4.89 Kousa 923.7.04  
926.3.04

mascula.

sibirica 929.1.98

suecica 98.4.99.

General note on the Coriariaceae.

The Coriariaceae is a small order of shrubs, <sup>found in the north + south hemisphere</sup> allied to the Empetraceae and Sapindaceae. Beyond the genus Coriaria (q.v.) the plants contained in the order are rarely met with. The Coriarias are half-hardy shrubs, slender and graceful in habit, and are characterised by the fruit-like appearance of the persistent thickened petals. The flowers are small + greenish + are as well as the berries, poisonous.

For Propagation see under Coriaria.

Coriariaeae. 1.

CORIARIA.

half hardy shrub

I. stem cutting -  
suckers.

II. seeds also - (poisonous) -

III. Myrsinifolia.

nepalensis - 9.18.10.79  
ruscifolia - 9.13.10.79  
= sarmentosa - 9.26.9.03.

thymifolia - 9.13.7.77.  
(black ink obtained from this species.)

terminalis see G.C. 24.10.03 -

IV. Lemniculcais Coriariaeae G.C. 24.10.03,

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<sup>(1)</sup> Lindemuth tried cuttings of *Aucuba japonica* in Aug.. Roots were obtained produced after 36 days but no shoot were formed. Root cuttings have not been investigated

(1) Lindemuth Gartenflora 52.



ALANGIUM.

Stone evergreen.

- I. Stem cuttings easy.  
Root cuttings?: nodulous.
- II. Flowers rarely:
- III. Decapetalum      F&M. 4063.  
Hexapetalum

AUCUBA.

hardy shrub.

- I. stem cuttings Oct. till Feb. 1925-10-84.  
or old pieces with 'eye' in gentle heat.  
layering, Aug. or Sept. after fertilization. Quickest method.  
grafting, on common Aucuba.  
(Make on few plants to obtain berries.) 1911-8-85.
- II. Seeds sown as soon as ripe. 1914-3-74.
- III. japonica + vars. see journals.  
variegata -
- IV. Aucubas  
1927-3-75  
1912-2-76  
1913-5-79  
1912-1-95.  
1912-4-02  
1910-5-02.

Cornaceae ?

BENTHAMIA  
= CORNUS.

half hardy shrub

I. layers in autumn.  
stem cuttings ?

II. easy germination of seeds.

III. fragifera 929.3.84  
(The Strawberry tree.) 94.7.88.  
= Cornus 91.11.90  
capitata. 98.11.90  
927.8.04  
9 15.10.04

CORNUS.

hardy shrubs.

I. stem cuttings: young shoots for sibirica.  
Suckers in autumn.

layering - for Benth. fragifera = C. capitata.  
(but see the usual method.)

division for C. canadensis etc.

II. seeds: imported if not obtainable. C. florida etc.

III. canadensis 926.12.91.  
923.9.93.

capitata see Benthamia fragifera.  
florida 918.2.87 / 912.3.98.  
mas 916.4.89 Kousa 923.7.04  
926.3.04

mascula.

sibirica 929.1.98

suecica 98.4.99.

Cornaceae 3.

CORNUS contd.

Cornels or Dogwoods S 25.7.93.

Japanese Dogwoods S 8.7.93  
or Cornels S 7.9.01.

Red Dogwoods S 14.12.95.

American Dogwood S 13.2.86.  
(C. florida)

COROKIA.

half-hardy or hardy  
evergreen shrub.

I. stem cuttings <sup>in</sup>  
layers in autumn.

II. ?

III. buddleioides  
Coloneaster S 4.4.91.

DAUIDIA.

I. ?

II. seed see S.C. 4.7.03  
S.C. 11.7.03

III. ?

IV. ?

SARRYA

hardy shrub

I. cuttings: half-ripe Aug.  
layers. spring or autumn.

II. Seed the usual method.

III. elliptica 9 15. 5. 75.  
9 21. 3. 91  
9 10. 2. 94  
9 10. 4. 97.  
9 29. 4. 99.

Jaydeniana.  
macrophylla.  
Thureti.

GRISELINA

I. stem cuttings - half-ripe shoots summer. 9 18. 2. 91.  
layers. 9 28. 4. 94.

grafting.

III. littoralis. 9 14. 7. 91.

Lucida.  
macrophylla 9 21. 2. 74.

IV. The Griselinas. 9 28. 4. 94.

Cornaceae S.

NYSSA.

hardy tree.

Layers in autumn.

seed from America.

Sylvatica (Pupelo Tree) 186. 11. 98.

1 other sp. all highly ornamental.

## General note on Crassulaceae.

The order Crassulaceae is composed mainly of succulent plants. The species Tillaea is found all over the world. They are allied to the Saxifragaceae and are strikingly similar in habit and structure, except the genus Penthorum which is sometimes included on that account in the Saxifragaceae. The plants are mostly perennial. Annuals are not common (Sedum, Crassula, Grammanthes) but shrubby forms occur. Many of the plants in cultivation are objects of beauty on account of their brightly coloured flowers and symmetrical or whorled arrangement of their leaves.

Propagation is easily effected by seed which is sometimes freely produced. Most hybridisation work has been done with regard to the Echeverias (See Burbidge, also work of M. Deleuil on hybrid Echeverias)

On the whole, vegetative methods of increase are more common. In nature the plants lend themselves well to this mode of reproduction, for they are often characterised by creeping rhizomes, by runners forming new rosettes, by fleshy leaves easily detached, by the formation of adventitious <sup>buds</sup>, and by other vegetative reproductive organs. (See introduction). Vegetative propagation is therefore easily effected in practice..

Stem cuttings strike with great ease. They must be dried before insertion after the manner of other succulants (cp Cactaceae etc.)

Leaf cuttings are somewhat slow may be employed for every plant in the order. In some cases the leaves are layered and detached

after roots have been formed, but usually this is not necessary. The slight attachment of the fleshy leaves to the plant of Sedum, Cotyledon, etc. show that propagation by means of these organs is a natural process. The roots of many Crassulaceae are unsuited for cuttings, being thin, and adapted mainly for fixing the plant in the soil. Root cuttings have not been investigated. Offsets are freely produced in the rosette genera, <sup>e.g.</sup> ~~enigm~~ Sempervivum, and may be induced by destruction of the terminal growth. These offsets afford a ready means of vegetative propagation. Grafting is employed to some extent among the Crassulaceae, e.g. Sempervivum and Echeveria.

See D. J. Rose, Crassulaceae, U.S.A. Department of Agriculture.

ALTAMIRANOA.

I. stem cuttings.  
leaf cuttings

II.

III.

IV.

BRYOPHYLLUM.

I. leaf cuttings - usual method - (see Chap. II.)  
stem cuttings. also easy.

II. ?

III. calycinum (leaf of life.) 915.4.76 / 917.11.91.  
Crenatum 917.9.03.

IV. Sebel's Pinleting.

COTYLEDON.

I. leaf cuttings  
stem cuttings.  
offsets

II. They also very easily.

III. fulgens. 917.2.83.

mamillaris 915.8.93.



Crassulaceae ?  
COTYLEDON. contd.

Purpusii.

hamosissimus 927.9.84.  
teretifolia.

## CRASSULA.

= Kalosanthes.

I. leaf cutting:  
stem cuttings easy.

II. seed also.

III. alpestris 96.9.79.

Cocconia 927.10.74 915.10.04.  
914.6.84

Conjesta 90.6.9.02

Conjuncta 90.15.2.02

Decipiens 90.3.0.03.

jasminea 911.8.88.

lactea 99.1.86  
922.12.88.

portulacaeae

profusa -

Sedifolia 90.13.12.02.

tomentosa 90.29.8.03.

IV. Crassula 923.7.81.

91.4.82

90.12.82

ECHEVERIA.

- I. Stem Cuttings -
- Leaf Cuttings -
- Effects in E. retusa .
- II. seed but slower than cuttings .

- III. glauc metallica -
- retusa §18.7.88 -
- §18.1.90.
- Secunda glauca §19.7.84 .

- IV. Scheveria's §4.7.74 .
- §20.6.74 .
- Scheveria for winter Flowering .

GRAMMATHE'S.

half, hardy annual

- II. raised from seed -
- III. chloroeflora B.M. 4607 -
- gentianoides §10.7.80
- §17.6.82 .

Crasulaceae f.

# KALANCHOE.

Stem succulent evergreen

I. Leaves.

1 stem cuttings - see G.C. 29.7.04.

II. seeds also in Feb..

III. Bentii G.C. 23.6.00.

diversa -

Dyeri -

flammea G24.5.02 / G.C. 9.7.04.

Flaseri -

Kewensis (x flammea G24.5.02  
+ Bentii.) G.C. 14.6.02.

# MONANTHES.

Greenhouse succulent

I. Stem cuttings -

Division of runners.

leaf cuttings: rather small for prop.: but possible.

II. ?

III. ariostaphis (climber) G4.7.74.

muralis G5.10.72.

polyphylla

= Sempervivum monanthos -

Gasculaceae J.

Gracilaria succulent

PACHYPHYTUM.

Layering leaves. see Svb. 9.85

Leaf cuttings also.

Stem cuttings.

>

III. Gracilarium.

ROCHEA.

I. Stem cuttings.  
Leaf cuttings.

II. Seed also

III. falcata.

odoratissima

versicolor.

SEDUM.

I. leaves. left to dry then inserted in sand in full moisture 28.8.91

Division for perennials -

Stem cuttings, also easy.

II. Seeds usual method for annuals.

III. amplexicaule 94.9.78.

maximum.

Maximowiczii 919.2.81.

purpureum.

populifolium (hardy shrub)

rhodiola.

rapetore.

Sempervivoides S.C. 14.12.78  
97.4.81.

ternatum 911.6.04

trifidum 925.10.79.

telephium.

IV. Sedums 911.4.85.

Grassmaceae ?

SEMPER VIVUM.

(hardy + greenhouse material)

Stem cuttings: dried for some days before insertion

leaf cuttings

Division of offsets for hardy sp.

II ?

III arachnoidesum 9.11.7.74.  
9.9.7.92  
9.10.9.98

Hookeri

Laggeri

tortuosum

velutinum 9.9.2.11.01.

IV. Sempervivum 9.15.7.99

TILLAEA.

1-1 (1) (1) (1) (1)

## General Note on Cruciferae.

The Cruciferae are a large order attaining their highest development in the region of the Mediterranean, though some genera are found all over the world.. The alliances are close with the members of the Parietales cohort, e.g. Capparidaceae, Papaveraceae, etc. The plants in the order are mostly low-growing annuals and perennials. Shrubs rarely occur (Aethionema, Vella). The Cruciferae are of greatest importance as supplying the majority of our common vegetables, Cabbages, Cauliflowers, Turnips, Radishes, etc. But they are of value in horticulture also for providing such ornamental ~~flowe~~ and fragrant plants as the stocks and wall-flowers. There are not more freely flowering rockery plants than the Aubrietias, Alyssums, and Iberiss<sup>es in</sup> of this order.

Propagation in the Cruciferae is effected naturally and most easily in practice by means of seed. <sup>As in</sup> Like the Compositae, seed is produced abundantly and is usually perfect, so that germination is easy. Much hybridisation work has been carried out among wall-flowers, stocks, and to obtain different varieties among the vegetables. Natural hybridisation takes place in the latter so easily, e.g. cabbages, that varieties must be kept apart in order to come true.

Vegetative propagation is employed for special varieties, specially for double species, e.g. Wall-flowers. Propagation by cuttings <sup>is</sup> also found to have the advantage of producing dwarf plants, the plants from seedlings often becoming ragged, e.g. Wall-flowers. Vegetative propagation by means of special reproductive organs takes place easily in this order. Bulbils are produced in Deñtaria bulbifera,<sup>(1)</sup> and adventitious buds are found on the leaves of Cardamine,<sup>(2)</sup> Nasturtium. Such plants are therefore easily reproduced from detached leaves. (See Chap. 2) Root cuttings have been investigated and found successful Morisia, etc. Other vegetative methods, grafting etc., are not usually employed in this order.

(1) see Fig. Introduction Part I.

(2) see Fig. Chap. III. Part I.



Cruciferae !

AETHIONEMA R.Br.

herbs, (ann. + perenn)  
✓ subshrubs.

I. stem Cuttings for shrubby kinds e.g. *Cordifolium* See 921.6.84.

II. seeds in spray for herbaceous.

III. *Cordifolium* = *Iberis juncunda* 98.1.98.  
921.6.84.

*Cordatum* 921.7.00.

*diastrophis* 914.2.03.

*grandiflorum* 95.6.97  
99.3.01.

*puschellum* 99.7.04.

*speciosum* 920.10.99  
914.90.

IV. *Aethionemas* 922.7.76.  
919.4.84.

The *Aethionemas* 95.12.03.  
(W. Irving)

*Aethionema* 927.8.81.

The best *Aethionema* 918.1.84.

*Aethionema grandiflorum* 929.1.76.  
(W. B. Hensley)

ALYSSUM Torr.

Ann. dwarf-shrubby  
+ perennials.

I. Division for saxatile: easy prop.

Stem Cuttings: safest for less common varieties

Cruciferae 2.

ALYSSUM contd.

II. Seed in spring.

III. alpestre ♀ 5.6.86  
♂ 21.7.91.

argenteum ♀ 18.8.94.

calycinum.

corymbosum ♀ 23.6.00

foliosum ♀ 21.7.00.

gemmonense ♀ 3.6.99.

var. sphaerum.

IV. i-daeum ♀ 4.8.90

maritimum ♀ 28.10.99.

♂ 19.4.90.

♂ 4.11.99.

♂ 11.11.99.

montanum ♀ 5.6.86.

♂ 23.8.02.

podolicum = Schizoclelea podolica.

pyrenaicum. ♀ 26.5.88

♂ 7.5.92.

♂ 27.6.03.

V. saxatile fl. pl. ♀ 11.3.01.

compactum ♀ 2.6.88.

variegata ♀ 10.9.87.

Serpophyllifolium ♀ 8.6.89  
♂ 11.7.91.

VI. albidum ♀ 19.8.00.

albidum fl. pl. ♀ 19.4.81. ♀ 19.5.02. ♀ 19.6.03.

Cuciperae 3.

ARABIS. contd.

iv. Alyssums 99.10.86.

920.5.93.

920.6.03.

Alyssum (Madwort) - 93.9.81.

ANASTATICA. Linn.

Annual.

ii. Seed in spring: (by immersing dried portion of plant in water: seed pods burst then sown - best in leaf-mould  
in wet sand & clay see 92.11.96.

iii. Hierochuntica (Rose of Jericho.) P.M. 4400.

or Resurrection Plant. 99.8.73

973.9.76.

ARABIS. Linn.

Dwarf rock plants  
perennial

i. stem cuttings: summer  
division

ii. Seeds in spring & autumn.  
self-sown in petraea.

iii. albida 919.5.00.

albida flore pleno. 917.9.81. 919.5.00. 918.6.04.

Cruciferae 4.  
ARABIS, contd -

III, alpina fl. fl. 15.5.01.

Arenosa 7.5.04.

Aubrietoides 27.4.87 / G.C. 4.4.03.

blepharophylla 17.9.81.  
13.5.84.  
14.5.89.

Billardieri 20.6.03. - 15.4.96

petraea 9.7.92. Culture 1.81.

procurens 19.1.89. 30.6.99.

Other forms from bedding plants 15.5.74

Notes on some Arabis 9.5.03.

Some New Arabis 28.5.03

ARBRIETIA. Adams. (Randy trailing perennial)

I. stem cuttings - in July summer.

division in spring & autumn: usual & surest method  
of increase -

II. Seed also: sown as soon as ripe  
(many gardeners prefer seed to division, but seed does not come  
true for varieties)

III - deltoides. G.C. 12.5.00

vars. Leichtlinii.

Dr. Mules - 8.6.01.

Stenderonii

Violaceae

Beauty of Baden-Baden etc.

Cruciferae S.

IV. Aubrietia contd.

- Aubrietia 92.7.92
- 923.7.92.
- 93.11.93
- 926.5.94.
- 98.6.01.
- 920.6.03

Propagating Aubrietias 92.18.4.96.

Aubrietias: Propagation Hübner 91.1.81.

Pruning Aubrietias 924.6.99.

Aubrietias & other Spring bedding Plants 916.5.74.

Notes on some Aubrietias 92.9.5.03.

Some New Aubrietias 928.5.03.

Cruciferae (Cabbage) capitata

F. vars. (Turnip) brassa

(Kohlrabi) caulorapa

BARBARIA R.Br.

hardy herb. perenn

I. Division  
stem cuttings for varieties

II. Seed in spring  
(Comes true for variegata.)

III. variegata. 928.3.74.  
918.4.91.  
91.8.96.

Vulgaris 917.11.88.

Cruciferae 6.

BISCUTELLA. Linn.

Herb. ann + perennial

I. Division for perennials

II. Seeds for annuals

III. Coronopifolia.

lanceolata 118.6.98

obovata

Sp. of easy cultivation, but of great value.

BRASSICA. Linn.

mainly herbaceous

II. Seeds the usual method.  
spring, autumn.

III. oleracea. (Cabbage) capitata

var: (Turnip) B. rapa

(Kohl-rabi) Caulo-rapa

Cauliflower B. botrytis cauliflora

Sp. cultivated for vegetables; not ornaments.

Kales 917.11.81.

Notes on the Cultivated Brassicas 18.9.97.

See also literature on vegetables.

Cruciferae 7.

CAKILE. Gärtner.

marked plants: xerophilous

veget. in nature by pieces of stem & root.

Seeds are not used for garden plants

sp. maritima - British

no hort. interest.

CARDAMINE Lin.

hardy herb. ann & peren

= DENTARIA Lin.

I. Division for C. rotundifolia to  
bulbs in C. bulbifera -

II. Seed: usual: in moist marshy soil e.g. grass -  
thalictroides

III. bulbifera - Dentaria bulbifera

diphylla 922.5.97.  $\swarrow$  latifolia Rm. 7628.  
pratensis. (Cuckoo Flower) British  $\swarrow$  petraea.

p. fl. pl. 911.6.81. / 920.5.99.

polyphylla - Rm. 6796.

923.2.84

926.3.98

rotundifolia 99.4.98

922.4.99

917.5.02

rhomboides purpurea 916.1.04.

luphiata 927.3.97.

IV. Toothworts - Dentaria. 924.4.81.

Cardamine or Cuckoo Flower 914.5.81.

Cuckoo Flower as a Toxic Plant 911.2.01.97

Cuciferae &

CHEIRANTHUS, Linn.

herb. l  
hardy evergreen shrubby plants

I. Stem cutting: summer, for part varieties see 923.4.81,  
make more dwarf + hardier plants

Division for herb. 931.12.81

II. Seeds as usual: sown in July; after which sow them selves.  
often make ragged plants compared to those from cutting  
906.3.81.

III. allioni 929.7.93  
914.11.03

alpinus 925.3.91.  
918.4.91.  
95.5.94.

Cheiri, (Common Wallflower), Brit.

Dilleni 927.4.82  
927.5.82.

mutabilis 919.11.87  
925.8.89.

ochroleucus 918.6.77.  
= Marshalli.

Garden vars. such as, Cranford Beauty, Ewbank's Double  
Golden King, Harbinger, Mrs. Harper Cresset

IV. Wallflowers. 919.5.74. 98.8.85  
912.6.75. 915.3.90.  
918.5.80.  
926.3.81  
926.11.81.  
926.5.83.  
912.5.83

The Wallflowers 923.4.87



Cruceiferae 9.

Cheiranthus contd.

COCHLEARIA. Linn.

hardy herb. perennial

121. Single wallflowers. 113.8.81.  
11.6.98.

Single Yellow wallflowers. 131.12.81.

Double Wallflowers 112.2.81.

18.1.87

10.5.90.

Double Yellow wallflowers 17.2.85.

29.5.86

24.4.97.

Double Dark wallflowers 13.6.99 10.3.6.99.

Wallflowers Single & Double. 17.5.87.

Double German wallflowers 131.7.80

Perennial wallflowers 123.6.77.

Wallflowers in Pots 17.4.83.

11.10.84

9.7.01.

Early down wallflowers 18.3.89.

Market wallflowers. 128.11.74

30.4.87

7.2.91.

Wallflowers English & French 15.8.76.

M. Clate on wallflowers 129.7.76.

What is a Silly flower 130.7.87/127.8.87/13.9.87.

What does Cheiranthus mean 14.10.84.

Cruciferae 10.

COCHLEARIA. Linn.

hardy herb. perennial

I. stem cuttings : spring  
division :  
root cuttings .

II. seed : best for acaulis . spring  
(annual).

III. acaulis = Donopsideum acaule (Violet Cress .  
9 21.12.72 .  
9 12.3.81 .  
9 25.4.85 .  
9 11.6.97 .

Armoracea (Horse-Radish .)  
see under vegetables .  
only . sp. of value .

CRAMBE. Linn.

hardy herb. perenn.

I. division of roots in spring  
root cuttings ?

II. seed also . spring .

III. cordifolia (Heart-leaved Sea Kale . 9 31.7.75 / 9 26.4.79 (note  
maritima . (Sea Kale) . 9 31.10.96 .  
tartarica (Tartar Bread .

DRABA. Linn.

hardy ann + bienn .  
suitable for rockery

I. division .  
stem cuttings .

Cruciferae II.

DRABA. contd.

- III aiyoides ♂ 3.4.97  
♀ 8.4.99.
- IV alpina ♀ 7.1.99.  
= elegans
- boetica ♂ 25.2.88  
♀ 16.2.89.
- brunifolia ♂ 7.2.74.  
♀ 14.4.94.
- Gilliesii ♂ 11.4.03 B.M. 7913.
- Mawi B.M. 6186. ♂ 10.3.77.  
♀ 11.4.91.  
♀ 2.4.92.  
♀ 16.4.98  
♀ 26.3.98

olympica  
var: heterocoma ♀ 14.1.99.

pyrenaica. ♂ 8.1.98  
♀ 4.6.98

= Pterocallis pyrenaica.

- IV Drabas ♂ 21.4.88  
♀ 5.5.88.

EROPHILA. DC.

(hardy annuals).

II. seed in flower.

- IV americana.
- praecox.
- bulgarica.

Cruciferae 17.

ERYSIMUM Linn.

ann + bienn + perenn.

i. Division for perennials -

ii. Seed freely: sprouts to autumn -

iii. ochroleucum  $\Sigma 1.4.93.$   
paucycarpum  $\Sigma 25.7.78.$

Perowskianum Blm - 3737.

rhaeticum  $\Sigma 20.9.79.$   
 $\Sigma 2.6.83.$

rupestre  $\Sigma 8.12.00$   
= pulchellum  $\Sigma 21.8.81.$

Garden herb, Golden Pen etc.

iv. Alpine Syrinchium ( $\Sigma 24.11.83.$ )  
(California sedum)

FARSETIA. (cinct. p.)  
(Swr.).

Hardy + greenhouse ann  
bienn + perenn.

i. Division  
Stem cutting, sprouting

ii. Seed in spring.

iii. clypeata (hardy perenn.)

lunaroides (greenhouse evergreen Rm - 3087.)

Cruciferae 13.

HELIOPHILA. Linn.

Greenhouse ann b  
shrubby.

I. Stem cuttings for shrubby: easy: Young shoots - Spring.

II. Seed. for annuals

III. araboides Pom. 496 (annual) -

scandens, (Greenhouse climber).

9.26.9.96. 9.14.12.99.

9.13.11.97. 9.27.1.00.

9.9.12.99.

9.7.1.99.

HUTCHINSONIA. R.Br.

alpis. ann + perennial

HESPERIS. Linn.

ann: bienn + perenn.

I. Division of roots.

II. Seed -

III. matronalis. 9.5.6.97

9.27.5.99.

9.16.9.04.

4 vars:

purpurea fl. pl. 9.18.6.04.

alba fl.

IV. Double Rockets. 9.28.6.84.

9.9.5.96.

9.30.12.99.

9.17.1.00.

9.17.3.00.

Rockets. (H. matronalis) 9.6.4.95

9.16.7.04.

Cuciferae 14.

HESPERIS. contd.

Double Yellow Rocket - 97.7.00.

Old Double Rocket 99.4.98

916.4.98

914.5.98.

Double White Rocket 917.7.80.

(matronalis fl. pl) 96.9.90

94.7.91.

HUTCHINSIA. R.Br.

alpinia. ann + perennia

I. Division in spring.

Stem cuttings - summer.

II. Seeds in spring.

III. alpinia. 916.5.91.

924.4.97.

97.5.98.

sp. of easy cultivation + quick growth.

TIBERIS. Linn.

hardy ann + perenn.

I. Division

Stem cuttings - after flowering - freely for spatulata.  
best for gibraltaria.

II. Seed. freely: but rarely produced by gibraltaria.

Cuciferae 15.

I. BERIS contd.

III - *Corydalis* 911.6.84

*c. pumila* 91.9.77.

Gibraltarica 921.6.79  
922.12.83.  
95.10.95.  
912.12.96.  
99.4.98.

*pruiti* 99.6.00  
916.6.00.

*rosmarinifolia* 923.4.81.

*Saxitilis* 914.2.85.  
917.4.97.  
916.4.98.

Sempervirens 911.11.76.  
918.8.01.  
916.12.02.

*s. fl. pl.* 92.6.88.

*s. Sardexiana* 924.6.99.

*Spathulata* 91.6.01.

*superba* 911.6.78.  
920.5.82.  
99.5.96.

umbellata. 917.12.81.

II - *Iberis* 911.7.03.

Annual Candytuft 916.99.6.77.

Cuciferae 16.

IBERIS contd.

EPIDIUM Linn

Select Candytufts 916.9.76.

Perennial Candytufts 926.11.92.

New Dwarf Candytufts 918.5.78.

Iberis (honq. by Baker) G.C. 1868 p. 711.

LUNARIA Linn

ISATIS Linn.

hardy biennials

Seed

glauca G.C. 11.8.00.

tricolor (Dyer's Wood) Petit

LEAVENWORTHIA Torr.

hardy ann.

Seed

aurora

Leavenworthia's 923.7.8 ?

MATTHIOLA R. & G.



Cruciferae 17.

LEPIDIUM. Linn.

hardy annual.

- i. seed - 934.6.72
- ii. sativum L. 29.2.96  
(Garden Cress) -

LUNARIA. Linn.

hardy ann & biennials

- i. division in spring
- ii. seed in spring
- iii. annua: biennis  
(Honesty) -  
+ var.
- iv. Honesty 9 23.4.87  
9 22.6.88  
9 20.5.99

White Honesty 9 13.5.99  
9 17.6.99.  
9 28.5.04.

Honesty in the Wild Garden 9 2.7.81.

Dried Seed Pods of Honesty 9 2.9.87.

MATTHIOLA. R.Br.

hardy  
ann & perenn

i. stem cuttings half-ripe wood 9 10.5.79.

ii. seed for ann & perenn.

iii. bicornis (ann) 9 6.8.87.

Cruciferae 18.

MATTHIOKA contd.

III. contd.

incana 189.6.72

kristis 186.7.78

188.3.84

184.10.07

Garden Vase: Grace Darling 182.3.01.

John Brique Stock 189.6.00

187.7.00

186.5.00

Princess Alice 1829.12.94

186.5.99

IV. Stocks 189.5.74

184.10.90

185.8.91

1824.3.94

1831.8.95

Biennial Stocks, 1811.7.96.

Brompton Stocks 1825.6.87

1814.3.91

1813.6.96

1810.7.97

1826.6.97

Long Succession of Stocks 1825.3.93.

Note on Stocks 184.9.86.

Concerning Stocks 1830.9.82.

Cuciferae 19.  
Matthiola contd

Foreign Stocks £31.1.91.

Garden Stocks £28.2.85.

Stocks for Spring Flowering £23.6.83.

Saving Stock Seed  
£17.7.75  
£31.7.75.  
£3.7.86  
£18.4.91.

green house  
and 1-5000

Autumnal Flowering Stocks £14.8.80.

Winter Stocks  
£23.5.74.  
£11.2.88.

hardy alpine

M. Chaté on Stocks £15.7.76

Stocks for Spring Flowering £23.6.83

East Lothian Stocks  
£30.11.78.  
£11.3.99  
£13.5.99  
£21.4.00.

MEGACARPAEA - DC.

- I ?
- II seed
- III polyandra £25.4.74  
£13.6.74

hardy plant  
alpine

Sp. only of botanical interest.

MORICANDIA DC.

Greenhouse  
ann & bienn -

- I. Seed.
- III. Sonchilolia = *Orychophragmus sonchifolius*.  
Bu - 6243  
93.4.80.

MORISIA - Nees, Gay.

hardy alpine.

- I. root. Cuttings easy.  
stem cuttings in summer -
- II. Seed - when ripe (which does not occur freely).  
Seeds buried in ground naturally: difficult to find.  
- if fresh soil placed around plants - helps to bring up  
seed - sown seedlings.

- III. Hypogea.  
912.9.91.  
925.3.93  
922.5.97.  
9c. 12.2.98  
9c. 26.8.99.  
914.12.01.

NASTURTIUM. Linn.

hardy plants.  
aquatics.

- I. stem cuttings for varieties.
- II. seeds most common.
- III. Liliput Snow Queen 913.8.04. sp. of no great beauty.  
officiale (water cress).
- IV. Dwarf Bedding Nasturtiums 911.7.03.

Cruciferae 21.

NO CCAEA. Rehb. M.R.

hardy perennial.

Division

Seed deep. sown.

Stylosa - Iberis stylosa -

9.11.3.82

9.12.4.84.

9.9.4.98

9.10.4.98.

PARRYA. R.Br.

hardy alpine.  
perennial.

I. ?

II. seeds. usual method.

III. microcarpa = Draba grandiflora 9.11.4.03.

SCHIZOPETALON<sup>UM</sup> Sims.

I.

II. Seeds. in heat in spring.

III. Walkeri. Bm. 2379. 9.1.11.90  
9.3.4.97.

SISYMBRIUM. Linn.

Greenhouse  
mostly weeds.

I. Stem cuttings: young shoots spring.

II. millefolium (greenhouse looergreen).

Cruciferae 27.

SOBOLENSKIA - M.B.

- I Division
- II Seed
- III Clavata 99.11.95  
(fragrant) 911.6.98

STANLEYA - Nutt.

hardy biennial.

- I Division in fruit
- II Seed
- III pinnatifida 90.15.6.01

## General note on Cucurbitaceae.

The Cucurbitaceae are with one or two <sup>e</sup>exceptions (Acanthosicyos) Dendrosicyos) all climbing plants or trailers, distributed over the greater part of the world. <sup>The order</sup> ~~It~~ is most highly developed in the tropics, and mainly in dry regions. The affinities of the order are doubtful; formerly they were allied to the Passifloraceae for their twining habit, but now from their structure are placed near the Campanulaceae. The plants are characterised by rapid growth, particularly of the root when young, and when once established in a garden they usually grow wild. The half-hardy or hardy plants such as cucumbers, gourds, and others, are nearly all annuals, and make such rapid growth even in one season, that they are commonly raised from seed.

Vegetative propagation is more usual for the greenhouse climbers. The soft tissues of plants like Kedrostis, Abobra, &c. make them specially suited to increase from young stem cuttings. Leaf cuttings have been investigated in the case of Momordica balsaminea. Leaves were inserted in August, and roots were obtained in 16 days, but no shoots were observed to have been formed. The method is a possible one for Abobra, Kedrostis, and other succulent types. Tuberous roots are a characteristic of many Cucurbitaceae (Trichosanthes, Thladiantha &c), and propagation in these genera is effected by division of the root tubers. Momor-dica cochinchensis can be propagated by cuttings of the roots.

Other vegetative methods are not employed to any extent.  
It would be interesting to compare the power of regeneration of  
tendrils of the Cucurbitaceae with that of the tendrils in  
Passifloraceae and Convolvulaceae. (q.v.)



Cucurbitaceae!

BOBRA.

Stems & greenhouses  
climbers

tuberous roots. - stored in frame during winter  
stem cutting.

easily from seeds.

viridiflora ♂ 14.3.74  
♀ 27.8.81.

ACANTHOSICYOS.

prickly dwarf shrub.

good seed obtained, but difficult to cultivate ♂ 3.4.86.

horrida - (Narcissae plant.)  
fruit & seeds are edible.

ACTINOSTENMA.

ALSOBITRA.

stem cutting easily.  
(for callus formation see Chap 7. p.

seeds.

Cucurbitaceae 2

AUGURIA.

Stove climber

- I. stem cuttings easy.
- II. seed also.
- III. warszewiczii B.M. 5304 (male plant).

BENINCASA.

- I. stem cuttings easy.

BRYONIA.

perenn. herbaceous  
Stove & hardy.

- I. Division of tuberous roots, stem cuttings.
- II. seed - rapid grower
- III. dioica. (hardy. 125.10.02.  
laciniosa, stove - see Bryonopsis.

BRYONOPSIS.

Stove climber

- I. stem cuttings.
- II. seeds ?
- III. laciniosa (Gooseberry Gourd) 179.8.74.

CITRULLUS.

stone herbs

- I. Division
- II. Seed?
- III. colocynthus (Kew) -  
vulgaris.

CUCUMIS.

half hardy trailing  
annuals.

- I.
- II. seed: (fruit edible. seed not necessary - unfertilized as good as fertilized  
down in frame then planted out - rapid growth.
- III. pascuaria.  
Sativa. (The Cucumbers).  
vars: Grand Mogal -  
Viceroy  
Empress etc.

- IV. Cucumbers 923.1.83  
925.5.72.  
Ornamental Gourds. 94.7.74  
915.17.83.

CUCURBITA. Same treatment as CUCUMIS.  
(gourd.) (cucumber.)  
often confusion between the two.

CYCLANTHERA.

- I.
- II. usually from seed.
- III. exfoliatus.  
pedata 922.12.77

umbelliferae 4.

## CHINOCYSTIS.

hardy annual trailer.

seed -

lobata.

## ECBALIUM.

hardy perennial

I. If roots are protected - will send up shoots each year.

II. usually treated as annual: seed.

III. elaterium (Squirting Cucumber.)

## FEVILLEA.

stone climber.

I. stem cuttings of young wood in summer

II. seed?

III. Moorei. only male plants known.  
(rampant climber)

## GERRARDANTHUS.

greenhouse climber

I. Division of root tubers?

Internodes on stem?

stem cuttings?

II. seed

III. tomentosa Bsm. 6694

Cucurbitaceae J.

HODGSONIA.

(stone shrub)

- I. stem cuttings.
- II. also seed.
- III. heterochita - (petals with remarkably long appendages).

KEDROSTIS.

greenhouse shrub

- I. stem cuttings?
- II.
- III.
- IV.

XAGENARIA.

hardy annual

- I.
- II. seed. treat like Cucumis.
- III. *virginialis*  
*bulgaris.*

XUFFA.

stone annual.

- II. seeds in heat.
- III. *acutangula* (*fetida*).  
*Sphaerica.*

MAXIMOWICZIA.

hardy climber.

I. stem cutting.

II. seeds?

III. sinensis 926. 12. 74.

MEGARHIZA.

hardy perennial.

I. Division tuberos roots: stems die down each year.

II. also treated as annual: seed germinate very easily.

III. californica - 914. 2. 80  
97. 8. 80  
922. 1. 81  
98. 5. 81.

MELOTHRIA.

perenn. climber.

I. stem cutting easy.

II. seed: fruits produced in great profusion in autumn.

III. abyssinica.

Convolvulaceae 7.

## MOMORDICA.

= Neurosperma.

ann: 7 perennials

- I. stem cutting: easy - sweet method
- II. seed - disadvantages - plants monocious: same sex maybe obtain  
95.11.98
- III. Charantia. 918.8.77.  
Cochinchinensis.  
mixta 95.11.98.  
involucrata 96.12.90.

## SECHIU M.

= Chayota.

half hardy  
Annual climber.

- I. seeds in heat.
- II. edule 91.1.81  
(Choko).

## SICANA.

stove climber

- I. stem cutting easy.
- II.
- III. spherica. Bm. 7109. (Kew)

Cucurbitaceae 8.

TELFAIRIA

stone turners.

I. stem cuttings: best of flowering shoots  
if not of other young shoots.

II. seeds: (edible, like Almonds).

III. occidentales. B.M. 62722.  
910.3.74.  
919.8.93.

THLADIANTHA

greenhouse chinks.

I. tuberos roots: <sup>plant</sup> dies down each year - new shoots in spring  
division.

II. diceions - fruit not often obtained.

III. dubia 97.9.78  
930.12.90.

TRICHOSANTHES = Copepon.

half-hardy + stone  
sea: perennials.

I. division of roots in tuberosa -  
stem cuttings?

II. seeds in spring.

III. anguina  
colubrina see 911.10.84.

japonica  
palmata  
tuberosa.

IV. The Snake Gourd 911.10.84.



Cucurbitaceae 9.

WILDBRANDIA.

hardy climber.

- I. tuberous roots - division.
- II. usually from seed - easy germination.
- III. Fraxinea 522-181.

General note <sup>on</sup> ~~of~~ <sup>n</sup> the Cupuliferae.

---

The Cupuliferae comprises the two orders Fagaceae and Betulaceae which are often considered separately. With the Myricaceae, Juglandaceae and Salicaceae the Cupuliferae form the Amentiflorae cohort.

While the Betulaceae are almost exclusively confined to temperate regions some of the members of the Fagaceae are found in the tropics e.g. Pasania Castanopsis and the somewhat isolated genus in the same order inhabits S. America (Chili) New Zealand and S. Austral

The Betulaceae include Alnus, Betulus, Carpinus, Corylus, Ostrya, and Ostryopsis. The Fagaceae comprise Castanea, Fagus, Nothofagus (not often met with in cultivation in this country) Pavania (also not very common) and Quercus. All the plants in the order are trees of considerable dimensions. They are all important economically for the timber which they supply especially Oak Beech &c. A study of these trees is rather the department of Forestry than of horticulture but as some specimens are to be found even in small gardens and they are common objects in town and park planting notes have been collected on their culture and propagation.

Propagation is mainly effected by seed. Where the increase of certain varieties sports are desired vegetative propagation usually by grafting on to the common variety as stock or by layering.

Cuttings are on the whole slow and are not usually employed except for varieties. Root cuttings are sometimes used for those trees which reproduce themselves naturally by root shoots (see chap. 3 ) but is not common. The trees are relatively microphyllous and the leaves are not suited for propagation.

ALNUS.

hardy tree.  
moist situations

I. Suckers. e.g. *incana* -  
layers for the special varieties: easy:  
or grafting on *A. glutinosa* -  
Stem Cuttings ?

II. seed usual method for ordinary varieties.  
Fruits freely produced -

III. *Cordifolia* 924.8.89  
925.4.91

glutinosa 97.5.04  
(Common Alder) 924.7.75.

See gen: literature

varieties *goldenleaves* 91.7.93.

*unipennis* 92.17.9.98.

*laciniata* 95.7.90.

917.7.86

931.8.89

*Quercifolia* etc.

*incana* (Silver Alder) 95.3.97

*rhombifolia*

*virescens* etc.

IV. The Alder. 911.10.02

(*glutinosa*)

978.11.85

98.5.86

914.1.88

972.11.90.

99.7.81.

977.11.90.

916.11.78

Alders for the Lawn

Alders as ornamental trees

The Alders (varieties)

Cupuliferæ ?

BETULA.

Hardy dec. tree.

Stem cuttings ? impracticable ∴ slow ?

+ layers for special varieties

Suckers -

grafting also for spec. vars.

root cuttings impossible ?

seeds do not retain power of germinating for more than one season.

alba (Silver Birch) see gen. arts.

laciniata pendula 916.10.80

916.5.85

lenta (Cherry Birch) 930.7.84

nana 94.2.88

pendula 918.4.91.

Maximowiczii 92.8.96

930.1.97.

Paper bark Birch 97.9.01.

Purple Birch 914.9.72 925.9.86

97.10.76 916.1.92

923.7.87 921.11.95.

pyramidalis 92.10.86

931.12.87.

IV. Ornamental Birches 96.1.77.

Birches in winter 93.4.86

Birch as a screen tree 921.8.86.

Weeping Birches 920.9.90 ? 915.5.94.

Value of the Birch 97.5.92

Cut-leaved & other Birches 916.7.81.

Cupuliferae 3.

BETULA. contd.

IV, Birches 86-3. 86. 12. 96. / 87. 5. 98.

Two American Birches  
(papyrifera & nigra) 811. 3. 99.

Notes on Birches 86. 3. 75.

White Birch 84. 10. 84  
84. 6. 92.

Other lit: on Birch.

Cupuliferae f.

CARPINUS.

hardy decid. tree  
moist situations

layers.  
suckers. for special varieties.

layers also for *C. betulus*, but plants not so good as those from seed.

stem cuttings?

II. Seed produced freely. sown when ripe.  
best method for ordinary varieties.

III. *betulus*. (The Common Hornbeam) see gen. arts.

*Carpinus*

*cordata*

} see Japanese Hornbeams.

*incisa* 920.7.89 / <sup>see also.</sup> 98.6.89.

*viminea* 93.10.85.

IV. The Hornbeam 98.6.89.

(A.D. Webster)

922.9.94.

The Hornbeams 910.11.83.  
(monog. G. Nicholson)

Wood of the Hornbeam 911.8.88

916.11.89.

Japanese Hornbeams 923.9.93.

Cupuliferaceae J.

CASTANEA.

hardy decid. trees.

I. Grafting on vesca for special varieties.  
layering?  
stem cuttings?

II. seeds in autumn: sown in March.

III. Chrysothryka - 94.1.79 | 916.7.92  
911.1.79. | 918.3.93.  
911.11.82  
929.1.87

vesca = vulgaris see gen. arb.

IV. The Sweet Chestnut. 927.3.85.  
926.12.85.

The Chestnut of the Isles 922.12.88.

The Spanish Chestnut 94.4.85.

The Great Chestnut of Mt. Stra 920.4.77.

Sweet Chestnuts of Austria 914.11.96.



CASTANOPSIS.

hardy evergreen shrub

- I. stem cuttings in autumn.  
grafting?  
layers?
- II. seeds.
- III. Chrysophylla - Castanea -  
indica (Stove).
- IV. Castanopsis G.C. 11.12.97.

FAGUS.

hardy <sup>evergreen</sup> decid. trees

- I. Suckers. naturally.  
grafting for spec: varieties on sylvatica?  
stem cuttings?
- II. Seeds: best method - gathered in autumn: kept dry till spring  
then sown.
- III.
  - antarctica G.C. 7.8.9.
  - (Cunninghami G.C. 5.88.  
(evergreen).
  - Betuloides G.C. 3.1.03.  
(evergreen)
  - var: zlatia G.C. 15.6.01.
  - Sylvatica G.C. 7.04 see gen: articles.

Cupuliferæ 7.

FAGUS. contd.

IV. *Sylvatica*. vars: -

Weeping Beech. 922.6.78

(pendula) 929.6.89.

923.7.92.

Weeping Purple Beech 922.6.90.

Cutleaved Beech  
(vicinia).

Copper Beech. 98.1.87

(Purple Beech. 976.7.90.

9c. 10.12.98

9c. 17.17.98.

9c. 15.11.02.

for other vars. see gen: arts.

V. The Beech 919.9.85  
931.10.96.

The Beeches 922.4.99.

Common Beech & its varieties 9c. 9.12.99.

Beech & its varieties 927.1.00.

Species & varieties of Beech 927.4.78

Beech Hedges 916.8.02.

Beech Coaks 9c. 23.7.04.

Burnham Beeches 93.1.74.

927.12.84.

Beech Trees & Lightning 920.1.77.

The Beech & its Uses 91.12.88.

Wood of the Beech 94.5.90

918.6.92.

Cupuliferae f.

FAGUS, contd.

15  
Notes on Beeches 913.3.75.

Beeches in New Zealand 97.10.99.

Gen lit. on Beech.

Cupuliferæ 9.

OSTRYA.

hardy <sup>decid.</sup> tree.

I. layers - cuttings for varieties -  
Grafting also on *Carpinus betulus*.

II. seeds gathered in autumn - sown in spring.

III. *Carpinifolia* § 23.4.81.  
§ C. 26.7.98.

*Virginica* § 10.11.83

IV. *Hop Hornbeam* § 20.10.77  
(*Ostrya*) § 15.9.83.

QUERCUS.

hardy decid. tree.

I. grafting for particular varieties : side grafting § 9.5.85  
layers ? on *Quercus Ilex* § 10.2.83  
stem cuttings ? § 26.1.84.

II. acorn fruit : sown as soon as drop : or kept till <sup>dry</sup> spring.  
*Q. suber* does not as a rule produce many good acorns.

III. *alba* § 21.3.85  
§ 18.4.85

QUERCUS. Contd.

III. concordia 978.12.78.  
 Cuspidata variegata 927.6.96  
 daumyo 95.12.85  
 98.1.87  
 95.10.89.

dentata.

glabra 99.4.81  
 916.4.81.

glandulifera 90.4.12.80  
 912.11.87.

ilex \_\_\_\_\_ 99.2.01.

imbricaria \_\_\_\_\_ 926.9.85.  
 pendula \_\_\_\_\_

pyramidalis 93.12.87  
 910.12.87.

lucombeana 97.12.89 / 92.13.9.02  
 90.26.5.00 / 92.20.9.02

Oaks 90.4.3.03 } 4 vars. 90.16.8.02.  
 98.8.96 }

Turkey oaks 923.5.85  
 (S. Nicholson).

Pedunculate + Sessile Oaks 90.6.10.00. 90.4.4.03  
 (Discussion) 90.27.10.00. 90.2.5.03  
 90.9.5.03  
 90.23.5.03.

Oaks of West Virginia 97.9.01.

Oaks as shrubs. 911.4.03.

Transportation of Oaks  
 of large size 90.15.9.00.

Cupuliferae II.

QUERCUS. contd.

III. contd.

Coccifera	(Prickly Oak)	♂ 10.9.81.	coccinea	♂ 17.11.89
Golden Oak		♂ 13.11.80.		♀ 1.12.00.
		♂ 23.4.92		
		♂ 5.9.96		
		♂ 26.9.96.		
palustris		♀ 73.3.01.		
rubra		♂ 6.8.87		
robur				
r. sessiliflora		♂ 6.2.92		
r. cuprea		♂ 29.8.91.		
serotata		♂ 18.4.85.		
striata		♂ 16.10.80.		
suber		♂ 14.12.89.		
		♂ 7.6.90.		
		♂ 13.9.90.		
		♂ 9.8.90		
		♂ 13.6.91.		
Turneri		♂ 14.1.88		
		♂ 4.2.88.		

♂ 18.10.73  
 ♀ 5.3.87  
 ♀ 13.7.92

IV. British Oaks	♂ 17.10.96	♀ 13.10.00
		♀ 20.10.00.
		♀ 27.10.00
		♀ 24.11.00.

Japanese Oaks. ♂ 14.10.93.

American Oaks ♂ 31.1.74  
 ♂ 1.12.94.

Oaks of the United States ♂ 26.8.76.  
 (also hybrid)

Best American Oaks ♂ 11.2.88  
 ♂ 19.1.95.

Cupuliferae 12.

IV Quercus contd.

Evergreen Oaks 94-12-80.  
916-7-89.  
923-11-89.  
91-8-91.

Holwood Oaks 913-10-88.

Gen. lit. on Oaks.

General note on Cyrillaceae

The Cyrillaceae are a small order allied to the ~~Celastraceae~~ <sup>Celastrineae</sup> and Sapindaceae containing shrubby plants chiefly inhabiting the West Indies. The American Buckwheat tree Cliftonia is not seen in cultivation. Cyrilla racemiflora is perhaps the plant most grown in the order though it is also not common.

Stem cuttings are a common <sup>mode</sup> of propagation though root cuttings (as seen by Fig. ) of Cyrilla will also succeed.

Leaf cuttings have not been investigated.



Cyrtaceae . .

CLIFTONIA.

Evergreen shrub

I. stem cuttings

II.

III. ligustrina (American Bonewheat Tree) -

B.M. 1628.

912.3.04

CYRILLA.

Evergreen green house shrub  
except aquatica

I. stem cuttings?

II. seed;

III. aquatica (Water Cyrilla of Hindoostan

racemiflora. G.C. 11.8.01.

912.3.04

only sp. seen in cultivation.

Bertha Chandler.

Chap. IV. Notes on the Propagation of  
Dicot. orders. D.



General note on the <sup>ace</sup>Datiscae.

The <sup>ace</sup>Datiscae is a small order allied to the Begoniaceae, and mostly found in Java, India &c., containing the genera Datisca, Tetrameles and Osteomeles. The plants are rarely seen in cultivation as the flowers are small and inconspicuous. Datisca cannabina is of graceful habit.

General note on the Diapensaceae.

The Diapensaceae are a small but interesting order containing alpine plants found in N. America, Europe, and Asia. The various genera are similar in appearance, and are characterised by their bright shining reddish leaves and comparatively large delicately tinted flowers.

Seed is sometimes employed for increase but is a slower process than propagation by vegetative methods. Runners are characteristic of the order and being freely produced, propagation is easily effected by their separation and insertion.

Stem cuttings are unsuitable as most of the plants are lowgrowing and some are stemless e.g. Pyxidantha.

Leafcuttings are impracticable as the leaves are tough and shiny and in consequence would be very slow (1). The roots are fibrous like all the Eical series (2) and are consequently unsuited for vegetative propagation. The Diapensaceae are not difficult of culture except Pyxidantha. The best position for them seems a somewhat shaded corner on peat soil in the rockery.

(1) Chap II.

(2) See Table of Orders.

DIAPENSIA. -

VEGETATIVE

PROPAGATION. - division of runners.

SYMPHYTHERA

SEED.

SPECIES.

- lapponica - rare - alpine -

B.M. 1108,

LITERATURE. -

# GALAX.

alpine -  
or suitable for edging Rhodo.  
Kalumias to.

I. division - runners formed in great abundance  
in *G. aplylla*.

II. seeds also, not so usual as veget. methods.

III. *aplylla* = *Rlandfordia* G 13.4.89.  
                  *cordata*. G 12.7.90.  
                  *Bm.* 75H. G 16.3.01.

not very much grown.

# TYXIDANTHERA.

- alpine.

1. by division, somewhat difficult to grow.

2 -

3. *barbellata* Bm. 4592.

4. G 22.3.84

G 10.1.85.

G 2.4.92.

# SCHIZOCODON.

- rock plant.

1. most commonly by division.

2 -

3. *soldanelloides*. G 4.11.93. | G 7.5.98.

G 31.5.82 | G 5.7.02

G 2.4.92

to:

4. G.C. 22.8.03.

# SHORTIA.

- rock plant.

1. most commonly by division. easily effected.  
as many runners are formed.
2. seeds also. - artificially fertilized and sown as soon as ripe  
on peat mixture G.C. 4. 11. 96.

3. grandiflora.

galacifolia G.C. 3. 94 / G.C. 11. 95 / G.C. 23. 4. 04.  
G.C. 18. 6. 04.

uniflora G.C. 24. 5. 02 / G.C. 2. 99.

sinensis -

californica

4. most grown is galacifolia.

Gen. Arts. on culture to. of galacifolia are

G.C. 4. 89 / G.C. 8. 90 / G.C. 3. 94 / G.C. 3. 97.

to.

General note on the Dichapetalaceae.

The Dichapetalaceae are an order allied to the Euphorbiaceae of botanical interest, only comprising some lianes and subshrubs mainly found in tropical Africa and America. The <sup>various</sup> very species are very poisonous e.g. Dichapetalum cymosus.

General note on the Dilleniaceae .

The Dilleniaceae are an order universally distributed in the tropics, containing mainly stove and greenhouse trees, shrubs, and climbers. The plants in the order are usually very ornamental, the flowers being large, with numerous stamens and compound stigma. e.g. Actinidia Hibbertia, etc.

Seed is not always obtainable, therefore in cultivation vegetative propagation is usually employed.

Stem cuttings strike without difficulty for all the genera.

The leaves are usually like those of the Camellia, tough and leathery, and consequently unsuited for propagation. (c)

Root cuttings have not been investigated.

1) Chap. II.

(Asteriaceae)

## ACROTREMA.

- stove evergreen -

1. Cuttings of young shoots in spring.
2. Seeds also.
3. Walkeri B.M. 5353. 9.11.10.90.

Arothianum -

Dhwaitesii - of graceful habit - not yet introduced.

## CANDOLLEA.

(greenhouse evergreens.)

1. stem cuttings in spring or summer?
2. when obtainable -
3. Cuneiformis B.M. 2711.  
Huegelii -  
tetrandra -

## CROSSOSOMA.

1. ?
2. ?
3. Californica. G.C. 22.8.03 -

## DELIMA.

(stove evergreen twiner.)

1. Cuttings of young shoots in spring.
2. ?
3. Sarmentosa B.M. 3058.



# DILLENIA.

- stone trees.

1. Cuttings of half-ripe wood in spring. 98.1.81.
2. seed also when obtainable.  
usually grow without difficulty.
3. *speciosa* - Pom. 449. Pom. 5016. 98.1.81.  
Watt's Diet. of Econ. Prod.  
- yields valuable timber -  
*indica*  
*pentagyna* etc
- 4.

# HIBBERTIA Andr.

(greenhouse shrubs & Climbers).

1. all species reproduces easily from stem cuttings, in spring -
2. also, when obtainable.
3. *dentata*. 931.12.92. / 98.2.96  
930.1.92 / 924.1.03.  
*Bandonini* Pom. 6053.  
*Cunninghami*. 920.1.83.  
*Grossulariifolia* - ~~climber~~ or trailer.  
*perfoliata* - Journ. Hort. Ser. 3 XXXIV, p. 371.  
*volubilis* -  
*Reidii* 923.5.91 / 93.4.97.  
etc.
4. Gen. Herb.  
925.12.80.  
928.7.88.

# TETRACERA.

stone chambers.

1. cuttings of young shoots in spring.
- 2 -
3. *alnifolia* +  
*obovata* +
- 4 -

# YORMIA.

(stone evergreen shrubs).

1. cuttings not easy to obtain - slow to root.  
best from weaker shoots. 9.6.88.
- 2 -
- 3 - *Burbridgei* . 9.10.12.81.  
*feruginea* +

General note on the Dipsaceae.

The Dipsaceae like their near ally the Valerianaceae, do not supply many ornamental plants to the garden. The most interesting are the many cultivated forms of the Teazel, particularly the handsome species Scabiosa caucasica.

As most of the plants in the order are annuals or biennials, propagation is effected by seed, which is usually abundantly produced.

Vegetative propagation is also common for the perennials by division and by stem cuttings. Leaf cuttings have not been investigated. Root cuttings might be a feasible means of increase in fleshy rooted species. e.g. Scabiosa, but have not been tried.

# DIPSACUS.

(hardy biennials).

- 1 -
- 2 - seed.
- 3 - *fullonum* (Fuller's Teazle).  
Cottage Gardener v. 83.  
*laciniatus* 911.9.75.  
*Sylvestris* 91.9.83
- 4 - 929.8.03 (gen.) Dipsacaceae.

# MORINA

(half-hardy herbaceous plants.)

1. division in spring.
- 2 - seed freely produced except in *M. Coulteriana* -  
sown in April.
3. *elegans*.  
*betonicoides* B.M. 6966. / *longifolia* B.M. 4092 / 926.10.95  
928.7.00. / *Wallichii* 922.8.91.  
*Coulteriana* B.M. 6734. / 930.8.84 / 925.11.93.

# SCABIOSA.

(hardy herbaceous perennials)

1. stem cuttings in spring for *S. caucasia*, *Webbiana* -  
division usual in spring.
2. seeds for *S. caucasia* also -  
usual method for all Scabiosa in spring or autumn. 921.5.87  
as a great many are aneuploids.
3. *atropurpurea*.  
*caucasia* 923.4.92 / 99.2.89 / 929.12.00 / 92.2.01.  
*Pamassi* = *Pteroccephalus Pamassi* 99.4.87 / 93.11.94.  
*Webbiana* 916.7.87.
4. 97.5.81. (Dwarf Purple Scabiosa.) / 97.9.89 (Dwarf German Scabiosa)  
921.7.83 (Dwarf Scabiosa.) / 919.7.90 (Dwarf Scabiosa.)  
913.16.88 (Dwarf German Scabiosa) / 91.9.94 ( " " ) to t

General note on Dipterocarpeae.

The Dipterocarpeae are an order allied to the Guttiferae, and Ternstroemiaceae, of economic rather than of horticultural interest. The members of the order are mostly large trees inhabiting the tropics, and unsuited for collections on account of their size. Small specimens of Dryobalanops camphora (the Camphor wood of Sumatra) and Ancistrocladus are however, sometimes seen in cultivation.

Propagation is usually effected by seed, the curious wings of which give the name to the order.

Stem cuttings strike without difficulty.

The leaves of the Dipterocarpeae are leathery, but have a characteristically long life of nearly twelve months, leaving the trees bare for a very short period only in the year, therefore propagation by leaf cuttings might be tried, but the method would be very slow.

Root cuttings have not been investigated.

## DRYOBALANOPS.

(stone evergreen.)

- 1 - ?
- 2 - seeds.
- 3 - camphora. (Camphor wood) 99.11.72
- 4 - Watt's Dict. of Econ. Products.

## SHOREA.

- (stone

- 1 ? stem cuttings. season?
- 2 seeds.
- 3 robusta. ciliata.  
bulgaris. Kunsteri.

General note on Droseraceae.

The Droseraceae, and order nearly allied to the Saxifragaceae are of great botanical interest as the plants contained in it are insectivorous, and the vegetative organs have in consequence become considerably modified.

Many of the Droseras are also in common cultivation, e.g. Dionaea muscipula, Drosera grandiflora, dichotoma, capensis, etc.

Seed is usually freely produced, and various hybrids among the Droseras have been obtained. (1)

Vegetative propagation is also easily effected, especially by division and offsets. Stem cuttings are not usually employed.

Root cuttings are a common mode of propagation in Drosera. (2)

Leaf cuttings have not been investigated.

(1) See literature under Drosera

(2)

# BIBLYS.

Greenhouse - perennial.

1. Treatment like *Drosera* ?  
division ?
2. miphoid seed.
3. gigantea G.C. 17. 11. 00.  
liniflora.

# DIONAEA.

(hardy or greenhouse perennial.)

1. Offsets, produced naturally - afford means of propagation.  
division of bulb-like crowns in spring. 93.8.72.  
leaves on damp moss will give rise to new plants
2. seed also. 924.5.79
3. muscipula 931.12.81.  
910.11.94.
4. 93.8.72.  
911.7.88.

# DROSERA.

(hardy & greenhouse herb. perennial)

1. root cuttings of strong grown plants. 926.7.73 / 920.1.83.  
- division of crowns.  
- suckers also. 920.11.97.
2. Seeds also in heat in spring.
3. - auriculata (914.6.84) capensis: burkeana (913.1.00)  
dichotoma 926.7.73 / 911.11.99.  
= binata Pom. 3082  
linata: indica: grandiflora: rotundifolia  
Whittakeri 922.12.83.
4. 92.3.78 (Intuition of Sundews.  
918.9.80 (Cape Sundew.) - Observations on some hybrids  
916.4.87 (Tropical Sundew.) between *Drosera filiformis* &  
9.C. 29.7.99 (Hybrid Sundew.) - *D. intermedia*.  
(Prof. J. Muirhead Macfarlane  
J.R.H.S. vol. XXIV p 241-19)



# DROSOPHYLLUM.

- (greenhouse perennial)

1. -
2. seed the usual method.
3. lusitanicum. B.M. 5796.  
94.12.80.  
918.12.80  
919.1.89.

# RORIDULA.

1. ?
2. raised from seed at Kew.
3. Gorgonias G.C. 26.10.96. + fig.  
G.C. 73.1.97  
G.C. 13.7.97.

Bertha Chandler.

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Notes on the Propagation  
of Dicot. Orders. E.



General note on Ebenaceae.

The Ebenaceae are a tropical order of economic interest found chiefly in the East Indies and Malay Archipelago, and allied to the Styraceae and Sapotaceae. (1)

Ebony is produced from the heart-wood of Diospyros ebeni, and is valued for wood-work, carving, etc., but not many genera are found in cultivation. The plants of greatest interest horticulturally are the various species of Diospyros, particularly D. kaki (the persimmon), an edible fruit of doubtful flavour.

Propagation is effected by stem cuttings, though slowly, and often by seeds. Root cuttings have been investigated, but not leaf.

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Gen: Lit: Monographs on Ebenaceae.

Hiern - Trans. Camb. Phil. Soc. vol. XII. Part. I.

Naudin - Nouv. archiv. du Mus. d'hist. nat.

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Ebenaceae

DIOSPYROS. Linn. - (hardy, greenhouse & stove.)

- VEGETATIVE - stem cuttings - half-ripe shoots in spring
- PROPAGATION. - ripen wood for stove species

- SEED. - seed for Persimmon (D. kaki.)  
also best for hardy species

- SPECIES.
- Ebenus
  - Kaki G.C. 5.11.98 G 2.8.02.
  - (Persimmon) G.C. 10.6.99.
  - Lotus G 23.7.87.
  - (Date Plum)

- LITERATURE. - G 5.1.01.

ROYENA

(greenhouse evergreen shrubs)

I . stem cuttings strike freely in sand in spring .

II . ?

III . pubescens B.R. Soo .

hirsuta

latifolia

sp. not often seen in cultivation .

Other species Maba, Snela, Tetrachis<sup>tr.</sup> not seen in cultivation .

General note on Elatineae.

The Elatineae are a small though widely distributed order allied to the Caryophyllaceae, and Hypericineae, mainly composed of small annual, marsh, or aquatic plants of botanical interest only. The British representatives in the order are Elatine hexandra, and E. hydropiper.

Like most water soft stemmed plants, the lower nodes of the stem are characterised by the presence of adventitious roots, and thus pieces broken off easily reproduce themselves naturally.

Propagation is also effected by the small seeds which are distributed by the agency of birds, and the wind.

Bergia is a land species occurring in the order, but is not seen in cultivation.

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Monograph on Elatineae. Seubert - Nova Acta Leopold. Nat. Cur. xxi. p. 35/

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General note on Eleagnaceae.

The Eleagnaceae are an order allied to the Thymeliaceae, and contain characteristically steppe plants to be found mostly on sandy stretches of land near sea shores, and other arid regions. The plants in the order are mainly ornamental hardy deciduous trees, conspicuous for their silvery foliage, and brightly coloured berries. Eleagnus parvifolia and the Missouri Silver-leaf (Shepherdia argentea) are two beautiful examples.

— Though the seed is distributed in nature by the agency of birds, attracted by the bright fleshy berries, propagation by seed is not the common method in cultivation, as the plants are very slow growing.

— Vegetative propagation is therefore more commonly employed.

Stem and root cuttings are successful in most species.

Layering is often found a speedy method of increase.

Where suckers are produced as in Eleagnus and Shepherdia, these are used as a means of propagation.

— Leaf cuttings are impracticable.

ELEAGNUS.

(decid. + evergreen shrubs)

- I. stem cuttings in March or April in air. current year's shoot.  
best for *E. oleoides* - - fruits in 3rd year after striking. (hardy decid. variety.)  
layers easy for *E. rotundifolia*.
- II. Seed. but slow 919.5.94.  
usual for decid. varieties - e.g. *angustifolia* (also by cutting.)
- III. *hortensis* -  
*longipes* 919.5.94. / *multiplora* B.M. 7341, *pungens*.  
*macrophylla* 917.11.96 / *orientalis*  
*parvifolia* -  
+.
- IV. 915.1.82 (The Silver Tree or Wild Olive.)  
918.3.89 (The Wild Olive.)  
916.1.92 (Evergreen Oleasters.) -  
916.4.92 (The Oleasters.) -

HIPPOPHAE Linn.

(hardy decid. shrubs.)

- I. stem cuttings 911.10.92.  
Suckers with roots attached  
root cuttings  
layers.
- II. also seed.
- III. *thamnoides* + varieties.  
*salicifolia*.
- IV. 911.1.96.

SHEPHERDIA.

(hardy decid shrubs.)

- I. suckers easily.  
(ascografting of one sex on to the other for fruiting)
- II. seeds also.
- III. *argentea* (Missouri Silver leaf) 918.5.72 / 916.9.76 / 913.11.86.  
*rotundifolia* 915.8.71



<sup>er</sup>  
General note on the Empetraceae.

The Empetraceae is a small order but widely distributed in Europe Asia, America, mainly composed of small heathlike plants. It is allied ~~supposed~~ to the Ericaceae, the Sapindaceae &c. Except for Empetrum nigrum the Crowberry the fruits of which are edible the plants of the order are rarely met with in cultivation .

In nature propagation is effected by seed , but as this is <sup>a</sup> slow process in cultivation, vegetative propagation by means of stem cuttings is employed. Neither leaf nor root cuttings have been investigated.

Empetraceae.

CERATIOKA.

- half hardy shrub.

I. Cuttings in summer in slight heat.

II. seeds?

III. ericoides B.M. 2758.

rarely seen in cultivation.

COREMA.

- half hardy shrub.

I. stem cuttings?

II. ?

III. conradi. G. 19. 10. 01.

rarely met with.

EMPETRUM.

- hardy shrub.

I. stem cuttings. ripe wood. in summer.

II. seeds. but very slow. a year before they vegetate.

III. nigrum.

rubrum B.R. 1783.

IV. see American shrubs. 1 lit. on hardy shrubs to.

General note on the Epacridaceae.

The Epacrideae are an order with limited distribution being confined mainly to Australia. They possess close affinities in general habit and structure to the Ericaceae and the methods of propagation in the two orders are therefore very similar. Vegetative is that most commonly used. Like the Ericaceae stem cuttings are commonly employed for increase, but they are slower to root and more liable to damp off if care is not taken in the Epacrideae. (See under general articles under Epacris. ). The roots are fibrous and unsuited for propagation. The leaves are typically xerophilous in character and unsuited for cuttings.

Epacridaceae.

## ACROTRICHE.

- greenhouse evergreen shrub.

- I. stem cuttings - young shoots in summer.
- II. seeds?
- III. *dioaricata* Fr. 1.87.  
*ovalifolia* B.M. 3171.

## ARCHERIA.

- (greenhouse evergreen)

- I. readily from stem cuttings in summer.
- II. ?
- III. -
- IV. -

## ASTROLOMA.

- (greenhouse evergreen shrub)

- I. easily by stem cuttings - young in summer.
- II. ?
- III. *denticulatum*.  
*pinifolium* B.R. 218.  
*humifusum* B.M. 1439.

## CYATHODES.

- (greenhouse evergreen.)

- I. young cuttings root readily - young in summer.
- II. -
- III. *glauca*  
*aerosa*.

DRACOPHYLLUM.

(greenhouse evergreen)

I. readily from cuttings in spring or summer. Young shoots.

II -

III. *gracile* G25.7.91. P.M. 2678.

*capitatum* P.M. 3624.

EPACRIS.

- greenhouse evergreen.

I. stem cuttings. Half-ripe wood. a little difficult. slow & apt to damp off. best about 2 in. long: in spring or early summer. Layering. also employed.

II. also G.C. 19.3.08.

III. *grandiflora* *splendens* G23.5.91.

*Knigkorni*. *onosmaeflora* fl. pl. G25.3.76

*impresca* G29.1.87.

*miniata*. G26.3.92.

IV. *Epacris* + their Culture. G9.8.84. / G15.6.78.

Hybrid *Epacris* G26.7.84.

Culture of *Epacris* G2.6.83.

*Epacris* G16.4.89. / G29.1.87.

Notes on *Epacris* G23.2.89.

Culture of *Epacris* G2.2.01. / G.C. 19.3.08

Cultivation of *Epacris* G.C. 25.1.02.

etc.

LISSANTHE.

(greenhouse evergreen.) -

I. half-ripe cuttings <sup>in summer</sup> or points of young shoots in sprais.

II. ?

III. strigosa G30.4.92.

daphnoides B.C. 466.

sapida B.R. 1275. / B.M. 3147.

LEUCOPOSON.

- greenhouse evergreen.

I. Cuttings - tips of young shoots in sprais or ripe in summer. Slow rooting & growth afterwards not rapid.

II. -

III. Cunninghami G29.9.79.

lanceolatus G3.2.94 / G29.2.96 / G17.2.00.

Richei G25.4.74.

verticillatus 10 -

LYSINEMA.

(greenhouse evergreen.)

I. Cuttings of young shoots - half-ripe tips in sprais or early summer.

II. -

III. pungens B.M. 1199.

SPRENGELIA.

- greenhouse evergreen.

- I. Cuttings - young shoots, half-ripe in spring & summer.
- II. best when obtainable.
- III. *incarnata* B.M. 1719.

STENANTHERA *pubifolia* see *Azroloma pubifolia*.

STYPHELIA.

- greenhouse evergreen.

- I. Cuttings of young shoots in spring.
- II. ?
- III. *viridis* B.C. 1223.  
*longifolia* B.R. 24.

TROCHOCARPA.

- greenhouse evergreen.

- I. Cuttings of points of shoots inserted in spring or summer.
- II. ?
- III. *laurina* B.M. 3324.

General note on the Ericaceae.

The Ericaceae is ~~without~~ one of the most important orders in horticulture, furnishing as it does the various Ericas Rhododendrons Gaultherias, besides the less common but equally beautiful flowering shrubs such as Kalmia, Enkianthus, Zenobia &c.

Propagation in the Ericaceae is in a great many cases effected by seed, but the method is somewhat slow for obtaining mature plants.

Much hybrids however have been raised in the Ericaceae especially in the genera Azalea Erica &c. (See general articles on Hybrid Azaleas Hybrid Rhodos. and Hybrid Ericas, also Burbidge &c.)

The various vegetative methods are consequently employed. The most common and speedy method is layering for the lowgrowing genera Rhododendrons arbutus, Ledums &c. Grafting is used to some extent

(see under Rhododendrons ) <sup>an</sup> Many of the plants in the order can be also easily divided like herbaceous plants, as they are apt to form a dense mass of fibrous roots.

Stem cuttings are used to some extent (See under Rhodos. ) especially for the Heaths (See under Ericas.) Neither ~~the~~ root nor leaf cuttings have been investigated. Nor would they be practicable as the former are thin and fibrous, the latter small and xerophytic in type.



# ANDROMEDA.

- dwarf hardy shrub.

= Pieris.  
= Cassandra.

- I. stem cuttings of half ripe shoots in spring.  
Dense rooting - esp. e.g. of japonica - makes them easily lifted.  
- quicker in frame than in heat.  
- layers in autumn.
- II. also.
- III. - floribunda. see Pieris floribunda.  
fastigiata G22.5.97.  
japonica = Pieris G5.3.87 / G2.6.00.  
holifolia. the only true Andromeda. G5.5.94 / G17.10.96.
- IV. G9.7.81 (The Andromedas).  
G3.9.81 (Andromeda).  
G17.10.96 (Andromeda and its Allies. W.T. Beau).

# ARBUTUS.

- hardy shrub.

- I. stem cuttings: sometimes for A. unedo. and A. u. var. rubra.  
layers. requires 2 years to root sufficiently.  
grafting. A. andrachne and procera; not so good for unedo rubra, as apt to go off at union.
- II. Seed early. in spring.
- III. Andrachne } G7.3.96 / G13.6.85.  
                  } - calcareous soil - cp. other Picaceae.  
Unedo        } Gc. 16.11.01 / G19.11.92. / G26.1.01.  
procera  
U. Broomeri . G16.1.75.  
hybrida G25.2.99.
- IV. G1.12.80 (Arbutus Unedo).  
G25.10.90 (The Strawberry Tree in Flower).  
G14.6.90 (Three Handsome Arbutuses).

# ARCTOSTAPHYLOS.

= Arbutus.

(hardy or half hardy evergreens)

I. stem cuttings. Season?  
t. layers.

II. seeds. : soon lose their vitality for glauca 920.6.74.

III. uva ursi. (The Bearberry)  
alpina 923.9.93 / G pungens.  
californicus 929.6.89 / Manzanita Bot. 8128.  
glauca 930.4.04

IV. 91.2.79. (The Bear Berries.)

# BEJARIA. Nutt.

= Befaria.

(greenhouse mostly evergreen)

I. Cuttings of young wood - firm in spring.

II. seed: produces in abundance with glauca.

III. glauca 913.12.90 / 925.4.91.  
Grandiflora te.

# BLAERIA.

-(greenhouse evergreen shrub)

I. Cuttings of young wood - Spring?

II. seed?

III. articulata  
ericoides Bot. 153.

## BRYANTHUS

I. cuttings of young shoots.

II. ?

III. empetriformis = Menziesia empetriformis. 926.5.88 / 94.5.98.

## CALLUNA

- hardy shrubby.

I. stem cuttings. Young shoots when half-ripe.  
or division for low growing varieties.

II. for many kinds, but not for varieties - as result uncertain.

III. vulgaris. 919.9.88.

(Hammondii. white var.)

other var. Golden King etc.

## CASSANDRA

= Andromeda.

I. layers.

Stem cuttings?

(hardy shrub.)

II. seeds also.

III. Calyculata. (American leather leaf.)

929.3.84 / 913.4.89 / 911.3.90 / 98.4.93 / Bm. 1286.

## CASSIOPE

= Andromeda.

I. layers.

and division.

Stem cuttings?

II. also.

III. fastigiata. 919.9.85 / 922.5.97 / 911.3.93.

tetrago

= A. tetragona

912.5.88 / 98.8.90 / 99.7.92.

CHIMAPHILA.

= Pyrola.

Hardy perennial shrub.

I. stem cuttings?

Divisions and suckers.

II. ?

III. maculata = Pyrola. Bm. 897. Gc. 1.11.02.

umbellata Bm. 478.

CLETHRA.

(greenhouse + hardy shrubs).

I. Stem cuttings of half-ripe wood in summer.

Young apical cuttings in spring?

layers in autumn.

II. also.

III. - alnifolia G25.1.79 alnifolia var. tomentosa G2.10.97  
(hardy) G25.8.86. G13.10.00.  
G29.7.99.

- acuminata G25.1.79.

- arborea G26.1.84 / G19.7.90 / G6.8.92 / G21.3.94 / Gc. 21.11.03.  
(half-hardy) Bm. 1057.- barbinervis G25.1.79. caulescens G18.7.96  
quercifolia " G26.12.96.IV. G25.1.79 (The Clethras)  
G19.2.81 (The white Alders)  
G12.5.88. (Clethras) -

## DABOECIA.

(dwarf hardy evergreen shrubs)

Cuttings of woody shoots also?  
Layering in summer.

seedling plants show tendency to vary.

polifolia (Irish Heath) 917.8.89 / 914.8.97 / 917.9.98  
98.2.96 / 930.10.97

p. var. alba 93.6.82 / 930.9.82

913.12.79 (The Irish or Connemara Heath.)  
930.10.97 (The Irish Heath.)

## ELLIOTIA.

(dwarf evergreen greenhouse shrub  
hardy with South exposure.)

I. stem cuttings - young shoots in spring  
layers at end of summer.

II. seed?

III. racemosa G.C. 16.4.04

(paniculata, bracteata)

sp. very rare: seldom seen in cultivation

## ENKIANTHUS.

(greenhouse evergreen shrub)

I. stem cuttings of young wood - 95.1.78.

reticulatus a little different

- cuttings

II. seed also

III. reticulatus G.C. 30.4.04

reticulatus Mag Bot. 127.

japonicus 95.1.78 / 910.3.88.

Species are not much grown in this country.

# EPIGAEA

(hardy evergreen trailers.)

- I. increase very slow: roots are fine & sensitive of disturbance. 926.9.85.  
Stem cuttings best of previous year's wood. in summer. —  
too much water should not be given.
- Division of roots in spring.
  - layers the usual method.
- II. Sometimes from seed with success — but often not to be obtained.
- III. repens. 921.8.80. / 915.7.82 / 926.9.85. / 930.6.88 / 91.12.94.

# ERICA

(hardy <sup>greenhouse</sup> under-shrub).

- I. Stem cuttings see articles on culture and propagation of Heaths below.
- II. Seed?
- III. Species are too numerous to mention: See under general articles. Most Common in cultivation are.
- Cinerea; aristata; ciliaris. 925.8.94;
  - codonodes 924.3.83; 926.3.98;  
918.2.93; 93.3.60.
  - arborea 97.2.74 / 99.4.04;
  - gracilis 95.11.87; 98.3.79.
  - herbaea 93.10.85; 927.4.89.
  - hyemalis 96.11.80; 97.5.92.  
+ var. alba
  - vagans 92.11.95 / 917.10.96 / 92.10.97 / 93.9.98;
  - Wilmoreana 911.3.99 / 92.15.2.96.  
912.3.04 /

## IV. Gen: Ht

- Hardy Heaths. 95.11.87 / 915.12.88 / 96.2.92 / 927.8.92.  
916.11.72 / 92.10.97. / 920.9.84.
- Soft wooded Heaths. 92.2.89 / 91.10.92.
- Cape Heaths 920.7.72.  
Propagating Cape Heaths 926.10.78.

ERICA. contd.

- vicia 914.1.88. / 922.1.76
- Autumn Flowering Heath 917.11.88.
- Winter Heath 922.1.87
- Heath in Flower 927.8.92
- Cape Heath in Trade Establishments 94.6.81.
- Cape Heath & their Culture 93.3.83.
- Heath and their Culture 93.2.83.
- Culture and Propagation of Soft wooded Heath 914.6.79.
- Hardy Heath as Bedding Plant 921.12.72.
- Winter blooming Heath 94.12.75.
- British Heath 99.12.76.

GAULTHERIA.

(hardy & greenhouse).

- I. <sup>stem</sup> Cuttings - season?  
+ layers easily.
- II. Seed also.
- III. *nummularoides* (hardy).  
  - procumbens* (hardy) 94.12.86 / 99.1.97 / 929.1.98.
  - shallow* (hardy) 923.4.87. / 99.8.90.  
93.12.87 / Pom. 2843.
  - trichophylla*  
(hardy alpine creeper) 922.7.93 / 913.7.95.  
915.7.99.
- IV. Gen Articles on  
*Gaultherias* 927.8.81.

# LEDUM. KALMIA.

evergreen.  
(hardy shrub).

stem cuttings - young shoots in sandy peat  
layers at end of summer.

also grafting.

seed also: but resultant plants often vary in size & colour.

glauca (Mountain Laurel) 925.5.89.  
925.5.95.

angustifolia (also in clumpy soil.) 923.6.88  
91.7.93  
var. rubra-rosea 930.6.00.

myrtifolia 924.4.86

latifolia 91.7.82 95.10.01.  
925.12.86

hirsuta to.

## IV. Gen & Articles

91.7.82 (Kalmia latifolia).

913.6.85 (Kalmias or American Laurels).

931.5.90 (Kalmias)

931.7.97 (Kalmias)

93.9.98 (The Mountain Laurel Poisonous.)

911.4.03 (Kalmias).

# LEUCOTHOE.

- Hardy shrub.

I - difficult of increase.  
layers, generally.

II - seed also - but also slow.

III - floribunda Paxl. Mag. Bot 101.

axillaris = Andromeda axillaris. 95.3.92

spinulosa = catesbaei

924.2.94.



# LEDUM

- hardy shrub,

- I. Layering usual method - quicker than seed.  
Stem cuttings but process very slow.
- II. Seeds for *latifolium* to: ripen freely - + plentifully, but slow increase.
- III. *buxifolium* = *Leiophyllum buxifolium* 920.6.85.  
920.5.93.  
*glandulosum* G.C. 5.6.97.  
*latifolium* 914.9.78 / 911.9.86 / 95.7.90.  
*palustre* 96.5.82 / 95.5.94.
- IV. 927.2.92 (The Ledums)  
910.7.97 (Ledums).

# LYONIA

(hardy evergreen)

- I. *lycea paniculata*  
= *Andromeda paniculata*.

# MENZIESIA

-(hardy shrub.)

- I. Division. Common method.  
Stem cuttings. most practicable + speedy method.  
Young shoots in spring strike better than in autumn.  
Layers. - 2 years before root well.  
in autumn.
- II. Seldom used.
- III. *coerulea*. *Lod. Bot. Cab.* no 164.  
*empetrifolia* 95.5.94.
- IV. 921.3.74. (Menziessias.)

## ORPHANIDESIA.

- dwarf hardy shrub.

I. layers? or cuttings?

II. seed?

III. gaultheriodes.

sp. rarely met with.

## OXYDENDRON.

- hardy tree

= Andromeda -

I. Difficult to propagate - so slow.  
layers?

II. seed.

III. arborescens =

Andromeda arborescens

918.10.79

922.9.94

926.8.93

93.9.98.

## PENTAPTERA.

(half hardy evergreen shrub.

= Friaria

I. stem cuttings?

II. seed.

III. sicula (Sicilian Heath) 926.5.88 Rom. 7030.

PERNETTYA.

- hardy evergreen shrub.

I. Stem cuttings for mucronata in April or May 98.2.79.

Division.

Layers is the usual method of increase.

Suckers also in mucronata 98.2.79.

II. Seed also ripens in quantity & germinates quickly but results are variable for varieties.

III. candida 978.9.78: ciliaris.

floibunda 98.7.82.

mucronata 926.5.83 / 93.11.94 / 96.1.00.  
+ bars.

IV. 919.1.01. The Pernettias.

{ 98.2.90. / 94.2.88 /

{ G.C. 22.12.00. Blooms Pernettias for Autumn Decoration.

{ 925.12.86 Pernettias in winter

91.3.90 Pernett. in the Conservatory.

916.2.92 Pernett. as Pot Plants.

925.1.79 New Forms of Pernettia mucronata.

93.11.83 Varieties of Pernettia mucronata.

PHYLLODOCE.

- hardy shrub.

I. layers. usual method. in summer or autumn.

II. seed?

III. taxifolia = caerulea B.C. 164.

PYROLA. - Chimaphila.

- hardy herb. perennials.

I. Division.

II. Seed.

III. uniflora.

rotundifolia 96.11.86 / 912.8.82 / 911.5.95.

maculata = Chimaphila mac.

umbellata = Chim: umbell.

minor

PIERIS. (Andromeda.) - hardy evergreen shrub.

I. Layering the usual method. quicker than seed.  
stem cuttings. also. - easy for japonica.  
but *A. floribunda* more difficult to increase by cuttings.

II. readily from seed when obtainable.

III. *formosa* 93.11.77 / 927.5.93 / 930.7.98.  
- *japonica* 93.11.77. | *jap. var. variegata*.  
927.3.86 | 931.3.88 / 918.3.95.  
928.3.96

- *floribunda* 930.3.89 / 97.5.92 / 920.3.97.

- *mariana* 91.5.75 / 926.11.98.  
*A. mariana*.

- *ovalifolia* 914.10.76.

RHODODENDRON

including *Azalea*.

(hardy, greenhouse & stove shrub)

I. layers. in spring or autumn usual method.

stem cuttings. of young shoot - half-ripe 93.4.80 / 96.1.83.

grafting. also on *R. ponticum*. see 915.8.85.

II. Seeds in spring.

III. Too numerous to mention: see varieties in general

article, common are -

*hexe* 94.5.95.

*amoena*

&c.

Gen. Articles on Rhododendrons.

Rhodos. in California 926.9.88.

Rhodos. Shows 927.6.88.

Grafting Rhodos: 915.8.88 / 97.11.88.

Himalayan Rhodos: (to Ireland) 916.12.93 / 910.8.95 / 94.5.89

Hybrid & other Rhodos. for Pot Culture 916.5.91.

Hybrid Rhodos. 925.4.91 / 922.10.81.

Hybrid Greenhouse Rhodos. 930.8.84 / 98.4.93 / 99.4.92 (Java hybrid)

Notes on Rhododendrons 96.6.91 / 922.10.87 / 921.6.79.

(Hardy) 926.7.90. / 918.4.91 / 921.11.96.

Greenhouse Rhododendrons. 912.1.89 / from cuttings 917.5.84.

929.10.87 / 94.6.87 / 96.1.83.

919.3.87 / 927.11.86 / 922.6.95.

Rhodos. in America 917.5.90.

Yunnan Rhodos. 98.10.90.

Spring flowering Rhodos. 912.2.90.

Rhodos. as a Cover Plant 921.4.88

Rhodos. in different soils 914.6.84. / 921.6.84 / 931.5.84. / 97.6.84.  
921.2.80 / 97.2.80. / 94.5.78 (Chalk).

Rhodos. new foliage &c. 6.6.96.

Azaleas 97.4.88 / 912.7.90.

White flowered Azaleas 919.5.88.

Indian Azaleas 920.4.89.

Group of new Azaleas 913.9.79.

Azaleas on their own roots 93.4.80.

Stone + Greenhouse (Azaleas) 923.8.90  
92.5.91.

Small flowered Azaleas. 96.8.92.

Greenhouse Azaleas 94.9.97.

Hardy Azaleas 91.6.89 / 912.6.86 / 927.6.91 / 926.6.97.

RHODOTHAMNUS.

- hardy shrub.

I. stem cuttings ->  
layers

II. seed ?

III. Chamacestus G 14.5.98 S.C. 22.5.97.  
G 7.5.98  
G 1.10.98

very rare shrub.

WITTSTEINIA.

- creeping alpine

(Kew.)

I. ?

II. seed ?

III. Vaccinacea only sp. known.

ZENOBIA.

- hardy shrub.

I. layering. Sure method for propagating varieties  
stem cuttings ?

II. seed. but seedling vary.

III. speciosa G 1.4.82 / G 23.9.82 / G 9.4.87. / G 26.3.04.  
s. var. pulverulenta. G 8.8.85 / G 7.2.91. /  
G 23.7.92 / G 6.7.95.

s. v. caespitae folia G 4.7.96 / G 8.5.97.

IV. The Zenobia G 29.12.83

The Zenobia G 25.3.93.

General note on the Euphorbiaceae.

The Euphorbiaceae allied in many respects to the members of the Geraniales is univefsally distributed in the northern and southern hemisperes. Most of the plants in the order are shrubs and are common in cultivation not so much for the flowers which are small, ~~✓~~ but for the bracts which render them very conspicuouse.g. Poisettia pulcherrima Euphorbia splendens &c. Many members of the order are also cultivated on account of their foliage e.g. Croton, Phyllanthus.

Propagation in the order is on the whole easy by vegetative methods. Increase by seed is not frequently except in some of the succulent species where it is more freely produced as results are variable. Stem cuttings are the usual mode of increase. This is the most usual and most certain mode of propagation when well coloured plants are desired.

Leaf cuttings succeed with some species of Euphorbiaceae although the process is slow ~~(X)~~. Lindemuth <sup>(5)</sup> tried leaf cuttings of Mercurialis perennis to test leaf regeneration, but though roots were obtained after 31 days no shoots were obtained. Root cuttings have not been investigated. They might possibly succeed with Daphniphyllum glaucescens.

(5) Gartenflora 52.

Luphorbaceae.

# ACALYPHA

stone shrub.

I. very easily prop<sup>d</sup> from stem cuttings at any time. 98.7.99 / 920  
best from young apical shoots in spring

II. ?

III. Godseffiana 915.7.99.

Macfleckana 93.9.98 / 930.12.93.

marginata 926.6.75 / 927.2.86.

Sanderiana 923.7.98 / 9c.3.10.96

= hispida. 99.3.01 / 9c.14.1.99.

IV. 9c.6.6.96. 92.1.91.  
916.7.98.

# ADELIA

- stone evergreen shrub.

I. stem cutting - well dried to heal base before insertion.

II. ?

III. ricinella. etc.

# ALCHORNEA

- stone ?

I. ?

II. ?

III. latifolia.

rarely seen in cultivation.

# ALEURITES

stone evergreen.

I. ripe stem - cuttings in summer.

II. ?

III. cordata: triloba.

rarely seen in cultivation



# ANTIDESMA.

- Stone shrub.

- I. ?
- II. ?
- III. pubescens.

# BERNARDIA.

(greenhouse shrub.)

- I. stem cuttings season?
- II. ?
- III. rosea 96. 11. 75.

# BUXUS.

(hardy evergreen shrubs & trees)

- I. stem cuttings of half-ripe in autumn.  
root readily 4-6 ins. long. - usual method for *B. balearica*.  
division. - usual method for dwarf boxes.  
e.g. *B. sempervirens* var. *suffruticosa* +  
Suckers .. in some sp.  
layers .. of old + young wood. in autumn.
- II. Seeds also. sown as soon as ripe.
- III. *arborescens*: *Sinensis*  
*balearica* 92. 4. 87. *sempervirens* v. *suffruticosa*.  
*japonicus aureus* 924. 8. 78 } *bulgaris* v. *pyramidata* 926. 12. 9  
921. 6. 90 }
- IV. 922. 1. 76 (varieties of Box.) - 97. 3. 96 (*Buxus sempervirens*).  
G.M. 24. 12. 81 (*Box Edquis.*) 978. 1. 99 (*Box Tree walk.*)  
9 29. 3. 84 (" ")  
9 8. 2. 90 (" ")

# CLUYTIA.

- greenhouse evergreen shrub.

I. Cuttings of side shoots root easily  
or points of young shoots keep ripe in summer.

II  
III

Collia spumosa  
montana scandens  
pauila

Species mainly of botanical interest.

# CROTON. including CODIAEUM.

(house evergreen shrubs)

I. stem cuttings. - at almost any  
season. - the best coloured leaves on well furnished shoot  
give the finest results from cuttings.

Mooring old plants. Surrounding stem with a split flower  
pot. an old method of increase.

- cuttings in water like oleander will also root 912.1.78.  
but the roots are very tender. in consequence.

II. for obtaining hybrids.

III. for the various garden varieties, which are unnumberable  
see the general articles. Among the commonest <sup>species</sup> met with are  
Andreasus, : Imperor Alex. III.  
Crown Prince; Baronesse Jauer de Rothschild. : Montfontainensis.  
Lawreni etc.

## Gen. Articles.

95.8.76 (New Races of Crotons)	925.11.93 (A Trio of Useful Decorative Crotons).
917.6.76 (Crotons & their Cultivation).	94.11.91 (Narrow leaved Crotons)
915.3.79 (Crotons for Table Decoration)	99.3.89 (Notes on Crotons)
929.4.82 (Crotons & their Culture.)	99.2.95 (Crotons in small Pots)
929.9.83 (& Treatment of Crotons.)	927.4.95 (Old Plants of Crotons)
918.8.83 / Crotons / 94.1.90	9c. 22.2.96 (Plants & their Culture Codiaeum)
98.9.88 / " / 927.10.94.	
912.10.88 / " / 912.12.91.	
99.12.93 / " / 914.1.90	

Euphorbiaceae. f.

DALECHAMPIA

(slow evergreen. shrubs  
& climbing.)

I. stem cuttings. easy -  
should be dried at base for a little time before insertion.

II. seeds. (often self-sown).

III. Roegiana. 930.3.89 / 94.11.93 / 910.11.00. / B.M. 5640.  
rosea 94.4.85.

DAPHNIPHYLLUM

(hardy  
evergreen shrubs.)

I. stem cuttings - not easy. don't insert in  
though best from current year's shoots in July. 928.4.94  
95.10.95.  
grafting not often used. 95.10.95.

II. usually imported from Japan.

III. glaucescens. 95.4.91. / 921.2.91. /  
916.8.90. / 928.4.94.

var. jagoense.

↓ var. viridis.

- Roxburghii.

IV. 95.10.95. (Daphniphyllums.)

EUPHORBIA, including

POINSETTIA.

(Stove. greenhouse / hardy).

- I. Stem cuttings - ripened - 9-12 ins. in spray or stems. after flowering. well dried at base. to prevent bleeding - often well to cut stem half way through - with callus. than the <sup>remaining</sup> portion -
- if stem cuttings inserted too early - they lose their bracts. Dec. 4.7.03
- Division for perennials.

II. not usual method except for annuals.

- III. Corollata 922.2.79.
- jacquiniaeflora 918.5.78
- = fulgens Dec. 15.1.98.

myrsinites  
wueferei 916.6.00.

P. pulcherrima 916.8.84 / 924.3.88 / 917.1.91 / 926.12.91 / 928.12.95.  
pulcherrima florissima 925.3.76 / 97.4.77 / 99.12.93.  
929.12.77 / 917.12.87 /  
923.8.73 /

IV. Euphorbias 99.9.76.

Double Poinsettias 917.2.77.

Poinsettias Single & Double 95.5.77.

Stove Euphorbias 925.1.79.

Large Plants of Poinsettia 916.3.78.

Culture of Poinsettias 931.12.81.

Poinsettias & their Culture 927.12.84 }  
99.6.83 }

Poinsettias Planted out 923.1.86.

Poinsettias 915.10.98 }  
923.12.99 }

Propagating Poinsettias Dec. 8.3.02 / 9 31.1.03.

HEVEA.

- Stone tree.

I. Cuttings of half-ripe wood in heat.

II. seed?

III. brasiliensis G4.12.80  
(Para rubber plant.) -

IV. G4.12.80 (India Rubber Plants.)

G3.10.74 (note.) India Rubber Trees in India

See also Wattle Diet. of Leon: Prod. etc.

HIPPOMANE.

- Stone tree.  
poisonous juice.

I. stem cuttings in sand. summer.

II. fruits very poisonous also.  
seed -

III. mancinella Gc. 8.5.97.  
(Manchineel) -

HURA.

(stone evergreen.)  
very poisonous.

I. Cuttings of ripe shoots summer.

II. seeds also.

III. crepitans (Sand box Tree).  
Strepans.

JATROPHA.

(stone evergreen tree.)  
very poisonous.

I. Cuttings of ripe shoots. base dried before insertion

II. seed in heat.

III. gossypifolia P.O. 117. urens (deadly poisonous.)

pandurafolia P.O. 604.

podagrifolia P.O. 4376.

G16.3.72.

MACARANGA.

stove tree.

= MAPPA.

- I. stem cuttings Season?
- II. ?
- III. Portuana. (Prized for foliage). G26.5.94 / G20.5.93 / B.M. 7407.

MALLOTUS.

greenhouse shrub.

- I. ripe cuttings in heat in summer.
- II. seed.
- III. japonica - only species yet introduced.
- IV. G19.5.94.

MERCURIALIS.

- common hedge weed.  
poisonous.

of botanical interest only. easy cultivation.

- I. division
- II. seed
- III. perennis. G7.6.04.
- var. aurea. useful for wild garden G5.6.80.

MANIHOT.

(greenhouse or stove  
evergreen.

- I. form shoots for stem cuttings in heat.  
Season?
- II. ?
- III. utilisima B.M. 3071.  
sp. etc.
- IV. rarely seen in cultivation.

Mythobriaceae 8.  
OLDFIELDIA.

- slow evergreen.

I. stem cuttings in heat. season?

II. ?

III. africana - (possibly African Oak).

PACHYSANDRA.

(hardy / slow shrub).

I. division in sprays - for hardy herbaceous.  
+ suckers. e.g. procumbens.

stem cuttings for tender sp. e.g. P. terminalis (slow).

II. procumbens. Bm. 1964. B.R. I. 33  
terminalis.

PEDILANTHUS.

- (succulent slow perennial)

I. stem cuttings - well dried at base before inserted in sand.  
+ kept rather dry.

II. -

III. lithymaloides.

+ vars. variegatus.  
variegatus cucullatus.

PHYLANTHUS.

- Ann. bienn. + shrubby.

I. stem cuttings of best marked shoots. easy 918.2.93 / 923.4.87.

II. seeds for annuals + biennials.

III. atropurpureus.

elongatum.

pallidifolius

= Reidia glaucescens 91.6.95

nivosus

921.1.82

923.4.87.

93.12.87.

918.2.93.

roseus pictus 99.9.76.

seemannianus / submarginatus 919.3.87

RICINUS.

- annuals & shrubs.

- I. Stem cuttings for shrubby species, season?
- II. Seeds for annuals & biennials. - e.g. *rutilans*.  
easily for *communis* - sown in spring in heat.
- III. *communis* (Castor. bil.) Pom. 2209. G11.5.92. See gen. articles.  
Gibsoni G27.11.75 / G22.1.76.  
*Zanzibarensis* G16.12.93.  
for other varieties see G24.1.74.
- IV. Castor bil Plants. G25.4.74 / G13.5.76 / G22.3.84 / G31.3.83.  
G24.4.86 / G24.1.74.

SARCOCOCCA.

- greenhouse half hardy shrubs

- I. Stem cuttings in slight heat, season?
- II. Seed?
- III. *Hookeriana*  
*prunifolia* G3.5.84.

SIMMONDSIA.

(hardy evergreen shrub.)

- I. Stem cuttings in autumn, ripe.
- II. ?
- III. *californica* = *Buxus chinensis*.

SIPHONIA. *caluaha* & *elastica*  
See *Hevea guianensis*.



STILLINGIA.

- Stems ever green.

I. stem cuttings in heat. summer.

II. seed?

III. populnea  
himalayensis.

Sp. rarely seen in cultivation.

SYNADENIUM.

- succulent stem perennial

I. stem cuttings - well dried before insertion. season?

II. -

III. Grantii Bm. 5633.

TREURIA.

- stem tree.

I. stem cuttings in heat.

II. seed?

III. nudiflora.

rarely seen in cultivation.

Bertha Chandler.

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Notes on the Propagation  
of Dicot. Orders. F.



### General note on Ficoideae

The Ficoideae or Aizoaceae are a xerophytic order allied to the Portulacaceae, and mainly found in South Africa. It contains many plants of interest, but the one of greatest importance is the freely flowering Mesembryanthemum of which so many species are in cultivation.

Seed is sometimes produced very freely, but seedlings are liable to damp off. They should accordingly be sown as soon as ripe in March.

Vegetative propagation is easily effected by means of stem cuttings. Leaf cuttings of some of the succulent leaved Mesembryanthemums &c. should be easy. (Not tried).

Root cuttings have not been investigated.

MESEMBRYANTHEMUM

Ficoideae

Non stem cutting in spray / ...  
... of the ...  
... plants ...

AIZOON.

- Greenhouse succulent.  
ann. bienn + evergreen shrubs -

VEGETATIVE

PROPAGATION. - stem cuttings . easy in spray .

SEED.

- also .

SPECIES.

- *Sarmentosum* Ref. Bot. 6 .  
*And. Rep. canariense* .

PHARMACEUT.

stem ...  
leaf ...

LITERATURE.

...  
...

Ficoidae 2.

MESEMBRYANTHEMUM.

(Greenhouse succulents)

I. freely from stem cuttings in sprays 18mmes 924.10.74 / 927.11.02.  
Dries at the base.

best to renew plants, as old plants get leggy trapped 923.7.01.  
leaf-cuttings?

II. usual method from seeds, which is freely produced 920.8.98  
92.10.17.98.

III. Species too numerous to mention, see under gen: articles.  
Commonly seen are.

Cryptallium 9m.10.7.83.

Cordifolium cordatum. 9c. 15.2.96 / 919.9.96 / 918.8.97.

mirabile 9c. 22.8.03.

muricatum 91.4.93.

racemosum 9c. 15.11.02 to \*

roseum 94.12.97.

IV. 924.10.74 (Mesembryanthemum). 922.11.02 (Mesembryanthemum)  
9c. 10.12.98 (Mesemb. Culture). 930.7.04 (Mesembryanthemum)  
98.4.99. (Mesemb. in the Open).  
923.7.01 (Mesembryanthemum)

PHARNACEUM.

(Greenhouse plants)

I. stem cuttings. readily root. in March.  
leaf cuttings?

II. seeds also : sometimes perfectes in linear

III. incarnum : acidum  
linear.

SESUVIUM.

- greenhouse succulent.

- I. stem cuttings in sprays.  
leaf ?
- II. seeds ?
- III. revolutifolium R.M. 1701.  
portulacastrum.

TELEPHIUM.

- insignificant alpine or  
rockery.

- I. division
- II. seeds ?
- III. imperati. 928.7.94.  
too insignificant. to be a favourite.

TETRAGONIA.

- hardy herb. annual.

- I.
- II. seeds, the usual method: sown in March - in frame. then  
put out in May.  
seeds of some are very hard. should be steeped in water
- III. expansa - (New Zealand Spinach).  
decumbens.
- IV. Lit. on vegetables.

General note on Frankeniaceae

The Frankeniaceae is a small order allied more or less to the Caryophyllaceae and Tamariscineae containing plants which are distributed in various parts of the world. The only plant of interest is the British Species Frankenia laevis which grows well near the sea side. The other genera Hypericopsis, Beatsonia, and Niederlina are not met with in cultivation. Propagation may be effected by seed, but more commonly by vegetative means,- either division, or stem cuttings. Leaf cuttings are not practicable as small exstipulate leaves are characteristic of the order. Root cuttings have not been investigated.

Frankeniaceae.

FRANKENIA.

Pumariaceae.

herb. alpine.

I. stem cuttings  
division.

II. seed also.

III. laevis 93.8.78 / 924.12.81 / 931.8.89  
pauciflora B.M. 2896.



General note on Fumariaceae.

The Fumariaceae is a small order, closely allied to the and sometimes included in the Papaveraceae, but differing from that order in the irregular flowers and watery juice. The plants are mainly annual or perennial herbs, and propagation is thus effected by seed or division. Dicentra (Dielytra) is the most important member of this order. Leaf and Root cuttings have not been investigated.

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Fumariaceae, 1.

CORYDALIS.

Hardy ann. & perennial.

I. Division after flowering  
of tubers - or any season.  
of offsets - for bulbous roots.

II. Seed, for annual spec. : in spring & autumn.

III. aurea.

glaucæ 99.11.89.

claviculata 912.9.96.

angustifolia.

bracteata 929.5.80.

Sconleri 921.5.98

94.5.01.

Halleri = bulbosa 916.4.98. / 918.5.01.

Readebowiana 976.3.98. 927.3.80  
919.3.81.

Semenovi 927.9.84.

lutea 976.1.89

915.3.90

nobilis 99.6.83.

914.5.92. / 911.5.95.

pallida 929.10.81.

rosea 96.2.92

racemosa 911.4.85.

rutaeifolia 916.4.04. K.

IV. New Corydalis 911.5.04.

The genus Corydalis G.C. 14. 5.04.

DICENTRA = DIELYTRA.

= Fumaria.

hardy + half hardy  
ann. + perennial.

I. cuttings. half-ripe -

also of roots for *D. spectabilis*.

division of crowns. best method 1824.5.90.  
in autumn.

of tuberos roots or bulbils for *D. canadensis*.

of underground shoots for *D. eximia* 1829.6.89.

II. Seed: ship seed producer is *D. chrysantha* -  
imported seed does not do well either.  
(better by veget. methods)

III. *canadensis* 1827.4.89.  
1819.4.90.

*chrysantha* 1814.11.03  
1822.1.04.

*cucullaria* 1829.4.81.

*eximia* 1816.8.91.  
1829.6.89  
1830.9.82

*formosa* 1824.8.78 / 1816.11.78 / 1827.8.99.

*spectabilis*. 1824.4.92. 1817.12.01.  
1811.5.78.  
1828.4.83

*thalictrofolia* 1814.2.85.

IV. American *Dicentra* 1829.5.85.

*Dicentra* 1829.8.91.

Large flower *D. dielytra* 1829.3.90.

Fumariaceae 3.

FUMARIA.

hardy annuals.

ii. Seed usual in spring.  
Easy cultivation self-sown.

iii. sp. not important

See also *Dicentra*.

*Solida* = *Corydalis bulbosa*.

*aurea* = *Corydalis aurea*.

Bertha Chandler.

Notes on the Propagation of  
Sicol. Orders. G.



General note on Gentianaceae.

The Gentianaceae are an order closely allied to the Loganiaceae and other members of the Gentianales cohort. The plants containing in the order are mostly steppe, shore and marsh plants and are found distributed widely over the whole earth. Owing to their alpine or xerophytic habit the majority of the plants in the Gentianaceae are lowly or creeping many of them moreover being annuals or biennials. They are thus suitable in cultivation for the rockery. &c.

Propagation is therefore mainly effected by seed which should be sown as soon ripe. Seed is in most cases abundantly produced and natural hybrids are often produced e.g. Gentiana luteopurpurea

Vegatative propagation by means of division is practicable for some genera if carefully performed; most Gentians however and especially the genus Gentiana itself, object to being distributed at the root. Cuttings of every are therefore on the whole impracticable for the hardy gentians. Stem cuttings are an easy mode of propagation for the greenhouse (Chironia, Exacum) &c. Root and leaf cuttings have not been investigated they are impracticable.

(For general culture of Gentians see under Gentiana.)

Gentianaceae:

CANSCORA. Linn.

Greenhouse or Stove  
annuals

VEGETATIVE

PROPAGATION.

SEED.

Seed in spring in heat.

SPECIES.

grandiflora

perfoliata

Panchii Bm 5489

Sp. not in common cultivation

LITERATURE.

CHIRONIA. Linn.

Greenhouse Evergreen

= ORPHIUM.

I. easily from stem cuttings in spring or autumn  
young or half-ripe wood -

II. from seed - common also.

III. diaphyllora

baccifera - Pom. 233. 93.9.98.

ixifera 920.10.94 / 91.8.03 / 923.7.04

fulvescens 926.9.91.

lucoides 915.9.00 Pom 511.

palustris - 921.9.89. Post May 149

pedunculata 929.9.93.

jasminoides to. Bot Cal. 27 Br 19

IV. OSTOMA

CHLORA. Linn.

hardy annuals.

I. the usual method; in spring -

III. perfoliata 927.11.78.  
var. grandiflora.

CICENDIA. Adans.

hardy annuals.

II. seeds. usual method

III. filiformis  
palehella = Exacum pol.

sp. not often met with -

CRAWFURDIA. Wall.

Greenhouse or half-hardy  
tunnies

I. Division. for perennials

II. for annuals.

III. fasciculata (annual) Pom. 4838

japonica 929. 10.81 (note)

speciosa 98. 11.79.



ERYTHRAEA. L. Rich.

hardy annual & perenn

- I. Division very easy
- II. seed for ann: bicennial in spring
- III. aggregata. 924.12.81. Brit. Fl. Gard. Direct. Ser. I. vol II.
- diffusa. 919.8.82 / 912.2.90. / 98.7.99.  
918.11.82 / 929.7.93 / etc.
- littoralis 96.8.81 / 91.9.00.
- Muhlenbergii 930.9.76 / 97.9.98.

EUSTOMA.

Greenhouse  
Ann: & perennials.

- I. Division for ann perennials e.g. exaltatum.
- II. seed also.
- III. Russellianus Pom 6676  
see Lisianthus Russell: G.C. 31.7.97 / 927.9.02.  
- exaltatum 918.8.77 / 915.9.83.

EXACUM.

Stone & greenhouse plants

- I. easy from stem cuttings. - lateral growth near base of stem best.
- II. seed also: imported.
- III. affine (annual) 930.7.84 / 929.9.83 / 921.7.94 / G.C. 20.8.04.  
see 926.12.03.
- bicolor see 926.12.03
- Forbesii G.C. 8.2.02
- maeranthum see 911.11.82 / 924.5.84 / 921.8.86 / G.C. 1.10.98 / 92.1.04, etc
- tetragonum
- zeylanicum 911.9.80 / 916.7.92 etc
- IV. Gen. maeranthum 911.11.82 affine to the sp. 926.12.03  
of the sp.

Scutellariaceae f.  
 insert <sup>here of</sup> *Fraseria*, affli.  
GENTIANA.

hardy -

I. Diff. to establish plants in many parts: sensitive to root disturb and transplanting. (∴ seed the best method)  
 Division for some sp e.g. *aeaulis*, but nil for others e.g. *Cruciata*.  
 Best method for *Favrati*.

II. Seed the best method, though slow: takes 3-4 years to develop mature plants. Seeds nil. produced in *Favrati*.

- III.
- aeaulis* 927.3.80 / 915.5.86. / 927.2.92. / 916.5.03. / 91.8.04.  
 928.5.81 / 922.12.88 / 927.8.98 / 926.9.03 /
  - Andrewsi* 99.2.78 / 927.9.79 / 914.10.93.
  - alpina* 921.2.85 / 924.8.95 / 927.2.97.
  - algida* 917.4.80.
  - adscendens* 924.9.81 / 918.8.94.
  - affinis* 928.7.94 / 925.10.79 / 913.9.79.
  - angustifolia* 911.6.92 / 924.8.95 / 930.5.96.
  - asclepiadea* 918.8.83 / 912.9.85 / 910.7.86 / 926.2.98 / 97.9.01.
  - a. var. alba* 93.9.98 / 919.8.99.
  - arvensis* 913.8.81 / 928.7.83.
  - bavaria* - 95.4.79 / 927.10.83 / 918.6.98 / 915.7.99.
  - crinata* - 911.10.73 / 925.9.80 / 99.10.80.
  - Favrati* - 923.2.01.
  - linearis* - 931.8.95 / 919.8.99 / 90.11.8.00.
  - lutea* - 930.6.83 / 925.7.03
  - Kurroo* - 929.3.80 / 925.10.79.
  - Septemfida* - 912.9.85 / 98.9.94 / 920.8.98.
  - strophora* - 90.20.2.97.
  - verna* - 924.12.81 / 928.8.86 / 931.10.91 / 919.3.92  
 912.6.86 / 922.12.88 / 927.2.92 / 90.18.6.04.

Gentianaceae S.

GENTIANA.

III. Tibetica 919.8.99.

IV. Gen. Articles on Gentiana.

- Gentiana 916.7.98 / 95.6.95 / 97.2.85 / 97.3.85 / 912.9.85.
- The Cultivated Gentiana 931.1.85
- Perennial Gentiana 924.8.95.
- Gentiana as plants for Edging 926.9.85.

before  
GENTIANA

FRASERA. Walt.

hardy biennial.

I. Division.

II. Seeds in spring.

III. Pazyi 922.1.76

speciosa 912.4.79.

LEIANTHUS.

Stem plants.

I. stem cuttings of young shoots.

II. seeds in heat.

III. longifolius BR. 880.

929.11.79 / 914.8.80 / 925.9.80.

KINNANTHEMUM.

marsh or aquatic

I. Division in spring.

II. seeds in spring in heat.

III. Humboldtianum

IV. 914.9.95, (note on kinnanthemum)

indicum  
m... ..

Lentianaceae 6.

LISIANTHUS.

biennial

- I. seed. usual
- II. seed. usual

III. russellianus 920.10.83 / 92.17.7.97. / 92.3.95. / 98.11.02  
 927.9.83 / 92.31.7.97 / 927.9.02

glaucifolius 92.10.80 / 923.4.81

periclyptus 95.3.90.

MENYANTHES.

bog plant

- I. Division in spring.
- II. seed in spring.

- III. indica.

IV. bipolia. 928.5.92 / 918.5.95 / 95.2.76 / 96.9.79.

SWERTIA

OPHELIA. see Swertia.

ORPHIUM. see Chironia.

PLEUROGYNE

hardy annual

- II. seed in spring.

- III. canitlica
- himalayensis.

Sp. mt. of leaf met with in cultivation.

PREPUSA.

stone perennial

- I. Division in spring.
- II. seeds in spring.

- III. Hookeriana. Bm. 3909.

Gentianaceae D.

VILLARSIA the Geraniaceae.

herb. plant

*Linnanthum*

I. Division ?

II. seed

III. Capitata

nymphaloides

= *Linnanthum nymph.*

915.12.83 / 919.10.95.

## General note on the Geraniaceae.

The Geraniaceae are an order widely distributed all over the world. It is related to the Malpighiaceae and Rutaceae and contains mainly herbaceous plants though some of the species of Balbisia (Impatiens, Averrhoa, Balbisia &c) are shrubby. Geranium and Pelargonium and Tropaeolum which are perhaps the commonest plants in cultivation are contained in this order. The majority of plants are lowgrowing and many e.g. Erodium, Geranium &c are suitable for the rockery.

The geraniums are easy of culture and increase. Stem cuttings strike at almost any season of the year. They are sometimes however inclined to rot or to get diseased e.g. Pelargonium, Balbisia. Root cuttings succeed for Monsonia sp. .. Leaf cuttings might succeed quite easily.

Seed is not so frequently used for increase as vegetative methods as being slower. Seedlings are also inclined to vary. Much hybridization work has been done in the Geraniaceae (See under Pelargonium.)

AVERRHOA. Linn.

Stone evergreen shrubs

I. half-ripe stem cuttings in heat.

II. Seed? (fruit edible in India).

III. bilimbi

Carambola -

IV. See Watts Econ. Dict. of Plants.

BALBISIA. Cav.

half hardy evergreen shrubs

I. Cuttings of half-ripe wood in spring.  
nichies to rot off. ∴ Care.

II. Seed also

III. verticillata Pom. 6170 / 914.10.93.

BIOPHYTUM. DC.

perennials.

I. ?

II. Seed usual method.

III. proliferum 917.12.87.

ERODIUM. L'Herit.

hardy ann. perennials  
(suitable for rockwork).

I. Division in spring.

Stem cuttings for E. trichomanesfolium in early autumn.

II. Seed for ann. + biennials in spring;  
usually the quickest mode of increase for all species.

# Geraniaceae ?

- II. Chrysanthemum 98.5.80 / 911.9.97.  
 guttatum 920.8.98 / 912.11.98 / 912.9.96.  
 hymenodes = 915.12.88 / 910.12.81 / 917.9.87.  
 macroderum 94.8.85 / 911.9.97. Bom. 5665.  
 manescovi 924.7.97.  
 pelargoniflorum 926.10.78 / 919.8.76 / 99.11.78.  
     petraeum fr.  
 Reichardi 920.8.84 / 93.11.94.  
     = chamaetruoides  
 Supracorum 912.10.95 / 92.11.95 / 925.9.97.  
 trichomanifolium 922.8.96 / 926.6.97.

- IV. Erodium 929.4.99.  
 Select Heron's Bills 928.2.74.

## GERANIUM (Down.) Linn.

Hardy or greenhouse  
 Suitable for rockery, border

I. Division. suitable for most sp: nil for argenteum so readily, as  
 it doe not spread itself.

Stem cuttings. proverbially easy for indoors <sup>species</sup> genera = great vitality & 91.6  
 also for outside sp.

II. Seed produces freely. : not so freely in argenteum  
 But seedling vary.

III. anemoneifolium (greenhouse) Bom. 206. 912.9.74.

argenteum 918.9.86 / 924.12.81 / 930.7.92.

arvense 99.6.77 / 921.6.79 / 92.6.83.



Geraniaceae J.

atlanticum 917.5.90 / 913.6.91.

balkanum 917.6.93 / 924.6.93 / 929.7.93 / 910.8.95.

cinereum 929.7.99 / 99.5.03

var: album

indressi 915.7.76 / 910.6.82 / 928.12.89.

ibericum 927.2.92 / 93.7.75

= platy petalum

lucidum 927.6.91.

nepalense 918.10.89.

sanguineum 910.7.97 / 92.14.1.99.

album 924.7.97 / 9.7.7.00.

var: caucastriense 919.9.03

striatum 929.11.02.

subcaulescens 914.7.94.

sylvaticum 917.8.95.

fl. pl. 913.7.78.

wallichianum 99.8.90 / 94.10.90. / 928.9.01.  
920.9.90 / 926.5.94

Gardenus var. Paul Crampbell 920.8.04

Ethel Beale 920.4.78

Magenta Queen 930.9.99

Henry Jacoby 912.8.99.

all general articles -

Geranium grandiflorum & other sp. 925.10.02

(C. Wolley Dod) 912.9.03

Geraniaceae f.

GERANIUM contd.

- I Hardy Geraniums 923.9.88 / 924.5.02  
 - 915.6.78 / 91.8.04
- Geraniums for winter & Spring <sup>Blooming</sup> <sub>Flowering</sub> 912.11.98 / 917.1.03
- Geraniums in the - Rock <sup>Garden</sup> see 924.5.02
- Geranium as a Standard 923.9.04
- Geraniums for Bedding 919.9.03

IMPATIENS. Riv.

hardy + greenhouse  
ann + biennials.

- I Division?  
 Stem cuttings at almost any season.  
 in autumn & preserve plants over winter  
 in spring for Verdonicae.  
 best for I. Hawkeri.
- II seed in open border in spring or in heat for greenhouse &.  
 I. Hawkeri does not usually produce seeds. 918.2.93  
 but easily from cuttings.
- III Balsamina 928.6.90 ..  
 Capensis 923.6.88.  
 Episcopi 915.8.85.  
 flaccida alba 98.11.84 / 914.6.84 / 916.7.87.  
 glandulifera 925.10.79.

*Grammaea* S.

IMPATIENS cont.

*Graudiflora* Gc. 16.2.01.

*Hawkeri* 919.3.84 / 917.12.84 / 922.1.84.  
913.10.88 / 912.10.89 / 922.11.90 / 912.12.91 / 98.5.97.

*Hookeriana* 929.11.84 / 916.1.86 / 919.11.87.

*Terdoniae* - 924.11.83 / 931.3.85.  
(Greenhouse) 912.10.78 / 912.7.79.

*Olivieri* Gc. 5.9.03 / 921.5.04 / 915.10.04.

*Roylei* Gc. 25.11.99.

*Sultani* 92.9.82 / 917.6.82 / 914.4.83 / 96.10.83 / 911.10.87.  
924.11.83 / 911.7.85. / 99.1.86 / 918.2.93.

IV General Article on Balsams.

Balsams. 928.3.85 / 912.5.88 / 913.8.92 / 91.6.95 / 922.11.02.

Balsams & their Culture. 915.5.80 / 99.2.84.  
OXALIS 924.3.77

Balsams from Home Saved Seeds. 95.11.81 / 919.11.81 / 93.12.81.

Balsams in Pots & out of Doors 92.11.78.

Balsams as a Border Plant 916.4.81.

Stove Balsams 98.10.92.

Double Balsams 917.8.86 / 917.8.80 / 922.10.81.

Specimen Balsams 930.3.78.

LIMNANTHES. R.Br.

hardy annual.

I. seeds in spring in shade

III. Douglasii. Pom. 3554. / 923.7.81 / 916.6.83 / 919.10.89.

MONSONIA. Linn.

greenhouse perennial.  
except lobata (biennial).

I. Division 1  
Stem cuttings in summer & autumn  
root.

II. Seeds also in spring in heat.

III. Cylindrica Refug. Botan 4 (1868)

lobata Pom. 385.

speciosa Pom. 73.

sp. not often met with.

OXALIS. Linn.

hardy & greenhouse

I. Division for perennials -  
tubers for O. cernua.

Sealy bulbs at crown of roots O. Deppei.

Stem cuttings for shrubby sp. e.g. fruticosa & Plumieri.

II. Seeds in spring in open for hardy sp.

III. acetosella 923.2.95 / 920.12.02.

arenaria Pom. 6193 / 98.1.76.

Cernua -  
(Bermuda Buttercup) 917.10.96 / 924.10.96 / 923.7.98 / 98.6.01.

Geraniaceae 7.

Corniculata 99.11.72.

var. mbra

crenata 9c. 22.7.98 / 9c. 14.3.03 / 921.10.99.

Deppei 917.7.75. (edible tubers)

elegans

enneaphylla 910.5.90 / 911.9.97 / 922.5.97 / 921.7.00.

floribunda 926.12.96 / 913.9.83.

incarnata 915.10.81.

lobata

910.12.87. / 911.11.93. / 914.11.03.  
94.11.93 / 91.10.98

Luteola 930.1.86.

Ortgiesii

931.1.03.

Rovicana

928.9.89 / 911.10.90.

Rosea

98.6.72 / 94.11.93 / 910.5.02.

Violacea alba

925.8.78.

TU Gen. Articles on Oxalis

Wood Sorrels

93.10.74 / 94.2.82 / 931.5.90.

Notes on Oxalises

926.2.76.

The Oxalises

94.3.76.

Exotic Wood Sorrels

915.11.84.

Oxalises in winter

92.1.86.

Uses of Wood Sorrels

92.12.82.

PELARGONIUM.

(Greenhouse)

I. Stem cuttings at almost any season.  
see Gen Articles. 917.1.80 / 951.9.00 etc.

Best after flowering in summer.

II. Root cuttings: only used for part. vars. for economy, see 917.1.80.  
better for some Cape sp. + fancy Pelargonium see 919.10.78.

Leaves for variegated sp. see 913.1.72.

III. Seed - in spring + summer. see 917.1.80.

III. Vars. too numerous to mention see gen articles.

among best garden vars are

Duchess of Teck, Duke of Wellington

Bonfire, Duchess of Fife, Mrs. Canale, Queen Victoria etc.

IV. Gen Articles on Culture + Prop. of Pelargonium.

Culture of the Pelargonium from 917.1.80 to 928.2.80

97.10.82 / 918.9.86

94.5.95 / 9

Decorative Pelargonium 913.6.91 / 92.4.92

Raising New Pelargonium 921.8.75

Variegated Pelargonium 930.12.71.

Pelargonium at Lewisham 916.95 / 910.7.97 / 917.6.93.

Zonal Pelargonium 916.2.92 / 918.5.97 / 915.1.01 / 919.7.02  
927.9.02 / 930.1.04.

Zonal Pelargonium in white 918.12.75 / 925.12.75 / 918.2.82 / 925.1.90 / 984.93.

Geraniaceae G.

SARCOCAULON

contd.

Double Zonal Pelargonium 97.2.74 / 95.12.85  
922.8.74 / 924.10.86.

Early flowering Pelargonium 928.5.81 / 912.3.87 / 916.2.89.

Day-leaved Pelargonium 929.6.78 / 918.6.86 / 924.4.98.  
915.7.82 / 92.6.88 / 97.4.00 / 930.3.01.  
93.11.83 / 98.8.91 / 926.5.00

Seeded leaves Pelargonium 93.8.78 / 97.10.93  
916.9.93 / 91.2.02.

Double Pelargonium see 93.7.80 / 927.9.90.

Regal, Show & Fancy Pelargonium 920.7.78 / 912.5.88 / 915.1.98.  
911.4.85 / 916.11.89 /  
930.5.85 / 95.5.93

Bedding Pelargonium 921.7.83 / 99.11.84.

Tricolor Pelargonium 917.8.78 / 917.6.93 / 96.10.94.

Seedling Pelargonium 95.7.84 / 922.8.85.  
928.6.84

Propagating Pelargonium 99.10.86 / 919.8.99.

Disease in Pelargonium Cuttings 92.24.9.98  
92.10.6.99.

Geraniaceae 10.

SARCOCAULON Sweet.

(greenhouse sub. shrub.)

i. Stem cuttings in sand.

ii. Seed.

iii. Burmanni. B.M. 5729.

TROPAEOLUM Ruiz.

(hardy, greenhouse.)

i. Division of roots best for T. speciosum.

Division of tubers for tiebens sp.

Stem cuttings in spring + autumn for Cooperi, Hermine Frastoff +

ii. Seed the usual + quickest method.

not for Cooperi. See 910.11.83.

iii. azureum 91.6.78 / 926.9.85 / 98.10.04.

canariense 91.11.84 / 924.5.90.  
(Canary Creeper)

compactum 910.11.83 / 917.11.83.

Cooperi 910.11.83.

deckerianum 95.12.85 / 986.12.85.

Leichtlini 924.6.99 / 98.7.99.

Robbianum 910.10.74 / 98.12.88 / 910.12.98.  
+ var.

majus minus.

pentaphyllum. 926.10.95.

speciosum.

(Blauwe Nachtkruid.)

925.5.78	98.11.90	927.8.92	926.9.96	916.8.91
924.11.77	96.6.91	97.10.93	919.9.96	925.1.00
929.12.77	927.6.91	912.9.96	911.1.02	927.12.91
				931.1.03

polyphyllum 98.4.76  
914.1.93 / 99.7.98 / 921.5.04.

rhomboidum 95.5.88.



Geraniaceae II.

TROPAEOLUM contd.

Tomasini 913.5.82.  
bicolorum 912.8.73 / 912.9.74 / 925.9.80 / 928.5.81 / 94.11.10.02.  
+ vars. 910.5.79

tuberosum 920.12.79 / 928.8.80 / 916.12.99.  
927.10.77 / 94.10.99 / 914.12.01.

Garden vars: Comet, Diefly, Cibrás Peru etc.  
Sunlight 926.00 / 928.03.  
Hermine Grashoff 915.10.81 / 927.5.82  
Redford Rival 925.8.83 / 94.9.81. etc.

Tropaeolum 911.5.78.

Tropaeolum (for winter) 99.10.75 / 929.7.76 / 97.12.78

Tuberous, rooted Tropaeolum 922.7.82 / 920.8.87 / 927.8.92.

Compact Tropaeolum 928.11.03

Dwarf hactertumii 928.8.80 / 930.7.84 / 930.3.89 / 910.10.90.

Double Tropaeolum (Hermine Grashoff.) 915.10.81.

VIVANIA Cav.

Greenhouse evergreen

1. stem cuttings in sand in spring

grandiflora  
parviflora.

Sp. seldom seen in cultivation

General note on Gesneraceae.

The Gesneraceae are a tropical order the numbers of which are found in both hemispheres Malay China tropical Africa &c. The order is allied to the Bignoniaceae, Scrophularinaceae &c. and is mainly composed of lowgrowing herbaceous <sup>plants</sup> characterised by soft stems and hairy leaves.

Vegetative propagation is remarkably easy both by cuttings of the leaf and the stem. Root cuttings in many cases are not practicable as the roots are fibrous but in many cases the Gesnerads are characterised by tuberous roots and rhizomes which serve as a means of vegetative reproduction. Leaf cuttings are practicable for all Gesnerads and especially for the tuberous species which produce no offsets e.g. Sinningia.

Increase by seed is commonly employed as it is freely produced. The seeds must be sown at once. They germinate readily. A great deal of hybridization work has taken place in the Gesneraceae and especially in the the genera Gloxinia and Gesnera.

Gesneraceae - Annotated List of Genera + Species.

Col. R. H. Beddome - Journ. Roy. Hort. Soc. Vol XXXIII. p. 74.

Peperaceae. 1.

ACHYMANANTHUS Jack

ACHIMENES.

(Stems herb. Perennials,  
Suitable for hanging baskets etc.)

I. Stem cuttings for young wood.  
Generally, leafy stems, used for prop. 12.5.78.  
(Single or divided.)

leaves also.

II  
III  
coccinea 921.7.00 / 910.12.81 / 930.12.82.

longiflora

alba

tubiflora (Peperera tubiflorae). 921.6.90 / 924.6.93 / 91.8.04

Verschaffeltii (garden hybrid)

(See gen. articles for other notes on sp.: not so much grown as used to be: but well worth culture.)

IV  
Achimenes & their Culture 912.7.79. 918.12.86.  
918.3.78.  
931.8.95.

Culture of Achimenes 918.3.76 / 924.3.77.  
917.8.72

Achimenes 925.2.93 / 95.9.96 / 92.9.99.

Achimenes as Basket Plants 915.2.79 / 927.2.86 / 918.12.86

AE SCHY NANTHUS. Jack.

Stems forming clump  
Suitable for baskets & pots  
or for growing on old tree ferns

I. Stem cuttings: half-ripe wood, in spring or summer. best.  
though strikes at any time  
II Leaf cuttings: easily - though slower  
III Sometimes ripen seeds.

Generales 2.

AECHYNANTHUS contd.

- Grandiflorus 922.9.83.
- Lobbianus 93.11.83 / 927.8.81.
- maculatus 915.5.80 / 923.7.04.
- Hildebrandii 912.5.94.
- fulcheri 912.5.83 / 917.4.86.
- speciosus 97.9.89 / 910.9.98.
- bicolor Pom. 5031.

Stem creeping  
shrub

- The Aechynanthus 910.3.88 / 92.11.89 / 92.10.97 / 913.3.97.
- Culture of Aechynanthus 96.5.76.
- Aechynanthus as Basket Plant 918.9.80.
- Aechynanthuses in Bloom 91.10.92.
- Species of Aechynanthus 931.8.95.

BESLERIA

Stem less green  
shrub

AGALMYLA

Stem creeping plant

Epiphyte - suitable for covering  
old wood etc.

I. Stem cuttings of ripe wood.  
Layers easy for A. staminea.

- II. Longistyla 923.6.77.
- Staminea Pom. 5747.

ALLOPLECTUS

Stems evergreen  
shrubs.

(Heimia).

I. stem cuttings in leaf. half-ripe wood: strike easily  
leaf cuttings also

II. ?

III. peltatus P 25.1.90 / 917.1.91.

BAEA

= DORCOCERAS.

freeshornae herbaceous  
perennial.

I. Division?

II. seeds the most usual method

III. hygrometrica Bm. 6468.

BESLERIA Linn.

Stems evergreen  
sub. shrubs.

I. stem cuttings - half-ripe wood in spray  
+ suckers - abundantly produced in melittifolia

II. ?

III. leucostemma Bm. 4310

inray Bm. 6341. 291

melittifolia B.C. 204 526. 11.83.

Generaceae f.

CHIRITA. Clarke (Haw.)

(Latin or half hardy  
but greenhouse!)  
Stems evergreen.

I. Stem cuttings in spray.  
Leaf cuttings. usual mode of propagation.

II. Mooni early from seed - in spray in heat - 912.7.86 / 99.1.97 / 926.6.97.

III. Depressa B.M. 7213.

Mooni B.M. 4405 / 920.9.84 / 918.9.86 / 931.8.89.

Smirnia (greenhouse) 910.12.81 / 913.9.02.

Stems from 9 plants

var. variegata. 91.12.77 / 91.12.83.

COLUMNEA.

(Stems evergreen).

I. Stem cuttings strike freely. 912.9.77.

II. -

III. Axiomatica.

Stems perennate

Crassifolia. } see gen. articles.

Scandens.

Schiediana 921.5.81 / 99.5.85.

IV. Columnas 96.2.91.

Culture of Columnas 974.11.83.

DICHROTRICHUM

(Latin Clarke)

stem cuttings in spray, half ripe ones

temperatures B.M. boxes / 920.9.84

Generaeae S.

CONANDRON

Clarke

(leafy or half-leafy  
herb. perennial)

I. stem cuttings?

Division.

ramondioides B.M. 6484. 930. 8.79 / 912. 7.84 /

humboldtiana B.M. 4757 99. 1.97 / 926. 6.97.

prunifolia B.M. 5111

for new species see R.B.G. Moore (herb. b. Smith)

CYRTANDRA Forst.

Stems trees & shrubs.

I. half-ripe cuttings in heat.

II. ?

III. pendula - Pritchardii. Sp. mt. often seen in cultivation.

IV. Himalayan Cyrtandroaceae 913. 9. 79.

Sp. common in cultivation.

DIASTEMA

Stems perennial

I. Division. Stem cuttings of young wood in spring.

II. Seed.

III. ochroleucum B.M. 4254. 1 pieta. / Sp. mt. common in cultivation.

DICHROTRICHUM Reinw.

(Stems Climber)

I. stem cuttings in spring: half-ripe wood.

II. ?

III. kermateum B.M. 6791. / 930. 9. 84.

DIDYMOCARPUS. Clarke -

(Stems herb. perennials)

I. Division -

Stem cuttings. Young shoots in sprout.

II. seeds.

III. malayanus Pom. 7586. 90. 1.8.96.

Humboldtiana Pom. 4757.

prunifolia Pom. 5161.

For new species see R.B.G. Notes - (see to do, Smith).

DRYMONIA. Mark.

(Stems evergreen climbers)

I. Stem cuttings in heat.

II. seeds? 916.3.89 / 910.9.92 / 89.3.95 / 919.3.98 / 926.2.00

III. narmorata Pom. 6763.

villosa Pom. 4866.

sp. not common in cultivation -

E PISCIA.

Stems perennials.

= Centrosolenia

I. Stem cuttings, easily, at any season. leaves?

II. ?

III. bicolor cupolata - Pom. 5195.

densa - Pom. 7481.

erythropus 915.14.76 / 928.3.91.

fulgida

Cyrtoseira fulgida 917.10.03



Geneseraceae ?

FIELDIA.

greenhouse climber.

I. Cuttings of tops of young shoots: or from side shoots.

II. -

III. australis B.M. 5089 / 96.11.75.

GESNERA.

I. lebens. (not really as in many Gesneriads but solid).

stem cuttings: best of young shoots.

leaf cuttings. (see sig - )

II. SKOXINIA.

III. cardinalis. 916.3.89 / 910.9.92 / 99.3.95 / 919.3.98 / 926.5.00  
917.10.96

cinabrunia. 98.1.76 / 922.4.76 / 926.2.87.

exoniensis. 914.4.88.

glaucophylla.

longiflora. 912.6.97.

anabitis. 96.11.97.

Donkharri. 920.8.81.

Houtteana  
coccinea. 98.4.76.

Houttei. 917.3.77.

hybrida. 920.8.04.

Leopoldi. 923.6.98.

macraurtha. 93.3.83 / 919.3.87 / 925.2.88.

zebrina. 917.11.83 / 927.3.97.

Gesneraceae &

GESNERA contd.

Gesneras. 911.5.72 / 914.8.83 / 925.6.98.

Gesneras for the Greenhouse in winter 919.2.76.

Gesneras & their Culture. 911.5.78. / 911.11.82.

Notes on Gesneras 99.11.95.

Hybrid Gesneras. 99.1.04.

HYPOCYRTA. Herb

(Shrub plant)

GLOXINIA.

I. Leaf Culture. best for fine varieties 920.7.78.  
Root slower than seed, which is modern method of prop.

II. Seed in Spring - see 926.8.93.  
Seedling plants more vigorous.

III. Gesneriodes 98.5.86.  
Her Majesty 916.7.98.  
maculata 918.4.91 / 919.1.01  
93.12.81 / 915.10.04.  
tubiflora = Dolichodevia tubiflora.

IV. Gloxinias. 95.7.90.  
922.3.90 / 925.7.91 / 913.2.92 / 913.5.93.

Seedling Gloxinias 926.8.93 / 916.4.98 / 94.3.99.

Spotted Gloxinias 922.2.79 / 92.10.97.

Gloxinias & their Culture 914.4.77 / 914.7.83 / 928.3.85

Generaceae 9.

GLOXINIA. contd.

I. Gloxinias & their culture 9 28.11.85.  
9 7.9.89 / 9 27.8.04.  
9 21.3.96.

Gloxinias at Reading 9 16.7.87 / 9 8.8.96.

Gloxinias & their Artificial Fertilization (M. Duval) J.R.H.S. vol XXIV p. 333 1900.  
Hydrea in bloom 9 6.10.87.  
Hydrea for water 9 4.11.82 / 9 19.1.84.

HYPOCYRTA. Mart.

(Stone plants.)

I. Stem cuttings easy.  
leaf cuttings - ?

II. Leaf seed also

III. glabra. Bm. 4346.  
palehra -  
strigillosa Bm. 4047.

ISOLOMA. Dene.

= Tydaea.

I. stem cuttings. Young shoots in spring.  
more common prop. from pieces of rhizome (scaly).  
by division see 9 7.11.85.  
leaf cuttings.

II. Seeds also see 9 19.12.96.

III. hirsuta 9 26.11.92 / 9 31.3.94 / 9 13.10.00.

Marquis de Guidiaro 9 4.11.93.

L. Madam Heine 9 14.2.80 / 9 27.11.80.

Vicomte A. de la Combe 9 16.12.99.

Senecioaceae 10.

Isoloma cord.

I. Lydaeas . Ge. 26.11.98. / 98.7.99.  
9 20.5.99 / 91.11.02.

Isolomas 98.7.99 / 91.11.02.

Lydaeas from seeds 919.12.96.

Lydaeas in bloom 98.10.87.

Lydaeas for winter 911.11.82 / 91sept.84.

Isoloma culture 929.8.03.

Lydaeas + Senecio 97.11.85.

JERDONIA. Wright.

store plants.

I. stem cuttings.  
leaf cuttings?

II. seed also.

III. indica Bm. 5814. at Kew.

KLUGIA. Schlecht.

greenhouse annual.

I. stem cuttings to preserve plants over winter.

II. seed the usual method.

III. notoniana 919.6.97. Bm. 4620.  
9c. 22.2.96  
9 30.5.85.

LEITIXIA. Regel.

Stems perennial.

I. Division of tubers.  
Stem cuttings & leaf cuttings easy.

II. Seed sown in <sup>early</sup> spring.

III. *brasiliensis* 917. 7.80 / 922. 1.81.

LYSIONOTUS. D. Don.

Stems herb.

I. Division in spring.

II. Seeds in spring in heat.

III. *setata* - Pom. 6538.

MITRARIA. Cav.

Half hardy or greenhouse  
shrub.

I. Stem cuttings as easily as *Muehlenbergia*  
at almost any season; best spring & summer.

Division of roots in spring.

II. *coerulea* Pom. 4467.

(Scarlet Mitre-pod) 922. 5.86. / 926. 5.88 / 928. 6.90.  
94. 6.92 / 915. 7.93 / 920. 5.99 / 96. 7.06.

MONOPYLE. Moench.

Stems perennial.

I. stem cuttings.  
leaf cuttings.

II. from seeds.

Celastraceae 12.

NAEGELIA

(Stove herb. perennial,  
rare specimen  
plant.)

I. Cosmo. see F.C. 11.12.97.  
very slow growth in fulvica -

II. seed ?

III. amabilis F.C. 11.12.97.  
= multiflora 917.1.91. B.M. 5083  
fulgida bicolor 919.11.81.

NEIVATANTHUS Mart.

(Stove evergreen  
Chiba.)

I. very easy culture + increase -  
stem cuttings  
leaf cuttings.

II. ?  
labacum B.M. 7107 / 938.9.89

III. longipes 98.11.81 / 95.11.81.

RAYMONDIA Koch

hardy herb perennial  
suitable for rock garden

NIPHAEA

Stove herb. perennial.

- PHINEA.

I. Division of roots in spring -

II. ?

III. albo-lucida B.M. 4282.

reticulata = Phinea ret. B.M. 5043.

pyramica 916.8.84 / 917.4.86 / 930.3.97  
var. alba 910.8.84 / 915.7.89 / 910.6.92  
930.7.84

the other species see general notes.

PENTARAPHIA. Lindl.

now greenhouse plants.

I - Young shoots for stem cutting.

II -

III - cubensis

libanensis B.M. 4380.

longiflora.

sp. rare.

PRIMULINA. Hance.

half-hardy perennial  
half-hardy or  
greenhouse plant

I. Division ?

II. Seeds

III. Tabacum B.M. 7117 / 928.9.89.  
(Rock tobacco)

RAYMONDIA. Rich.

hardy herb. perennials.  
suitable for rock garden.

- JANKAEA.

I. Division, in spring of offsets.

Difficult subjects: slow growth both young & old plants.

leaf cutting also, but not economical, as largest leaves should be used; plant so spotted. see gen. arts.

II. Seed neural method - but slow.

III. Heldreichii 95.6.97 / 93.6.99.

pyrenaica

var. alba

916.8.84

910.8.89

917.4.86

913.7.89

920.7.89

930.3.97

918.6.98.

for other species see general articles.

Gesneriaceae 14.

RAYMONDIA. Contd.

IV. The *Raymondias*. *Fl.* 1.90.  
9 12.6.97  
9 16.9.99.

*Raymondia*  
(*pyrenaica*.) *G.C.* 13.4.01.

*Les Ramones* *La Sem. Hort.* 8.5.99.

RHABDOTHAMNUS, Cunn.

half-hardy or  
greenhouse shrub.

I. stem cuttings  
leaf cuttings.

II. Seed.

III. *Solantri* *G.C.* 24.10.03 / 9 15.10.04.

RHYNCOGLOSSUM.

greenhouse biennial

II. seeds in heat.

III. *obliquum* - *zeylanicum* *B.M.* 4198.

RHYNCHOTECHUM, Bl.

stove biennial.

II. seeds in heat. *B.M.* 6920.

III. *ellipticum* *B.M.* 5832.



RHYTIDOPHYLLUM Mart.

Stem cuttings

= STERODASTRA

- I. Stem cuttings easy.  
Leaf cuttings.
- II. seed.
- III. Auriculatum Pom. 3562  
tomentosum Pom. 1023.

SAINTPAULIA Wendl.

Greenhouse

- I. <sup>not</sup> Stem cuttings as rosette habit.  
division of offsets  
Leaf cuttings do not prod. tubers but fibrous roots see 10.12.98.
- II. seed also: usual (annual.)
- III. ionantha. 923.2.95 / 93.9.98 / 929.10.98 / 910.12.98.  
9c. 4.11.99 (927.1.00 / 9c. 23.1.04.

STAUROANTHERA

var. subra.

SARMIENTA Ruiz. + Pav.

greenhouse perennial trailers.

= Urceolaria.

- I. Stem cuttings easy.  
(adv. roots on stems easily.)
- II. seed also.
- III. repens. Pom. 6920.  
94.6.81 / 917.6.82 / 930.4.92 / 9c. 11.5.01.

Reservaceae 16.

SINNINGIA Rees.

Stove Caerogreus.

= STENOCASTRA.

Greenhouse or stove  
- leaf. persistent.

I. Division

stem cutting. easy.

leaf cutting. also.

II. not usual.

III. concinia

= Stenogastera concinia

Bm. 5253.

910.7.97.

Sc. 11.6.98

924.6.99.

Sc. 18.6.98

94.4.03

Guttata. 912.6.86

speciosa. 922.1.77/927.7.77/919.8.87.

Regina Bm. 5182.

Yongeania Bm 4954.

STAURANTHERA.

greenhouse?

I. stem cuttings easily

II. seeds. also

III. grandiflora. Bm. 5409. 96.8.92.

STENOCASTRA. Hanst.

see SINNINGIA

TREPTOCARPUS. Lindl.

Greenhouse or stove  
herb. perennials.

- I. Rosette habit - stem cutting. not available -  
leaves for cuttings used. (see Poebel. also 196.2.81 to  
Division usual mode.
- II. also. usual mode. in heat in spring.
- III. biflorus 920.9.79 / 926.2.81 / 925.11.82.  
caulescens 95.4.84.  
Durni 912.6.86.  
floribundus 925.1.79 / 927.9.79 / 919.8.82.  
Gardeni Bm. 4862.  
Galpini 919.3.92.  
Rexi 912.7.80 / 916.8.84 / 916.7.87. var. multiflora 928.6.84.  
Newlandii, 928.16.10.97 / 916.6.94 / 923.7.98 / 99.7.98.

- IV. Streptocarpus 914.11.96 / 918.8.88.  
Streptocarpus 928.8.97.  
The genus Streptocarpus 922.5.86.  
Cape Primroses 930.3.95.  
Evolution of the Streptocarpus 917.9.98.  
Hybrid Streptocarpaceae. 918.8.85. / 913.3.92. / 913.8.92. / 90.1.10  
916.7.84 / 915.11.92 / 916.2.97

Gesneraceae 18.

TAPPEINOTES DC.

Stone plant.

I. stem cutting ?

II. seed

Caroliniae S15.11.73 Pom. 5623

var. major S29.12.83.

TRICHANTHA.

Stone trailer.

I. division ?

II. seed

III. minor Pom. 5420.

General note on Goodeniaceae.

The Goodeniaceae are a small order almost confined to Australia, allied mainly to the Campanulaceae. The plants in the order are mainly greenhouse perennials, and shrubs not very well known in horticulture, except the beautiful blue Leschenaultia Biloba Major.)

Propagation takes place vegetatively by means of stem cuttings of half ripe wood which strike easily in spring.

Root and leaf cuttings have not been investigated.

Seed is not often used for increase.

Goodeniaceae  
SCARBOZA. Linn.

(greenhouse specimens)

# DAMPiera

greenhouse herbs or shrubs

I. stem cuttings strike easily. young shoots: sprout.  
Division

II. fascicula. (also) P. 2732  
III. lavenderacea.

sp. not much seen in gardens.  
(Australian)

# GOODENIA

greenhouse herbs & shrubs

I. young cuttings easy sprout.  
Division

II. seeds also P. 881

III. calendulacea.  
grandiflora.  
laevigata.  
ovata.

Australian plants. not much known in gardens.

# LESCHENAUZIA

greenhouse evergreen

I. stem cuttings young shoots sprout: easy P. 14.6.84  
P. 27.8.81 & see: arts.

II. ?

III. biloba major. P. 27.7.72 / P. 14.6.84 / P. 28.6.84 / P. 4.10.84.  
P. 21.7.88 / P. 14.6.90  
formosa P. 27.8.81 / P. 24.2.83 / P. 16.2.89.

IV. Leschenaultia & their culture. P. 27.8.81 / P. 24.2.83.  
Leschenaultia (biloba) P. 4.10.84.

SCAEVOLA. Linn.

( Evergreen greenhouse + stone )

I. stem cuttings. Young shoots.  
division.

II. seed also.

III. attenuata (greenhouse) Pom. 4196.  
Konigii (stone) Pom 2732.

VELLEIA. Sm.

(greenhouse evergreen)

I. division in sprout.

II. seed ?

III. lyrata - B.R. 551.  
paradoxa. B.R. 971.

sp. not commonly met with in cultivation.

this order [See Mezua]

Propagation in nature is by seed, but in cultivation seed is rarely produced.

Vegetative propagation by means of stem cuttings is therefore resorted to.

Root cuttings have not been investigated.

The leaves of nearly every species are shiny and leathery, and are unsuited for propagation.

## General note on Guttiferae.

The Guttiferae are essentially a tropical order. The plants are inhabitants of tropical forests in America, Asia, Africa, Madagascar, &c., and the leaves of many are characterised by "drip tips" in order to carry off excessive moisture. (As the name infers). The order is allied to the Ternstroemiaceae &c

Most of the plants are stove trees and shrubs. Some, for example Clusia, are epiphytes. Few species therefore are found in cultivation outside of Botanic Gardens, because they require too much accomodation. Economically, however, in their native countries (India) these trees are very important for timber.

For example, <sup>K</sup>Wayea, Calophyllum, Mesua, Garcinia, Ochrocarpus, Poeciloneuron. They are nearly all, moreover, characterised by beautiful flowers; the sweet-scented Indian Nagskur belongs to this order [See Mesua.]

Propagation in nature is by seed, but in cultivation seed is rarely produced.

Vegetative propagation by means of stem cuttings is therefore resorted to.

Root cuttings have not been investigated.

The leaves of nearly every species are shiny and leathery, and are unsuited for propagation.



CALOPHYLLUM. Linn.

Stove evergreen trees.

I. stem cuttings of ripe shoots in sprout.

II. Calaba (Calaba - tree.)

inophyllum.

Ann. Roy. Bot. Gard. Calc. vol. V.

Gamble - Manual of Indian Timbers p. 56.

CLUSIA. Linn.

Stove evergreen trees.

I. cuttings of ripe shoots.

II. ?

III. Proquiartiana Bm. 5325.

odorata Bm. 5865.

rosea.

GARCINIA. Linn.

stove evergreen.

I. stem cuttings : ripe wood.

II. ?

TADESMIA. Sal.

III. dulcis.

Gambogia (see Oliver, on Propagation).

mangostana. (Mangosteen. see Oliver, on Propagation).

santhochymus dulcis Bm. 3088.

IV. Ann. Roy. Bot. Gard. Calcutta vol. 5.

Economic Products - Watt.

Bertha Chandler

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Notes on the Propagation  
of Dicot. Orders. H.



General note on Haloragaceae.

The Haloragaceae are a small but widely distributed order in the south of the eastern hemisphere, allied in flower-structure to the Onagraceae, but in many ways having affinities to the Rosales into which cohort it is sometimes placed. The plants in the order are mainly marsh plants, many of them common British herbs. For example Hippuris, Myriophyllum, and Cercodia, growing beside, or in the water. The only plant of value for the garden is Gunnera, the large foliage of which is very decorative at the sides of ponds or other places where plenty of moisture is available.

Propagation in the order takes place naturally by seed, or detached pieces which easily root. In cultivation increase is usually by division.

Haloragaceae.

# GUNNERA.

(hardy herb. perennial.  
moist or wet situation)

## VEGETATIVE

### PROPAGATION.

Division of crowns as easily as Rhubarb.  
Easily grown. Deep rich soil - plenty of moisture.

## SEED.

- also from seed.

## SPECIES.

- *manicata* 9.7.98 (note).  
9.3.96.

*laegethauica*.

scabra. 9.7.10.99 / 9.4.11.99 /  
9.29.2.96.

## LITERATURE.

*Gunnera* 9.8.11.79 / 9.9.10.86 / 9.4.11.93.

Haloragaceae ?

HALORAGACEAE

Brit. water or marsh plant

I. Division

II. Seeds ?

III. Sp. of no hort. value.

HIPPURIS

Brit. perennial aquatic

I. water plant.

Division Parrotia, etc.

II. Seeds

III. Sp. of no hort. interest.  
bulgaris

MYRIOPHYLLUM

hardy perennial aquatic

I. Division

II. Seeds ?

III. proserpinacodes. Suitable for margins of lakes etc.  
= *Herpestes reflexa*

General note on Hamamelid<sup>e</sup>ae.

The Hamamelideae are a small order distributed in the sub-tropical regions, but whose chief home is Japan. It has alliances to the Saxifragaceae and other members of the Rosales cohort. The plants in the order are nearly all hardy flowering shrubs, and are of exceptional beauty, both on account of the flowers which usually appear in winter or early in the year before the leaves, e.g. Fothergilla, Forsythia, Hamamelis, &c., and on account of the foliage which often turns in autumn to brilliant crimson, e.g. Liquidambar, Parrotia, &c.

Growth in this order is very slow, which fact possibly accounts for the Hamamelidae not being so commonly cultivated as they would otherwise be.

Propagation is therefore also slow. Good seed is not often obtained and must be imported, or propagation must be effected by vegetative means.

Stem cuttings in most cases are very slow. Grafting on a common stock Hamamelis virginica, and layering, are much more often used as quicker methods of increase.

Root cuttings have been successful with species of Hamamelis, though not investigated for other genera. Leaf cuttings would be slow and tedious. They have not been investigated.

HAMAMELIDAE.

DISTYLIUM  
BUCKLANDIA. R.Br.

greenhouse shrub or tree.

- I. stem cuttings of ripe shoots: care needed as liable to rot off.
- II. -
- III. populnea Bot. M. 6507 -  
(prized for foliage) 94.9.80.

DISANTHUS. Maxim.

CORYLOPSIS. Sieb. & Zucc.

hardy flowering shrub

- I. layers.  
stem cuttings?
- II. seeds?
- III. himalayana B.M. 6779 919.3.87.  
multiflora.  
pauciflora B.M. 7736. 97.4.83.  
spicata B.M. 5458

DAVIDIA. Baill.

(hardy shrub)

- I. stem cuttings but slow.  
layers...
- II. seeds
- III. involuerata 921.2.03  
90.11.4.03

DISTYLIUM

freehonal evergreen.

stem cuttings strike with difficulty  
root cuttings easier

- I. 3 acemesosum ✓
- 1/2 variegatum

DISANTHUS, Maxim.

hardy shrub.

I. layers 1  
cuttings ?

II. seeds imported from Japan

III. cercidifolia ✓ 923.2.01 / 925.4.03  
(only species - rare -) (good autumn foliage)

FOTHERGILLA, Aubl.

hardy decid. shrub.

I. layers for varieties  
stem cuttings ?

II. seeds in sprigs

III. alnifolia 91.6.89 / 911.6.87  
major see F.C. 20.2.04

IV. Gen Art. Fothergilla F.C. 20.2.04



Hamamelidaceae 3.

HAMAMELIS. Linn.

hardy decid. shrub.  
of slow growth.

stem cuttings strike with difficulty.  
root-cuttings succeed.  
also layers.

Grafting usual method. 922.2.02 / 99.3.01.

H. arborea on to young seedlings 927.1.94 / 913.6.91.  
of H. virginica in March.

ii. good seeds not obtained, although flowers in abundance  
e.g. H. arborea + H. virginica  
take 2 years to vegetate. 922.2.02. Sc. 21.3.96

iii. arborea 99.3.01 / 98.3.84 / 929.3.90.

= japonica.

j. var. Zuccarini 915.1.98.

mollis 917.1.03 / 930.1.04 / 925.2.99 / 917.1.03.

virginica 913.10.00 (note).

iv. General Articles.

The Witch Hazels. 923.1.04 / 913.6.91 / 922.2.02.  
Sc. 15.1.98.

The Witch Hamamelis 98.2.96.

The Japanese Hamamelis 94.7.91.

LOROPETALUM. R.Br.

- hardy shrub.

I. Stem cuttings in autumn

II. Seeds.

III. Chinese Bun. 7979.

95.3.04 / 97.4.94. / 921.3.03 / 99.4.04.

LIQUIDAMBAR. Linn.

hardy decid. trees.  
slow growth.

I. Stem cuttings.

layers more usual. - styraciflua -

also suckers from root.

II. Seed. best sipped.

often a year before germinate.

III. styraciflua ✓ (113.1.94)  
unberbe.

IV. The Sweet Gum (Liquidambar) 925.8.83.

Liquidambar at Home 99.3.78.

Liquidambar (styraciflua) 93 30.8.90.

922.2.90.

tc.

Hamamelidaceae. 1.

ARROTIA. C.A. Mey.

Rare decid. tree.

Stem cuttings of half-nipe shoots,

also layers.

also.

✓ *jacquemontiana* Pom. 7501.

✓ *persica* Pom. 5744. 9.13.17.02.

RHODOLEIA. Champ.

Rare shrub.

layers?

Seeds -

Champoni 925.9.75 / 9c. 19.8.99.

TRICHOCLADUS. Pers.

I. ?  
II. .  
III. .  
IV. .  
V. .

General note on Humiriaceae.

The Humiriaceae, a small tropical order, belonging mainly to South America, is of no horticultural interest.

The order comprises three genera, Humiria, Saccoglottis, and Vantanea.

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General note on Hydnoraceae.

The Hydnoraceae are a small unimportant order of purely <sup>botanical</sup> interest, containing two genera, Hydnora, and Prosopanche.

The order is considered distinct by Engler-Prantl, but associated with the Cytinaceae by Bentham & Hooker. (See Rafflesiasaceae, the order to which Cytinus and Hydnora are closely allied).

General note on Hydrocaryaceae.

The Water Chestnut, Trapa natans has features which are so characteristic that it is placed by Engler into a separate family the Hydrocaryaceae. It has allied however to the Onagraceae in which Trapa is usually placed. [See Onagraceae]

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General note on Hydrophyllaceae.

The Hydrophyllaceae are an order widely distributed in tropical and temperate regions, and allied closely to the Boraginaceae and Convolvulaceae, &c. (In the Polemoniales cohort).

Plants in the order, for example Nemophila, Phacelia, are common in cultivation. Other genera are not so well known.

Propagation is mainly effected by seed, as the majority of the plants are annuals.

Vegetative propagation by division, and stem cuttings in spring is employed for the perennial and shrubby genera, e.g. Hydrolea, Nama, and Wigandia.

Leaf cuttings have not been investigated. Root cuttings succeed easily for Wigandia macrophylla.

Hydrophyllaceae?

(hardy annual).

EMMENANTHE. Beuth.

seed -

not many sp. in general cultivation: rare.

*pseudoleptora*. 918. 8. 77.

*spinoza* (aquatic) RR 566

ERIODICTYON. Beuth.

hardy or half-hardy

I. stem cuttings?

II. seed. HYDROPHYLLUM. Linn

hardy herb, rarely perennial

III. *glutinosa*. 92. 10. 80.

rare.

EUTOCA. see PHACELIA.

HESPEROCHIRON.

half-hardy or hardy  
perennial also + annuals.

I. Division. not suitable. as plants rare + slow growing

II. seed

III. *Californicum* 95. 5. 83 / 918. 6. 04. RR. 833.

*pumilus* 91. 5. 80 / 93. 7. 80 / 92. 6. 88 / 911. 6. 92.

very slow growth.

hardy (half hardy)

ENOPHILA Nutt.

(Hardy annuals & perennials.)

I. Stem cuttings - young shoots in spring - best for annuals  
II. Seed sown in April for summer flowering  
in autumn for next spring -

III. atomaria Pom. 3774.  
aurita B.R. 1601.  
insignis Pom. 3455. B.R. 1601.  
var. grandiflora.

IV. placodiodes (perenn.) B.R. 740. 9.20.12.73 / 9.18.8.86

V. hemophthalas 9.4.3.76  
hemispha insigis for hanging Baskets 9.18.3.76.

PHACELIA

(hardy annual & perennials.)

= EUTOCA.  
= COSMANTHUS.

I. Division in spring for perenn.

II. Seed in spring - best for annuals.

III. Campanularia 9.12.6.86 / 9.18.6.87 / 9.17.6.93 / 9.30.6.94.  
Pavryi S.C. 14.12.01 / 9.6.6.85.  
vinifolia  
viocida

IV. Phacelia 9.21.1.99.

ROMANZOFFIA Cham.

(hardy perenn.)

I. Division (see fig?)

II. also seeds.

III. sitchensis 9.1.5.97. Pom. 6109.

sp. of easy culture & increase.

Hydrophyllaceae 4.

WIGANDIA. H.B.K.

(hardy large leaved herbaceous)

The Hypericaceae are an order allied to the tropical Guttiferae  
I. stem cuttings - young shoots in spring - best from tops of old stumps.

Root cuttings also but not so good as shoot cuttings when these  
can be obtained see 9.30.12.71.

eyes also see 9.8.11.73.

the various species are of interest and value in horticulture,

II. seed also in spring & autumn.

W. caracasana rarely flowers in this country.  
easy for W. vigieri.

III. caracasana B.M. 4575. 9.20.12.73 / 9.8.8.86.  
= macrophylla = wrens 9.30.12.71.  
vigieri 9.31.8.72.

IV. Propagating Wigandias 9.8.11.73. many cases they are small  
and thin. They have not been investigated.

Best cuttings are a successful method of increase for the various

species of Hypericums, H. calycinum, etc.



General note on Hypericineae.

The Hypericineae are an order allied to the tropical Guttiferae under which they are sometimes included. The Hypericums, however, are mainly temperate region plants, many of them being British.

The various species are of interest and value in horticulture, as they are freely flowering and of easy culture, even on poor soil, or under the shade of trees..

Vegetative propagation by means of stem cuttings is the usual mode of increase for the shrubby genera.

Leaf cuttings are not practicable, as in many cases they are small and thin. They have not been investigated.

Root cuttings are a successful method of increase for the various species of Hypericums, H. calycinum, &c.

Hypericaceae. 1.

ERICUM.

SCYRUM. Linn

(hardy evergreen).

*Scyrum* 14.7.86 / 91.6.89 / 920.8.90.

Stem cuttings of young or side shoots. ripe : in summer.

Seed? *Scyrum* 911.10.79 / 930.11.89 / 99.8.90 / 920.8.03

*Cuxandrae* - 917.9.81.

Sp. not of leaf met with.

*Scyrum* 923.10.75 / 926.6.86 / 925.8.00.

CRATOXYLON. Blume.

928.2.82 / 97.10.82 / 913.10.83. Bsm. 178 / 6563.

*Cratoxylon* Bsm. 6764. 915.7.83 / 910.2.83 / 932.8.2 / 912.7.84

*Cratoxylon* 925.8.77.

*Cratoxylon* 911.8.81 / 920.10.00 / 927.8.04.

Ann. Roy. Bot. Gard. Calc. vol. V.

HARONGA. - Thonars.

Evergreen shrub shrub.

I. Cuttings of young shoots in heat.

II. *Haronga* 99.12.89 / 923.11.89 / 925.8.94 / 929.9.94 / 926.8.94

III. *madagascariensis*.

var. *nicotry* 915.9.94 / 910.11.94 / 96.6.96 / 90.31.11.96

HYPERICUM. Tournef.

91.13.94 / 95.1.95

I. Stem cuttings. ripe in Sept. *oblongifolium* 917.2.83.

*Hypericum* 910.11.77 *curvatum* 94.2.82

*Coris* 97.10.82.

root. cuttings e.g. *H. adpressum*: *calycinum*

division. *H. repens*

II. seed. *H. nepalense*, *calycinum* *Coris*

III. *aegypticum* B.R. 196 - Bsm. 6481. 920.3.80.

*androsaenum* 93.3.83

Hypericaceae . 3.

Ten Articles on Hypericum.

Shrubby St. John's wort. 917.2.83. / 917.12.98. / 93.9.04.  
94.11.76. (Hardy.)

- The St. John's wort. 922.9.77. / 94.8.86.

- Notes on Hypericum. 912.10.89

- Hypericum in bloom 919.8.93.

- Species of Hypericum 914.9.78

- American Hypericum 99.3.01.

Bertha Chandler

Notes on the Propagation  
of Dicot. Orders. I



General note on Ilicineae.

The Ilicineae are an order of somewhat doubtful affinities, possibly being related to the Sapindo-celastrai series. Ilex is the only plant in the order of Horticultural interest.

The common holly, Ilex aquifolium is one of the commonest trees in the garden, and the many varieties are cultivated for the beauty of their foliage.

Since hollies are slowgrowing, their propagation is also slow. Vegetative methods by stem cuttings &c. for this reason are not much employed.

Propagation by seed is the usual method. See general articles under Ilex.

Leaf cuttings would not be practicable, and root cuttings have not been investigated.

Ilexaceae.

ILEX. (Juncus) Linn.

(hardy trees.)

stem cutting will never root, but <sup>also Fortunei + variegata,</sup> I. crenata easily from cuttings 927.12.90  
95.3.92

Cuttings also for variegated sp. like shoots in autumn 928.2.74.

- Root usually 8 to 12 mths. before rooting 99.12.82.

Grafting on to I. aquifolia for finer varieties 928.9.78.

Budding, also in spring or summer. 914.9.72.

The usual most satisfactory method: seed stones be kept 1 yr. to rot  
prep. slow growing, 2 yrs. before come up - then slow progress 95.12.03.

8-10 yrs. from seed to make fence 4 ft. high. 925.4.03.

aquifolium. 925.11.82 / 911.12.86 / 929.10.84.

Holly also see: articles on Holly.

vars. laurosternaria 916.4.04

laursoniana 924.3.77 / 921.4.77.

camelliaefolia 931.1.03 / 928.2.03 / 926.3.04.

cornuta 98.12.00. / Rom. 5059.

crenata 95.2.87 / 922.10.87 / 924.3.88 / 916.2.89 / 924.1.91.

95.3.92 / 92.1.97 / 912.12.03 / 923.1.04 / 927.2.04.

c. variegata. 929.1.81.

diphyrena 920.11.80 / 919.2.87.

glabra = Prinos glaber 96.7.72.

integrifolia = Othera japonica 913.2.04.

latifolia Rom 5597. 98.6.72 / 913.2.04 / 924.1.94.

laurifolia. nova 917.1.03.

paraguensis 925.11.76 / 98.12.77 / 922.12.77.

pemizi Se. 12.3.04 / quercifolia 913.2.04 / verticillata = Prinos vert.  
(Opaea)

wilsoni 910.6.99 / 917.11.00.

915.12.77  
91.1.81.

Dicuiaceae .

I L E X contd. Illicaceae.

Gen. Articles. & Bibliography on Holly.

- Ilex aquifolium* & its varieties 96.2.04  
920.2.04  
927.7.04  
95.3.04.
- The Holly & some of its varieties 927.12.02. / 921.8.80.
- The Hollies G.M. 4.7.05.
- Some little known Hollies 93.1.03.
- Holly. 928.11.03 / 95.1.84 / 95.1.89 / 927.12.90 / 95.10.0
- Notes on the Fruiting of the Holly 923.6.77.
- Two good Hollies 931.10.03.
- Weeping Hollies 923.8.02.
- Transplanting Hollies 92.1.78.
- Japanese Hollies 98.4.92?
- The Hollies. (S.T. Cook). J.R.H.S. vol. XXXI. p. 118. 1906.

General note on Illecebraceae.

The members of the Illecebraceae, a small order closely allied to the Caryophyllaceae, and sometimes (as in Engler-Prantl) included under them, are for the most part low growing, valueless weeds.

Some of the <sup>c</sup>species however, for example Herniaria glabra, and Paronchya argentea are used for carpet bedding.

The plants are of easy culture and propagation, either by seed, or vegetatively by division.



Utriculariaceae.

## TERNIARIA.

hardy herbaceous  
used for carpet bedding.

easy - roots at almost every joint on under surf.

I. Division.

glabra 926.11.81 / 972.10.72.

var: aurea 911.7.96.

## ILLECIBRUM.

hardy. greenhouse + store

I. easy. Division. for greenhouse + store.

II. seed. usual for hardy.

III. verticillatum.

Sp. of no great hort. value.

## PARONCHYA.

hardy herbaceous  
animals + pen.

I. Division.

II. seed for animals

III. argentica. (suitable for bedding) 99.8.84.

Serpiphyllia.

General note on Juglandaeae.

The Juglandaceae are an order allied to the Cupulifereae. Juglans the walnut is the most common species grown in this country though Carya and Pterocarya are also met with in cultivation.

Vegetative propagation by cuttings is not practicable, as they do not strike easily.

Root cuttings of Carya alba, according to Fuller, succeed very well.

Leaf cuttings have not been investigated.

Grafting is much more commonly used, the stock being the ordinary Walnut, Juglans regia.

The most ordinary method of propagation is by seed.

Juglansaceae.

CARYA

hardy decid. trees.

I. root, cuttings (see Fuller.)

II. layers.

III. seeds. best sown where intended to remain.

III. *alba* 930.5.91 / 96.6.85.

(Hickory)

*halleda* 921.8.97.

*olivaeformis* 926.10.72 / 913.12.79 / 920.8.81.

(Pecan nut)

*sulcata* -

*tomentosa*.

(Mocker Nut) G.C. 20.10.00.

sp. not much grown in Britain: though Hickory valued by cabinet makers.

IV. Fuller's Prop. & other Amer. writers.

- Nuts & their culture

- Note on Hickories 914.1.93.

JUGLANS

hardy decid. tree.

I. grafting. - difficult. best cleft grafting in spring 96.4.72.  
Ponding.

II. Sown when gathered, or preserved till next spring.

Sown where intended to remain.

III. *californica* / *cordiformis* G.C. 19.10.01.

*intermedia*.

var. *pyramidalis* 922.4.76.

*longirostris* 94.5.78.

*mandschurica* G.C. 26.10.01.

*nigra*. (see gen. articles also)

930.9.82

94.11.82

97.10.82

921.11.85

914.3.91

926.10.01

G.C. 16.10.01

Juglandaceae ?

JUGLANS. contd.

regia . 930.12.71.

Vars. laciniata . 916.6.77. / 910.3.88 / 923.5.89 / 924.1.91.

- rubra 95.4.6.98.

- Serotina 929.7.76.

rupestris

Sieboldia 922.6.95.

I. The Walnuts . 915.4.76.

its varieties . 922.4.76.

The Walnuts . 90.9.11.01 / 916.9.82.

The Common Walnut 912.12.96 . 915.11.90.

(nigra)  
regia .

928.3.85 (The black Walnut  
nigra .

The Walnut Tree 98.12.88.

its Uses .

PTEROCARYA .

hardy decid. tree .

I. grafting . on Common Walnut.

also layers . of young shoot.

II. ripens fruit on continent . but not often in Britain except in S.

III. caucasica . - fraxinifolia . 928.1.88 / 917.2.00 / 924.3.00 .

spachiana . 98.9.88 / 921.4.00 / 94.10.02 .

Juglandaceae 3.

PTEROCARYA Contd.-

III. rhoifolia = japonica.

stenoptera = laevigata  
sinensis.

IV. Pterocarya. 919.3.98 / 923.4.98.

Bertha Chandler.

Notes on the Propagation of  
Sicol. Orders. L.



# LABIATAE.

## ACANTHOMINTHA. A. Gray.

- leafy annual.

II. seeds in spring.

III. *laifolia* B.M. - 6750.

## AEOLANTHUS. Mart.

store annual

seed produces freely.  
usual method of prop.

II. *Suavolens* - (Dob.)

## ANISOMELES. R.Br.

(Succulent & stem)

young seedling that freely in spring to heat

seed in spring for germination & preservation

III. *Malabarica* B.M. 2071.

*ossea* (stem annual)

caliatae :-

AJUGA. Linn.

(Hardy ann. bienn & perennials.)

division for perennials.

layers. rooted 91.9.94.

seeds for annuals & biennials.

alpina 91.6.72.

genevensis 98.7.82

91.9.94.

911.4.03.

reptans 916.11.72./927.8.81./918.6.98.

var: Brockbankii 91.6.95.

927.8.81. (Ajugas.)

ANISOCHILUS. Wall.

(Stove perenn. or biennials)

I. stem cuttings in heat - in spring.

II. seeds in spring.

III. carnea  
decurvata.

ANISOMELES. R.Br.

(Greenhouse & stove.)

I. young cuttings root freely in spring in heat.

II. seeds in spring for annuals & perenn.

III. malabarica. R.Br. 2071.

ovata (stove annual).



## SALLOTA. Benth.

(stone or half-hardy annual).

- I. seeds - easy culture - apt to become weed.  
sp. of no horticultural value.

III. foetida.  
suavolens.

IV. -

IV. -

IV. -

## BRUNELLA Linn.

= Prunella.

- I. easy culture.  
Division for varieties.
- II. seed also - which comes fairly true
- III. grandiflora B.M. 337. 9.11.7.96.  
var. alba 929.7.99.  
Webbiana 93.8.95. | 929.7.99  
928.8.96 | 94.11.99.

## COLERKOOKIA

## BYSTROPOGON (greenhouse evergreen shrub)

- I. stem cuttings - side shoots in spring
- II. -
- III. plumosum  
funeatum  
sp. easily cultivated - of not much value in horticulture.

## CALAMINTHA

(hardy herb. perennials)

- I. Division in spring
- II. Seeds also.
- III. alpina = Aciros alpinus B.M. 2153 / 9.10.9.81.  
grandiflora 924.7.80.

## EDRONELLA.

(greenhouse plants)  
herb. + shrubby.

I. Division for herbaceous sp  
stem cuttings for shrubby.

II. seeds also.

III. Cana B.M. 4618 / 99.9.82

Cordata 928.5.81.

pallida B.R. 1846. t.29.

triphylla (evergreen shrub) = *Drecocephalum canariense* (Baum of Cuba)  
9 2.8.84 / 9 18.10.84.

## CHELONOPSIS. Miq.

I -

II. seed

III. nasehata B.M. 4483 / 920.7.01.

## COLEBROOKIA.

(greenhouse evergreen  
shrub)

I. stem cuttings of half ripe wood in spring

II. seeds?

III. oppositifolia B.R. 487  
ternifolia

## COLEUS.

(evergreen shrubby.)

I. stem cuttings - very easy at any season.  
usually spring see 9 9.3.98 / 9 29.7.99 / 9 24.5.02.

II. seeds also - freely produced.

III. Blumei 1 var:

Beekwith Gem 9 10.7.79.

Canary Bird 9 7.7.83.

Coleus (contd)

III. Crimson Velvet G22.10.81.

Mahoni G26.1.01  
to to

Hendersoni G20.9.79.

Thyrsoideus B.M. 4642.

G29.7.99 / G.C. 11.2.99.

G27.1.00 / G29.12.00.

G24.1.03 / G.C. 14.2.03 / G.C. 5.3.04.

IV. Gen. Art.

G19.3.98 (Coleuses)

Cultivation of Coleus G.C. 13.3.97.

G23.3.01 (Coleuses from Seed)

G30.12.76 (Varieties of Coleus)

G9.6.77 (Grafting Coleus)

G.C. 6.2.97 (Coleus).

COLLINSONIA, Linn.

(hardy herb. perennial)

I. Division.

II. seeds?

III. anisata B.M. 1213.

var. canadensis to.

COLQUHOUNIA.

(large hardy evergreen shrub)

I. stem Cuttings in summer.

II. seeds.

III. coccinea B.M. 4514.

CURPILA, Linn.

(large hardy perennials)

I. Division

II. seeds.

III. mariana B.C. 1205.

Bull. H. Gard. Sweet Her. 1. vol. III. 243.

Journ. Hort. Ser. 3 XXX. V. p. 321.

REMOSTACHYS. Bge.

(hardy perennial)

Division

stem cutting in spring

seed

laciniata G. 24.6.76 / 928.6.79 / 929.6.95.

var: iberica G. 19.6.99.

GARDOQUIA. (Ruiz. + Pav.) Briq.

(greenhouse evergreen plants.)

I. stem cuttings - half ripe in June.

II. seed

III. betonicoides Pom. 3860. 911.6.81.

Hookeri Pom. 1747. Mas. Bot. 243.

multiflora Pom. 3772.

HEDEOMA. Pers.

(hardy annuals.)

II. seed in early spring.

III. pulegiodes  
thymoides.

GOMPHOSTEMMA. Wall.

no horticultural value

See Ann. Roy. Bot. Gard. Calcutta vol. 3

for various sp. worked out by Prain.

<sup>5. Labriatae.</sup>  
HEMIGANDRA. R.Br.

(greenhouse evergreen shrub.)

- I. stem cuttings - half-ripe in spring.
- II. seed?
- III. pungens Fl. Ser. 988.

HEMIGENIA. R.Br.

(greenhouse evergreen shrub)

- I. stem cuttings - young shoots.
- II. seed.
- III. purpurea.

HORMIUM. Linn.

(hardy herb. perennial)

- I. Division in spring.
- II. seeds in spring.
- III. pyrenaicum Brit. Fl. Gard. Sweet Ser. 1. vol III.

HYSSOPUS Linn.

(hardy evergreen)

- I. Division in spring & autumn.  
fine stem cuttings in spring & autumn - best method for sowing
- II. seed in March or April.
- III. officinalis B.M. 2299.  
var. decumbens 526. 10.89.

AMIUM. Linn.

(Hardy perennials)

Division ✓

stem cuttings for varieties

seeds

longiflorum 912.6.80 / 926.6.80

maculatum 910.7.77

var. aureum 917.8.77 / 923.3.78

etivale Bm. 177 / G.C. 9.5.03

striatum 923.11.78 / 917.12.78 / 914.12.78  
920.11.78

species of little value, except above.

LAVANDULA. Linn.

(Hardy perennials)

young firm wood in spring 931.11.03 / 910.10.85

or autumn. to callus during winter. cuttings with stout frost bells.

913.2.97 / 911.7.93 / 94.6.04

vera (see gen. arts on Lavender.)

Spica 91.9.77

98.10.04 (Sweet Lavender)

910.10.85 (Lavender Culture)

913.2.97 (Lavender)

925.5.01 (Growing Lavender)

911.2.93 (The Cultivation of Lavender)

923.8.73 (Lavender Culture in Hertfordshire)

923.1.97 (Sweet Lavender)

Journ. Roy Hort. Soc. No. 1912 p. 258. Sweet Lavender.  
vol XXXVIII

LEONOTIS. Pers.

(greenhouse + stove plant)

easy culture. Prop.

stem cuttings inserted in spring + summer in heat for Leonurus.

Division - for herbs.

Seeds also.

I. dubia G29.11.02.

Leonurus G28.5.98.

nepetaefolia Pom. 3700.

IV. Gen. Acts on L. Leonurus - the best known species.

G24.1.74 / G7.1.93 / G.C.19.11.98.

LEONURUS. Linn.

(Greenhouse annual herb)

I. -

II. seeds in heat.

III. Cardiacca / heterophyllum / sibiricus.

LEPECHINIA. Willd.

(hardy herb. perennials)

I. Division in spring  
stem cuttings in spring + summer.

II. Seed?

III. spicata B.R. 1797.

not very conspicuous flowers.

LEUCAS. R.Br.

= Phlomis.

LEPHANTHUS. Benth.

(hardy herb. perennials.)

I. Division in spring.  
Stem cuttings.

II. seed in April.

III. *anisatus* BR. 1282.

MARRUBIUM. Linn.

(hardy herb. perennials.)

I. Division in sprais  
slips & cuttings.

II. seeds.

III. *vulgare*.  
var. *lanatum*.

MELISSA. Linn.

(hardy herb. perennials.)

I. Division in spring.  
Stem cuttings in & autumn. ?

II. seed.

III. *grandiflora* B.M. 208.  
*officinalis*

MELITTIS. Linn.

(hardy herb. perennials.)

I. Division easy - in spring & early autumn.  
when plants strong enough.

Layering - stems in early summer, pinching off buds 926.9.91

*Melissophyllum* by stem cuttings is slow.

Best to slip up stem some way 926.9.91.

II. seeds also but slow.

III. *Melissophyllum* (The Honey Balm) -



## MENTHA. Linn.

Hardy herb. perennials.

I. Division in spring & autumn.  
Easy from stem cuttings  
also root cuttings G10.3.83.

II. -  
III. arvensis purpurascens G10.3.83.  
Black & White Mint G29.9.77.  
gibraltaria G5.5.77.  
Pulegium gibraltaria G5.4.79.

## MICROMERIA. Benth.

(hardy & half hardy  
evergreen & shrubby.  
Some annuals)

I. stem cuttings in spring or summer.

II. also

III. graveola G27.8.04.  
piperella G5.5.87  
(rock plant) G17.8.89  
G.C. 17.9.98.

## MOLUCELLA. Linn.

(hardy plants -  
annuals etc.)

I. Division of tubers in *M. tuberosa*

II. seeds for larvae G23.4.81.

III. laevis Bsm. 1852. / G23.4.81.  
tuberosa -

sp. more curious than ornamental.

MONARDA. Linn.

(hardy herb. perennial -  
same situation).

I. Division of plants in spring.

II. seeds.

III. didyma  
(Bergamot or Bee Balm) 908.8.86.  
920.8.87  
91.8.91  
91.9.94.

† var 930.7.81.

purpurea 920.8.81.

fistulosa Pom. 145.

Brachyloba 99.8.79. Pom. 3310.

Russelliana Pom. 2513.

IV. 913.3.80 (Monarda).

MONARDELLA. Reuth.

(hardy herb. perennial)

I. Division in spring.

II. seeds.

III. macrantha Pom. 6270 / 914.10.76.

MOSCHOSMA. Reiche.

(greenhouse annual)

I. stem cuttings - after flowers are over in spring.  
(flowers in winter). 922.7.02.

II. for annuals ocyroides.

III. riparium. 922.7.02 916.1.04

90.22.7.02 90.26.3.04.

924.1.03

90.7.3.03

90.9.1.04.

NEPETHA. Linn.

(Hardy perennial.)

I. stem cuttings strike easily in summer. for finer species.  
Division also in spring.

II -

III. gleehoma variegata G 14.5.98  
Gc. 18.6.98.

Mussini G 8.10.04

spicata Pom. 6.10.05.

PERILLA. Linn.

(greenhouse annual)

OCIMUM. Benth.

(greenhouse annual)

I. seeds in heat.

III. basilicum.

canum Pom. 2452.

Sacretum G 1.9.77.  
(the sacred Basil.)

ORIGANUM. Linn.

(Hardy herb. perennial)

I. stem cuttings easy in summer.  
Division also in spring.

II seeds.

III. Dictamnus G 11.7.83  
(Dittany of Crete) G 9.2.89  
G 23.9.99.

Toumeforti G 26.9.85  
(Dittany of Amorgos) G 24.9.87

hybridum G 5.11.87  
G 22.10.87  
G 17.9.88.

ORTHOSIPHON Benth.

(slow & greenhouse.)

I. Division in spring for herbaceous & -  
Stem cuttings of half-ripe shoots for shrubby.

II. seeds.

III. incanus Bm. 3847  
Stamineus Bm. 5833. 913.3.97.

PERILLA Linn.

(greenhouse annuals)

II. seeds in heat. - gradually hardened off G.C. 2.3.01.

III. nankinensis  
+ var. laciniata 95.10.72.

PHLOMIS Linn.

(hard. perennial rocky) -

I. Division in spring & autumn.  
Stem cuttings for shrubby species in spring & autumn.

II. Seeds - freely produced.

III. armeriaca 92.11.78.  
Cashmiriana 930.8.79.  
fruticosa 96.8.98  
96.7.72  
925.7.91  
910.6.82.

lunariifolia Bm. 4699. / G.C. 10.2.00.

Russelliana 99.7.98.

tuberosa 930.8.02 / 923.7.04.

See Gen. arts for other sp.

IV. 921.2.80 (The Jerusalem Sage - Phlomis.)  
915.10.81

PHYSOSTEGIA. Benth.

(Hardy herb. perennial  
seeds)

I. Division in spring - offsets.  
Stem cuttings - young shoots in summer.

II. seeds.

III. *virbricata* P.M. 3386.

*virginiana* - *Draccephalum virginianum* P.M. 467.  
(slow)

PLECTRANTHUS. L'Hérit.

(greenhouse + 1000)

I. Division, and  
stem cuttings for shrubs.

II. seeds.

III. *Australis* P.R. 1098. / B.C. 1185.

*Chiradzulensis* G.C. 9.1.04.

*crassus* G.C. 9.1.04.

*fetidus* 919.4.84

920.12.84.

*Makoni* P.M. 7818.

*feet kernahis* P.M. 2460.

POGOGYNE

(Hardy annual.)

I. seeds

III. *Douglasii* P.M. 5886.

*ridiuscula* *Sarkentlora* 1242.

POGOSTEMON. Desf.

(stove + greenhouse  
shrub.)

I. Stem cuttings in spring.

II. seed.

III. Patschouli. - (greenhouse) 916.5.85.

not ornamental - only grown for scent.

Plectranthoides. Bm. 3238.

(stove).

PRASIUM.

I.

II.

III.

PROSTANTHERA, Labill.

(Greenhouse shrub.)

I. stem cuttings of young shoots in sandy soil.

II. seeds also

III. empetrifolia Bm. 3405

= Chilodia scutellaroides.

Casianthos Bm. 2431 / 92.6.83.

nivea Bm. 5658.

PYCNOSTACHYS

stove annual.

II. seeds in heat.

III. urticifolia Bm. 5365.

911.1.02

Se. 11.299

Se. 25.299.

# ROSMARINUS.

(hardy evergreen).

- I. stem cuttings .  
- slips in spring & autumn .  
- layers in summer for varieties
- II. plants best from seeds .
- III. officinalis  
+ vars :

# SALVIA.

(hardy, greenhouse + stove .  
ann. bienn. + perennials)

- I. stem cuttings in spring & autumn .  
Division & sowing of tuberous roots like Dahlia  
for S. patens + azurea grandiflora .

- II. seeds in spring .

- III. azurea grandiflora 910.11.83 912.1.01  
- Pichei . 91.11.84. 931.10.03.  
9c. 27.10.00  
9c. 3.11.00 .

- azurea 95.11.84 / 912.11.92 / 99.11.95 .

- argentea 911.8.00 .

- amœna B.c. 377

- aurea 923.11.89

> boliviana 97.3.85 Bethelli 930.9.82 / 928.10.82 / 925.11.82

- 99.2.84 . b. var verticillata 910.1.85

922.3.90 .

- bicolor 924.7.97 .

- Candelabrum B.m. 5017 / 97.2.85

- caœmicea 923.7.98

- Carduacea 922.1.76

III  
cont'd

*alvius*  
*dichroa* 920.8.04  
*elegans* 99.2.84  
913.3.97 }

*farniacea* 913.9.79  
918.7.85 }

- *glutinosa* 919.9.03

- *generaeiflora* 98.8.74 / 917.9.81

- *Grahamiana* 924.10.85

- *Greggi* 924.9.81 / 910.5.84 / Prun. 6812

- *Heeri* 913.4.95  
922.2.61  
923.2.01  
917.1.03

- *Korminum* 929.8.96  
915.10.04

- *hoveyi* 910.12.98

- *patens* 914.9.86  
919.10.80  
928.10.99  
928.11.99

- *interrupta* 915.10.81  
925.5.80  
926.4.01  
916.3.01  
927.3.03

var: *alba* 911.10.98  
- *rutilans* 928.12.83 / 920.4.01  
- *splendens* 914.2.99 / 911.6.98 / 921.11.03  
911.11.99  
927.4.00  
926.12.03

- *sp. grandiflora* 925.9.97  
922.10.98  
923.9.99  
919.12.99  
919.1.01

- *virgata* 911.11.02





SIDERITIS, Linn.

(hardy & greenhouse  
herbs & shrubs)

I. stem cuttings in summer.  
Division in spring.

II. seeds -

III. canariensis

byssopifolia = Stachys tecta

STACHYS, Linn.

(hardy & greenhouse  
perennials)

I. Division &  
stem cuttings at any season. Best in summer.  
tuberosa ditto for tubifera.

II. seeds also

III. betonica 910.7.80 / Rom. 900.

b. grandiflora 94.1.79.

corsica 913.9.93.

tubifera 924.8.88 / 914.1.99

917.11.88 / 97.2.91.

species not much in cultivation.

TEUCHRIUM, Linn.

(hardy & greenhouse  
annual & perennials.  
& shrubs.)

I. Division for perennials.  
stem cuttings for shrubby e.g. frutescens.

II. Seeds also

Teucrium contd.

fruticans 926.11.98  
96.7.04

montanum 922.8.96.

purpureum 922.9.94.

pyrenaicum 927.8.98 / 911.1.02.

Species not much in cultivation.

THYMUS Linn.

(Hardy evergreen trailer  
suitable for rockery.)

I. stem cuttings in spring  
division in spring

II. seeds in spring

III. azureus 96.8.81.

carnosus 922.8.04

comosus 917.8.89 / 910.8.90.

micans 923.7.87.

White Thyme 927.5.93 / 928.7.94 / 91.8.04

Golden Thyme 921.9.72 / 923.12.71.

Serpifolium  
var. coccineus 99.7.87 / 915.9.88 / 92.7.95

TINNEA Peyr. & Klotzky.

(Stove.)

I. stem cuttings in spring 923.3.90.

II. seed.

III. aethiopica 99.8.84. / 923.3.90. / B.M. 5637.  
92.4.84 / 926.3.97

# TRICHOSTEMA A. Rein.

(hardy sub. shrubs).

I. stem cuttings in spring.

II. seeds?

III. Parishii

lanatum Sib. 11.78.

sp. (rare).

# WESTRINGIA Sm.

(greenhouse evergreens).

I. stem cuttings - half ripe shoots in spring.

II. seeds.

III. eremicola B.M. 3438.

rigida = cuneata B.M. 3307.

rosmarinifolia.

# DRACOCEPHALUM Rein.

(hardy herb. ann. + perennials).

I. Division -

stem cuttings in spring -

II. seeds in spring for ann + perenn.

III. argurense 910.10.91 / 94.7.94.

denticulatum B.M. 214. // grandiflorum B.P. 180. / 927.2

umbriata B.M. 467 / 911.12.75 / 99.10.86 / 915.9.94. 922.8

mutans alpinum G. 26.5.00 / G. 28.6.02.

perigrinum 922.9.00 / 910.10.03.

ruschianum 928.7.83 / 915.3.88.

speciosum B.M. 6281 / 910.3.77.

virgianum = Phyllostegia virginiana.

var. alba 920.7.95 / 911.02 / 922.11.02 / 96.12.02.

General note on the Lacistemaceae.

The Lacistemaceae are a small order of doubtful affinities possibly near the Piperaceae containing but one genus *Lacistema* from tropical America. The species are not of horticultural value as the flowers are small and inconspicuous.

General note on the Laurineae.

The Laurineae mainly composed of trees and shrubs, plentifully found in N.W. America &c. with affinities to the Monimiaceae, Myristicaceae. Laurus nobilis is found in Europe while the parasitic Cassytha is confined to the tropics.

Propagation in the order is effected by seed in heat, or more generally by vegetative methods. Stem cuttings strike without difficulty though somewhat slowe.g. Laurus &c. Root cuttings are employed for some of the tropical genera.

Leaf cuttings have been tried by Lindemuth <sup>(1)</sup> ~~for~~ Laurus nobilis but as in the stem cuttings, and to a greater extent, rooting is slow. Roots were obtained after 66 days but no shoots were obtained. The method is impracticable owing to the leathery texture of the leaves of all the the Laurineae(except of Cassytha, where the leaves are reduced to scales owing to the parasitic habit.

(1) Lindemuth.

Laurineae,

CRYPTOCARYA RB.

ANIBA. Aubl.

(half-hardy or greenhouse tree)

- I layering?
- II stem cuttings?
- III seed.
- IV peruvialis (the Comino tree.)

HURT G.C. 26.5.00.

(Store cuttings)

BEILSCHMIEDIA. Nees.

I from stem cuttings?

II ?

III LAURUS Linn.

IV Laurel var. such as Baccata + Calappa, from in form of cuttings, layering and grafts, used for wood.

CINNAMOMON Bl.

(Store trees)

I from stem cuttings young shoots in spring.

II seedlings from best pyramidal form.

- III Burmanni.
- Camphora (camphor tree.)
- cassia
- eucalyptoides
- mitidum
- Zeylanicum Bl. 1636.

IV 923.1.75.

Watts' Econ. Diet k.

CRYPTOCARYA RR.

(Hardy shrub)

- I ?
- II ?
- III ?

London 91.3.73  
(Spice bush)

HERNANDIA Linn.

(Stove evergreen trees  
(leaf hairy, thin))

I. Cuttings, ripe shoots in sand in heat.

II. *mercuriana* Rm. 5839.  
*feltata*.

Sonora (juice of leaves - strong depuratory).

LAURUS Linn.

(Hardy greenhouse + Stove  
Seed. Evergreen shrubs)

I. Laurel var. such as Versailles + Calchis, slow in forming roots on cuttings layering, and grafts. used for varnishes also root cuttings.

II. Seeds usual method - must be sown at once 911.3.82. or let a season before planting. Seedling give best pyramidal form.

III. *azorica* 910.6.82.

Cassia, camphora, Sassafras, to.

Bernardi 97.1.92.

Alexandria laurel 911.2.82.

*latifolia* 920.3.75.

*nobilis* var. *salicifolia*  
926.5.88.

IV. 926.12.91. Varieties of laurels.

97.1.82 / 921.1.88. Hardiness of laurels.

911.3.82. (Sweet Bay.)

926.11.98. (Laurels).

930.12.71. (The Common laurel a Newper.)



Launiceae

LINDERA. Thunb.

(hardy shrub.)

I. layers.  
stem cuttings.

II. seed.

benzoin. G. S. 73.  
(Spice bush)

LITSEA. Lam.

(half hardy tree)

I. layering.  
grafting on to *Laurus nobilis*.

II. seed.

III. *geniculata* B.M. 1471. = *Laurus geniculata*.

OCOTEA. Aubl.

(greenhouse tree)

I. Cuttings of ripe wood in sandy soil.

TETRANTHERA Jacq. (greenhouse tree)

III. *bullata* B.M. 3931.  
= *Oreodaphne bullata*.

OREODAPHNE

I. ?

II. seed.

III. *bullata* B.M. 3931.

Californica B.M. 5320/926.6.74

(Californian laurel.) 930.8.79

Sp. somewhat rare. 930.8.90

98.11.90.

## General note on the Leguminosae.

The Leguminosae are among the widest and most widely distributed orders among the Dicotyledons. They are found all over the world, and the plants in the order are as varied in habit as the Compositae, annuals perennials shrubs and trees being present. Water plants are however rare. Neptunia and Aeschymone are in cultivation. The Leguminosae are allied in many respects to the Rosaceae through the tropical section Caesalpinoaceae, and also to the Prot<sup>e</sup>aceae through the Mimosae. The plants in the order and especially the shrubby species are characterised by long tap roots which make them to a great extent independent ~~independent~~ of surface moisture, but which on the other hand makes them difficult to transplant.

For propagation ~~the~~ seed which is usually freely produced ~~and~~ affords the common mode of increase, is sown where the plant is intended to remain.

As growth in the Leguminosae is often slow, particularly in the early stages vegetative propagation is a more speedy means of increase. The method of grafting on suitable stocks (Robinias on Robinia pseudacacia, Caragana vars. and other leguminous plants on Caragana arborescens) is the method most commonly used. Layering is also used for many shrubs e.g. Wistaria, Acacia &c. Stem cuttings succeed for most perennials. Like many of the Proteaceae

however, stem cuttings in many hardwooded Leguminosae are very slow and difficult e.g. Cercis, Clanthus Dampieri, Erinacea pungens, Gleditschia triacanthos. Alternative vegetative methods are found to give better and quicker results. As in many other plants where stem cutting are slow and difficult, root cuttings are employed with success e.g. Acacia, Amorpha, Caragana &c. In some cases e.g. Wistaria &c. root grafting is used instead of the ordinary stem grafting. Where runners are produced as in Lupinus, these form an easy means of vegetative propagation.

Leaf ~~cut~~ cuttings have not been investigated to any great extent systematically. Miss Kupfer<sup>(1)</sup> examined the regeneration of modified leaves, but with little success. Work has also been done in connection with the regeneration of the hypocotyledons of the pea and the beam (2)

(1) Kupfer.  
(2) Burns + Hedden.

Leguminosae

Gen: Articles

Hardy Leguminosae 91.4.99.

New Chinese Leguminosae. Pl. 20.9.01.  
20.9.02.

91.5.99

ARIA

the cutting before and get

platyphora not easy from

what joined back

root cutting (see Chap 4)

method for some of

grafting

found the best method in

from cuttings, no power

to it for growing under

these leaves is one of

amata

cordata

Cavens

dealbata 92.7.92

So 1.8.97

Stenonome

leptone

leucos

longifolia

lucida

platyphora

sericea

Leguminosae.

ABRUS.

(Seed. Stone Climber).

I. stem cuttings in heat.

(Soft leaves - leaf cuttings?).

II. seeds also.

III. precatorius (Prayer Plant.)

perigrinus 915.9.88. (Weather Plant.)

ACACIA.

(Hardy greenhouse + stone climber)

I. stem cuttings before wood gets hardy. weaker side shoots best.

platyptera <sup>+ Ricciana</sup> not easy from cuttings. best from smaller short-jointed shoots. 922.1.81 / 95.5.88.

- root-cutting. (See Chap III)

- suckers. for some sp. affinis (dealbata)

- grafting.

II. seeds the best method in heat. - Plant preferable to that from cuttings, as flowers more freely in younger stage.

- but if for flowering earlier than from cuttings 92.4.87.

- seeds scarce in some sp. linifolia to -

III. armata.

cordata.

Catechu.

dealbata 92.7.92

92.1.5.97.

Drummondii.

leprosa.

lineata -

longifolia

hastulata -

platyptera.

2. Leguminosae.

ACACIA contd.

Socotrana.

urophylla

vestita

verticillata

IV. 9.8.5.75 / 927.12.07 (Greenhouse Acacias) -

9.27.12.80 (Acacias for Pillars) -

9.12.10.78 / 921.11.85 (Acacias) -

9.22.4.90 (Propagating Acacias) -

9.4.4.91 (Culture of Acacias in pots) -

ADENANTHERA.

(store evergreen.) -

I. stem cuttings w/ heat.

II. ?

III. falcata  
parviflora.

ADENOCARPUS.

(hardy + greenhouse  
seed. shrubs)

I. layering

II. grafting on h?

stem cuttings

III. seed best for delecticans: though not produced well in this country

IV. delecticans 9.13.6.85.

9.27.11.86.

hispanicus

to.

Leguminosae  
DESMIA

(greenhouse shrubs & trailers)

- I. stem cuttings in heat.
- II. seeds - generally, more satisfactory.  
annual sp. muricata  
                  papposa  
                  + pedicula      are not grown.
- III. boroniodes.  
          glutinosa.  
          microphylla.

AESCHYNOMONE

(store herbs + shrubs, also aquatic?)

- I. stem cuttings.
- II. seeds for herbaceous species.
- III. aspera  
          bispinosa  
          sensitiva (shrub)

AGATI

(store trees)

- I. stem cuttings - young shoots in heat in spring.
- II. -
- III. coccinea  
          grandiflora flore pleno.

ALBIZIA - Acacia.

(greenhouse or hardy shrubs)

- I. stem cuttings - easy for Lophantha.
- II. best from seeds 914.9.72.
- III. Julibrissin = Acacia nenu.  
          Lophantha = Acacia lophantha (useful for pot + table plant.)

Leguminosae.

## AMERIMNON.

(<sup>stone</sup> evergreen tree) -

I. ripe cuttings - easy culture + prop<sup>n</sup>.

II. ?

III. Boronai.

## ALHAGI.

(greenhouse shrubs or sub shrubs) -

I. young stem cuttings.

II. seeds preferable.

III. camelorum  
maurorum (Manna).

## AMHERSTIA.

(stone tree) -

I. rare plant - difficult to flower -  
stem cuttings of half-ripe wood. (wants great heat 70-80.  
fussy moist.) -

II. seeds also.

III. nobilis.

IV. 926.2.76. (Amherstia nobilis.)

917.4.80

919.3.84

9020.9.02

## AMICIA

I. young stem cuttings in spring 9112.00.

II. ?

III. zygomis 9139.84.



Leguminosae.

## AMMODENDRON.

(hardy evergreen).

- I layers.  
Stem cuttings? in autumn.
- II seeds also.
- III Sieversii.

## AMORPHA.

(hardy decid. shrub).

- I layers.  
Stem cuttings  
Suckers for *A. fruticosa*.  
root cuttings also for *A. fruticosa* 97. 8. 88. (see Chap III)
- II best from seed.  
for *canescens* etc 925. 8. 00.
- III *canescens*. 94. 8. 97 / 914. 9. 01. / 931. 8. 89.

*fragrans*  
*fruticosa* 97. 8. 88.

- IV 931. 3. 88 (*Amorpha*)  
927. 12. 88

## AMPHICARPEA.

hardy.  
Annuals.

- II seed in open border in spring.
- III *monica* (Hog Pea Nut).

ANAGYRIS.

(Greenhouse shrub)

- I. young stem cuttings in summer.
- II. seeds also.
- III. barbata - febrida.

ANDIRA. = Seffroya.

(Stone evergreen)

- I. stem cuttings - -
- II. -
- III. vicornis (Cabbage Tree) -

ANTHYLLIS.

(hardy herbaceous)

- I. of easy culture and propagation -  
 Division for herbaceous.  
 Stem cuttings for shrubby sp. e.g. eminea. (slow grower.)
- II. seed also.
- III. aurea -  
 eminea - (slow growing.)  
 montana. 9.11.6.98  
 var. nora.  
 tetraphylla -  
 vulneraria POM  
 + var.  
 webbiana.
- IV. Gen. Art. 9.10.9.81. (Anthyllis) -

9. Leguminosae.

## AOTUS.

I. stem cuttings half-ripe in <sup>spring or</sup> summer, easy cultivation

II. ?

III. ericoides

gracillima 973.4.84 / 978.3.91.

villosa = ericoides

IV. 94.6.84 (Aotus gracillima)  
the most well known species.

## APIOS.

(hardy tuber.)

I. Division of tubers 910.9.81.

II. ?

III. tuberosa (Ground Nut) 910.9.81 / 915.10.81.

## ARACHIS.

(slow annual.)

II. from seed, but very slow growing when once started 976.10.

III. hypogea 976.10.89. (Monkey Nut.)

IV. see also Fuller on Nut Culture.

## ARTHROCARPUM.

I. stem cuttings

II. ?

III. gracile

leguminosae.

ASPAIATHUS.

- I. stem cuttings - half ripe in spring.
- II. ?
- III. *Carnosa*  
*Chenopoda*  
*pedunculata*.  
Sp. rarely seen in cultivation.

ASTRAGALUS.

(hardy herbs or shrubs)

- I. easy culture.  
division not for *monspessulanus*.
- II. seeds for annuals.  
best for *monspessulanus*.
- III. *alpinus*. *adurgens* 94.6.79.  
*gummifer*  
*hypoglottis*.  
*monspessulanus* 99.11.89.  
*tenuifolius*  
*vaginatus*  
*venosus*.

BAPHIA.

(Shrub)

- I. stem cuttings in heat.
- II. -
- III. *borneensis*.  
*nitida* (R.C.)

BAPTISIA.

(hardy perennial)

- I. division in spring.
- II. seed.
- III. *australis* 92.7.98/924.6.99.  
*alba*  
*exaltata*. *leucophae* Bm. 5900 / *trictoria* 94.1.79.

leguminosae  
BARBIERA

(stove evergreen)

I. stem cuttings of half-ripe wood.

II. ?

III. polyphylla, single sp.  
= Clitoria polyphylla.  
= Galactia pinnata.

BAR KLYA

(greenhouse sp.)

I. stem cuttings. half-ripe.

II. also.

III. syringifolia.

BAUHINIA

(stove climber, heavy shrubs)

I. half-ripe cuttings.

II. -

III. Candida  
Corymbosa.  
curanensis Bot. Reg. 1133.  
integrifolia  
natalensis B.M. 6086.  
purpurea S.S. 4.84.

tomentosa 915.11.79.

Vahlia

variegata 916.2.86  
925.3.93.

IV.

BORBONIA, Linn.

(greenhouse evergreen shrubs)

I. cuttings. half-ripe in April.

II. 0.

III. cordata And. Rep. xxxi.  
Crenata B.M. 274.

BOSSIAEA Vent.

(greenhouse shrubs)

- I. stem cuttings - leafy -  
not easy to strike.
- II. seeds in spring, more usual method.
- III. angustifolia  
disticha  
lucifolia 924.5.84 / 94.6.87 / 920.4.89 / 95.4.90 / 925.5.  
hemicaulis.

BRACHYSEMA RBG.

(greenhouse evergreen)

- I. stem cuttings - a little difficult. better from  
seeds 926.11.84.  
layers also.
- II. also seeds. usual method.
- III. californicum  
lanceolatum 924.1.85 / 926.11.84.  
undulatum.

BRONGNIARTIA.(greenhouse evergreen  
sub-shrubs.)

- I. stem cuttings - young shoots.
- II. -
- III. podalyrioides.  
sericea.

BROWNEA. Jacq.

(store evergreen trees  
shrubs.)

I ripe stem cuttings.  
also root cuttings.

II seeds also. to raise hybrids

III. Ariza 921.4.83 / 923.6.88 / 97.5.98.

Coccinea 93.4.80 / 92.5.85 / 921.5.98.

Crawfordi x 97.12.93 / 925.1.96 / 96.1.00 / 90.30.1.04.

grandiceps 929.1.81 / 925.2.88 / 93.3.88 / 915.4.99.

macrophylla 911.9.75 / 931.5.79 / 910.3.88.

princeps.

IV 921.4.88 (Brownias)

929.1.98 (Brownias in flower at Kew).

BRYA.

(store trees or shrubs.)

I stem cuttings in heat

II seeds also

III. Pbenus. (Tawaiia Pbeny).

BURTONIA. R.Br.

(greenhouse shrubs)

I young cuttings best from lateral or basal shoots  
treated like Picea cuttings in spring, not from stout leaf  
913.2.86.

II seeds usually produced in abundance. preferable method.

III. conferta B.R. 1600.  
pulchella  
scabra

IV. 913.2.86 (Burtonias + Johnsonias.)

BUTEA. Roxb.

(dwarf evergreen)

I. Young stem cuttings.

II. also

III. frondosa.  
superba.

CADIA. Forst.

(dwarf. stone shrub).

I. stem cuttings?

II. seed.?

III. ellisiana B.M. 6685.

CAESALPINIA. Linn.

(stone or greener evergreen).

I. stem cuttings in heat.

II. seeds in heat.

III. japonica

hardy, but still rare.

926.12.91 / 97.7.94. / 91.2.02

99.8.02 / 923.7.04.

brasilicensis (Brazil wood.) sappan. to -

Gillesii  
(Poinciana)

916.8.90.

CAJANUS. DC.

(stone evergreen shrub)

I. stem cuttings in spring.

II. seed also.

III. indicus B.M. 6440.



3 Leguminosae.

CALLIANDRA. Benth.

(Stove evergreen)

I. cuttings of current years shoots - half ripe.  
in gentle bottom heat in summer.

II. seeds?

III. *fulgens* Benth. 7626.

*haematocephala* 918.7.82 / 925.1.96 / Benth 5181.

*Tweedii* . 925.2.88 / 915.3.90 / 925.2.93 / 96.2.92.

CALOPHACA. Fisch.

(hardy seeds. Stove)

I. grafting on common *Laburnum* or *Caragana arborescens*  
stem cuttings? slow & difficult. 921.8.  
layers?

II. seeds germinate easily, but inclined to damp off.  
best to graft.

III. *wolgatica* 921.8.97 / 913.11.86.

CALPURNIA.

(greenhouse or  
half-hardy tree)

= *Virgilia*

I. stem cuttings  
layers.

+ grafting on to *Laburnum* which it much resembles in  
appearance.

II. seeds also.

III. *aurata* 94.4.96 / 917.4.97.

*lasiogyne* 926.3.97.

CAMPOENSIA Welw.

(Stems shrub. climbing.)

- I. stem cuttings in heat.
- II. imported seeds; did not flower till 1895 in this country.
- III. maxima Pom. 7572. G.C. 14.11.96 / G.C. 7.11.96 / G.C. 21.11.96  
G.C. 7.11.03.

Species rare: unlike other Legum. has no nodules on roots. Also has largest flowers in Legum. flowers - over 1 ft. in length.

- IV. G.C. 14.11.96 (Camposia maxima)

CAMPTOSEMA Hook. & Arn.

(Stems + greenhouses climber + shrub.)

- I. stem cuttings in heat.
- II. seeds.
- III. pinnatum G.C. 17.7.97 / Pom. 4582.  
rubicundum G.C. 5.9.03 / Pom. 4608.  
splendens.

CANAVALIA (Adans.)

(Stems perennial twiners.)

- I. stem cuttings in heat.
- II. seeds in heat.
- III. bonariensis B.R. 1199.  
ensiformis Pom. 4027.  
rubilans.

lyrata B.R. 1310 G.S. 10.89  
corymbosa G. 21.1.82 / G. 28.2.83 / G. 26.8.93 / G. 22.8.96  
G. 19.8.97 / G. 10.8.98 / G. 10.8.99 / G. 10.8.99

CARAGANA Lam.

(hardy decid. shrubs.)

= Robinia.

I. grafting mainly on *C. arborescens* for roses kinds.

Root cuttings. see Chap III.

Layering. for low sp.

stem cuttings - very difficult.

II. seeds.

III. *aurantiaca* - 917.6.99.

*arborescens* - *Robinia caragana* 920.7.89 / 96.5.93.

*frutescens* 96.5.93

*gracilis* 918.6.98

CARMICHAELIA R. Br.

(greenhouse shrub)

I. stem cuttings. Side shoots in spring.

II. seeds?

III. *australis*

*Mulleriana*  
tr.

CASSIA Lin.

(ann. bienn. perenn  
greenhouse + stove.)

I. stem cuttings - half-ripe shoots in heat for hardy per  
easy for *C. corymbosa* in spring / autumn -  
↓ tender

II. seeds - for ann. bienn + perenn.

III. *biflora* B.R. 1310.

95.10.89

*corymbosa* 921.1.82 / 924.2.83 / 926.8.93 / 922.8.9

919.8.99 / 917.11.00 / 919.9.03 / 94.11.03.

16 Leguminosae.

CASSIA contd.

Coquimbensis 977.10.84 / Bm. 9002.

fistula (Judean Laburnum) 915.1.81 / 979.1.81.

glauca 914.12.01.

floribunda 93.11.83 / 91.9.88.

laevigata 924.7.89.

marylandica 93.10.96 / 974.10.77.

sophora 92.10.80 / 98.10.81.

tomentosa 91.12.00.

IV. Gen. Arts.

Cassia corymbosa 95.11.84 / 977.11.02.

The best Cassias 97.6.83.

Cassias planted out 974.9.84.

CASTANOSPERMUM, A. Cunn.

(greenhouse evergreen)

I. stem cuttings  
layers

II. seeds best method when procurable.

III. australe (Morton Bay Chestnut). 1921.6.90  
Hook. Bot. Misc. I. t. 51.

CENTROSEMA, DC.

(slow evergreen tree)

I. ?

II. Seeds

III. plumieri (Snake Flower) Lc. 13.3.97.

IV. pubescens Lc. 13.3.97.

CERATONIA. Linn.

(greenhouse or half hardy trees)

I. stem cuttings - ripe shoots in autumn

II. seeds

III. Siliqua And. Rep. t 567. / 94.5.78.  
(Carob Bean Tree.)

CERCIS. Linn.

(Hardy decid. trees.)

I. stem cuttings? diff. to propagate. possibly accounts for rarity.  
grafting. esp. for varieties other than siliquastum -

II. seeds in <sup>light</sup> heat in spring. <sup>best method</sup> gradually hardened off. then out.

III. Siliquastum (Tudas Tree) - or (American Red-bud).

926.5.00. / 92. 22.9.00 / 917.5.07 / 97.2.03.

92. 8.7.99. / 92.5.12.96 / 926.3.89.

C. japonica. 915.9.77 / 910.7.80.

See other var. species - under gen. articles

IV. The Genus Cercis 926.4.84.

The Tudas Tree 928.4.94 / 921.10.93. / 921.6.90.

93.7.97 / 915.10.92.

The Tudas Tree + its allies 922.5.97

CHORIZEMA. Labill.

(greenhouse evergreen)

I. stem cuttings - short side shoots. (see gen. articles)  
in summer. Preferable for varieties e.g. C. cordata splendens.

II. easy for most sp. Difficult for P. ovata. See 923.2.84.

Seeds. Give best plants. quicker

in gentle heat in spring.

seedling variable for spec. varieties

CHORIZEMA contd.

- III. Chandleri 924.5.84.  
var. elegans 98.2.90.
  - coodata Paxt. Mag Bot. 97. 91.1.96.  
98.1.98.
  - var. splendens. 923.2.84 / 919.3.84 / 97.4.88.
  - elegans. 914.5.81.
  - flavum 926.4.84.
  - Hendersoni 914.12.89.
  - Henehmanni Paxt Mag Bot. 171. / 925.5.78.
  - mucronata. 923.2.90.
  - Lowi 925.2.92.
  - ovata. Paxt Mag Bot. 153.
  - varium Paxt Mag Bot 175. / 99.3.01.
- IV. Chorozemas. 928.6.84. / 92.4.84. / 916.3.89.
  - Culture & Propagation of Chorozemas 921.12.78 / 923.10.80.
  - Chorozemas in Bloom 928.8.91. / 97.4.00.
  - The Chorozemas. 930.4.97 / Dec. 11.6.98.

CICER Linn.

Partly annual.  
(green house or  
store?)

- I.
- II. seeds in spring.
- III. arictinum (The <sup>Bengal.</sup> Green or Chick Pea) 930.12.76.  
(habaceous plant.)

CLADRASTIS. Rafin.

(hardy decid. trees)

I. layers in sprang & autumn.  
grafting.  
+ budding.

stem cuttings? very difficult + slow.  
seeds?

ii. amurensis B.M. 6551. 929.9.83 / 928.8.86 /  
912.5.88. / 918.1.90. / 927.7.89.

tricoloria (Yellow wood) 91.6.01. / B.M. 4767.  
= lutea. (Virgilia lutea).

iv. The Yellow wood 94.8.83.

CLIANTHUS. Sol. Lindl.

(half-hardy evergreen  
shrubs)

I. stem cuttings. easy. - for C. puniceus see 918.7.91.

grafting for Dampieri on C. puniceus. see 93.4.86. + 930.11.89  
will not succeed well on own roots. } + 922.6.01.

ii. seeds also - also on Colutea arborescens see 90.29.6.01.  
+ 98.11.07.  
see 911.4.03.

iii. - carneus B.R. 1842 L.S.I. 914.4.77 / 95.4.79.

- Dampieri 924.10.83 / 926.4.90. / 90.27.5.99 / 98.6.01.  
93.8.01 / 922.2.02. / 99.5.03

(The Glory Pea of Australia)

rare plant because difficult of culture + propagation

var. marginata 94.10.99.

- magnificus 913.4.89.

- puniceus albus 919.10.01.

iv. Cultivation of C. Dampieri 91.11.07. / 923.7.81.  
Dampiers Glory Pea 916.3.77. / 915.5.82.

puniceus. 99.2.01 / 924.4.01. Part. Mag. Bot.

+ 914.2.03. + 918.7.91.

IV. Gen. Articles.

Grafting Clitantes 91.3.86. / 91.9.1.01. see under I also.  
Lobster Claws 929.3.90.

Clit

CLITORIA. Linn.

(Slow evergreen  
twiners.)

I. Stem cuttings. short side shoots. in heat.  
best for propagating varieties - esp. of ternatea -  
though annual.

II. seeds - when they are to be obtained.

III. arborescens Pom. 3156.

heterophylla Pom. 2111.

Plumieri B.R. 268.

ternatea Pom. 1547. / Paxl. Mas. Bot. 147.

92.8.01. / 926.3.81 / 91.8.91 / 920.4.92.

IV. Gen. Art. Clitoria ternatea 919.8.90.

COLUTEA. Linn.

(hardy shrubs) -

I. Stem cuttings at end of summer.

II. Seeds. best method in early spring in frame.

III. arborescens 927.9.80. Pom. 81. vars. cruepa

93.10.85 / 921.8.86 / 98.9.00.

+ bullata see 9.11.12

(The Bladder Senna).

cruenta . 924.8.42 / 920.12.90.

halieppica 93.6.82 / 928.7.88 h. = istrea. (plate) 9.11.12.

longialata = cilicica see 9.11.12.



21. Leguminosae.

*nepalensis* Bm. 2622.

other var. see general arts.

IV. *Coluteas* 919.9.03.

*Coluteas* 93.9.87 / ~~912.8.88~~<sup>9</sup> / 912.12.91.

The *Coluteas* Gm. 9.11.12.

COLVILLEA. Boj.

(More evergreen tree.)

I. stem cuttings in sand in heat.

II. seeds also when obtainable -

III. *racemosa* Bm. 3325.6.

COPAIFERA. Linn.

(More evergreen tree.)

I. stem cuttings in sand in heat.

II. seeds?

III. *quianensis*  
*officinalis* fr.

CORONILLA, Linn.

(hardy + greenhouse shrubs)

I. stem cuttings in summer - half-ripe wood,  
easily for *C. emerus*, + *glauca* 924.4.86.

II. seeds.

III. *coronata* 93.5.00. = *C. montana* Bm. 907.

*emerus* Bm. 445. 923.6.88 / 911.10.90.  
(hardy)

*glauca* Bm. 13. var. *variegata* Bm. 2179.

919.1.78 / 919.11.81 / 95.4.84 / 926.4.84 / 927.1.94.

914.8.97 / 920.1.00 / 96.2.04.

*iberica* Brit. Fl. Gard Sweet Ser. 1. vol. 1. (23)

= *Cappadocica* 915.8.96 / 91.9.88 / 99.7.81.

Leguminosae  
ORONILLA contd.

4

juncosa BR. 822

varia. 928.7.83/911.2.93/925.6.98/92.2.9.99.  
Hardy. Heavy culture.

valentina 925.10.84.

CROTALARIA. Linn.

(store annuals, store of greenhouse perennials)

I. stem cuttings & division for perennials.

II. seed for store annuals, & perennials.

III. purpurea Pom. 1913 (store annual)

pulchella Pom. 1699. (greenhouse evergreen)

fenestrata Pom. 1938 (store evergreen)

vitellina BR. 447.

species not much grown.

CYCOGYNE. Benth.

(greenhouse evergreen)

I. % young stem cuttings, and suckers which are freely produced.

II. Seeds, but rare.

III. canescens. Part Mag Bot 199.  
(rare plant.)

CYLISTA. Ait.

(store evergreen form)

I cuttings in heat in sand.

II. -

III. tomentosa  
villosa And. Rep. cccxlvii.

CYNOMETRA, Linn.

(Stone evergreen tree)

- I. Stem cuttings in sand in heat.
- II -
- III. cauliflora  
polyandra  
ramiflora

CYTISUS, Linn.

(Hardy - green house h  
Shrub + trees)

- I. stem cuttings e.g. Androminii, canariensis etc. see under each.  
grafting - better for varieties e.g. C.s. praecox. + Andreanus  
on Laburnum usually. - or C. racemosus. see 911.3.93.  
prostrate sp suitable for the rocks
- II. Seeds the usual method - quick - + readily raised  
when obtainable. - C. Andreanus from seeds but variable 98.6.01.  
99.6.94.
- III. albus - 95.7.84 / 96.22.5.97 / 928.5.98.  
adami. 95.1.84 / 925.6.92 / 911.6.98.  
s. Andreanus. 93.6.99 / 96.8.98 / 925.7.03 / 96.30.5.03 / 96.30.5.96  
98.0.01 / 925.4.91 91.8.04. etc.  
alschingerii. 93.10.75 / 910.6.82 / 99.6.94.

aeolicus B.R. 1902.

Androminii 916.5.96 / 94.5.98 / 920.5.99 /  
(prostrate) 921.5.92 / 96.8.5.97.

(rather rare)

decumbens 95.6.97 / 918.6.98 / 96.18.8.00.

biflorus B.R. 308. 929.4.93 / 95.7.93.?

Capitatus B.C. 497. 917.9.92 / 914.7.94 /

canariensis 918.8.83. (on propagation.)

everestianus 920.6.91 / 912.12.91 / 91.4.93 / 93.4.97.

(Diff. to prop. by cuttings) - graft on to C. racemosus.

elongatus 915.6.72 Andr. Rep. 632.

filipes (tender) 91.1.96 / 925.4.81 / 912.5.88 / 99.4.92 / 96.1.94.  
924.2.00 / 91.3.00

CYTISUS contd.*foliosus* Bm. 476.*fragrans* G7.3.74 / Gc. 3.11.00.  
- *Gemita fragrans*.*Frivaldskyanus* Gc. 4.7.96  
G 16.7.98.*hirsutus* Bm. 6819.*incarnatus* G28.9.72.*Kewensis* (x) Gc. 6.6.96 / G15.5.97.  
G10.6.99 / G23.11.01.*laniger* (Lender) G25.5.89.*nigricans* B.R. 802 G7.7.83 / G21.7.94 / G25.8.94 / G20.8.98 / G18.8.00.  
var. *longispicatus* G3.8.01.*purpureus* G12.5.94 / G22.5.97.*purpureus* ~~naja~~ G18.6.98 / G11.6.04 / G17.6.82 / G14.6.90.  
*proliferus* Gc. 5.3.98 / G19.2.98.*ratisbonensis* G15.4.82 / G10.5.90 (note)  
(note)*racemosus* G13.12.79. (in foli.)

G28.11.91 / Gc. 22.2.02 / G28.5.04.

var. *elegans* G29.1.98.*Schickauensis* G30.6.94 / G17.7.97*leopardus* G18.6.98.*pedunculus* G18.6.92 / G30.6.94.*praecox* (hybrid) G8.5.97 / Gc. 8.5.97 / G15.7.99 / G7.5.98. best from culting.*pallidus* (The Moonlight broom) G28.5.04.(dwarf)  
*Sulphureus* G21.7.00.*Sessiliflorus* G6.6.96. Bm. 255*Stenopetalus* = *elegans*  
(Greenhouse) G21.3.96 / G26.5.88.

Leguminosae.

Villosus 20.9.79.

Varieties of the Common Broom.	910.5.02.
The Larger Brooms	910.10.03.
Hybrid Cytisus	99.5.03.
The Broom & its allies	927.8.92.
Brooms in the Landscape	910.9.92.

DALBERGIA Linn. f.

(Stove evergreen trees)

I. stem cuttings <sup>from</sup> ~~the~~ young wood in spring - in sand in heat.

II. seeds ?

III. *bohebitis*  
*seawoods* etc.

of not commonly met with in cultivation.

DALEA Linn.

(greenhouse shrubby perennials) -

I. stem cuttings ?

II. ?

III. *bicolor* B.R. 43. = *mutabilis*,  
*mutabilis* B.M. 2486.

DAVIESIA Sm.

(greenhouse evergreen)

I. cuttings of half-ripe wood - short side shoots best.

II. seeds sown in heat in spring.

III. *alata* B.R. 428. *glauca* B.R. 43. -

*latifolia* - Paxt Mag Bot 223.

*ulicina* B.C. 44. Paxt Mag p. 29.

DESMODIUM.

mainly.  
(Stove & greenhouse shrubs.)

- I. <sup>stem</sup> Cuttings in heat in heat. - half ripe in spring or any other season
- II. Seed?
- III.

DIPHYSA

(Stove shrubs)

- *gyrans*. 915.12.80. / 976.1.84. / 923.2.89.  
(the Telegraph Plant).
- *japonicum* 917.8.89.
- *penduliflorum* = *Lespedeza bicolor* = 915.10.04.  
(hardy) 926.8.76 / 929.9.83 / 98.10.84 / 93.11.88 / 918.9.97 / 91.8.04.
- tillicifolium*
- *racemosum* 921.9.78.
- *mutans* B.M. 2867.
- *canadense* (hardy) 917.9.98.

IV.

DICHRISTACHYS. DC.

Stove shrub.

- I. <sup>stem</sup> Cuttings in heat. young shoots.
- II. Seeds in heat in spring.
- III. *platycarpa.*  
*delioides.*  
*cinerea.*

DILKWTNIA. Sm.

(Green house evergreen)

- I. <sup>stem</sup> cuttings from side shoots best.
- II. Seeds also in heat. - not well produced in Florida.
- III. *speciosa* - Part. Mag. 27.  
*glycinifolia* Part Mag 99,  
*floribunda* Led. Bot. 305.  
*ericifolia* B.M. 1545.  
*glaberrima* B.M. 944. etc.

DIMORPHANDRA. Schott.

- tropical gigantic tree

Sp. not in cultivation.

D. mora Gr. 16.1.97 / 16.9.76.

DIPHYSA. Jacq.

(Stove covergreen)

I. stem cuttings of firm young shoots.

II. Seed?

III. *Carthagenensis*

racemosa U.S. Dept. Agric. Contrib. Nat. Herb. vol. 1. no. 9.

DIPTERYX Schreb.

(Stove covergreen tree)

I. stem cuttings in sand in heat of ripe wood.

II. Seeds.

III. *odorata* (The Tonguin Bean) 18.9.77.

vine  
climber  
at of  
ec. →

ERYTHRINA. Linn.

(Greenhouse or Stove plants.)

I. stem cuttings - young shoots 2-3 ins. long, also pieces with eyes. - Paxt. Mag. 175.

II. seeds

III. *Crista galli* (see below) Paxt. Mag Bot. 175 / 19.3.98 / 11.10.98. (half hardy)

*humana* 19.9.00.

*humii* 11.7.86 / 31.8.95 / 11.9.97 / 16.10.00.

*laevifolia* 16.8.81. Bot. Kl. Gard. Sweet. Ser. 1. vol II. 142.

*herbacea* 20.5.76 / 12.4.79 / 16.3.80 / Bot. 877.

*umbrosa* 14.10.62 / 18.10.02

*marmorata* 19.2.87.

Parcelli Bull's Cat 1876-7.8.4.  
*versipellis* ditto. 1885.6.

IV. The Coral trees (*Erythrina*).

*Erythrina* & their culture

19.9.01.

The Coral Trees

10.2.83.

15.12.91.

*poianthes* Bot. R. 1246. Bot. 3234.

*Crista-galli* 22.2.79 / 17.5.84 / 12.12.91 / 29.8.96 / 14.8.97.

*constantiana* 2.11.96.

25 Leguminosae.

DOLICHOS, Linn.

(greenhouse or stove furnis)

I. stem cuttings in heat in sand

II. Seed h.

III. lignosus P.M. 380 9 2.6.83

japonicus G.C. 13.12.02

tetragonobolus 9 7.9.72

Sinensis P.M. 2232. 18.4.76

sp. except lignosus not much cultivated, as not possessed of st bean

ENTADA, Adams.

(Stove evergreen c hnters)

I. stem cuttings - of young shoots

II. Seeds

III. Pursaetha (seeds of which Indian gela), scandens

sp. not common in cultivation.

ERINACEA, Boiss.

(hardy shrub)

I. stem cuttings difficult, but possible. see

Fig - & description of specimens

- laeyensis also.

II. seeds also.

III. pungens = Anthyllis erinacea.

G.C. 6.6.96

9 5.12.03

G.C. 13.6.96

9 13.9.02

ERVUM, Linn.

(herb. annuals)

II. seeds in spring in open - rarely cultivated.

III. lens. (The Common Lentil.)

9 16.10.75.

> insert ERYTHRINA here.



29 Leguminosae.

EUTAXIA. R.Br.

Greenhouse or half-hardy  
(half-hardy evergreen  
tender.) shrubs.

- I. Stem cuttings - short young shoots. in spring.
- II. Seed?
- III. pungens Paxt Mag III 245.  
myrtifolia

~~ELEMINGIA~~.

GALACTIA P.Br.

(Hardy <sup>decid.</sup> + stove evergreen tender)

- I. Division for hardy -  
Stem cuttings for stove sp. short side shoots.
- II. - Seed.
- III. glabella: mollis (hardy)  
pendula B.R. 269.

GALEGA Linn.

(hardy herb, perennial,  
ramblers.)

- I. Division in spring.
- II. Seeds sown in spring.
- III. Hartlandi 926.12.03.  
923.7.04.  
930.7.04.  
var: bicolor grandiflora 920.6.04.  
officialis var: bicolor 923.7.98.  
officialis 93.10.96 / 93.10.910.7.97 / 92.2.8.02.  
(Goat Rue)  
var: alba 99.8.84 / 928.7.94 / 925.7.96 / 923.7.98.  
927.9.84  
grandiflora B.R. 769.  
biloba Brit Fl. Gard. Sweet. 159. persea Sweet. 244.  
IV The Goat Rue (Galega) 929.1.81.

GASTROLOBIUM. R.Br.

(greenhouse evergreen)

- I. stem cuttings, half-ripe shoots in spring -  
 II. seeds in spring, in heat - produce best plants,  
 III. bilobum DC. 70. B.M. 2212.  
 acutum B.M. 4040.  
 villosum. Journ. Hort. Ser. 3. XXXIV. p. 59.  
 B.M.

GENISTA. Linn.(hardy <sup>or</sup> half-hardy +  
greenhouse-)

- I. stem cuttings for finest species, of hardy kinds in spring or autumn  
 + easily for greenhouse or half-hardy -  
 grafting on Laburnum for vars. see G.C. 18.11.99, for details  
 II. seeds usually produced freely at G.C. 25.3.99.  
 sown in spring - best for aethnensis see G 11.8.00  
 98.9.02.  
 III. aethnensis G 1.8.96. / G 20.7.89 / G 13.8.92 / G 31.7.97 / G 22.8.04.  
 (hardy evergreen) -  
 - monosperma -  
 genus (greenhouse or  
 half-hardy seed) G 5.7.02 / G.C. 2.4.04.  
 - sagittalis G.C. 30.6.00. / G 23.7.04  
 (hardy evergreen) -  
 linifolia B.M. 442.  
 aegyptiaca (Petch whin) G 15.12.88.  
 lusitanica G 19.5.00.  
 emerea G 15.7.99.  
 humifusa G 18.8.84.  
 elatior G 30.5.85 / G 10.7.86.  
 dalmatica G 27.7.96 / G 6.7.01.  
 fragrans G 1.5.80.  
 prostrata G 26.5.74. / G 24.7.80.  
 hispanica. G 20.6.85 / G 16.6.88 / G 5.5.94 / G 20.5.99 / G 14.12.01 / G 9.8.02.

virgata 917.6.93 / 929.6.95 / 930.7.95 / 912.7.02 / 913.6.03 / 930.7.04.

- IV. The Genistas 914.5.81.
- The Genistas 918.3.93.
- Propagating Genistas 918.1.96.

GEOFFRAEA, Linn.

(store evergreen trees)

- I. stem cuttings of ripe shoots in spring.
- II. seeds in heat?
- III. spinosa  
superba.

GLEDITSCHIA, Linn.

(hardy decid. trees)

- I. stem cuttings diff.?  
grafting - on.
- II. Seeds imported from America -  
should be soaked for 12 hours in warm water.
- III. Chinensis 916.4.81 / 922.10.84 /  
or sinensis  
triacanthos see gen. articles -  
var. pendula 923.3.78.

- IV. The Honey Locust. (*G. triacanthos*)  
+ barb:  
911.10.84.  
917.2.91  
917.10.96. / 910.11.00.

GLYCINE, W. & Arn.  
= Kannydea.

(store & greenhouse  
flowers.)

- I. stem cuttings in heat.
- II. seeds in spring.
- III. cocconea - B.M. 270.      hispida (Soy Bean) 929.7.82.  
subcunda B.M. 268.      = Soja hispida
- IV. Glycines grown as bushy shrubs 919.1.78.

GLYCYRRHIZA. Linn.

(hardy herb. perennial)

- I. Division of roots
- II. Seeds?
- III. glabra (Liquorice) 96.8.87.  
P.M. 167.

GOMPHOLOBIUM.

(greenhouse evergreen) twines.

- I. stem cuttings of short young shoots in spray.
- II. seeds.
- III. grandiflorum B.R. 484.  
polymorphum Part Mag. 151. / 93.8.72.  
venulosum B.R. 1574.  
tomentosum B.R. 1474.  
see gen. art.
- IV. Gompholobium 930.4.87.  
Gompholobium 99.7.87.

GOODIA. Salisb.

(greenhouse evergreen shrub.)

- I. stem cuttings - short young shoots.
- II. seeds.
- III. latifolia P.M. 958. 93.5.90 / 913.6.91 / 97.5.92.
- IV. pubescens P.M. 1310.

GUILANDINA. Linn. Benth.

(tropical evergreen shrub)

= Caesalpinia

- I. ripe cuttings in spray.
- II. seeds.
- III. Moringa = Moringa pterygosperma.

GYMNOCLADUS, Lam.

hardy decid. tree

- I. Root cuttings - see 914.7.83 / 931.1.91.  
Stem cuttings? Suckers. also 914.4.88.
- II. Seeds are freely produced in America - imported from there for stock
- III. canadensis (The Kentucky Coffee Tree).  
chinensis (Soap Tree).
- IV. The Kentucky Coffee Tree 914.7.83. / 99.3.89 / 931.1.91.  
HARDENBERGIA 927.7.78 / 914.9.78 / 923.1.86.

HAEMATOTOXYLON, Link.

(slow evergreen tree)

- I. Cuttings of firm young shoots in heat.
- II. Seeds also - soaks some time before sown in heat.
- III. campechianum (Logwood Tree).  
Benth. + Torr. 86.  
Watts' Feon. Products.

HALIMODENDRON, Fisch.

(hardy decid. tree)

- I. Stem cuttings?  
root cuttings.  
layers.  
- grafting usually on Caragana or Laburnum. usual method
- II. seeds also - but not easy to raise in this way - as seedlings apt to damp off see 98.7.99.
- III. argenteum (Siberian Salt Tree)  
= Robinia argenteum Pom. 1016.  
92.3.72 / 913.11.86 / 921.12.89 / 926.4.90 / 930.7.92 / 917.7.97.

3 Leguminosae.

HALKIA. Thunbg.

(greenhouse perennial)

I. stem cuttings in spring -  
division

II. seeds also

III. imbricata Rod. B. 381.  
P.M. 1850 + 2596.

HARDENBERGIA. Benth.

(greenhouse evergreen  
climbers)

I. stem cuttings of firm young side shoots in spring

II. seeds & also

III. Comptoniana = Kennedyia macrophylla B.R. 1862.  
99.3.89 / 92.4.92 / 117.3.94 / 920.3.97.

Lindleyana 924.3.88.

monophylla. 99.2.01 / 96.2.04. = Kennedyia monophylla  
B.R. 1336.

ovata P.M. 2169.

= Glycine binaculata P.M. 26

HARDNICKIA. Roxb.

(stone evergreen tree)

I. stem cuttings of ripe young shoots in sand in heat.

II. seed?

III. binata  
fruticosa.

HEDYSARUM Linn.

(hardy ann. <sup>biennial</sup>  
& perennial)

I. division, in spring for perennials -  
layers, or stem cuttings also, see 97.7.94.

II. seed in open border in spring

III. multijugum 927.6.96. / 914.5.98 / 922.8.04,  
(perenn.)

Maackenzii P.M. 6386 / 922.1.76 / 92.11.78 / 928.6.79.

obscurum P.M. 282

34 Leguminosae

HEDYSARUM contd.

- humile G 24.5.79.
- microcalyx Bm. 6931.
- lanceale G 12.7.90.
- carneum Bc. 312.  
(annual)

HIPPOCREPIS Linn.

(hardy an. trailers. <sup>(rockeries)</sup>  
+ one shrub H. balearica

- I. division in spring for perennials -  
stem cuttings of H. balearica.
- II. seeds in spring.
- III. comosa G 29.4.99. (trailers)  
+ helvetica G 14.7.94.  
= comosa.  
balearica Bm. 427. (shrub).

HOFFMANSEGGIA Cav.

(stone evergreen)

- I. cuttings of young shoots in sand in heat.  
division in spring.
- II. seeds.
- III. prostrata  
falcaria.

HOSACKIA Dougl.

(hardy plant.  
suitable for rockeries)

- I. stem cuttings of perennials in summer.  
division in spring.
- II. seeds, also
- III. bicolor B.R. 1257.

HOVEA. R.Br.

(greenhouse evergreen shrub.)

- I. stem cuttings of firm side shoots - a little difficult  
liable to damp off if not watered carefully. see 98-1-98.
- II. seed the better method - in spring.

III. *celsi* Part. Mag. 241. / 98-1-98 / 918-2-99 / 916-3-01 / 92-5-96  
*pungens* Part. Mag. 101.  
*latifolia* B.P. 30. *longifolia* B.R. 614.  
*parvosa* B.M. 3053. B.M. 1624.

IV. *lucifolia* = *chorymbosa* 95-3-81.  
 The genus *Hovea* 11-1-87.

*Hovea celsi* *utramque* 96-2-86.

*Hovea celsi* 930-7-89, / 96-6-91.

HYMENAEA. Linn.

(Shrub evergreen tree)

I. Cuttings of firm young shoots in sand in heat.

II. Seed?

III. *combaril* (The locust tree, wood of various sp.  
*caudoleuca* used for timber.)

IV. *Wallich* *Icon. Prod.*  
 Indian timbers?

HYPOCALYPTUS. Thunbg.

(greenhouse plant)

I. stem cuttings side shoots in spring.

II. Seed?

III. *obcordatus* = *Crotalaria cordifolia*.  
 B.M. 3894. B.M. 413. B.R. 128.

- *styracifolius*



INDIGOFERA Lin.

(greenhouse + stove.  
ann. peren. + shrubs)

I. stem cuttings. young shoots half size in summer - for shrubs -  
division for perennials.

II. seeds for ann. + biennials in heat.

III. Decora. B.M. 5063 decora alba 911.6.81 / 920.8.00  
(greenhouse shrub)

indica . . . 922.9.00

psoraloides . . B.M. 476.

violacea (stove) B.M. 3348.

white Indigofera 97.8.86

(floribunda alba)

floribunda - 916.8.84 / 930.8.84 / 98.10.87 / 97.6.90.

gerardiana (stove) 913.8.92 / 927.8.92 / 94.8.94 / 911.8.00.

coronillifolia 922.9.82

juncus 915.11.79.

elegans speciosa 914.7.83.

angustifolia B.M. 465. Cardicans B.M. 198-

cytisoides B.M. 742.

australis B.C. 149. B.R. 386.

IV. The Indigoferas 922.1.81.

Indigoferas + Desmodium 920.8.81.

INGA Willd.

(Stove evergreen.)

I. stem cuttings - from young shoots. in spray + summer

II. seeds ?

III. purpurea B.R. 129.

fulcheriana 927.8.81 / 920.2.86.

macrophylla B.M. 5075.  
= setifera

INOCARPUS. Forst.

(Stone evergreen tree.)

I. stem cuttings of ripe shoots in sand.

II. seed?

III. *edulis* (Obakeite Chestnut.)JACKSONIA. R.Br.

(greenhouse evergreen)

I. stem cuttings - half-ripe shoots in sand in spring.

II. seed?

III. *scoparia* B.C. 427.JONESIA. Roxb.

(stone trees.)

I. cuttings of ripe wood in sand in heat.

II. ?

III. *asoca* Pom. 3018. 98.4.93.  
too large for private collections.KENNEDYA. Vent.

(greenhouse evergreen tree.)

I. cuttings of side <sup>rather weak</sup> shoots in spring - see gen. articles.  
*splendens* difficult.II. seeds when produced freely <sup>often</sup> preferable to cuttings.  
as *Kennedyia coccinea*III. *coccinea* 918.7.85. / 96.3.86.var. *elegans* Pax + May 99.*eximia* 921.1.94.*lilacina* 92.4.92.*marryathiana* 913.1.83 / 92.1.86 / 94.6.87 / 910.12.87 / 97.1.93.*rubicunda* 97.4.83 / 911.5.89 / 919.5.00.IV. The *Kennedyas* 918.7.85.*K. rubicunda* + other sp. of *Kennedyia* 911.5.89.

LABICHAEA, Gaud.

(Greenhouse evergreen)

I. cutting half ripe shoots in summer.

II. seeds ?

III. lanceolata B.M. 6751.

LABLAB see Dolichos lablab.LABURNUM, Lris.

(hardy trees)

I. stem cutting.

layers. - see 190.11.97.

grafting for vars.

budning - on seedling stocks.

II. seeds - the usual method.

III. vulgare = Citrus Laburnum B.M. 176.

alpinum = Scotch Laburnum 912.1.95 / 99.7.04.

adamii (x). 95.1.84 / 912.1.84 / 925.6.92 / 99.8.07 / 911.6.81.

alpinum  
var. Waterer 95.7.07.

916.7.87

Numbers of garden vars. 14.

see gen. article.

golden Rain 95.9.85 etc  
pendulum etc.Caramanicum B.M. 4898 / 917.10.03 / 917.9.04.  
= Podocypis car. 920.5.76.

IV. The Laburnum Sc. 29.7.99 / 91.12.94 /

Worthless Laburnums 93.1.75

Laburnum Poisoning 923.10.75 / 922.9.77. /

Laburnums on Arches &amp; Pergolas 924.9.04.

The Laburnums 921.6.84 / 924.4.97 /

# LATHYRUS, Linn.

hardy plants  
mostly hard annuals  
or hardy climbers

- I. Division for perennials - slow for latifolius or stem cuttings. easy - best for perennials - e.g. latifolius -
- II. Seed - for annuals in spring
- III. Seed for perenn: but good seed must be saved. - variable results. see 97.4.94. 919.5.94 to
- Splendens. 928.8.97. (+ plate).  
half-hardy.
- pubescens 929.10.98.
- latifolius 919.5.94. / 94.10.90. / 92.8.90.
- grandiflorus see 94.2.93.

- IV. Sweet Peas 912.3.92.
- Everlasting Peas 929.10.98. / 98.6.78. / 94.2.93. / 91.8.04. / 92.8.90. / 92.4.81. / 91.5.97. / 921.4.94. to

Sweet Peas	9c. 11.8.00.	928.3.03.
articles.	923.2.01.	918.4.03.
(apb. 1900.)	914.9.01.	927.2.04.
	91.3.02.	923.3.04.
	9c. 1.3.02.	923.1.04.
	9c. 19.4.02.	
	9c. 22.3.02.	

National  
See Sweet Pea Society Catalogue for newest species

also -

Leguminosae.

LEBECKIA, Thunbg.

(greenhouse shrub.)

- I. stem cuttings.
- II. seeds?
- III. Cytisoides = Crotalaria pulchella Bsm. 1699.

LENNEA, Klotsch.

(greenhouse decid. shrub)

- I. young shoots in spring -  
ripe shoots in autumn.
- II. seeds?
- III. robinoides Paxt. H. Gard. III. 246.

LESPEDEZA, Michx.

(hardy or half-hardy shrub)

- I. stem cuttings of ripe wood.  
division for perennials.
- II. seed for annuals.
- III. bicolor 913.9.90 / 927.8.92 - Bsm. 6602.  
Sieboldi 919.8.93 / 920.17.10.96 / 96.10.00 / 911.10.02.

LESSERTIA, DC.

(greenhouse an.  
perenn + shrubby)

- I. division +  
stem cuttings for perenn + shrubby
- II. seed for annuals.
- III. perennis Bsm. 6106..  
fulvica Poir. 970  
pulchra Bsm. 2064.

41 Leguminosae.

LIPARIA. Linn.

(greenhouse evergreen)

I. Cuttings young shoots in sand -  
not too much moisture else damp off

II. seeds?

III. parva Bm. 4034.  
Sphaerica Andr Rep. 568  
villosa Andr Rep 387.

LODDIGESIA. Linn.

(greenhouse evergreen.)

I. Cuttings of young shoots in spring

II. seeds?

III. oxalidifolia Bm. 965.

LONCHOCARPUS. HB. K.

(Stone evergreen tree)

I. Cuttings half-ripe wood in sand to heat in spring

II. seeds?

III. Barteri 92.10.86 / 99.10.86 / 924.11.00.  
Bm. 6943.

LOTUS. Linn.

(hardy ann. perenn.  
✓ greenhouse perenn.)

I. Stem Cuttings for shrubby + perennials e.g. peliorhynchus.  
Division for low growing + trailing

II. Seed for annuals / perenn. see Lc. 3.11.00.

III. Corniculatus 916.7.87.  
Hpl.

Siliquosus 90.14.7.00.

peliorhynchus 91.3.02 / 915.2.02 / 925.5.89 / 916.4.87 / 917.7.00  
(Pigeon's Beak)

jacobaeus 919.5.88 / 911.10.90 / 93.10.03.

Leguminosae.  
LOUREA. Nees.

annual flower herb.

I. Seeds -

II. Papilio = Respertilionis  
(Bat's wing plant) 924.7.86.

LUPINUS S. Linn. (ann. perenn & shrubb)

I. Cuttings for tree lupine also (L. arboreus).  
II. best & most quickly from seed, which is freely produced.

III. nanus (annual) 918.7.91.

rootkaensis 916.5.99.

Somerset 919.2.6.903 / 917.7.00.

Arboreus 921.6.90 / 928.6.90 see gen. article.

var. Snow Queen 920.8.04 / 93.9.04.

polyphyllus 912.9.99 /

Cruickshanksii Prm. 3056.  
do.

IV. Lupines 922.6.94 / 98.6.95 /

Annual Lupines 922.10.81.

The Tree Lupine 925.9.86. / 923.5.03.

914.8.97. / 91.4.99. / 95.7.02.

The Lupin as a Field Crop. 919.5.4.02.

MAACKIA. amurensis 918.9.80.  
919.7.92

now Cladrastis amurensis.  
(Leyers.) -

MAECHERIUM. Pers. (shrub) -

I. stem cuttings?

II. seeds?

III. ferrum 920.3.80.

Leguminosae

MEDICAGO Linn.

(hardy ann. + perenn  
1 shrub. M. arborea.)

I. stem cuttings of M. arborea in spring.  
Division of perenn. in spring.

II. seeds in spring.

III. arborea G.C. 20.6.03 / 914.2.74 / 977.3.74 / 99.7.3.03.  
marina 96.5.99.

echinus  
(Calvary Clover) 92.9.87.  
annual.

elegans 914.10.76.

sativa G.C. 2.5.96.

MELILOTUS, Juss.

(hardy ann.  
M. arborea shrub)

I. stem cuttings for M. arborea.

II. seeds usual method

III. officinalis 923.8.84 /  
arborea.

MILLETTIA W. + Arn.

(store cuttings)

I. stem cuttings -

II. seeds.

III. megaspema B.M. 6541.

MIMOSA Linn.

(store evergreens)

I. stem cuttings in heat.

Division for M. vicia

II. seeds in heat. only method for M. pudica (annual).

III. prostrata 94.7.74.

pudica (the Sensitive Plant) - B.R. 941.



TIRBELIA. Sm.

(greenhouse evergreen.)

- I. cuttings of half-ripe shoots in spring.
- II. seeds?
- III. Baxteri B.P.R. 1434.  
 dilatata B.P. 1367.  
 floribunda Paxb. Mag. VIII. p. 103

MUCUNA. Adans

(stove climber.)

- I. cuttings half-ripe shoots in heat in spring.
- II. seeds - very prickly pods.
- III. mibricata - puerita B.P.M. 4945. (The Cow Itch).  
 too large for ordinary collections  
 910.9.81 / 922.9.83 / 922.8.85 / 910.8.87 / 98.3.89.  
 macrobotryp. 918.9.86.

MUELLERA. Lin. f.

(stove evergreen.)

- I. stem cuttings of half-ripe wood in sand
- II. seeds?
- III. moniliformis

NEPTUNIA. Lour.

(stove water plant.)

- I. stem cuttings. &  
 divisions in heat.
- II. seeds.
- III. plena B.M. 4695.  
 oleracea = Desmanthus nasutus And. Rep. 629.

NOTOSPARTIUM Hook f.

hardy in some places  
- half-hardy - or greenhouse  
shrub.

I. Stem cuttings - but not very readily. see 94.8.00.

II. Seeds. - imported from New Zealand.

III. *Carmichaeliae* (Pink Broom) 913.7.89/916.9.93/924.6.93/923.7.92/916.3.95.  
915.8.03.

B.M. 6741.

ONOBRYCHIS Gärtn.

(hardy ann. & perenn.)

I. Division not to be recommended as plants dislike disturbance

II. Seeds best when intended to remain.

III. *radiata* B.R. 1847 L.37.

*viciaefolia* G.L. 6.7.01 (note).

ONONIS Linn.

(hardy & half-hardy ann & perennials.)

I. Stem cutting for perennials & shrubby.

II. Seeds for ann & perenn. - the best method for all of.

III. *arvensis* 927.8.81/915.12.89.

*antagonensis* 930.6.94/913.10.00.

*futicosa* B.M. 317, 94.9.86/918.9.86/910.8.72.

*natrix* B.M. 329 99.8.90.

*pedunculata* B.R. 1447

*rotundifolia* 917.1.95/923.7.98/G.L. 16--00. B.M. 335

ORMOCARPON P. Beauv.

(slow or ever green  
varies)

I. Stem ~~cuttings~~ cuttings

II. ?

III. *Coronollides*

Leguminosae

ORTOSIA. Jacq.

(Stove evergreen herb.)

- I. stem cuttings leafy ripe shoots in same heat.
- II. seeds
- III. Coccinea  
Dasycaepha

ORNITHOPUS. Linn.

(hardy annuals)

- II. seeds sown in open in spring
- III. ebracteatum  
to.

OROBUS. Linn.

(hardy herb. perennial except saxifolia annual)

- I. Division in spring
- II. seeds
- III. sp. canescens B.M. 3117  
Coccineus B.C. 883

to.

usually included under Lathyrus.

OXYLOBIUM. Andr.

(greenhouse evergreen)

- I. stem cuttings - young fruit shoots in sand in spring
- II. seeds also
- III. arboreum Paxt. Mag 163 B.R. 392  
ellipticum B.M. 3249  
retusum = Gastrolobium retusum B.M. 3328

OXYTROPIS, DC.

(hardy perennials.)

- I. stem cuttings 1 division  
but do not transplant well.
- II. best method of increase by seeds.

III. Lambertii Bm. 2147  
montana 110.7.80.  
pilosa etc see gen. article

Halleri 914.7.94.  
strobilacea 914.7.94.  
pyrenaica (rare)

IV. 916.H.87

PARKINSONIA, Linn.

(stove evergreen shrub)

- I. stem cuttings half-ripe shoots.
- II. seeds when obtainable
- III. aculeata.

PAROCHAETUS, Hamilt.

(half hardy evergreen creeper)

- I. Division in spring.  
stem cuttings medium hardy in spring. (hardy and 4 years)  
offsets see 923.7.98.
- II. Seed ?

III. Communis (Shamrock Pea).

917.11.74 / 928.6.84 / 926.5.94 / 917.11.94 / 923.7.98.

PETALOSTEMON, Michx.

(hardy herb perennial)

- I. Division in spring.
- II. seed
- III. violaceus Bm. 1707.

(The Ranunc.) 920.3.80 / 921.4.11.02

PHASEOLUS Linn

hardy ann. perenn.  
 ✓ greenhouse + stove  
 tubers.

- I. division ✓  
 stem cuttings.
- II. seed: for hardy sp. esp. for Kidney Bean. (annua.) -
- III. lobatus Pom. 4076  
 to.  
 See arts. on vegetables.

PIPTANTHUS D. Don.

(hardy decid. shrubs.)  
 or half-hardy.

- I. stem cuttings, ripe shoots,  
 root cuttings,  
 layers.
- II. seeds, freely produced.
- III. nepalensis Brit. H. Gard. Sweet. Ser. 1. vol. 11. no 864.  
 (Evergreen Saburnum) - 924.6.76 / 931.1.91 / 913.5.93 /  
 911.6.89 / 915.6.89.

PISUM Linn.

(hardy ann. + perenn.)

- I. divisions for perennials.
- II. seeds for ann + perennials
- III. sativum (The Pea).  
 See list on vegetables to.

PITHECOLOBIUM Mart.

(Stove trees.)

- I. stem cuttings?
- II. seeds
- III. saman (The Rain tree) 920.3.80 / G.C. 9.11.01.

q Leguminosae.

LATYLOBIUM Sm.

(greenhouse evergreen)

- I. stem cuttings - half-ripe wood in spring.
- seeds in slight heat in spring.

- II.
  - formosum Pom. 469.
  - murrayianum Pom. 3259
  - obtusangulum Pom. 3238
  - parviflorum Pom. 1520
  - triangulare Pom. 1508.

PODALYRIA Vent.

(greenhouse evergreen)

- I. stem cuttings, ripe shoots - side shoots in spring.

- II. seeds in warmth.
- III.
  - alba Pom. 1177.
  - biflora Pom. 753
  - tinctoria Pom. 1099.

PODOLOBIUM R. Br.

= Oxyclobium -

Podolobium staurophyllum Paxt Mag. 1837.

POINCIANA -

(stove evergreen shrub)

- I. stem cuttings - short side <sup>shoots</sup> best in spring see 74.12.97 to.

- II. seeds in heat.
- III. = *Caesalpinia*
  - pulcherrima 74.12.97 / 99.1.86 / 920-10-94
  - Gilliesii 73.3.00 / 921.4.00 / 914.10.99 / 912.10.01.

PONGAMIA Lam. Vent.

(stove evergreen shrubs & Climbers)

- I. stem cuttings?
- II. seeds
- III.

PRIESTLEYA. DC.

(greenhouse evergreen)

I. stem cuttings half-ripe shoots in sand

II. seed?

III. vestita - Liparia vestita Pom. 2223

vellosa Pom. 3216.

PSORALEA. Linn.

hardy & greenhouse perennials shrubs.

I. Division in spring.

stem cuttings - half-ripe shoots in spring

II. seed -

III. aphylla Pom. 1927 / Bot. 201/.

aculeata Pom. 2158.

secumbens Bot. 282.

bracteata Pom. 446.

Corylifolia Bot. 665

melilotoides Bot. 454.

pinnata And. Rep. 474.

PTEROCARPUS. Linn.

(stove-evergreen tree)

not in common cultivation

See Johnson; etc.

PTEROLOBium. R.Br.

(stove shrub) -

- see Bot. Diet.

PUERARIA, DC.

(greenhouse evergreen climber)

- I. cuttings of half-ripe shoots in sand.
- II. seeds usually in sprig.
- III. Thunbergiana Torr. 10.92 / 13.3.97 / 18.3.02. /  
La Sem. Hort. 21.8.97

PULTENAEA, Sm.

(greenhouse evergreen shrub)

- I. Cuttings of tips of shoots - in sprig -  
or small side shoots in sprig.
- II. Seed?
- III. rosea B.M. 69411. / 916.3.78.  
pedunculata B.M. 2859.  
obcordata = Eucleia obcordata B.R. 403.  
B.C. 60.

RAFNIA, Thunbg.

(greenhouse evergreen)

- Crotalaria triflora B.M. 482  
B.C. 611.

RHYNCHOSIA, Lour.

(greenhouse + stove  
herb: trailing)

- chrysoeas B.M. 5913.
- cyanoferma B.M. 1859  
= Cylista albiflora.
- phaseoloides B.M. 2284.

ROBINIA, Lin.

(hardy tree)

- I. layers usually - see 19.7.90.  
grafting on false Acacia standard high better. R. pseudoacacia  
for varieties often break at point of union.
- II. Seed for neo. mexicana - do not open for hybrids  
open in this country.



hispidula (The Rose Acacia) - 919.7.90 / 925.6.87 / 917.7.86 /  
 930.3.95 / 930.7.98 / 917.9.81.  
 neo-mexicana 915.7.93 / 922.6.01 / 917.8.01.  
 (False Acacia)

pseudacacia inermis albo variegata 930.12.99.

pseudacacia (Locust Tree or False Acacia) 922.7.99 / 925.1.02.

varieties - golden leaved 923.6.88.  
 aurea, + 914.10.93

915.7.90 / 918.1.76 / 911.3.82  
 910.9.87 / 916.7.92 / 918.7.7  
 p. angustifolia p. densiflora p. pendula

dissecta 96.11.75.

macrophylla = hispidula inermis 916.3.72 / 94.7.85.

viscosa 930.7.87 / 914.7.88 / 917.8.89 / 917.7.90.

IV. The Robinias 915.8.03.

The Acacia or Locust Tree 926.12.85.

Varieties of the False Acacia 926.6.86.

The Acacias 910.8.89.

Robinias 919.9.74.

Acacia or Locust Tree 921.1.88.

SARACA. Linn.

S. indica = Jonesia acoca. 98.5.80  
 912.6.97.

SCHRANCKIA. Willd.

or half hard  
 (hardy perennial)  
 trailer.

I.  
II.  
III. uncinata (Sensitive Brier) 98.1.81.

SESBANIA. Pers.

SOPHORA. Linn.

half hardy + hardy.  
(hardy flowering shrub)

= *Edwardsia*

I. stem cuttings also easily - for grandiflora.  
graphis for varieties e.g. pendula. etc.  
on to seedlings etc. of common forms.

II. seed early.

III. grandiflora. *Edwardsia grandiflora* 918.8.77. / 919.5.83 / 926.5.83 /  
japonica 91.10.98 / 928.9.01.

var. pendula. 920.1.72 / 924.6.76 / 95.11.92 / 97.9.95.

viciifolia 9c. 2.7.04 / 9c. 20.2.04.

tetraptera 92.6.88.

= maenabiana. Pom. 3735.

IV. The Sophoras. 98.9.83.

The Old Sophoras at Kew. 96.3.86.

SPARTIUM. Linn.

(hardy flowering shrub.)

I. Cuttings of half-ripe shoots in spring.

II. but seeds better - as freely produced -  
best to sow where intended to remain - as make long roots &  
do not transplant well.

III. junceum Pom. 85. 913.8.98 / 912.8.99 / 94.8.00.  
(Spanish broom) 94.11.82 / 93.11.94 / 924.7.97.

var fl. pleno. 918.10.90 / 917.8.89.

var. album. 926.5.94.

SPHAEROLOBUM. Sm.

grandiflorum Pom. 7308, 1272

SUTHERLANDIA. R.Br.

or greenhouse.  
(half hardy flowers in  
shrub).

I.

II. seeds

III. Spectabilis 924. S. 84.

frutescens 91.10.87 / 924.8.90

= Colutea.

SWAINSONIA. A.

(half hardy shrubs  
cool greenhouse)

I. stem cuttings in autumn. 3-4 ins long in sand  
used sometimes as stock for *Chionodoxa* *Dampieri*.

II. Seeds also.

III. Neitchei. 919.10.95 / 930.11.95

Osborni. 928.7.83 / 919.7.90 / 91.8.91 / 910.7.97.

galegifolia alba. 929.8.96 / 914.8.97 / 923.7.98 / 922.10.98.  
Pom. 994. G.C. 9.2.01.

TAMARINDUS. Linn.

Economic.  
officialis Pom. 4563.

THERMOPSIS. R.Br.

(hardy perennial)

I. Prop. itself freely by suckers -  
more suitable for wild garden than for cultivated border.

II. seeds, freely, like lupine.

fabacea - 913.5.99. / 927.2.92 BR 1272.

montana 926.6.75 / 94.6.81 / 97.6.03 / 97.6.03

rhombifolia 918.6.81. 918.4.85 (propagated)

nepalensis 917.1.91.

(prop. 1991) 914.79 / 94.10.84 / 913.10.92 / 913.10.00

(prop. 1991) 914.79 / 94.10.84 / 913.10.92 / 913.10.00

TRIFOLIUM Linn. - (hardy herb. perennial)

I. Division very easily for alpinum etc.

II. seeds.

III. The Shamrock. (History etc.) 90.7.4.00.

Buffalo Clover.  
(Trif. reflexum) 90.12.02.

alpinum 929.4.99. / 915.9.00. / 926.9.93. (perennial)

repens 923.4.81.

uniflorum 911.5.78 / 910.10.85.

IV. Clovers etc.

not of hort. value.

TRIGONELLA, Linn.

not of hort. value.

ULEX, Linn. (hardy flowering shrub)

I. stem Cuttings for varieties e.g. Ulex europaeus fl. pl.

in summer see 927.6.03. - / 99.5.03. / 918.4.85.

in places where intended to remain, as diff. to transplant

II. seeds. for single variety of europaeus etc.

see 913.10.00.

ULEX contd.926<sup>5</sup>. 88.

- II. europaeus fl. pl. 92.6.88 / 99.5.03 / 927.6.03.  
 915.3.02. / 918.4.85 (propagating.)

names

(Dwarf Furze) - 91.4.79. / 94.10.84 / 913.10.94 / 913.10.00.

hispanica 924.6.76 / 928.5.81 / 92.6.94.

- IV. Gorse 96.1.83 / Gorse hedges 925.9.86 / 919.7.90.  
 Gorse Covert 98.6.78. Furze trees. 926.5.83.  
 The Whin as a Hedge and Covert Plant. 911.4.91.

URARIA. Desv.

crinita P.M. 4377.

VICIA. Linn.

(hardy perennials.)

- I. veget. prop - easy.  
 runners.
- II. seeds - easily. some sp. likely to become weeds. e.g. cracca +
- III. Orobus.  
 Sylvatica } 91.25.8.00. 927.8.81.  
 Cracca 918.8.00.  
 Pyrenaica 91.6.89.  
 (rockery).  
 for other sp. see P.M.

VIGNA. Lavi.

-(greenhouse climber)

- I. division of tubers?  
 II. seeds.  
 III. Strobilophora 91.4.1.96.

VIRGILIA. Lam.

(hardy tree.)

= *Cladrastis*.

- I. ?
- II. seeds - of slow growth at first - afterwards more vigorous -
- III. lutea of *Cladrastis lutea*  
 919.2.74 / 96.3.80 / 928.8.80 / 915.10.87.
- IV. The Virgilia as a Lawn Tree 924.7.75.

WISTARIA. Nutt.

(hardy climber.)

- I. Steen cuttings for certain sp. 99.5.74. (*pubescens*)  
 Layered - see 926.12.74 (*Layering wistarias*)  
 Grafting for varieties on *W. sinensis*.
- II. Seed easily - best method. see 928.6.02.
- III. *sinensis* 929.5.97. / 93.5.02 / 911.6.04 / 93.6.99 /  
*multijuga* 923.6.94 / 92.1.4.99  
*japonica* 92.4.1.02.  
*involuta* 92.27.8.04.
- IV. The Wistarias 930.9.99. 919.6.97.  
 928.4.00.  
 + 94.6.98. The Wistaria 922.6.89.  
 925.5.95.  
 924.7.97.  
 928.8.97.
- Dwarf Japanese Trees 99.6.00.  
 (Pigmy Wistaria)
- Wistaria sinensis* 928.9.95 / 931.8.95 / 92.5.91.  
*Wistarias + their Culture* 919.9.74.
- III. white wistaria - 920.6.85 / 923.6.88 / 914.6.90 / 918.5.93  
*W. sinensis alba*.  
*pubescens* - 916.7.87.  
*W. sinensis fl. pl.* - 920.7.72 / 93.8.78 / 913.3.80 / 922.4.82.

General note on Leitneriaceae.

The Leitneriaceae are an small order with some affinities to the Castaneae, containing the one shrubby genus Leitneria from N.America. It is not met with in cultivation.

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General note on Lennoaceae.

The Lennoaceae are an order of purely botanical interest allied to the Monotropese and an offset of the Ericaceae, containing root parasites. The principal genus is Lennoa.

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General note on Lentibularineae.

The Lentibularineae are an order of more botanical than horticultural interest~~are~~, though many beautiful species of Utricularia and Pinguicula are in cultivation. The order may be considered as an offset of the Scrophularineae modified as regards their vegetative organs through their insectivorous habit.

A remarkable power of vegetative propagation is characteristic of the order, almost any isolated portion being able to regenerate itself. Seed which is usually abundantly produced is an easy and the usual mode of propagation. (1)

see  
Goebel.  
Glück. *te. on Utricularia.*

subulamineae.

PINGUICULA Linn. (bog plants)

I. Veget. Prop. very easy.

Division. 94.12.75. (see also 97.4.83 and 924.3.83.

leaf cuttings for P. caudata. like Pecheveria leaves.

bulbs for P. grandiflora etc. - P. alpina difficult to keep.

II. Seed the common method.

III. alpina Bot. vol. IV. 309.

927.5.76 / 95.1.91.

Caudata. 99.4.81 / 98.10.81.

- Baker 924.2.83 / 98.3.84 / 925.3.82.

924.3.83 / 97.4.83.

95.11.84 / 911.4.96.

911.12.97 / 93.12.98.

916.11.01.

Var. Bakeriana. 921.3.03 / 928.3.03.

var. superba

- grandiflora 924.9.81.

924.2.83

915.5.86

911.9.86.

- hirtifolia 912.4.84 / 923.5.85. Pom. 6785.

- lutea Pom. 7203 / 915.3.84.

- vallisneriaefolia 913.4.78 / 99.5.85.

IV. The Butterwort 927.8.81.

The Butterwort 930.5.74.

Pinguicula 923.4.81 / 94.5.93 / 96.6.96.

Long leaved Butterwort 913.4.78.

Other varieties



General note on Linaceae.

The Linaceae are an order allied to the Geraniaceae &c. and are widely distributed. The true flaxes are slender herbaceous plants, (with the exception of *Linum arborea* which is shrubby) and are found in tropical and subtropical regions. The plants of the *Hugonia* type are shrubby and even treelike, and are found in the tropics only. These latter are not so commonly met with in cultivation.

Vegetative propagation for the shrubby species is effected easily by stem cuttings and by division. Root nor leaf cuttings have not been investigated. ?

Seed is usually freely produced in the flaxes except in *Linum arboreum* which for long was thought to be a synonym of *Linum flavum*. The true *Linum flavum* however produces seed abundantly

Linaceae

ERYTHROXYLON. Linn.

(stone evergreen trees.) -

Stem cuttings of half-ripe wood in heat  
root cuttings also of l. coca.

seeds?

Coca B.M. 7334.

- ♀ 23.3.76
- ♀ 13.5.76
- ♀ 16.2.89.

LINUM. Linn.

(Hardy & greenhouse ann & per  
& shrubs)

I. stem cuttings - easy in spring & summer for hardy & greenhouse of  
esp. for trigynum to. specimens flower better than from seed.  
♀ 27.3.86.

root cuttings for L. alpinum  
narbonense ♀ 23.3.78.

Division for perennials.

II. seed sometimes will good, as in L. salsooides & L. arboresum  
in L. flavum better seed & produced abundantly.  
alternative method to cuttings.

III. arboresum ♀ 6.8.98 / ♀ 29.1.84 / ♀ 20.8.98  
 used to flavum ♀ 14.2.85 / ♀ 21.5.92 / ♀ 12.6.97.  
 be

africanum B.M. 403.

Berlandieri ♀ 14.2.74.

candidissum ♀ 27.4.78 / flavum ♀ 4.11.99 / ♀ 5.9.85.

grandiflorum B.M. 4956 / var. rubrum ♀ 22.6.89.

monogynum ♀ 1.9.88 / ♀ 31.5.90.

narbonense ♀ 20.11.97.

trigynum ♀ 1.1.81 / ♀ 5.2.81 / ♀ 2.2.84

♀ 15.1.81 / ♀ 19.3.81 / ♀ 7.3.85.

*Linum* contd.

II. *viscosum* 926.6.80 / 928.8.80.

perenne  
= *sibiricum* 914.7.83 / 916.6.88 / 92.8.90.  
94.8.97.

III. The Dwarf Flaxes 923.3.78.

The Linums of Flax. 927.3.86.

Flax & Hemp Culture in England 90.25.7.96.

REINWARDTIA.

(Greenhouse or stove shrubs)

I. stem cuttings in spring the usual method.

II. seed.

III. *trigynum* 93.9.84 / 93.12.87.  
= *Linum trigynum* 920.2.92  
Pom. 1100. 925.11.93.  
928.12.95.  
919.5.00.  
915.2.02.  
93.1.03.  
919.12.03.  
97.5.04. etc.

General note on Loasaceae.

The Loasaceae are a small order containing plants native in America with somewhat doubtful affinities, but possibly allied to the Cistaceae & Violaceae. The plants in the order are not popular in cultivation, owing to the presence of powerful stinging hairs, the injurious effect of which when touched, often last a week or more. Many species of Loasa, Mentzelia &c. are not uncommon in gardens where due care can be exercised in their culture, as the flowers are peculiar in structure and usually brightly coloured. The boatshaped petals in which the stamens lie, and the buttonshaped disc of extra petals in the centre of Loasa and other genera are very characteristic.

As most of the plants are annuals propagation is best effected by seed

Loasaceae.

BLUMENTBACHIA. Sebrad.

(Half-hardy annual)

I seeds in heat.

II. *Chuquitensis* Bm. 6143. / 924.2.75 / 928.8.80.

= *contorta*

*contorta* - *grandiflora* Bm. 6134.

*insignis* Brit. ~~Fl.~~ <sup>Gard.</sup> Sweet. Ser. 1. vol III. no 171.

*multifida* Bm. 3599.

GRAMMATOCARPUS. Presl.

(Half-hardy climbing annual)

I seeds in heat.

II. *vulvabilis* Bm. 5028

= *Seyparthus elegans* 98.10.81.

ILLAIREA. Warr.

(climbing hardy annual.)

II seed

III. *canarinoides* Bm. 5022.

LOASA. Adans.

(Half-hardy annual except *latertia*)

I. stem cutting easy for *L. latertia*. the only perennial.

II. seed ripens freely & germinates readily.

III. *hispida* 922.1.76 / 91.5.80. / Se. 23.10.97.

*Placei* Bm. 32188 / B.R. 1599.

*vulcanica* 929.9.78 / 914.5.81. / 920.2.86  
917.8.78 | 927.2.86.

*latertia* 94.12.80 / 921.8.86.

- I. *prostrata* Bm. 6442.  
 II. *tricolor* B.R. 667.

IV. 931.5.84. (Loasa hispida and other varieties)  
 The Loganiaceae are an order mainly tropical, the plants inhabiting subtropical regions in S. America, China and New Zealand. The plants are of various habit, trailing, climbing and

MENTZELIA, Linn. (mainly annuals)

II seeds in warmth.  
 Care that seed trays do not damp off somewhat prevalent in M. ornata

III, *aspera* 914.3.03.

*bartonoides* 92.8.84 / 96.9.91?

- *Microsperma barb.*
- *Bueride*
- = *Bartonia*

*Ludleyi* = *Bartonia aurea* 930.12.82 / 96.9.84.

*ornata* 912.8.76 / 92.12.76 / 919.10.78.

*nuda* Bm 54.83.

IV The *Microspermas* 927.7.78.

*Mentzelia ornata* & other sp. 926.10.78.



General note on Loganiaceae.

The Loganiaceae are an order mainly tropical, but containing some plants inhabiting subtropical regions, as N. America, China and New Zealand. The plants are of various habit, trailing, climbing and shrubby. Many of the Loganiaceae require care in their culture.

Their propagation too though not difficult is often slow [e.g. Desfontainea, or the cuttings are liable to damp off e.g. Buddleia.

With care and under the proper conditions however stem cuttings strike (see general articles )

Other vegetative methods (root and leaf cuttings ) have not been investigated. Division may be used for the lowgrowing genera.

Increase <sup>by seed</sup> is however the usual mode of propagation in this order.

Loganiaceae

Buddleia Linn.

(Stone greenhouse or leafy hard shrubs)

- I. stem cuttings - easily - but liable to jump off. e.g. paniculata. should be moderately firm & not too much moisture. given in autumn - ripe wood.
- II. used for obtaining new varieties - which are then prop'd by cuttings.

III. Asiatica G 9.1.04  
 = columbica G 16.1.04  
 G 28.1.04 } G. 26.1.01.

auriculata G 11.12.83 / G 16.11.89 / G 13.12.90.

Colvillei G 10.6.93 / G 15.6.01 / G. 4.6.04

cristata G 30.6.88.

Globosa Pom. 174 G 17.4.86 / G 16.7.87 / G 24.4.95 / G 5.4.02.  
 G 15.5.86 / G 7.7.94

heterophylla BR. 1259.

insignis G 19.10.78 / G 28.7.94.

variabilis Pom. 7609.

G 29.8.03 / G 5.9.03 / G 8.8.04 / G 19.8.99.

IV. Buddleias G 2.7.98.

Buddleia variabilis tc. G 19.8.99. / G 23.4.98.  
 G 17.6.99

Buddleia variabilis Vitis  
 varieties G.M. 26.10.12.



Loganiaceae

CHILIANTHUS. Burchell.

Greenhouse or (Slow shrubs)

- I. stem cuttings half-ripe in summer or autumn.
- II. abundantly produced.
- III. Californicus. 9.9.77.  
arborescens: Buddleia Saligna.

GELSEMIUM

(Shrub)

DESFONTAINEA. Ruiz. + Pav.

(Hardy <sup>Greenhouse</sup> evergreen shrubs)

- I. Stem cuttings not difficult but slow in summer or autumn. - half-ripe see 96.9.84. 915.7.82.
- II. spinosa - B.M. 4781.  
+ sp. Hookeri.

915.8.96. / 916.1.97. / 929.11.79  
 916.2.97. / 927.10.77.  
 911.12.97.

- III. 96.9.84. Propagating Desfontainia spinosa.  
 93.11.94 Desfontainia spinosa  
 915.7.82 "  
 923.7.92 "  
 9 "

EUOSMA albiflora see Logania floribunda.

FAGRAEA. Thunb. (Stone shrubs and trees)

- I. stem cuttings in April - from shoots.
- II. seeds.
- III. zeylanica Bm. 6080 etc. (very poisonous).

GELSEMIUM. Tuss. (Twining Shrubs)

- I. stem cuttings in spring - protected.
- II. seeds?
- III. sempervirens 910.4.80 / 922.5.86.  
nitidum (hardy climbing shrub.)  
= Carolina.

LOGANIA. B.P. (Greenhouse evergreen)

- I. stem cuttings from side shoots.
- II. seeds?
- III. floribunda B.C. 1118 Andr. Rep. 520.

SPIGELIA. Linn. (Stone & hardy shrub)

- I. slow of culture: slow rooting.  
Division. but slow.
- II. seeds not yet ripened
- III. marilandica (hardy) <sup>Pom. 80.</sup> 918.8.88 / 917.8.99 / 925.11.93.  
splendens Pom. 5268 / 930.8.90 / 926.11.97.  
anthelmia Pom. 2389.
- IV. 93.3.77 (The worm Grass. S. marilandica.)

General note on Loranthaceae.

The Loranthaceae allied to the Santalaceae are a small <sup>parasitic</sup> order ~~parasitic~~, order, mainly composed of plants found in the tropical Asia, Australia and America. Nutsia and Guiadendron plants rarely met with in cultivation have their roots in the ground but whether they are parasitic on other trees as in the case of the other members of the Loranthaceae is not definitely known. Viscum album (the mistletoe) is a plant known to all, ~~and~~ other varieties are some times met with. Loranthus is less common.

The only method of propagation is by seed (except in the case of Nutsia where vegetative propagation may be used) which is also the natural mode of increase, birds being attracted by the bright fleshy berries and distributing them. For articles dealing with propagation of mistletoe and the various trees which may act as hosts see under Viscum.

ORANTHUS. - Linn. - (parasite on trees.)

berries - like Mistletoe.

3. europaeus 915.6.72

maeranthus 913.4.72.

NUTSIA, RBV. (greenhouse shrubs)

1. stem cuttings - firm side shoots best.

2. seed also.

3. floribunda = Loranthus floribundus  
(The Tree of King George's Sonns)

ligustrina.

sp. not <sup>often</sup> met with in cultivation.

VISCUM. Linn. (parasite on trees.)

2. seed - only method of propagation.

Sown in March or April - on host tree - Apple most common, but also Poplar, Lime, Maple, Oak etc. (see gen. articles). The berry is pressed into slit in bark, or <sup>on</sup> under side, not crushing to damage & then covered with lawn or muslin to protect from birds. See fuller account in 924.1.83 / 920.8.04 / 930.1.04.

M. Laurent - Branches of willow infested with parasite - then grown

3. alba (for hosts see gen. articles.) (Bull. de la Soc. Roy. Bot. de Bel. t. XXXVIII)

minimum } 929.6.01 (on Euphorbia)

rotundifolium } (on Eualea)

Cruciatum G.C. 19.4.02 (on olive).

4. Gen. Articles on Culture and Propagation + Value of Mistletoe

- The Mistletoe - 913.12.02 / 925.2.99 / 94.2.99 / 94.3.99 / G.M. 17.12.81 / 929.12.88 / 930.12.93.

- Propagation of the Mistletoe 927.1.83

- Mistletoe of the Ancients 916.3.72

General note on Lythraceae.

The Lythraceae are nearly allied to the Myrtaceae and Onagraceae and are an order widely distributed in the New and Old Worlds.

Many of the plants are herbaceous, for example Loosestrifes (Lythrum) which are prized for their bright colouring on the banks of ponds, streams &c. Many are shrubs, for example Lagerstroemia, Lafoensia &c.

The flowers are not so showy in themselves as those of many other plants, but they are produced very freely in most of the species, and massed together, make a fine show.

Vegetative propagation by means of stem cuttings is commonly employed throughout the order.

Root and leaf cuttings have not been investigated.

Seed is usually freely produced and germinates easily.

CUPHEA. P. Browne.

(greenhouse or half hardy plant)

I. easy from stem cuttings in spring & autumn.

II. seed for annuals.

III. Eminens G 5.11.84

Hillfieldiana G 9.9.76.

jomellensis G 17.11.83

lanceolata B.M. 6412.

miniata compacta G. 6.11.97.

platycentra G 16.9.93 / G 18.7.96 / G 27.9.05

Rozli G 5.1.78.

viscosissima Brit. fl. Gard. Sweet Ser. 1. vol 60.

Zampani G 2.11.78 / G 23.10.80 / G 10.9.81

GRISLEA. Roxb.

(stone evergreen shrub) -

I. stem cuttings in spring in heat. - half-ripe.

II. Seeds also,

III. tomentosa B.M. 1906.

= Woodfordia floribunda Salisb.

HEIMIA. Link.

(greenhouse or half-hardy shrub.) -

I. stem cuttings of half-ripe wood in spring.

II. unpoaked seeds.

III. salicifolia = Mesaca salicifolia.

var. grandiflora. B.R. 1841. no. 40.

LAFOENSIA. Vand.

(Stone shrub.) -

I. cuttings of ripe wood in autumn.

II. ?

III. microphylla (Vandelliana) -

Lythraceae.

LAGERSTROEMIA. Linn.

(slow green house shrubs)

I. Cuttings of young shoots in spring, & early summer. side shoots best or older wood in autumn. 920.8.87. / 919.7.90.

II. ?  
III. elegans 98.9.00.

var. cuneata 923.8.73.

- flos Reginae 910.2.94.

- ferdii Ge. 93.6.00.

- indica Pom. 403. 96.8.87 / 919.7.90 / 916.9.93 / 93.9.98  
Ge. 29.7.99 / 98.9.00 / 911.1.02.

IV. species indica the most well known.

Gen. Arhillo. H.B.K.

921.9.72

98.11.73

926.3.84.

LANSONIA. Linn.

(slow trees)

I. stem cuttings - ripe shoots in sand.

II. OLINDIA Shrubby

(evergreen shrub)

III. alba : purpurea.

Myrtaceae.  
LYTHRUM. Linn.

(hardy annual & perennials  
except *L. Graefferi*)

I. Division for perennials.

stem cuttings for *L. alatum* - young shoots in spring  
+ *L. Graefferi*

II. seeds in fruit for annuals & perennials.

III. *Graefferi* (trailer) Bou. 6499. / 910.6.83 / 92.8.84.

*alatum*. G.C. 8.12.60.

*roaleum* 930.7.98.

*Salicaria* 96.8.81 / 913.8.87 / 91.9.88 / 96.10.94

*Virgatum* 978.8.80 (note)

NESSAEA. H.B.K.

(mainly half hard  
evergreen shrub)

I. Division in spring.

stem cuttings of young shoots in spring

II. seeds.

III. ~~*salicifolia*~~ = *Heimia salicifolia*  
*triflora*.

OLINIA. Thunbg.

(evergreen shrub)

I. stem cuttings ?

II. ?

III. sp. not seen in cultivation.

*acuminata*.

*Cymosa* - *capensis*.



Lythraceae.

PUNICA. Linn. f.

(hardy, leaf. hardy decid trees.  
P. granata nana in stove.)

I. stem cuttings in summer + shaded.  
root cuttings  
layers.

grafting. for best varieties on to seedling stocks.  
of double varieties on to single.

II. seed for ordinary varieties P. granata.  
fruit not very plentifully produced in England - not enough seed

III. Granatum Pom. 1832. 972.8.84  
972.9.00  
91.8.04.

acid varieties.

double red 97.8.79.

nana Pom. 634. see also 976.10.01.

IV. The Pomegranate. (P. granatum) 976.10.01.  
How to flower Pomegranates 925.9.86.

SONNERATIA. Linn. f.

(stove evergreen shrub)

I. stem cuttings - half ripe wood in heat.

II. "

III. acida : apetala.

WOOD FORDIA. Salisb

(stove shrub).

I. stem cuttings - half ripe in spring in heat.

II. seeds also

III. floribunda = Guileia tomentosa

Pom. 1701

Bertha Chandler

Notes on the Propagation of  
Nicot M.



## General note on the Magnoliaceae.

The Magnoliaceae are an order of plants with affinities to the Ranunculaceae and Anonaceae. Their home is mainly Japan though they are to be found also in China America &c. Some of the most beautiful flowering shrubs hardy and greenhouse are to be found in this order e.g. Illicium, Magnolia, Drimys &c.

The plants in the order are on the whole not easy of cultivation or propagation. They are slow of growth and in the Magnolias themselves impatient of root disturbance. Seed when it is obtainable affords a quicker means of increase than vegetative methods, but it is scarcely ever ripened in this country e.g. Liriodendron &c. While seedling plants are quicker of growth the plants obtained by vegetative methods are usually more freely flowering.

Layering, and particularly hillock layering or marcottage, is used for increasing Magnolias. The method is however slow.

Stem cuttings are rarely used, for they are not only slow but are inclined to damp off in many species. The most suitable growth for cuttings are those of young wood.

Root cuttings would not be suitable as they are sensitive to disturbance.

The leaves are large and leathery in most Magnoliaceae and thus unsuited for Propagation.

Grafting is a common method of propagation, both on to seedling

Stocks , and older stocks of Magnolia communis.

(Magnoliaceae)!

CERCIDYPHYLLUM. - Sieb. & Zucc. - greenhouse tree or shrub.

I - readily from cuttings. 930.2.97.  
also layers.

II. from seeds imported from Japan.

III. japonicum. 930.2.97.  
913.12.79.

LIRIODENDRON. - large evergreen tree.

DRIMYS. Forst. - greenhouse or half-hardy evergreen trees.

I. Cuttings of half-ripe shoots.

II. ?

III. winteri (Winter's Bark). 921.10.76.  
B.M. 4800. 94.3.82.

= chilensis.

- aromatica (Pepper Bark).

B.R. 1845. t. 43.

ILLICIAM. Linn. - greenhouse evergreen shrub.

I. cuttings of young ripe tips. in summer.  
(rather slow to propagate. not many young shoots produced.) -  
layers also used.

II. ?

III. floridanum 930.4.92 / 91.2.90 / B.M. 439.

verum B.M. 7005.

parviflorum

religiosum B.M. 3965. 95.7.02 / 94.11.82.

IV. 917.8.89  
The Illicium

(Magnoliaceae) 2,

KADSURA. Koenig.

- trailing greenhouse  
Evergreen.

I. Cuttings yearly ripe shoots,  
also young shoots.

II. ?  
III. watti  
japonica

LIRIODENDRON. Lin.

- hardy decid. tree.

I. very brittle wood.  
layers. grafting  
+ budding - for varieties.  
stem cutting?

II. Seed usual method, 9.10.11.83  
Plant does not flower until 8-10 yrs. old  
- if sown in autumn. comes up in spring - if in spring remains in ground a year

III. tulipifera. 9.4.7.96 9.4.9.80  
9.18.7.96 9.19.8.82  
9.29.11.02  
9.28.11.03

IV. General articles

- 9.1.8.74 The Tulip Tree.
- 9.12.1.95 . . . . .
- 9.17.11.77 . . . . .
- 9.1.10.87 The Tulip Tree for Timber.
- 9.2.8.02 Liriodendron tulipifera
- 9.26.7.02 . . . . .

# MAGNOLIA. Linn.

not successful for *M. bipetala* or *macrophylla*  
(wood too soft)

Grafting. 1 layers. common. (*M. acuminata* + *cordata* as stocks).

Layers usually preferred. - of young shoots in spring + autumn.

also budding - 2 yrs before separating for *M. conspicua* etc.

Stem Cuttings - short young shoots of last year's growth.  
also ripe shoots in autumn.

Seeds. - must be sown as fresh as possible, else they lose their vitality. Seedlings grow faster than Cuttings, but sometimes not obtainable e.g. *conspicua* - then imported seed from France + America.

- *acuminata* - G 24.12.87  
(Cucumber Tree). G 29.9.88.  
G 25.2.88 (variegated sp.) -

- *Campbelli*. G 11.6.87 / G 6.4.95 / G 24.8.95  
(Indian or Sikkim Yulan. G 2.4.87 / G 16.4.87 / G 2.6.83 / G 21.5.87  
G 14.3.03.

- *conspicua* - G 12.4.90 - G 8.6.95  
(Chinese Lily Tree G 18.4.96 G 2.5.85.  
or Yulan. G 30.4.98 G 4.6.87.  
G 18.8.94

- *conspicua* vars. & Hybrids G 16.4.01.

- *cordata* G 30.3.72 / G 21.6.90.

- *auriculata* (Fraseri) G 20.12.79 / G 11.6.81.

- *glauca* G 7.11.96 / G 1.8.91 / G 27.11.97  
G 3.10.03 / G 31.7.86 / G 19.7.90.

(Magnoliaceae 4.)

MAGNOLIA. contd.

MAGNOLIA. contd.

grandiflora - G 19.11.81. / G 5.2.87 / G 22.1.87.  
G 26.10.95 / G 13.9.79 / G 29.10.81.

hypoleuca - G 20.10.77. / G 19.7.79 / G 29.9.88.

Kobus G.C. 23.8.96.

Lenne G 7.5.81. G.C. 18.11.99  
G 5.5.94 G 22.7.99.

macrophylla - G 11.2.88. / G 12.12.85. / G 5.8.82  
G 4.7.96. / G 9.3.95. / G.C. 3.11.00.  
G 11.7.96.

obovata G 11.6.87.  
G 21.7.94.

parviflora G.C. 16.7.98. / G 3.9.98  
G 6.9.79.

purpurea G 2.4.82.  
= obovate

Salicifolia stellata G.C. 18.6.98.

Soulangeana G 6.5.82 / G 5.4.84 / G 29.5.80.  
nigra

Soulangeana - G 26.4.02 / G 21.4.94 / G 12.4.84.

stellata B.M. 6370. G 7.6.02 / G.C. 16.4.04 / G 15.4.99.

= Halleana. G 30.4.98 / G 30.4.92 / G 10.4.97 / G 29.1.87.  
G 12.4.90 / G 11.3.93 / G 15.6.78 tc.

tripetala G 5.7.90 / G 5.12.85  
(Umbrella Magnolia) G 10.6.82 / G 12.7.90.



(Magnoliaceae s.)

# MAGNOLIA. contd.

Hatsoni. 930.7.98.  
915.6.95.

99.16.7.04.  
99.16.7.98.

Russellianus 99.11.5.01.  
= Kirianthus.

## Tr: Gen: Articles on Magnolias

Magnolias. 92.8.73 / 97.9.73 / 930.1.75.

Laying Magnolias 92.5.74.

(Magnolias & their allies. 925.9.75.

Magnolias. 927.1.77. / 96.6.96. / 924.4.80.

Magnolias.  
(G. Nicholson) 929.9.00.  
(W.T. Bean) 98.12.83

The Magnolias. 93.6.88.  
(W. Falconer).

Early flowering Magnolias. 96.5.82 / 99.5.85 / 94.5.95.  
918.5.89 / 99.26.4.02.

Late flowering Magnolias. 98.7.82.

Transplanting Magnolias 910.12.81.

Magnolias as Lawn Trees. 922.8.85 / 929.8.85.

Magnolias with hybrid sp. 915.6.89 / 924.6.93.

Magnolias in Pots 92.5.91. / 91.4.93 / 94.4.91 / 99.7.92  
929.4.99.

American Magnolias 913.7.89.

New Japanese Magnolias 910.2.94.

(Magnoliaceae b.)

TICHELIA. - Linn.

(slow evergreen tree.)

I. (fuscata easier from stem cuttings than rest of Magnolia.)  
- half-ripe shoots in summer.

II. ? (imported seeds.)

III. - Champaca. Ge. 27.7.03  
Ge. 7.8.97.

- fuscata. Ge. 23.6.00. / 97.11.96.

= Magnolia fuscata. 914.5.87 / 921.5.87 / 99.8.90.

- lanuginosa. Pom. 6179. / 96.11.75.

SCHIZANDRA. Uchx.

(greenhouse or half-hardy shrub.)

I. stem cuttings, ripe shoots.

II. ?

III. - Coelestis Pom. 1413

propinqua. (slow.) Pom. 4614.

ALAUMIA.

- slow evergreen.

Cuttings of ripe shoots.

Grafting on *Magnolia obovata*.

+ weeping on same stock also.

?

Candollei. Pom. 6614, 4251.

var. *galeottiana* Pom. 6614.

Hodgsoni. Pom. 7392.

TROCHODENDRON.

(hardy evergreen  
trees)

I. stem cuttings?  
layers?

II. ?

III. *araliodes* Pom. 7375.  
(hardy). G.C. 10.5.02.

General note on the Malsherbiaceae.

The Malsherbiaceae are an order of plants from Peru Chhili allied to the Loasaceae. No plants in the order are in Cultivation.

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General note on the Malpighiaceae.

The Malpighiaceae form one of the Gerianales cohort having affinities to orders in that group. Some of the liane plants in the order inhabitants of the tropical forests. Others are found in the ~~n~~ new world, and consist mainly of shrubs and trees. Not many plants in the order are in general cultivation outside of botanical collections.

Vegetative propagation by means of stem cuttings as that most commonly employed.

Root and leaf cuttings have not been investigated.

Increase by seed when obtainable is also though less commonly employed.

(Malpighiaceae) 1.

ACRIDOCARPUS. Guill. & Per.

(pseudonal & store chambers.)

I. stem cuttings in heat.

II. imported seeds.

III. natalitius Bm. 5738.

orientalis.

socotranus.

BANISTERIA. Linn.

(store green or shrub)

I. stem cuttings with root freshly in stove of half ripe wood.

II. ?

III. chrysophylla.

ciliata.

splendens.

BUNCHOSIA. Rich.

store shrubs.

I. stem cuttings of ripe wood in heat.

II. ?

III. argentea.

nitida. Aud. Rep. 604.

odorata.

polytaehya.

(Maepighiaceae ?)

BYRSONIMA. Rich.

(slow evergreen trees or shrubs.)

- I. stem cuttings of half-ripe shoots:
- II. -
- III. crassifolia = Maepighia crassifolia.  
altissima.

GALPHIMIA. Cav.

(slow evergreen shrub.)

- I. stem cuttings of firm young shoots in heat.
- II. ?
- III. glauca. ♀ 16.8.79.  
Mamm. Bot. I. t. 18.

HETEROPTERYS. H.B.K.

(slow climber)

- I. Cuttings of firm young shoots.
- II. seed ?
- III. Chrysophylla. Bm. 3237.  
mida (shrub).

HIPTAGE. Gaertn.  
= GAETNERA.

(slow evergreen trees.)

- I. stem cuttings of firm young shoots in April.
- II. -
- III. madablota / obtusifolia.

(Malpighiaceae) 3.

(stone climbers).

HIRAEA. Jacq.

= TRISTELLATEIA.

I. Cuttings of fine young shoots.

II. ?

III. glaucescens.  
indica. etc.

MALPIGHIA. Linn.

(stone evergreen  
shrub).

I. Cuttings of young half ripe shoots in summer.

II. ?

III. aquifolia.  
coccigera. Syn. 8.86.  
urens.

STEMAPHYLLOM. A. Juss.

(stone climber  
+ twiner).

I. Cuttings of ripe wood in sand.

II. ?

III. aristatum P.R. 1659.  
ciliatum. (Godebuis) 925.2.88 (with plate).  
littorale B.M. 6623.  
heterophyllum B.M. 4014.

TRISTELLATEIA.

See HIRAEA.

General note on the Malvaceae.

The Malvaceae. are an order with well marked affinities to the Sterculiaceae and Tiliaceae. The plants comprise herbaceous and shrubby annuals and perennials and are distributed over the whole earth except the arctic regions.

Propagation in the order is mainly effected by seed which is usually freely produced. The hybrids obtained are mainly in the genus Abutilon. When seed is not so easily obtainable and for other reasons (see Chap 1. ) vegetative propagation is employed stem cuttings strike easily and is the usual mode of increase. Leaf cuttings also succeed for many genera, though the method is slow. (see fig. )

Root cuttings succeed in the case of Abutilon vars. &c .

Other vegetative methods are not commonly employed.



ABUTILON.

I. Cultivars early in spring: seedling plants flower in a sexual state more freely than seedlings, which are less variable.

II. Seed, also freely: but variable -  
in spring for winter blooming. G 4.12.80.

- III. vars:
  - Boule de neige. Red Gemlet.
  - Boule d'or. Royal Scarlet.
  - Coronet.
  - Golden Haze.
  - Marquise.
  - insigne.
  - hexillanum.

IV. General articles. Gen. G 14.1.88. / G 26.9.91. / G 12.2.87. / G 21.5.8. / G 19.4.79 / G 23.8.79 / G 13.3.83

varieties G 9.4.98 -

Culture G 28.11.85.

As for winter flowering. G 5.2.81 / G 12.1.95 etc.

ADANSONIA.

tree.

I. plant wd. of interest in horticulture for cultivation.

III. digitalis. The Baobab Tree -  
one of giants of the vegetable world -

G 27.1.00.

G 29.1.76

G 3.2.72.

ALTHAEA.

Randy biennials or  
perennials.

I. Division.

Stem cutting. of old stems in summer after flowering  
of new stems in spring.

- Single eyes.

Grafting on roots - but not to be recommended, as resulting specimens  
are not strong & do not cope well with disease.

II. Seed. is best method. in spring: seedlings do not seem to suffer  
so much from disease (*Puccinia malvacearum*):

comes true for varieties & stronger 921.9.01.  
9c.9.6.00.

III. Officialis.  
rosea & garden vars.

IV. Gen: Article. 924-10-03 to 926-3-04  
(Du Hon with the Hollyhock W. Paul F.d.S.).  
9c. 18-10-02 / 910-1-03 / 931-8-01 / 9c. 9.6.00.

Single Althaea. 924.8.99.  
97.8.97  
97.4.88.

Propagating Hollyhock 924.7.86.  
tc:

BOMBAX.

Stove trees - plants

I. stem cuttings root readily. Do not make oak fruit plants as imported seeds.

II. imported seeds best.

III. ceiba.  
Cambodense.  
malabaricum.

ERIODENDRON. DC.

I. ?  
II. ?  
III. Bm. 3860. aufractuosum.

FUGOSIA. Tuss.

(greenhouse shrub).

I. stem cuttings easily in spring.

II. ?

III. Cereiformis Bm 5413.  
hakeaeifolia 925.3.99.  
(with plate) 911.6.04.

GAYA.

I. ?  
II. ?  
III. ?

Malvaceae 4  
FOETHEA. Nees. + Mart.

Stove plants.

= PAVONIA.

stem cuttings strike easily.

seed also

Makoyania = Pavonia makoyiana. B.M. 6427.

♀ 18.2.88 / ♀ 14.12.78 / ♂ 2.2.84 / ♀ 14.1.88.

♀ 27.3.86.

strictiflora ♀ 17.6.93

♀ 14.9.01.

GOSYPIUM. Linn.

Stove? plant.

I. stem cuttings - make smaller plants than seedlings.

II. seeds ♀ c. 3.6.99.

III. barbadense. (Cotton Plant.)

IV. The Cotton Plant. ♀ 9.2.01. ♂ 3.10.85.

♀ 5.9.85.

HIBISCUS Linn.

(Greenhouse).

I. stem cuttings strike easily.

except H. Hugeli + syriaca ♀ c. 22.8.96.

- snekers for H. moscheutos

- division for H. palustris ♂ 12.10.01.

- grafting for syriaca (Althaea frutex).

II. seeds freely produced except in H. Hugeli.

Malvaceae S.

Hibiscus.

Coccineus G10.1.80. / G2.10.86 / G10.9.89.  
= speciosus G15.8.96 Pm. 360.

coelestis G21.10.99 / G18.11.99.

Colleri G9.12.76 / G24.6.76.

elatus  
= Paritium elatum Pm. 5745.

grandiflorus G7.2.85.  
(plate)

var. roseus G13.9.90.

Huegeli Bm. 5406. / G7.8.80 / Gc. 8.XI.02.

virginis G7.10.76

Lamberti G27.1.83.

Manihot Pm. 775 / Gc. 9.10.97 / G21.10.99.  
(plate) G12.2.98

militaris G13.9.84.

moscheutos G13.2.73 / G10.1.80 / G31.10.03.

palustris G12.10.01. / G21.3.85.

rosa-simensis G7.3.91 / Pm. 158 / G3.8.95 / G4.10.02.  
(plate)

- cooperi G7.8.80 / G6.2.97 / Gc. 16.6.00.

var. (Bulló Catalognet)

- berrisoni G19.1.89

- fulgens G4.2.88.  
(plate)

- schizopetalus - Plate G. vol. XVI, p. 486.

G15.5.80 / G29.2.96 / G19.3.87 / G15.8.91 /  
G9.8.79 / G15.7.93.

splendens Gc. 25.9.97 / G14.6.02

Syriacus Pm. 83 / G1.10.81 / G27.9.84 / G19.9.83 / G7.11.91.  
G17.9.92 / G7.9.01 / G25.12.97.

Malvaceae 6.

(Hibiscus)  
syriacus var.

Coeleste 97.9.01 / 915.10.87 / 916.8.79.

totus albus 921.10.93 / 911.9.97.

africanus.

= trionum 928.5.81.

(plate) 912.1.89 / 92.12.93 / 931.7.97.

IV. Gen Articles.

Hardy kinds of Hibiscus 921.2.74.

Rose Mallows. 919.12.74.

Some Ornamental species

of Hibiscus. 929.11.79 (T. Davis.)

Hibiscuses & their Cultivars. 926.1.84.

Rose Mallows. 912.11.92.

HOHERIA. A. Cunn.

(cool greenhouse) -  
or keep hardy.

I. young cuttings easily in spring.

II. seeds also.

III. populnea. 91.11.02.

9c. 30.11.01.

9c. 9.11.12.

IV. (The cultivated greenhouse Davis - )

HONITTEA.

[1]  
[2]  
[3]  
[4]  
[5]  
[6]  
[7]  
[8]  
[9]  
[10]

(Malvaceae 7.) -

KITAIBELIA. Willd.

I. graphip - see Lindenuth's expt. in P3.5.02.

Stem cuttings easy.

II. Seed also.

III. *Laudmulleri* 92.11.01. 92.11.01 / 93.1.04 / 93.5.06 / 93.7.06

*Lindenuthii* 92.9.02 92.9.02 / 92.7.98 / 93.5.99

*vitifolia* 93.5.02.

KOSTELETZKIA. Presl.

I. stem cuttings

II. Seed.

III. 9.9.96.

KYDIA. Roxb.

I.

II. *grandiflora* Part. Aug. 9.12.77 / 92.7.02 / 92.11.02

III. *calycina*.

LAGONARIA. G. Don.

I. stem cuttings easily.

II. -

III. *Patersonii* B.M. 769. 92.11.77 / 93.5.02 / 93.11.02

93.9.97 / 93.10.98 / 94.6.97

94.8.91 / 94.9.95

LAUATERA. Linn.

I. Stem cuttings.

II. best by seed. true for ~~varieties~~

III. arborea - 92.12.46.

a. variegata. 93.2.83. / 98.3.84 / 931.5.84 / 910.7.86 -  
923.11.89 / 923.7.98 / 90.8.7.99.

assurgentiifolia 99.12.99.

maritima 914.10.93 -

alba 91.8.85.

humifera B.M. 517 -

humifera 915.3.02 / 921.5.04 / 91.8.96 / 920.3.97.

IV. The Tree Mallows 923.6.00 / 97.2.03.

Lavateras 922.1.98.

Hybrid Lavateras 90.12.96 / 90.2.1.97.

MALOPE. Linn.

(hardy annual.)

I. YODIOLA

II. seeds sown in spring -

III. trifida. 94.3.82.  
927.7.89.

v. grandiflorum. Part. May. 919.5.77 / 914.8.80 / 915.8.85.

MALVA. Linn.

(annuals to  
perenn)

I. YODIOLA

II. seeds for annuals in spring -

III. alba 91.10.92 / 90.28.8.97.

crispata (annuals) - 912.10.72 / 918.2.88 / 918.1.02 -

moschata 929.9.77 / 923.10.86 / 94.6.87.

m. alba. 913.8.87 / 919.9.91.

IV. Mallow Tribe of Perennials 918.12.75.

Mallows 920.8.81



Malvaceae 9.

MALVASTRUM - A. Gray.

- I. ?
- II. ?
- III. *christianum* 918.85.  
*Coccinea* 928.7.00.  
*Gilbesii* 930.12.99.  
*latentinum* 919.9.03.  
 - *Malva latentinia*.

MALVA VISCUS - Dill.

- I. stem cuttings in spray.
- II. Seed.
- III. arborus = *Achamia malvasiscus* 911.3.76.

MODIOLA - Moench.

- I. hardy rock perennials  
 Division 1
- II. Seeds.
- III. *geraniodes* 98.10.99 (note).

NAPAEA - Link.

- I. Division 1
- II. Seeds.
- III. *dioica* 919.9.03.

(hardy plant: suitable for wild garden.)

(malvaceae 10)

NUTTALLIA.

- I. stem cuttings.
- II. seeds fresh.
- III. grandiflora Pax & Mas 217.  
malvaeflora Pax & Mas 31.  
papaver. - - 173.

PACHIRA. Aubl.

slow shrub.

- I. stem cuttings. (Callus. see f. - Chap I.)
- II. seeds rarely produced in this country.
- III. elegans - Carolina elegans 914.6.79.  
insignis - Carolina insignis 930.8.73  
macrocarpa 912.9.85.

PALAVIA. Cav.

(hardy annual).

- II. seeds in sprout.
- III. flexuosa Pom. 3768.  
930.8.84.

PAVONIA. Linn.

slow shrub.

- I. stem cuttings.
- II. seeds also.
- III. Malmovsa B.C. 371.  
Wiotii (plate) 94.8.83 / 914.1.93 / 913.1.83.  
= multiflora

Malvaceae II.

PLAGIANTHUS. Forst.

- half hardy or hardy Shrub.

I. easily from stem cuttings.

II. seed. when procurable.

III. Lyalli 914.7.94 / 931.7.97 /  
Lampeni = sidoides see also 98.7.93.

pubescens 913.3.80

reticulatus 928.10.76. (note.)

IV. Gen. Art. P. Lyalli 1 other vars. 98.7.93.  
P. Lyalli at Home 92.7.04.

SIDA. Linn.

I. stem cuttings easy.

II. seeds when obtainable.

III. obliqua = hederacea  
= Malva Californica 913.8.92

SIDALCEA. A. Gray.

I.

II. seed.

III. candida 911.7.83 / 93.11.83 / 924.7.86.

var. 'rosy gem' 93.10.03 / 99.14.11.03.

Listerii 917.7.97 / 931.3.00.

malvaeflora = oregana 914.7.83 / 97.8.97 / 915.8.85.

IV. Sidalceas 94.8.83.

S. candida 1 other vars 93.11.83

SPHAERALCEA. St. Hl.

General note on the Malvaceae.

I. stem cuttings.

II. seed also.

III. (Bahamas Mallow) *Abutiloides* 920. 7. 95.  
(plate)-

*Munroanum*. = *Malva munroanum*  
= *Malvastrum* -  
93. 10. 03. B.R. 1306.

They are almost without exception hardy. Nearly all the Malvaceae require rest in the soil for their successful culture. Many of the species have small blossoms, *Leonora* etc. and other genera such as *Alcea*, *Althaea*, *Alcea* etc. are little known but they are always cultivated and are as freely flowering as those which are commonly cultivated. The Malvaceae are rarely raised for their elegant foliage e.g. *Bertolonis* etc. but the flowers are also often shown and are freely produced. Seed except by artificial fertilization is rarely produced in this country. This mode of propagation is especially not the usual one unless hybrids are raised. Some hybridization work has been with *Bertolonis*, etc. Vegetative propagation may be effected with remarkable ease in the Malvaceae. Cuttings of stems, buds, or seedlings of young plants, and parts of older stems strike readily.

General note on the Melastomaceae.

The Melastomaceae of plants with varying habit, herbs, shrubs and trees, but all char<sup>c</sup>acterised by the pluricostate veined <sup>nation</sup> and stamens with peculiar appendages. The order is usually placed in the Myrtales as it is closely allied with members of that cohort. Inhabiting the tropics as they do in nature, in cultivation they are almost without exception stove plants. Rhexia is however hardy. Nearly all the Melastomaceae require peat in the soil for their successful culture. Many of the species from Brazil Ossaea, Leandra &c. and other genera such as Oxyspora, Phoeneuron Loreya are little known, but they are of easy cultivation and are as freely flowering as those which are commonly cultivated. The Melastomaceae are mainly prized for their elegant foliage e.g. Bertolonia &c. but the flowers are also often showy and are freely produced.

Seed except by artificial fertilization is rarely produced in this country. This mode of propagation is therefore not the usual one unless hybrids are wished. Some hybridization work has been with Bertolonias. &c.

Vegetative propaga<sup>a</sup>tion may be effected with remarkable ease in the Melastomaceae. Cuttings of stems both of stem tips, of young shoots, and parts of older stems strike easily.

Leaves strike easily and is the usual mode of increase for Phyllogathis and other genera. (1)

The roots are mostly fibrous and unsuited for cuttings.

(1) see Dip Chap. II. Part. I.

ACISANTHERA. R.Br.

Stove sub. shrub.

of no great horticultural interest.

I. stem cuttings in stove temp -

II. ?

III. quadrata -

ADELOBOTRYS. DC.

Stove climbing shrub -  
epiphyte.

I. stem cuttings ?

II. ?

III. Lindenii  
Scandens.

AMARABOYA.

(stove or warm  
greenhouse shrub.)

I. Cuttings of young shoots in heat.

II. -

III. princeps. S2.4.87.  
splendida S2.4.88  
Amabilis

IV. L'Illustr. Horticole 2nd no. 1887.

ARTHROSTEMMA. R+P.

(stove or greenhouse  
ever green shrub)

I. stem cuttings of firm side shoots in spring or summer

II. -

III. versicolor (stove) Psm. 3678

nitida (greenhouse) Psm. 3112

BERTOLONIA. Raddi.

(Creeping or dwarf stone plants)

I. stem cuttings

leaf cuttings

Very easy cultivation & increase.

II. - also. not so common as veget. means.

III. maculata, Humboldtiana, Roddeckiana, Superbiana, Viraudae  
Van Hottkei 923. 3. 78 to -

IV. 930. 10. 80 Culture of Bertolonia

920. 10. 83 Bertolonia

920. 2. 92

925. 11. 82.

See Poell's Catalogue 1876 onwards for details

BLAKEA. Aubl.

(stone evergreen shrubs or trees).

I. stem cuttings of quite rope wood - else inclined to rot.

II. ?

III. trineria B.M. 451.

(guatemalensis.)

Quinqueneria.

BRACHYOTUM. (L'Her.) Triana.

Stone evergreen -  
Somewhat rare.

I. Cuttings easily

II. Seed also

III. Conferium B.M. 6018

(only species) 913. 2. 92.



Helactomaceae 3.

BREDIA. Blume.

(greenhouse shrub.)

= Bredia -

I. Cuttings in early sprig. or stems -

925.8.00 / 929.8.91.

II. sometimes available -

but cuttings, if seed not to be had -

III. hirsuta 915.10.87 (note)

920.7.89 ( " )

B.M. 6647.

CALVOA. Hookf.

I. Easy from stem cuttings.

+ from leaf cuttings -

II. seed also -

III. ?

CAMBESSADESIA. DC.

(herb. stove shrub.)

I. Cuttings of half-ripe shoots in heat.

II. - ANOPHYLLUM

III. paraguinensis B.M. 6604.

Malastomaceae f.

CENTRADENIA. G. Don.

Cool stove evergreen.

I. Stem cuttings - best of side shoots in spring.  
make bushy, well furnished little specimen, which flowers the following year -

leaf cuttings.

Seeds not often employed. slow in comparison to cuttings.

floribunda } G 25.8.04.  
grandiflora }  
R.M. 5228.

rosea. B.R. 1843 t. 70. G 27.2.78 / G 21.2.85 / 96.4.89.

IV. G 18.8.83 Centradenia & their Culture.

CLIDEMIA. D. Don.

(stove shrubs.)

I. Easy from stem cuttings.  
leaf cuttings through stems.

II. not often used.

III. hirta R.M. 1971.

vittata.

CYANOPHYLLUM. Haud.

(stove ever green)

= Miconia.

I. stem cuttings in heat.

II. seeds?

III. magnificum G 20.4.78 / 98.12.83 / 927.11.80.

metallicum = Miconia metallicum.

Melastomaceae J.

DISSOTIS. Benth.

(Stove shrubs.)

I. easily from stem cutting.

II. ?

III. incana. (Sprecher) B.M. 3790. / 94.10.90.

Ironi giana. B.M. 5149

Mahoni. B.M. 7896

ERIOCNEMA. Naud.

(Stove shrub.)

I. stem cutting

II. -

III. marmoratum.

Panderi x (Sander's Cat. 1895.

G.M. illustration 5328.  
1895.

GRAUESIA. Naud.

Stove herbs.

I. stem cutting easily.

II. Seeds also.

III. guttata. = Bertolonia guttata B.M. 5524.

var. superba G.T. 2.80.

L. Illust. Horticol. Pl. CCC LIX.

GUYONIA. Naud.

Stove herb.

I. stem cutting easy

II. -

III. tenella -

Nelusetimide 6.

HEEREA Seabrook.

Slow evergreen shrub.

I. stem cuttings young shoots.

II. -

III. rosea: Heterocentron rosea.

B.M. 5166. 930.10.97.

Slow evergreen shrub

HETEROCENTRON Hook. & Arn.

Slow herbs

I. stem cuttings easily

II. -

III. mexicanum B.M. 5166. 922.11.79.

roseum = Heeria rosea 92.12.82.

HETEROTRICHUM DC.

Slow evergreen shrubs.

I. Cuttings of young shoots in heat.

II. ?

III. macrodon B.M. 4421.

KENDRICKIA Hook f.

Slow climber.

I. stem cuttings easy.  
leaf cuttings but slow.

II. seed also.

III. walkeri G.C. 3.10.96.

(only species)

Malastomaceae 7.

LOREYA, DC.

(Stone evergreen)

Cuttings of young shoots in April.

arborescens

MEDINILLA, Gaudich.

Stone evergreen shrub.

I. cuttings of firm shoots. side best.  
also young tips.

II. -

III. amabilis G 4.9.94 / 912.6.86 / B.M. 6681.

Curtisii B.M. 6730. / 915.12.83 / 91.4.99 / G.C. 15.6.01.

javanensis B.M. 4569.

magnifica B.M. 4533. / 92.7.92 / 913.7.95 / 924.4.97 / 930.9.99.

IV. Gen. Articles

Medinillas & their Culture. G 27.6.78.

Medinillas G 12.7.79 / 928.6.84 / 929.5.97 / 92.5.04

Medinilla (magnifica) G.H. 3.2.83.

MELASTOMA, Burm.

(Stone evergreen)

I. stem cuttings in heat.

II. Seeds also.

III. granulatum B.R. 671

sanguineum B.M. 7041.

villosum B.M. 7630.

Delastomaceae S.

MECOCYDON. Kunz.

Stove evergreens.

I. stem cuttings - in heat.

II -

III. edule.

grande  
hictorium

MICONIA. R. & P.

Stove plant.

= Cyanophyllum.

I. stem cuttings - either apical. or pieces.  
leaf cuttings

II -

III. magnificum - Cyanophyllum.

pulverulenta Bon. 5411.

MONOCHAETUM. Naud.

Greenhouse + stove  
Evergreen shrubs.

I. stem cuttings in heat in spring.

II. Seed also.

III. ensiferum 95.1.78 / 974.1.80 / 974.2.83.

humboldtianum Bon. 5367.

sericeum 919.3.97

s. grandiflorum 93.3.88.

s. multiflorum 927.12.90 / 99.2.95.

lemonianum 94.12.80 / 918.12.80 / 920.3.86 / 923.2.89.

tenellum Bon. 5371 / 913.8.97.

IV. Culture + prop. of Monochaetum 979.11.79.

Melastomaceae 9.

MONOLENA. Liana.

Stems Perennials.

I. stem cuttings.  
Divisions also? as Crowded root stocks.

II. -

III. *pumilaeflora* B.M. 5818.

NEPSERA. Naus.

Stems Shrub.

I. Stem cuttings easy.

II. Seed also

III. *aquatica* 930. S. 88.

OSBECKIA. Linn.

Stems Shrub.  
Decid. evergreen.

I. Cuttings of firm side shoots in spirit.

II. -

III. *canescens* B.M. 3790.

*chinensis* B.M. 4026 / B.R. 542.

*Nepalensis*.

*pulchella* 979. 10. 81.

*rostrata* B.M. 6573.

*stellata* B.R. 674.

OSSAFA. DC.

(Stems Evergreen Shrub)

I. stem cuttings of firm side shoot

II. Seed also.

III. *fascicularis*.  
*purpurascens*.

Melastomaceae, 10.

OXYSPORA. DC.

- Stone Evergreen shrub.

- I. stem cuttings, half-ripe shoots.
- II. seed?
- III. esculentum.

PHOENEURON.

- I. stem cuttings.
- II.
- III. Moloneyi B.M. 4729. G.C. 11.8.00.

PHYLLAGATHIS. Bl.

Stone Perennials.

- I. stem cuttings.  
leaf cuttings more usual - see Fig. more economical.
- II. seed rarely.
- III. hirsuta.  
rotundifolia B.M. 5282.

RHEXIA. Linn.

Hardy Rabarbons.

- I. Division 1  
stem cuttings.  
tuberous root - tubers?
- II. Seed also.
- III. ciliosa. H. Gard. Sweet. Ser. I. vol. III. 298.  
mariana G 19.9.96. / Bot. Cal. 366.  
virginica B.R. 664.  
virginica B.M. 968. - suitable for rock work or moist boggy soil.
- IV. The Virginian Meadow Beauty G 14.4.77.  
Other Rhexias.



SONERILA Roxb.

Stem annual

leaf cuttings easy.

Seeds sown in heat - usual method  
not certain for varieties

- grandiflora B.M. 5354.
- maculata 92.12.93.
- margaritica B.M. 5104. 91.12.83. / 919.12.91.
- peperomiaefolia
- var. namei 916.12.76.
- Hendersoni 916.11.78 / 918.7.74.
- argentea 916.12.76 / 910.11.83.
- Beusoni B.M. 6049.
- elegans B.M. 4978.
- stricta B.M. 4394.

IV. (Bertolonias) 995.85.  
Sonerilas.

See also vars. in Sander's Cat: 1895 on.  
+ Bull's Cat. 1891, 2 Vol.

- Sonerilas 918.11.82 / 929.11.84 / 99.11.89 / 974.12.92.

TIBOUCHINA Aubl.

(Stems & greenhouse)

= PLEROMA

I. stem cuttings of side shoots, half size  
or tops of old shoots -

II. seeds also

III. maezanthera.

= Pleroma maezanthera	930.11.89.	917.12.95	920.12.00
= Lasianandra maezanthera	915.2.90.	928.11.96.	92.2.01.
	929.10.92	912.12.96	94.10.02
	923.3.95.	99.1.97	95.12.03

var. floribunda 920.1.77 / 98.9.83 / 915.9.83 / 931.8.95 to

elegans 924.2.83 / 912.4.90 / 919.12.91 / 925.8.94.

Benthani 925.11.82 B.M. 4007.

gayianum B.M. 6345.

IV. Lasianandra 910.12.81 / 921.9.89 / 95.8.93.

P... 910.82 / 911.92.

General note on the Meliaceae.

The Meliaceae are an order closely allied to the Rutaceae thus falling into the Gerianales cohort, mainly composed of large shrubs and trees. They are found in nature in the tropics (Madagascar Australia ) and thus in cultivation they are mostly stove plants, not commonly seen however on account of their large size., and because their flowers are small and inconspicuous. Many of the plants in the order are astringis (Carapa ) and some are economic. <sup>ent e.g.</sup>

Propagation in cultivation is mainly effected by cuttings of half ripe shoots in sand in stove heat.

Meliaceae I.

AGLAIA, Lour.

store evergreen shrub or tree.

I. young cuttings - half ripe.

II. -

III. Hoaiensis.

odorata. Wight Leon. t. 511.

rugosa

Roxburghiana - etc.

Sp. of no great horticultural value.

AITONIA, Humbg.

greenhouse evergreen shrub

I. Young cuttings root in sand - liable to damp if too much moisture.

II. -

III. Capensis B.M. 173.  
(only species.)

CARAPA.

store trees.

I. stem cuttings - ripe shoots in sand.

II. -

III. guianensis.  
procera.

CEDRELA, Linna.

hardy tree.

= Ailanthus

I. root-cuttings. Quick in growth.

II. seeds?

III. sinensis = Ailanthus flavescens.

916.9.76 / 99.3.78 / 913.6.85

Meliaceae 2.

CHICKRASSIA (A. Juss.)

KAHAYA.

URKAE A.

MELIA. Linn.

Stove & greenhouse.

I. Cuttings of ripe shoots in pairs -

II. Seeds also. B.M. 627 / 910 277

III. *australis* B.M. 1066. } half hardy,

*floribunda* 99.4.81.

*japonica*.

*sempervirens* (stove) B.R. 643.

IV. sp. not quite so large for ordinary cultivation

SANDORICHUM. Cav.

I.

II.

III. *indicum*.

IV.

Meliaceae S.

## SWIETENIA.

- Slow evergreen tree.

I. stem cuttings of half ripe shoots

II. seeds also

III. mahogoni.

IV. Malogani, Trees in India Frb. 9.74.

Manual of Indian Timbers.

## TURRAEA.

- slow evergreen trees

I. stem cuttings of firm young wood -

II. seeds ?

III. heterophylla -

lobata - B.R. 1844.

obtusifolia B.M. 6967 / 910.3.77.

pinnata B.R. 1413 -

General note on the Melianthaceae.

The Melianthaceae are a small order near the Sapindaceae limited to tropical and south Africa. The plants are mainly trees and shrubs not largely cultivated as the inflorescences are not ornamental.. Some of the species especially M. Pectinatus are cultivated for the beauty of their leaves.

Propagation is effected by seed and vegetatively by stem cuttings and divisions. Root and Leaf cuttings have not been investigated.

Meliaceae 1.

GREYIA. Hook. + Harw.

greenhouse shrub.

I. Cuttings. half-ripe wood - shoots.

II. seeds also.

III. Sutherlandii B.M. 6040 -

MELIANTHUS. Linn.

greenhouse evergreen  
shrub.

(Honey-Flower.

I. Division 9.11.4.74  
for M. major. 9.13.5.76.

Stem cuttings. young shoots strike freely

II. seeds. when it can be depended on.

III. Comosus B.R. 45.

major 9.11.9.75 / 9.13.5.76.

micros B.M. 301.

pectinatus 9.9.12.99.

Yrimenianus B.M. 6557.

General note on the Menispermaceae.

The Menispermaceae are an order with alliances to the Berberidaceae in the Ranales group found in both hemispheres. The plants in the order mainly trees and shrubs climbers are of no especial horticultural significance. Menispermum canadense (the Moonseed) Cissampelos are most commonly seed.

Propagation is effected by seed and by stem cuttings. The roots which in most species are thick and knobbly might afford a means of increase.



*Memiper maceae*. 1.

ABUTA. Aubl.

- Stove evergreen climber

I. stem cuttings in heat.

II. ?

III. *repescens*.

CISSAMPelos. Linn

Stove or warm  
greenhouse climber

I. stem cuttings - small firm side shoots in heat

II. -

III. *pareira* (Pareira Brava Root).

COCCULUS. DC.

= *TATEORHIZA*.

(stove & half hardy  
evergreen climber)

I. cuttings of firm side shoots.

II. seeds ?

III. *Baifowii*.

*Carolinus* 912. 5. 88. (hardy)

*indicus*. 915. 11. 79.

*laurifolius* (half hardy).

*macrocarpus*.

*palmatus* B.M. 2970-1. = *Tateorhiza columba*.

CYCLAEA. Arn.

I. stem cuttings - half life wood

II. seeds -

III. *elegans*, *racemosa*.

Menispermaceae. 2.

MENISPERMUM Linnaeus.

(hardy decid.  
climbers)

- I. Division of roots.  
stem cutting in sprain.
- II. Seeds in sprain.  
easy cultivation: quick growers.
- III. Cocculus.  
Canadense (hardy woody climber,  
palmatum = Cocculus palmatus  
= Jakoshija Colombo
- IV. The Moonseed 925.10.79.  
(m. canadense) 921.7.83.

General note on the Monimiaceae.

The Monimiaceae are a small order allied in many respects to the Myristicaceae, but also very near the Laurineae. It is thus usually placed in the Ranales cohort. The plants in the order are found in tropical and subtropical regions particularly in the southern hemisphere (Australia ) &c. They are no <sup>2</sup>grat va value in horticulture. The chief genera are Peumus and Siparuna and the climbing Palenaria.

Propagation is mainly effected in cultivation by stem cuttings. The leaves are leathery and cuttings would not easily afford a means of increase. Root cuttings have not been investigated

Increase by seed is also used.

Monimiaceae. 1.

LAURELIA. Juss. greenhouse leaf hardy tree.

- I. stem cuttings.
- II. seed.
- III. serrata. Th. Bot. 8279.
- aromatica Gard. Chron. Fig. 177.
- noval zelandiae

PEUMUS. Pers. (greenhouse evergreen)

- I. Stem cuttings in sprays.
- II. -
- III. fragrans - Boldoa fragrans. Bm. 7024.

PIPTOCALYX. Oliv.

- I.
- II.
- III. Moorei.
- IV.

SIPARUNA. Aubl.

- I.
- II.
- III. Cauliflora.
- IV.

General note on the Monotropaceae.(Pyrolaceae ).

The Monotropaceae are an order composed of plants of a parasitic and saprophytic habit more of botanical than of horticultural interest. The Pyrolas (Ericaceae ) are sometimes included in this order which is thus often called Pyrolaceae. In the order are Monotropa.sp. hypopitys see G.1.9.88.  
G.8.9.88,  
Newberrya Pterospora and Sarcodes sp. sanguinea see G.7.11.74.  
G.31.10.74.  
G.16.12.76.

The last named (The Canadian snow plant) is parasitic on Pine.

General note on <sup>the</sup> Moringaceae.

The Moringaceae comprise the one genus Moringa. Its affinities are doubtful and it is variously placed by various authors.

A possible position is the Parietales. The various species are trees or shrubs found in tropical and subtropical regions.

The Moringas are of economical interest as supplying edible roots and young fruits.

Propagation is effected by seed and stem cuttings. The fleshy ~~x~~ roots might possibly serve as a means of increase.

Moringaceae.

MORINGA. Juss.

Stove evergreen trees.

- I. Cuttings of half-ripe shoots in spring  
- fleshy roots used for horse-radish in India  
prop. by these?

II. -

- III. pterygosperma -  
Coccolobaensis Bm. 2596.

General note on the Myoporineae.

A small order of <sup>no</sup> horticultural value allied to the Labiatae  
and to the Plantagineae.

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Myoporaceae.

General Note on Myoporaceae

MYOPORUM. Banks. + Soland.

- Greenhouse evergreen shrubs.

I. Cutting young shoots in Apr Spring.

II. - affinities with the Juglandaceae and Cupuliferae in the

III. album 96.9.73 The usual species cultivated are 98.7.83.

debile - Pogonia debilis Pom. 1830

parvifolium 910.11.83 / 927.10.83 . Pom. 1693.

serotinum P.R. 1845.

General Note on Myricaceae.

The Myricaceae were once an order widely distributed over the whole world now they are limited mainly to temperate regions.

Myrica is the <sup>ole</sup> ~~slee~~ representative of the order which has affinit<sup>ie</sup>is with the Juglandaceae and Cupuliferae in the Amentiflorae cohort. The usual species cultivated are cerifera and californica.

Stem cuttings are the mode of increase usually employed (see general articles under Myrica ).

MYRICA. Linn.

(Hardy & greenhouse  
shrubs).

The Myricaceae comprising the one genus Myrica (the Rush)

I. greenhouse sp. by stem cuttings  
also division. Layers  
Suckers also for (*Comptonia asplenifolia*)

II. Seed a usual method for hardy species. Sown as soon as  
ripe: best for *rubra*. wood too hard for cutting 921.8.89.

III. *asplenifolia* = *Comptonia asplenifolia*: 95.2.84 / 924.12.84 / 925.5.88 / 970.1.91.  
*Californica* (hardy) 919.2.84 / 910.1.91.  
930.12.93.  
915.6.95.

*cerifera* (hardy) 910.1.03 / 93.2.00

*gale* (hardy) 922.3.90.

*nagi* Pom. 5727.

*rubra* (greenhouse) 921.8.89.

IV. Gen. Arb. The Galewort 913.10.77.

The Wax Myrtle of the Sea 912.1.95.  
Coast of E. N. America

General note on the<sup>e</sup> Myristaceae.

The Myristaceae comprising the one genus *Myristica* (the Nutmeg) is essentially tropical and found mainly in Asia. It has marked affinities with the Anonaceae. *Myristica* is of great economical value but of little horticultural interest. In the countries where it is grown it is commonly propagated by means of grafting seed &c. (see general arts. ). In cultivation it is usually increased by cuttings made of the ripe shoots.

Myristicaceae

MYRISTICA. Linn.

Some evergreens.

I. Stem cuttings. ripe shoots.  
(in cultivation).

Commercially, grafting seedling stock in 2nd year of growth.  
using males economically. 1 male plant to 100 females. (Hubert).

II. Seed. germinates after 6 weeks or so

ARDNISIA. Linn.

III. amygdaloides

aromatica

Beccari Bot. 6803

fragrans Bot. 2756-7.

mosekata

Sphaerocarpa

officinalis

IV. Review on "Die Muskatnuss" Dr. O. Warburg. 1897.

Leipzig. (Pigelmann)

G.C. 3.7.97.

nummifera 93786 / 935288 / 935289 / 936109

blanda Bot 6307. 937281 / 937985

polycephala 91148

pruriens 9221299

Solanaria Bot 1677

V. Some articles on Ardisia

Ardisia 925198

935123

932181

Myrsinaceae . 1.

AEGICERAS. Gärtner.

(greenhouse - evergreen tree)

I. Stem cuttings - half-ripe shoots in summer.

II. ?

III. *najus fragrans* -

ARDISIA. Sw.

(store or greenhouse trees & shrubs.)

I. strikes readily from stem cuttings but resulting plants not so hard as seedlings.

- root cuttings also.

II. seed - produces best plants.

which are rather slow however in vegetating. 917.10.85.

III. *crenata* - Pom. 1950. 914.2.03 / 917.10.85 / 919.11.87.

*japonica* -

*mammilata* - 93.7.86 / 925.2.88 / 914.2.89. / 926.12.96.

*oliveri* Pom. 6357. 927.8.81 / 98.9.83.

*polycephala* - 91.1.98.

*pruinulacifolia* 923.12.99.

*Solanacea* Pom. 1677.

IV. Gen. Articles on *Ardisia* -

*Ardisia* 922.1.98.

98.12.83

922.1.81.

General note on the Myrsinaceae.

The Myrsinaceae are essentially a tropical order. Many trees and shrubs are to be found in the stove and greenhouse. The order is closely allied to the Primulaceae. The plants are really Tree Primroses, the only difference being the tree or shrub habit. The chief attraction of the Myrsinaceae are not so much the flowers as the brightly coloured berries which succeed them. e.g. Ardisia, Embelia. &c.

The genera are propagated by seed when obtainable. Seed however is usually not formed e.g. Jacquinia and has not been obtained in cultivation in the green flowered Deherainia smaragdina.

Seeds are also slow to germinate e.g. Threophrastacea, Maësa

but on the whole seedling plants are preferred to those obtained from cuttings especially in Ardisia (1).

Vegetative <sup>propagation</sup> is that most usually employed. Stem cuttings strike without any great difficulty except in Threophrasta imperialis.

They are the only convenient means of increase in Deherainia smaragdina. (1) Leafcuttings have not been tried but root cuttings succeed from Ardisia and Threophrasta.

(1) see R. B. G. notes on Deherainia.

Myrsinaceae. 2.

CLAVINA R. & P.

- stems evergreen tree

I. stem cuttings of half-ripe shoots.

II. Seeds.

III. Fulgens Pom. 5626.

macrophylla Pom. 5829.

ornata Pom. 4922.

Cauliflory characteristic

IV. Clavijas 918.3.93.

DEHERAINIA. Deane.

Stem shrub

I. stem cuttings - young shoots. Early.

II. not yet obtainable.

III. smaragdina Pom. 6373.

IV. Deber: smaragdina. Notes of R.B.G. Polun. —

9 21.2.74

9 14.12.78

EMBELIA. Juss.

Stem evergreen

I. cuttings of half-ripe shoots.

II. seeds?

III. ribes (Indian currant).

Krausei. Ref. Bot. t. 365.



JACQUINIA. Linn.

stone evergreen.

- I. Cuttings of ripe shoots.
- II. seeds in heat.
- III. auriantbaca 9.11.79.

LABISIA. Luidl.

- stone shrub -

- I. stem cuttings?
- II. seeds.
- III. alata. Illust. Hort. bot. malomana " " 580. Pothoina B.R. 1845 t. 48.
- IV. The family Labisia 9.4.87.

MAESA

Stone evergreen shrub

= BAEOBOTRYIS.

- I. stem cuttings - half-ripe shoots.
- II. seeds but slow.
- III. vidua = Baebobotrys Bm. 2052.

MYRSINE. Linn.

frankincense evergreen.

- I. stem cuttings - half-ripe shoots, short.
- II. ?
- III. Capitellata Bm. 3222.

# THEOPHRASTA.

Storia Natur.

I. Stem cuttings difficult. e.g. *T. jussiae*, *T. imperialis*  
but root cuttings readily e.g. *T. imperialis* -

II. seeds also but difficult to procure -

III. *jussiae* .  
*imperialis* . 95.1.84 -

IV. See articles.  
*T. imperialis* 924.9.84  
*Theophrasta* 923.3.72 .

General note on <sup>the</sup> ~~the~~ Myrtaceae.

The Myrtaceae reach their highest development in tropical America and Australia. The order is mainly composed of trees and shrubs and is closely allied to the Lythraceae and other members of the Myrtales cohort. The plants in the order e.g. Eucalyptus &c. are characterised by an aromatic fragrance due to the presence of essential <sup>oils</sup>. These oil glands are markedly present in the leaves and are visible to the naked eye as lucid dots. In horticulture, the Myrtaceous plants are greenhouse plants requiring the same culture as Ericas and Proteas. Many are favourites such as Leptospermum, and the Bottlebrush trees (Callistemon, Metrosideros &c. ), Bertholletia giving the Brazil nut, and Eugenia caryophyllata giving the Clove of commerce are of economic rather than of cultural importance. Many of the Myrtaceae are hardwooded and are slow of growth and increase. They are perhaps for this reason ~~for this~~ not so widely cultivated as they would otherwise be.

Seeds are a mode of increase often employed and they germinate easily. Vegetative is however more usually employed. Stem cutting of young growths strike easily. Leaf cuttings are not practicable owing to the slow growth in this order. Root cuttings have not been investigated. Grafting on M. communis is also common for Myr

Myrtaceae.

ACMENA. DC.

Greenhouse evergreen shrub

I. stem cuttings - half-ripe shoots.

II. seed?

III. floribunda - Pom. 5480.

= *Pogonia Smithii*

ovata.

AGONIS.

evergreen shrub.

I. stem cuttings.

(if not much known in horticulture) -

II. seeds?

III. flexuosa  
marginata.

IV. The genus *Agonis* 96.3.86.

ANGOPHORA. Cav.

evergreen shrubs or trees.

I. stem cuttings - ripe shoots.

II. *ACKEA* Pom.

III. cordifolia = *Metrosideros hispida*. Pom. 1960.

laucelata.

*Cuphoraba* Pom 2690

*frutescens* Pom 2002

*viridis* Pom 3160

Dryataceae 2.

ASTARTEA. DC.

Greenhouse Evergreen  
Shrub.

I. Young cuttings root readily.

II. -

III. fascicularis. P. 17. 10. 91.

BABINGTONIA. (Kunt.) Reult.

Greenhouse  
Evergreen.

I. stem cuttings

II. -

III. Camphorosma. (only species & very uncommon).

926. 8. 93 (note)

95. 11. 81.

BACKHOUSIA. Hook. & Harw.

Greenhouse.

I. easy from stem cuttings. Plants flower early.

II. -

III. myrtifolia 92. 6. 94. B.M. 4133.

BAECKEA. Linn.

Greenhouse evergreen  
Shrub.

I. stem cuttings. Young shoots in spring.

II. ?

III. Camphorata B.M. 2694.

futescens B.M. 2802

Saxicola B.M. 3160.

lanceolata B.M. 2107

BARRINGTONIA. Forst.

Stone evergreen  
tree + shrubs.

I. Difficult. stem cuttings best from lateral shoots, ripe wood.

II. -

III. *racemosa* Pom. 3831.

*samoensis* Pom. 7337

*speciosa*.

BEAUFORTIA. R.Br.

I. Cuttings of half-ripe shoot - remain some time before they root but plants flower earlier than seedlings.

II. seeds also.

III. *Dampieri* Pom. 3272.

*decurvata* Pom. 1733.

*purpurea*.

*splendens* Pom. 7231. G 5.5.83. (gen. article).  
(Bottle-brush) G 9.6.89. G 26.9.91.  
G 21.5.87

BERTHOLLETIA. Humb. + Bonpl.

Stone large

I. <sup>stem cuttings</sup> of no value of ripe wood in saw.

II. -

III. Species of no value horticulturally - but economically important as <sup>exelsa</sup> producer Brazil Nuts.

IV. See Watt's Dictionary of Economic Plants etc.

Myrtaceae - f.

CALLISTEMON. R.Br.

(greenhouse evergreen shrub)

I. Cuttings of firm half-ripe wood.

II. Seeds in heat in spring.

III. lanceolatus - seaber R.R. 1288.

lineare 118.12.86.

= *Metrosideros citrina* Pom. 260.

rigidus R.R. 393. / 918.12.88 / 914.6.90 / 927.6.91.

918.6.92.

Salignus = *Metrosideros floribunda* 922.8.96 / 928.7.00 / 924.10.00.

speciosus Pom. 1761.

IV. Notes on Bottle Brush Plants 927.1.83 / 914.6.84.

Bottle Brush Trees. 925.6.92.

CALOTHAMNUS. Labill.

(greenhouse evergreen shrub).

I. Cuttings of firm young wood.

II. ?

III. — (climbing sp. in Sardinia R.B.P.).

1 sp. *Melaleuca uncinatus* Pom. 7941.

Quadrifida Pom. 1506.

rupestris Pom. 7906.

villosa B.R. 1099.

laeophylla S.S. 22.11.96.

condensata 922.8.96 / 928.10.98 / 928.28.1099.

cornuta Pom. 6140.

quadrifida

922.8.96 / 928.10.98 / 928.28.1099.

Myrtaceae S.

- greenhouse evergreens.

DARWINIA Rudge.

I. stem cuttings of young shoot in sand in heat.

919.4.79.

II. - hardy 919.4.93 / 925.6.03.

III. macrostegia 929.4.99 / 916.6.00.

= Genetyllis macrostegia. B.M. 4860.

lulipefra B.M. 4858.

= Hedaroma tul. 921.3.91. / 923.5.91 / 930.5.91.

= Genetyllis. 918.4.93 / 919.6.97.

fuchsiodes 930.12.76 / 929.6.78.

Hookeri 911.1.79.

EUCALYPTUS L'Hérit.

greenhouse or hardy evergreen.

I. stem cuttings of young half ripe wood.

Diff. for some e.g. S. montana

layers.

inarching.

Budding see Sc. 11.3.99.

II. Usual method - imported seeds. see 922.5.75.

III. andreana 916.9.90.

amygdalina 918.1.79 / 99.10.80 / 924.7.80. / 913.10.00. B.M. 3260.

var. beta 916.6.86.  
citriodora 93.12.87 / 930.7.92 / 95.10.95 / 920.2.97.

calophylla Sc. 28.11.96.

cordata 922.8.74 / Sc. 10.9.98 / Sc. 28.1.99.

cornuta B.M. 6140.

coecifera

(hardy) 922.4.76 / 916.6.83 / 914.7.83 / Sc. 5.12.96.



Myrtaceae 6.

EUCALYPTUS.

filicifolia Bon. 7697, G 17.7.80 / 915.9.77.

Gunnii G 20.8.81 / G.C. 1.4.99 / 915.2.02.

(hardy) G 19.7.02 / 925.1.02.

globulus G.C. 18.3.99 / 99.4.04 / 931.3.00 / 99.6.00.

resinifera G.C. 6.4.01

stricta Bon. 7074.

urnigera G 9.2.89.  
(hardy)

IV. Gen. Articles on Eucalyptuses.

Eucalyptuses in this Country. G.C. 11.2.99.

Eucalypti G.C. 8.4.99 / 94.4.91.

The Eucalyptus G.C. 29.7.99.

The Eucalyptus, Soil & Craft G.C. 11.3.99.

Eucalypti in Scotland. G.C. 20.10.00.

Hardy Eucalypti G 1.3.02 / G.C. 21.12.01?

Eucalypti in the Transvaal G.C. 9.12.99.

Research on the Eucalypt G.C. 11.4.03  
(Baker & Smith).

Eucalypti in S. Norfolk G 9.4.87.

The Blue Gum Tree (globulus) G 29.11.90

or Silver Gum Tree. G 2.5.74

Sillaniana Bon. 7670

G 10.9.95 / 97.10.02 / 931.5.00

FENZLIA

Fenzlia in leaf

staurifolia G 26.3.91

Myrtaceae 7.

EUGENIA. Linn.

hardy greenhouse /  
stove shrubs.

I. stem cuttings of firm shoots easy

II. And seeds

III. Caryophyllata. (The Clove Plant).

jambolana 923.1.81.

Luma Pom. 5040.

malaccensis Ge. 3.10.96.

myrtifolia BK. 627.

pedunculata Pom 473.

- Plinia ped. Pom. 3223.

Ugni (hardy) 916.11.80 / 917.7.97 / 910.12.98 / 924.5.02.

IV. The Clove Tree 911.1.81

919.2.81.

FEIJOA. Berg.

stove shrub

I. stem cuttings easy in heat.

II. from seed.

III. Sellowiana Pom. 7620

910.9.98 / 917.5.04 / 921.5.04

FENZLIA. Endl.

stove annual

II. seeds in heat

III. Dianthifolia 926.3.81.

= Gilia dianthoides

Myrtaceae 8.

GRIAS. Linn.

slow evergreen trees.

stem cuttings, ripe wood in heat.

cauliflora B.M. 5622.

(Anchovy Pear).

GUSTAVIA. Linn. f.

slow evergreen s.

I. stem cuttings: ripe wood in heat.

II. gracillima B.M. 6151. ♀ 25.8.83 / ♀ 14.9.89.

III. Luisignis B.M. 5069.

IV. pterocarpa B.M. 5239. ♀ 28.12.95.

HYPOCALYMNA. Sm. & S.

greenhouse evergreen.

I. Cuttings of young shoots in sand.

II. angustifolium B.R. 1843 t. 8.

III. robustum.

(The Peach Myrtle.) ♀ 7.5.04. / ♀ c. 7.11.03  
♀ 16.9.82

IV. The Peach Myrtle. ♀ 9.9.82.

JAMBOSA. DC.

= Eugenia.

greenhouse or slow shrub.

I. stem cuttings easily.

II. -

III. australis ♀ 12.10.89 / ♀ 7.12.89 / ♀ 23.3.90.

malaccensis B.M. 4408.

= Eugenia malaccensis.

vulgaris B.M. 3356.

Mycotaecae 9.

KUNZIA Rehb.

heath-like greenhouse shrubs

I. stem cuttings - treated like Erica.

Baxteri = Callistemon macrostachyum.  
BR. 1838 t. 7.

Corifolia BR. 1998.

pomipera DC. 1889 p. 201. fig. 36.

LECYTHIS Linn.

II. imported seeds.

III. ollaria (Sapucaya Nut.) -

LEPTOSPERMUM Forst.

greenhouse evergreen

I. stem cuttings of young shoots half-ripe sprigs.

II. seeds in heat in sprigs.

III. bullatum 913.7.78 / 929.6.78 / 923.4.92 / 925.2.99.

lanigerum 927.9.79. / 98.1.81 / 928.2.85 / 921.2.85.

separatum 935.9.90. / 925.4.92 / 92.4.2.99 / 92.7.04.  
(hardy in sheltered districts). Bot. 3419.

separatum grandiflorum 929.5.97.

IV. Leptospermum 914.4.94

Myrtaceae 10.

LEOTYKTA. Schau.

freestone evergreen

I. stem cuttings. Young shoots with firm base.

II. Ericoides B.M. 7753.

Violacea.

MELALEUCA. Linn.

freestone evergreen.

I. small shoots. Young half-ripe.

II. seeds also when produced.

III. fulgens B.R. 378.

Fraseri B.M. 3210.

hypericifolia B.R. 199.

leucadendron G. 18.8.00.

nerii folia B.M. 1058.

squamata B.R. 477.

squarrosa B.M. 1935.

wilsoni B.M. 6131.

METROSIDEROS. Banks.

freestone evergreen

I. stem cuttings. Young side shoots in spring & in autumn.  
Difficult for *M. hispida*.

II. seeds. slow in ripening in species.

III. buxifolia G. 13.12.92.

floribunda. G. 27.6.91 / G. 23.7.98 / G.C. 21.3.03 / G.C. 13.6.03.

(hardy in sheltered places: see *Callistemon rigidus*).

hispida Bot. Cab. 106.

Other: B.M. 922.

Myrtaceae II.

MICROMYRTUS. Reuth.

Tricoid greenhouse stam

- I. Cuttings of young shoots in spring.
- II. Seeds in heat in spring.
- III. microphylla. Ref. Bot. 220. (1870).

MYRCIA. DC.

Stove evergreen.

- I. stem cuttings of short young shoots.
- II -
- III. acris Bm 3153.
- amplexicaulis Bm 5790.

MYRTUS. Linn.

Stove & greenhouse stam

- I. stem cuttings - half-ripe shoots.
- Grafting on *M. Communis*.
- for double myrtle, as grows very slowly 9.11.75.
- Budding for varieties.

II -

- III. *Communis* (The common myrtle).
- mucronata* (9.16.10.80.
- pimenta* Bot. 178
- tomentosa* 9.5.6.80 Bm 250.

- IV. Myrtle 9.7.3.96.
- Myrtles in tubs 9.9.10.97 / 9.11.9.97.
- Double flowered Myrtle indoors 9.10.7.86.
- Myrtles as Decorative Plants 9.2.6.77.
- 9.22.11.79.

NAPOLEANA. P. Beauv.

slow evergreen shrub

I. stem cuttings - half-ripe shoots -  
2-4ms.

II.  
III. Miensii B.M. 4199.  
imperialis B.M. 4387.

PIMENTA.

slow evergreen trees

I. stem cuttings, ripe shoots, sprigs

II -  
III. aenis B.M. 3153 = Mercia aenis  
officialis B.M. 1236 = Myrtus pimenta.  
(all species) -

PSIDIUM. Linn.

slow evergreen -

I. stem cuttings of young shoots

II -  
III. Cattleianum 924.5.02 / B.M. 2501.  
(The Purple Guava)

Guava. 924.5.02

polycarpum

pyrifolium B.R. 1079.

IV. The Guava 97.9.77 / 98.4.87.

Dryptaceae 13.

REGELIA.

Greenhouse shrub.

I. stem cuttings - young shoots half-ripe .

II -  
III. ciliata Gg. 5. 74. B.M. 6100.

RHODOMYRTUS. DC.

Greenhouse shrub

I. stem cuttings .

Graphing onto M. communis?

II -  
III. tomentosa = Myrtus tomentosa B.M. 250.

SYNCARPIA.

I  
II  
III  
IV  
V

THRYPOMENE. Mill.

Tricornid greenhouse shrub

I. stem cuttings - half-ripe from : spring

II -  
III. saxicola = Baeckea saxicola B.M. 3160,



Dryptaceae 14.

## TRISTANEA.

hardy evergreen on  
greenhouse.

I. Stem cuttings - joints of shoots  
or short side shoots in spring 2-8 in.

II. seeds?

III. *Lawsonia* B.M. 4529.

*macrophylla* B.R. 1839.

*neriiifolia* B.C. 157.

## VERTICORDIA. DC.

greenhouse  
evergreen.

I. Stem cuttings - young shoots.

II. ripened seeds.

III. *nikens* B.M. 5286.

lc -

Betha Chaudes,

Notes on the Propagation of  
Dicot. Orders. N.



General note on the Nepenthaceae.

The Nepenthaceae are an order composed of the one genus Nepenthes (the Pitcher Plant ) which is interesting botanically for the modification of the leaves into insect-catching devices, and horticulturally for the beauty and curiosity of these <sup>ese</sup> ~~of th~~ coloured pitchers. The Nepenthaceae are found in various parts of the old ~~wo~~ world particularly in Borneo, Sumatra &c. By older sytematists the order was allied to the Cytinaceae and Aristolochiaceae, but now owing to the affinity of the flowers , the relationship with the Droseraceae and particularly with the Sarraceniaceae is seen to be ~~wo~~ more marked.

Culture and propagation of the Nepenthaceae are by no means difficult (see under Gen. arts. ) Vegetative means of propagation is the usual means of increase, though seed is also used. Stem cuttings strike <sup>difficultly</sup> without in heat. Root and leaf cuttings have not been investigated. The roots seem however impatient of disturbance.

NEPENTHES.

I. easily from stem cuttings - usual method.

from shoots cut into pieces 923.8.94.

or tops of shoots. - though don't root so well often as mature  
 roots: require more time & heat than most stone plants.

Layering also. 920.6.85. / 99.6.77.

(see prop. of Nepenthes.)

II. seeds very easy: when obtainable.

not so much used as veget. methods.

III. bicalcarata.

Masteriana 923.8.94 / 92.2.81.

Mixta 91.9.94.

Morganiana 915.10.81.

Northiana 926.11.87 / 90.24.10.03.

Rajah (rare) 96.8.87 / 921.12.95.

Rafflesiana 920.1.85.

Sanguinea

Stenophylla

Veitchii 90.29.8.96.

tc.

Balfouriana x 90.29.7.99.

distillatoria Bm. 2798.

Twei 90.18.9.97.

x Siu W. Thistleton Dye 918.8.00 / 923.8.00.

villosa Bm. 5080. 90.6.10.00.

ventricosa 90.18.6.98 / 917.1.03

IV. Pitcher Plants 919.10.72. / 910.1.74. / 919.6.80.

or Nepenthes 95.6.80 / 913.1.72.

920.9.79 / 99.6.77.

Nepenthes 928.1.88 / 90.11.9.97.

Nepenthes at Kew 920.11.97.

Pitcher Plants round  
 London. 914.1.88.

Pitcher Plant as a Plant 90.31.10.03.  
 Protector.

The Nepenthes of Australia 928.1.99.

Hybrid Pitcher Plants 930.5.85. / 92.6.83.

General note on the Nyctagineae.

The Nyctagineae are an order composed mostly of shrubs (a tree form occurs in Pisonia aculeata ) native in various parts of America.

The beautiful Bougainvillea glabra of cultivation belongs to this order.

The flowers of plants in the order are small e.g. Abronia &c. but the ornamental character is given by the large coloured bracts e.g.

Bougainvillea.

Propagation is mainly effected vegetatively by means of shoot cuttings.

Lindemuth tried leaf cuttings of Mirabilis jalapa. Roots were obtained after 17 days but no ~~shoots~~ shoots. The roots are thick in

Mirabilis and Colignonia and might be suitable for cuttings. They have not been investigated.

Nyctaginaceae. 1.

ABRONIA. Juss.

(annuals, half-hardy prostrate plants, rock-work, or border.)

Young cuttings in spruit-sandy soil.

Seeds best method citius prodnes (areuaria + umbellata) or imitated as in fragrans see 919.2.81.

areuaria 919.8.82.

Cycloptera 910.10.80.

fragrans Bm. 5544. 928.2.74. / 911.5.78 / 913.9.79.

latifolia Bm. 6546.

melleifera Bm. 2879.

umbellata 91.11.79.

The Abronias of Paul Verbenas 919.2.81.

The Sand Verbenas 927.8.81.

ALLIONA. Linn.

(hardy annual)

I. Seeds. Sandy loam. 921.10.74

II. in Carnata -  
violacea = *Oxybaphus violaceus* -

MIRABILIS. Linn.

fruits hard  
half perennial  
suitable for masonry

division - tuberous root with multiple  
annual method by Juss for yellow variegated white for other colors  
not 2nd year plant

fragrans (Linn) Bm. 271 / 916.8.80

923.2.74 / 922.10.82 / 922.10.82 Bm. 6266

Any Nyctagmiae  
BOUGAINVILLEA. Commers.

hardy perennial

I. Stem cuttings from wood. Early autumn.

II. Cytheri. 925.6.98. Rom. 4810.

III. glabra. 923.8.84. / 917.1.85. / 925.4.85. / 912.9.96.  
910.9.87. / 923.4.87. / 930.3.96.

q. var. sanderiana. 927.4.00.

q. var. Mand Chettle bough. 930.7.04.

Speciosa. 93.4.86 / 923.10.86 / 915.3.86.

spectabilis 929.5.86 / 917.4.86 / 98.5.86.

IV. Bougainvilleas and their Culture. 921.4.77.  
924.6.76.

Bougainvilleas. 922.5.86 / 97.1.93 91.10.96 (B. glabra).  
95.6.86 / 9e.13.6.96.

Bougainvilleas in India. 929.1.76 / 970.11.80.

de Bougainvillea -

BOLDIA. fragrans. 931.10.74

I. fragrans.

MIRABILIS. Linn.

greenhouse or  
hardy perennial.  
Suitable for rockery.

I. Division tuberos root with multiflora  
suckers.

II. usual method by pieces for jalapa: veget method & better for others which  
not ripen seed easily.

III. jalapa (Marvel of Peru). Rom. 371. / 915. 8.85.

IV. multiflora 923.2.78 / 922.10.92 / 92.10.80 Rom. 6266.

Hybrid Mirabilis. J.R.H.S. vol. XXIV 1900 p. 279

Nyctagineae.

OXYBAPHUS. Vahl.

Rare perennials

Division in spring

seeds in slight heat in spring

Cervantesii (Brit. Fl. Part Sweet Ser. vol. 1.)

viscosus Arn. 434.

PISONIA.

Stove or greenhouse herbs.

i. stem cuttings - half ripe in sand.

ii. Seed

iii. aculeata.

grandis

Present Day Water Lilies - J. Hudson, V.M.H.

Var. serotina p. 314  
Journ. Roy. Hort. Soc., Nov. 1912



General note on the Nymphaeaceae.

The Nymphaeaceae are a small aquatic order widely distributed according to the various genera, the greatest development being found in S. America. Affinities are with the Berberidaceae on the one hand and with the <sup>or</sup> Paperaceae on the other. While some of the plants take up a comparatively small amount of room e.g. Cabomba, Brasenia &c. others e.g. the wellknown <sup>regia</sup> Victoria are too large for an ordinary collection. The culture of the waterlily (Nymphaea) was very much brought <sup>to</sup> ~~at~~ the front by the untiring efforts of M. Latour-Marliac, whose results in hybridization are renowned. (see under Nymphaea). As aquatic~~s~~ the members of the family are perhaps best increased by in practice by means of seed, but vegetative propagation is also easily effected, by means of tubers division rhizomes &c. Cuttings are not very practicable.

Literature: Present Day Water Lilies. - J. Hudson V.M.H.  
Journ. Roy. Hort. Soc. <sup>Vol xxxviii</sup> Nov. 1912. p. 249.

BRASENIA. Schreb.

aquatic.

- I. *lutea*, Division
- II. *perfoliata* of the same for *perfoliata* & *perfoliata*
- III. *peltata* (The water shield.) Curious flat leaves. Dark purple fls.  
 917.1.74  
 915.6.90.

EURYALE. Salisb.

Warm water. trop. ag.

- I. Division of tubers.
- II. Seed.
- III. *ferox*. 911.8.83.

CAISOMBA. Aubl.

half hardy in summer  
greenhouse in winter

- I. root, Division
- II. Culture of *Metastachyum* in Italy 916.6.00
- III. *aquatica* - *Metastachyum* 911.4.83  
*Metastachyum* hardy in England 938.4.42  
*Metastachyum* 914.10.85.

NYMPHAEA. Linn.

Nymphaea

- I. Division of tubers - for culture 911.10.77.
- II. *lotus* & *flava* - for culture 916.3.18  
 915.7.76

Nymphaeaceae . s .

NYMPHAEA

NELUMBIUM. Juss.

(aquatic .

tubers . Division

Division of rhizomes for *pekinense* to .  
▽ roots .

Seeds the best & usual method . 913.11.97 .  
92.1.86 .  
have long vitality - best to cut the best a .  
(for *luteum* tubers better . 92.1.86 .

*speciosum* . 911.11.93 / 912.12.96 / 910.9.04 .  
(The Sacred Bean)

var. *album* 913.10.00 .

926.12.85 .

~~90.4.99 .~~

*album grandiflorum* 98.4.99 .

- *plenum* 97.9.01 .

*luteum* 92.1.86 / 919.11.81 / 911.10.81 .

*pekinense* 922.3.07

to .

10 . Culture of *Nelumbium* in Italy 92.6.00 .

*Nelumbium* & their Culture 911.11.82 .

*Nelumbium* hardy in England 925.11.93 .

The white *Nelumbium* 924.10.85 .

NYMPHAEA. Linn.

Nuphar.

I . Division of tubers . for *alba rosea* 911.10.79 .

root stock & fleshy roots for *N. flavo* 916.5.85

915.7.76 .

II . seed for new varieties  
producing

most of *Nymphaea* reprod. naturally from seed see 92.12.82 / 922.10.81

NYMPHAEAE

III. alba L. var. rosea

advena - Chromatella -

flava -

Fröbeli -

maritima: maritima. carnea te. see you. articles.

IV

Water Lilies 1919.5.83  
1920.7.78 / 1918.12.94 / 1911.12.97  
1913.9.98 / 1914.12.97 -

Hardy Water Lilies 1928.3.91. 1920.6.96 1935.90  
1919.8.93 1924.10.96.  
1922.9.93 1923.12.93.  
1930.9.93.

The Indian Lotus 1920.2.86.

The Water Lilies of Egypt. 1916.8.98 te.

Water Lilies in America 1914.7.96.

" in New Jersey 1920.3.86  
" " Berlin

My work among the Water Lilies. 1926.12.85.  
(N. maritima)

Nymphaea 1914.11.83 / 1912.1.86 /

Indoor, Water & Waterside Vegetation. 1927.9.79 -

Hybrid Nymphaeas at Kew 1917.8.97.

Mexican Water Lilies 1920.9.90

te

See Hudson in Gen. Bot. also.

Hardy Nymphaeas. (A. Bedford) J.R.H.S. vol. XXXIII, p. 364.

Blue Nymphaeas. (J. Hudson) J.R.H.S. vol. XXVIII, p. 86.

Nymphaeaceae f.

NUPHAR Sm.

See Nymphaea

I. Seed.

II. advena 11.6.72.

luteum

multiseptata 190.8.81.

VICTORIA.

I.

II. seed.

III. regia 90.21.11.02. / 90.4.3.03 / 922.8.74  
9 14.4.00.

- new emission 95.7.84.

var. Trickeri 978.4.00. / 985.1.02.

IV. The Great Water Lily 925.8.94.

The Victoria Water Lilies in the Open Air 923.6.00.

Bertha Chandler.

Notes on the Propagation of  
Dicot. Orders. O.



General note on the Ochnaceae

The Ochnaceae are an essentially tropical order chiefly found in Brazil. The chief interest horticulturally is the brilliant colour and curious construction of their fruit e.g. Ochna. The order is allied to the Dilleniaceae.

Seed is freely produced and propagation is best effected by this means. Stem cuttings succeed also. Root cuttings and leaf cuttings have not been investigated.

GOMPHEA

Achuaceae - 1.

CESPIDIZIA. Gondot.

Stove tree.

VEGETATIVE

PROPAGATION. stem cuttings. leaf-ripe: 8 weeks.

SEED.

SPECIES.

LITERATURE.



Gehraaceae 2,

GOMPHEA.

Stone evergreen shrubs.

I. Cuttings: fine shoots of young tops in spring.

II. ?

III. *Decorans* (olivaeformis) 97.11.91.

*Theophrasta*

(*gigantiphylla*) 920.9.02 (note) -

OCHNA. Vell.

Shrub. Stone.

I. Cuttings half ripe shoots summer: little difficult.

II. Seeds see 920.12.84.

III. (*multiflora* 913.6.03 / 930.12.82.  
*atropurpurea* Pom. 4519.

General note on the Olacaceae.

The Olacaceae are a small tropical order distributed chiefly in South and West Africa America. It is allied to Santalaceae and Loranthaceae and like them parasitic in habit. The plants contained in the order e.g. Schoeffia, Ximenia, &c. are of no horticultural importance.

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General note on the Oleaceae.

The Oleaceae are an order belonging to mainly subtropical regions e.g. Indian archipelago, China, Japan &c. It is nearly allied to Loganiaceae and other members of the Polemoniales cohort, as well as to the Celastraceae and other orders. This order is important in horticulture as it furnishes many of our beautiful hardy flowering shrubs such as Forsythia, Syringa. Some members of the Oleaceae e.g. Lilacs are very much more grown on the continent particularly in France than with us (X). Large trees such as Olea, Fraxinus &c. are also characteristic of the order.

Propagation by means of seed is effected readily for some species. But its free production is dependent on very favourable conditions and therefore vegetative <sup>methods are</sup> ~~inc-reases~~ is more commonly employed in the order.

Stem cuttings strike easily for most of the genera, and ~~di~~

Oleaceae contd.

<sup>and</sup>  
is especially useful for raising stocks for grafting.

Grafting is very largely used as the members of the Oleaceae (except Jasminum) have a very close affinity to each other. Fraxinus or Ligustrum therefore be used as a stock for nearly all the plants in the order. Usually stem cuttings are preferable but grafting is used for the delicate *Species*.

Layering can also be used in most of the genera with advantage

Root cuttings offer a mode of propagation in Jasminum, Olea &c.

Leaf cuttings are impracticable, since propagation would be slow and tedious, the leaves of the ~~whole~~ family being on the whole hard and leathery.

Oleaceae 1.

CHIONANTHUS. Gärtner.  
= LINOCEIRA.

hardy shrubs.  
boggy sheltered situations

I. stem cuttings - not often used.

layers in summer.

grafting sometimes on Ash, but slow & gives no seed.

on own root: ripens 1 seed & properly 925.11.76.

budding:

II. seed. very slow. better to graft 94.12.80.  
often imported 95.5.88.

III. relians 927.6.96 (note)

virginica 925.11.76

94.12.80.

93.3.88.

Fontanesia.

FORSYTHIA. Vahl.

Hardy decid. shrub.

I. easy of increase -

stem cuttings: ripe wood in Sept. half-ripe in summer.

layers also easily for suspensa. (common)

grafting on Prunel.

II. seed not common method.

III. europaea 90.10.8.04.

intermedia 919.4.80 (hybrid) 95.5.00.

Fortunei 926.4.02

suspensa 920.3.80. 95.4.84 / 919.3.84 / 928.6.90 / 923.4.04 / 90.2.5.9

viridissima 922.1.84 / 911.4.96. / 925.3.93 /  
(greenhouse)  
= suspensa.

IV. Forsythias 911.6.81 / 928.6.90 / 919.7.90 / 926.3.92. / 90.6.5.99.

Hybrid Forsythias 919.6.86.

920.3.89

FRAXINUS, Linn.

Hardy decid. tree.

Cultiv. do not root well -

Grafting on for vars. on ordinary Ash.  
more floriferous than seedlings, but not so free in growth.

Layering. not very practicable for old specimens: good for young.

Seed ripe in October: grows quickly (ornus) sambucifolia.)

Cannot be used for varieties. (weeping ash var. pendula comes up  
∴ variable. ordinary excelsior).

americana (white Ash) 906.11.87 / 919.10.89 / 910.6.99.

excelsior var. pendula 92.9.99.

lentis cifolia

(tamariocifolia.) 93.10.91 (note).  
931.8.89.

Manisii { 922.8.04.  
          { 930.5.85.

ornus = ornus europaea 95.8.82 / 916.4.87 / 924.11.88 / 922.6.89 / 919.6.97.3.

sambucifolia L.S. 2.8.02 / G.C. 26.7.02.

Remilbyensis 94.1.79.

zanthoxyloides 96.10.80.

The Ash. 923.3.89.

Uses of the Ash 914.5.92 / 915.5.86 / 98.5.86 /

Ornamental kinds of Ash 94.2.82.

The Ash & its varieties 923.9.82

FONTANESIA, Labill.

- I.
- II.
- III. philleraeoides 927.12.79.

Labill. Leon Pl. Syr. Rav. t.1.

JASMIMUM. Linn.

Stove greenhouse &  
hardy.

I. Stem-entire. Young shoots - spray.

Layers.. for hardy sp.

Budding.. for varieties

Suckers..

Root-entire for *J. gracillimum* P21. 1.94.

II. Fruits produced rarely - even on continent.

III. acuminatum P.R. 1296. angulare Pom. 6865 Gr. 17.11.00.

aurum variegatum P22. 10.81.

azoricum P27. 9.79.

didymum. P22. 11.79. Pom. 6349.

futicans P18. 6.98 Pom. 461.

floridum Pom. 6719.

grandiflorum P14. 3.92 / P5. 1.95. / P17. 9.04.  
(Spanish). see gen. art.

gracillimum. Pm. 27. 1.83 / P25. 2.91. / P4. 3.99. / P21. 1.74.

hirsutum P.R. 15. / P1. 2.79 / P14. 1.88 / P15. 12.83

humile P24. 6.99

Manigarsi Pom. 4823 / P12. 5.00

modiflorum.  
(White-flowering  
Jessamine) - P24. 2.94. / P28. 12.95. / P13. 2.04.  
P14. 12.95 / P1. 2.02 / see gen. art.

ligustrifolium. P11. 5.78.

officinale P25. 8.94 / P18. 1.96 / P20. 8.98.

polyanthum P26. 12.91.

revolutum P4. 8.94 / P11. 8.94 / P27. 6.96.

Sambae fl. pl. P22. 1.84  
(see gen. art.)

Wallichianum P.R. 1409.  
for other sp. see gen. art.

Claceae f.

i. The Jasmies 98.1.76. 377 / 99.1.97.

Jasmines Shrubby + Climbing 916.2.84.

Jasmines in Pots 912.6.86. 978 / 910.9.81. 921.90

Double vars. of Jasmin 920.8.92  
914.5.81.

Spanish Jasmin 923.4.92 / 914.5.92.

Winter flowering Jasmin 95.1.95.

PERNODORA 4+3

And + Bayl

Jasmin leaves can grow  
strong

LIGUSTRUM Linnaeus

Hardy shrub.

i. Stem cuttings. Good place to place 3 or 4 to grow together.  
easy. e.g. Smirnae to. from shade  
large clusters of roots formed.

ii. seeds also. Sow when ripe or having rotted for some months.

iii. Coriaceum B.M. 4519. 920.2.97.

Fortunei 916.7.81.

chinesse 94.8.83.

lucidum 927.9.90 / 920.10.00.

japonicum 930.8.84 / 95.2.87.

nepalense B.M. 2921.

ovalifolium 919.11.87 / 94.12.86 / 91.12.88.

Quihoui 923.2.89 / 917.9.92.

sinense 921.7.94 / 924.7.97 / 928.7.00 / 92.8.02 / 96.9.02.

rulgaris var. pendulum 925.10.79.

variegatum 910.7.80.

Olaceae S.

The Privet (W. J. Bean) - 117.3.77 / 19.1.97.

The Privet - 21.4.00.

14.5.78 / 10.9.81 / 14.1.90

Common + other Privets 25.1.90.

MENODORA H. + B.

Amb. + Bonpl.

Greenhouse evergreen shrub

I. stem cuttings, half-ripe shoots -

II. ?

III. scabra.  
trifida -

NOTELAEA

I. grafting on Privet. + stem cuttings - firm shoots.  
II. ?  
III.

Greenhouse evergreen shrub

NYCTANTHES Linn.

Stone evergreen

I. Cuttings of half-ripe shoots.

II. Difficult from seeds

III. arbor. tristis Bon. 4900 B.R. 399,  
(fragrant Indian Hursingar.)

IV. The high flowering Jasmine 25.11.99.  
(arbor. tristis)



Olaceae G. Linn.

OSMANTHUS cold.

mainly greenhouses  
evergreens.

OLEA Linn. 12.20 / 928.3.85 / 921.4.88

I. Stem cuttings - <sup>young</sup> firm shoots: species:  
Root cuttings.  
Layers.  
Grafting. on Privet, Ash, Lilac.  
(*O. undulata* diff. by layers + cuttings.)

II. Seed: five inferior plants. fruits small.

III. *capensis* B.R. 613.

*europaea* see gen. art.

*fragrans* Pom. 1552. 924.12.81 / 926.88 / 916.7.88.

*ilicifolia*

*laurifolia* Pom. 3089.

*undulata* Pom. 3089. Bot. Cal. 379.

III. The Olive Tree (*O. europaea*) 917.4.75.

Old Olive Trees in Majorca 921.10.99.

Olive Trees near the Mediterranean 92.1.75.

OSMANTHUS Lour.

hardy evergreen  
shrubs.

I. Stem cuttings: early end of summer, root by next spring.  
Grafting. on Privet in autumn.  
(objection e.g. in *O. myrsinifolia* - stock gives out roots.)

II. Seed not usually obtainable. (cp. Holly. seed best method.)

III. *aquilifolia* 915.8.96.

*ilicifolia* 94.4.85 / 919.11.84 / 912.1.95 / 926.1.95.

var. *purpurascens* 91.7.99.

oleaceae 7.

OSMANTHUS contd.

*Myrtifolius* 911.12.80 / 928.3.85 / 921.11.85.

for other vars. see ants.

*Osmanthus* 918.11.93

*Osmanthus* 91.8.96

Vars. of *Osmanthus* 927.9.90.

PHILLYRAEA. Ruin.

hardy evergreen

I. Stem cutting. best method : strikes easily : half ripe wood : summer.

Grafting on Prunel : but resulting plants not satisfactory esp.

*P. decora* : not so long lived as on plants on own roots.  
(cutting better method.)

Layering . in spring & autumn.

II. seeds frequently used : mixed with soil in rot. heap.

(*P. vilmoriana* abundant seed readily increased 917.5.02)

III. *angustifolia*.

*decora* Bon. 6800.

= *Vilmoriana*. 91.12.83 / 929.1.87 / 931.5.90 / 914.3.91 / 920.2.9

*media*.

*ilicifolia*.

*rosmarinifolia* 97.4.88

†.

IV. *The Phillyraea* 928.7.03.

*The Phillyraea* 916.12.93.

SYRINGA. Linn.

(hardy decid. shrub.)

stem cutting easily. young shoots in spring  
or half-ripe in August.

92.7.02 / 925.2.92  
99.7.92.

Grafting, not such free growth. see G.C. 28.10.99 etc.  
best on own roots. + gen. articles.

(Grafting + Budding on Common Prick not recommended for severe bars.  
see gen. art.)

Suckers: e.g. Persian Lilacs 911.6.92.

Seed for *S. ligustrifolia* etc.  
but not to be relied upon for varieties.

amurensis - B.M. 7534.  
= *S. ligustriflora*  
= *Ligustrina amurensis* - 929.12.77.

Emodi 919.7.84 / 93.11.77 / 97.7.94.

jorikavae G.C. 1.7.99  
920.6.85.

japonica 920.7.89.

oblata B.M. 7806.

vulgari 92.4.98.

For Garden Vars: *vulgaris* fl. pl. *Lemoinei*  
Jean Barb.  
Charles X.  
to to.

see gen. arts.

IV The Lilacs. 912.9.74 / 931.1.91. / 910.8.01.  
(*L. Lemoinei*)

New Vars. of lilac. 910.8.89 / G.C. 24.2.00.

Lilac - G.C. 6.8.98 / G.C. 29.4.99.

Glacaeae 9.

Double lilacs for forcing 928.3.85.

Double lilacs. 97.8.80. / 93.12.87 / 913.6.91.

White lilac 6 97.3.74 / 930.5.74 / 96.4.78.

Species & Native Habits of the lilac. 915.8.91.  
(A. Traubet). 922.8.91.  
929.8.91.

Strawberry lilacs. 95.4.90 / 919.4.90 / 99.7.92 / 925.2.93 / 918.3.93.

Persian lilacs. 916.78 / 97.6.90 / 916.6.00. B.M. 486.

Forcing lilac 913.1.72 / 929.1.81. / 92.4.2.99. / 92.11.6.04.  
915.2.79 / 920.4.89 / 92.14.12.01

Stratification see 92.27.12.02  
for forcing lilac.

also. Aethylation.....

Hybrid lilacs - (P. Remons) J.R.H.S. vol XXIV. p. 299 1900.

Stem cuttings succeed easily

Root cuttings and leaf cuttings have not been investigated

## General note on the Onagraceae.

The Onagraceae are an important order in horticulture as supplying the many species of Fuchsia. The members of the order are mainly herbaceous a few being shrubs and are to be found mainly in the temperate zones of the new world e.g. California, Mexico, West South America &c. Besides Fuchsia the Onagraceae afford annuals in the summer such as Clarkia, Gaura, Zauschneria and in the winter the orchidlike Lopezia.

Culture and increase is easy. Many plants e.g. Willowherb increase<sup>28</sup> so easily in the garden that it becomes a weed. Seed is abundantly produced and is the best method for increasing the annuals e.g. Clarkia, Euchatidium &c.

Vegetative propagation is largely utilized in nature for the increase of the Onagraceae. e.g. in Epilobium in which plant stolons runners and rosettes are produced. Division may also take place artificially for the purpose of reproduction.

Stem cuttings succeed easily.

Root cuttings and leaf cuttings have not been investigated

Chagraceae 1.

CLARKIA Pursh.

hardy annuals.

II. seed in August. or spring 92.8.84.

III. elegans - RR. 81575 see also 915.6.89.  
e. fl. pl. 922.1.76.

fulchella see 915.6.89. Pom. 2918.

C. var: Salmon Queen 922.7.99.

IV. Clarkias 922.10.84.

Double Clarkias 912.7.79.

California Annuals 915.6.89.

EPILOBIUM Linn.

(hardy perennials.)

I. Division in spring. better in winter.

stem cuttings in spring. ripe wood. easy. 914.9.78.

II. seed also.

III. angustissimum Pom. 76.

angustifolium 919.12.96 / 930.7.98.

billardierianum 912.8.93.

Dodonaei 929.9.94.

hirsutum to see gen. arb.

latifolium 918.11.93 / 912.6.97.

obcordatum Pom. 7641 / 95.9.85 / 926.9.85 / 939.6.95 / 910.9.87.

IV. The Epilobium 95.9.85.

Onagraceae 2.

EPILOBIUM. L.

EUCHARIDIUM Fisch. & Mey.

hardy annual.

seed in spring.

Breweri + 99.7.81.

x 94.6.84.

Concinnum Pom. 3589.

FUCHSIA. Linn.

greenhouse & hardy.

I. stem cutting. at any season: proverbially easy: spring & autumn -  
Gony Wood. bold. see 93.9.83 & gen. art.

II. seeds also see gen. art. espe 930.10.86 / 910.9.87

III. arborescens. 928.2.80.

Boliviana 929.4.76 / 98.11.79 / 929.4.82.

cosalema 918.10.79.

microphylla 91.11.79. / 99.12.93.

Garden vars. too numerous to mention (see gen. articles).

var. Mrs. Marshall 93.8.83.

Shower of Stars 91.9.00. &c.

IV. Fuchsias 918.6.92 / 97.3.96 / 911.9.97. / 94.2.99.  
926.8.93 / 929.8.96 / 931.12.98 / (coloured plate  
of F. Monarch)

The Fuchsia 920.8.92.

Fuchsias as Pillar Plants 917.10.96.

Fuchsias as Basket Plants 94.8.94.

♀ ... 92.10.97

FUCHSIA. contd.

IV. Best white double Fuchsia's 919.7.79.

Garden Vars. of Fuchsia's 915.8.91.

Notes on Fuchsia's 914.11.91.

Fuchsia's as Climbers - 916.5.91.  
(Plate of F. decumbens)

Fuchsia's in the Flower Garden. 923.8.90.

Coloured leaved Fuchsia's 94.5.89.

The Centenary of the Fuchsia 915.12.88.

Fuchsia's treated as Annuals. 930.10.86.

Fuchsia's as Pyramids 90.18.8.00.

Standard Fuchsia's 95.7.02.

Fuchsia's in Autumn 98.11.89 / 926.10.89.

Hardy Fuchsia's 924.8.89.

Winter flowering Fuchsia's 915.6.72 / 912.6.86 / 926.9.85.

Fuchsia's for Greenhouse  
Border 94.4.03 / 914.3.03.

LUDWIGIA. Lin.

GAURA. Lin.

hardy perennial

I. stem cuttings - easy spring & autumn see 99.11.01 / 924.9.89.

II. seed also in spring. see 99.11.01.

var. B.R. 389

Lindheimeri 93.9.84 / 924.9.84 / 93.12.98 / 99.11.01.



Onagraceae 4

JUSSIAEA. Lous.

keep-hardy

(adv: roots freely produced in nature on reefs -)

skew cuttings

seed?

natans 923.7.81.

repens

macrocarpa ciliata

LOPEZIA. Cav.

annual.

skew cuttings also - to keep over winter.

seeds in spring usual.

coronata - Brit. Fl. Gard. Sweet. Ser. 1. vol II. 108.

923.2.78 / 917.12.81.

miniata 91.1.96.

racemosa B.M. 254.

LUDWIGIA. Linn.

repens. (Swartz. Ic. Ind. occ.)

MONTINIA. ?

(by P.P. in Saxifrag.)

Enagraceae S.

OENOTHERA. Spach.  
including GODETIA.

(hardy <sup>annual!</sup> perennials)

I. Division in spring  
stem cuttings of perennials in spring -  
Snakers easily for *O. tanacetifolia* -  
root cuttings also for *O. caespitosa*. Sc. 19.10.01.

II. seed in spring also.

III. *biennis* 98.3.89 / 917.8.89.

*Lamarckiana* 92.8.84 / 91.1.12.00.

*macrocarpa*. 913.8.84 / 927.8.84

*missouriensis* 912.9.91 / 97.7.94 / 95.8.99.

*marginata* 919.1.95. plate in 96.12.84.

*ovata* 928.5.98 / Sc. 22.7.99.

*speciosa* 913.7.85 / 925.7.96 / 926.2.98.

*s. rosea* 919.10.01.

*tanacetifolia* 930.8.84.

*taraxacifolia* 97.5.81 / 921.10.82.

IV. *Oenotheras* 91.13.6.03.

including *Primroses* 92.10.80 / 914.8.72.

911.9.80 / 921.7.94.

96.12.84 / 924.9.92.

*The Godetias* 924.12.92.

agraceae 6.

TRAPA. Linn.

(water annual).

seeds. 91.9.77.

bispinosa 922.6.78.  
(Linn)

triflorus. (Water Chestnut. 916.10.77 +gen. arb.

The Water Caltrops 922.12.83.

TOSSAIAEA. ?

LAUSCHNERIA. Presl.

hardy rock pla

I. Division of roots: Care necessary, as root-stalks very brittle  
in L. californica -

Stem cuttings in autumn & spring.

II. seeds also.

III. California 910.10.96 / 94.9.97 / 98.11.02 / 929.11.02.

var: splendens 910.9.98 / 916.9.99.

IV. Zauschneria (californica) 910.12.98 / 924.12.98 / 931.12.98 / 90.7.99

## General note on the Orobanchaceae.

Like the Lentibularineae, the Orobanchaceae are an offset of the Scrophularineae degenerated in their structure in this case by their parasitic habit on the roots of plants. Orobanche major and minor (the Broomrapes) Lathrea (the Toothwort) are British, but others e.g. Aeginetia &c. are tropical. The order is of botanical rather than of horticultural interest. To be noticed for their curious structure are Christisonia, Cistanche (b.m. 7911) Aeginetia (Indian Broomrape) Most of the Orobanchaceae possess little beauty and many are <sup>harm</sup> ~~afraid~~ from the nourishment they <sup>draw</sup> ~~derive~~ from other plants. Such are Orobanche racemosa, on tobacco and hemp, O. minor on clover &c. One species of Lathrea however viz. clandestina is grown for the crocuslike beauty of its flowers.

Propagation is effected naturally by seed <sup>which</sup> ~~whives~~ thrives if it comes into contact with a root of a host plant. (S)

Vegetative propagation cannot succeed unless a portion of the host plant is also available or detached.

Orobanchaceae.

LATHRAEA. Lin.

root-parasite.

I. easy by bits of stems to.

II. seed also.

III. Squamaria. 9.11.5.89.

Clandestina 9c. 7.5.06 / 9.4.5.89 / 9.22.6.89 / Rom. 4106.

IV. Lathraea 9.6.4.89  
(Clandestina) 9.11.5.95.

OROBANCHE. Tourmf.

root-parasite.

I. (prop<sup>n</sup>. by <sup>so-called</sup> tubers ?) parasitic on roots of other plants.  
see 9.11.1.02 / 9.18.1.02.)

II. seed, most usual.

III. speciosa. 9.9.2.01. / 9.1.2.02.  
9.1.9.00.

IV. major 9.13.7.89.  
Orobanches 9.15.6.01.

The Broomrapes. 9.13.9.84.

PHELIPAEA. Reut p.

root-parasite.

= ANOPLANTHUS.

- I.
- II. seed.
- III. Biebersteinii 9.5.6.80.  
egyptiaca 9.28.2.80.

Bertha Chandler.

Notes on the Propagation of  
Aicol. Orders. P.



pa

General note on the Papaveraceae.

The Papaveraceae are an order belonging almost exclusively to the northern regions (Central and East Asia, N. America &c.) They are closely allied to the Cruciferae, Capparidaceae and other members of the Parietales cohort. The plants in the order are mainly annuals ~~propagation~~. Many of the Papaveraceae are free growers and robust feeders e.g. Bocconia cordata Papaver somniferum, and are thus more suited to the wild than the cultivated. The fugaceous character of their flowers make them also unsuitable for ~~cultivation~~ cutting though flowering so freely and persistently, they make good patches of colour. Sanguinea the blood root is an effective rock plant.

Propagation is best effected by seed which is produced in abundance. so much so that when once established the plants increase themselves from year to year. As with other plants impatient of root disturbance the members of the Papaveraceae e.g. Romneya Coulteri &c are best grown from seed where they are intended to remain.

Vegetative propagation by division and stem cuttings for the perennials is also easily effected. Root and leaf cuttings are scarcely worth investigating in practice while seed offers such a ready means of increase.

SOCCEONIA

Papaveraceae. l.

# ARGEMONNE, Linn.

mainly hardy annual

## VEGETATIVE

PROPAGATION. - Suckers.  
division for perennials.

## SEED.

- the usual method: perenn: treated as annual.  
Sown as soon as ripe, or else lies dormant 93.1.74

## SPECIES.

- *albiflora* B.M. 2342.
- *hiopida*.  
(the Prickly Poppy) 917.9.81 / 96.9.90. / 93.10.96 / 924.7.97.
- *mexicana* -  
= *grandiflora* 912.9.03. / 924.9.04.

## LITERATURE.



Papaveraceae. 2.

OMECON Hand:

BOCCONIA Linn

(hardy perennials.)

I. Suckers. plants must be kept within bounds, else take up lot of room.  
Division

II. Seed. also.

III. cordata B.M. 1905. § 31.1.80 - § 30.8.90 / § 31.3.00.  
§ 21.10.82 / § 8.3.89 / § 27.7.95.  
ESCH. japonica.  
c. var. carnea § 4.12.97.

ferruginea pubescens B.C. 83.  
integrifolia.

microcarpa § 5.9.96 / § 10.9.98 -

IV. Bocconia § 8.10.98.

CHELIDONIUM Linn.

(hardy herb. perennial)

I. Division

II. Seed.

III. grandiflorum.  
majus.  
G.L.A.M. fl. pl.

DENDROMECON Benth

hardy -

I. stem cuttings.

II. seed: plants better & stronger than from cuttings.

III. rigidum B.M. 5134 § 17.7.97 / § 15.10.98 / § 8.7.99 / § 19.10.01.

IV. The Tree Poppy § 10.10.96.

Papaveraceae 3.

OMECON. Hance.

hardy perennial.

I. sown: prop. very early.

II. seed?

III. Chionantha. B.M. 6871. 926.1.89.  
(Chinese Cyclamen leaved Poppy)

<sup>SCH</sup>  
ESCHOLTZIA. Cham.

hardy annual.

I. division. also.

II. seed best: sow where intended to remain: best in autumn.

III. California 925.11.99.

erocaea

c. fl. fl. mandarin 915.12.77.

for other sp. see gear arb.

IV. Eschscholtzia 927.12.93  
927.9.93  
927.6.03

new varieties of Eschscholtzia 919.8.76.

A New Use for Eschscholtzia 916.5.03 -

GLAUCIUM. Town.

I. ?

II. Seeds: successive sowing spring & autumn for succ. flowering.

III. Corniculatum 920.12.79 / 910.1.80.

flavum 923.7.04.

luteum 921.6.90 / 928.7.94 / 98.12.00.

Serpieri 917.1.94.

tricolor 92.3.1.03 / 92.13.8.04.

Papaveraceae f.

HUNNEMANNIA. Sweet.

half hardy herb. perenn

i. Division

ii. seeds in spring

iii. *funariaefolia* G11.6.87 / G15.3.92 / G14.9.95 / G13.8.04.

HYPERICUM Linn.

hardy annuals

ii. seed

iii.

MECONOPSIS. Vieg.

hardy herb. perennia

i. Division in spring

ii. seed in abundance. best method: spring

iii. *aculeata*. Pom. 5456. G11.8.83 / G12.8.99.

*canbriica* G17.6.76 / G14.6.92 / G17.6.99.

*grandis* G15.9.00.

*heterophylla* Gc. 26.5.00 / Gc. 22.6.01. /  
G16.12.99 (Rare).

*nepalensis* G16.3.81 / G20.6.85 / G28.2.85 / G25.7.95 / G20.

*simplicifolia* G17.6.79 / G22.5.80.

Wallichii G26.6.75 / G19.3.81 / G11.3.82 / G29.7.82.  
G15.8.91 / G16.2.95 / G31.7.97.

iv. *meconopsis* G14.2.93.

Indian Poppies G6.8.81.

PAPAUER Tourm.

hardy annual & perennial

I. Division of roots.

II. Seeds. best method. spring or better in autumn.

- III.
  - alpinum 920.10.83 / 922.8.96.
  - arenarium 922.1.96.
  - bracteatum 912.6.86
    - var. maeranthum 927.5.93.
  - glaucum  
(Tulip Poppy) 99.7.92 / 931.9.95 / 97.8.97
  - Hookeri 922.1.87.
  - laevigatum 923.2.89 / 96.7.89.
  - rudiculae  
(Iceland Poppy) - see gen. act. on Iceland Poppies  
930.10.86 / 923.4.87 / 98.12.88 / 913.9.90.
  - v. fl. pl. 918.7.85.
  - orientale 911.6.81 / 910.11.83 / 924.11.83 / 917.6.93  
see Oriental Poppies.
  - pavoninum 910.7.86 / 914.8.86.
  - pilosum 922.6.95 / 923.6.00 / 928.6.02
  - rhaeos.  
= umbrosum  
(Shirley Poppy) 928.1.76 / 924.4.80 / 925.9.86 / 94.6.87 / 90.11.2.99.
  - rupifragum 919.6.97.
  - r. var. atlanticum 98.10.98.
  - Somniferum 90.5.8.99. / 91.30.6.00 / 923.2.01.  
(Opium Poppy).
  - Spicatum 99.7.81.

Papaveraceae 6.

PAPAVER contd.

10 Gen. Articles on Poppies.

Annual Poppies 916.12.3.81 / 96.7.89.

Poppies 99.6.83 / 925.6.84 / 94.8.88 / 927.7.89.  
912.12.96 / 95.17.8.01.

Double Poppies 926.2.76.

Single + Double Poppies 913.2.86.

The Iceland Poppy. 911.11.84. / 91.8.96 / 95.27.6.03.

Oriental Poppies 99.6.83 / 923.6.94 / 926.6.97.

Perennial Poppies 918.6.81 / 926.3.92.

Shirley Poppies 913.4.95 / 919.9.03 / 925.6.04.

Garden Poppies 919.5.83 / 931.12.92.

Poppies as Cut Flowers 926.4.96.

Hybrid Garden Poppy 94.11.99. / 918.11.99.  
921.10.99.

Giant Poppies 927.6.85 / 911.7.85 / 921.8.86 / 915.6.95.

Opium Poppies 918.7.85.

On some hybrid Poppies (H. de Vilmorin.) J. R. H. S. Vol XXIV. p. 203.

Microcalyx. 95.13.9.02 / 95.3.9.02 / 95.9.9.02

11 Gen. Art.

California Bush Poppy 912.6.99. / 923.9.99.

(R. Coombs)

Lapaveraceae J.

PLATYSTEMON Benth.

hardy annuals.

I. seeds in spring or autumn.

II. Californicus. Pom. 3579.

♀ 10.86 / ♀ 12.3.04.

(Canadian Bush Poppy

or Purshii)

PLATYSTIGMA R.Br.

half hardy perennial

I. Division

II. Seed

III. linear B.R. 1954.

linearis Pom 3575

ROMNEYA

(half hardy or hardy herb. perennial)

I. Division

root cuttings, see ♀ 6.4.96 / ♀ 19.5.00

layers, also see ♀ 31.7.97.

II. Seed best; sometimes sparingly produces esp. in North Prov.

slow to germinate & do not transplant well. ♀ 19.5.00 / ♀ 14.2.

III. Conlteri. ♀ 16.9.76 / ♀ 8.11.84 / ♀ 5.11.93

♀ 8.9.77 / ♀ 28.7.88 / ♀ 7.8.97

♀ 25.5.78 / ♀ 6.3.86 / ♀ 31.7.97.

trichocalyx, ♀ 13.9.02 / ♀ 3.9.04. / ♀ 4.9.04.

IV. Gen. Arb.

Californian Bush Poppy ♀ 15.4.99. / ♀ 23.9.99.

(R. Conlteri)

Papaveraceae 8.

SANGUINARIA. Linn.

Hardy tuberos perenn.

- I. Easy: division in sprays
- II. Seed also
- III. Canadensis Pom. 162  
 (Canadian Blood Root  
 or Pukeon) \$25.2.82  
 \$23.6.00  
 \$28.5.04

STYLOPHORUM. Nutt.

(hardy herb. perennial)

- I. division in sprays
- II. seeds in sprays
- III. diphyllum \$14.5.98  
 \$16.6.00  
 \$23.4.04  
 japonicum P.M. 5830

General note on the Passifloraceae.

The Passifloraceae are composed mainly of climbing plants. They are allied to the Malsherbiaceae and the Turneraceae and abound in the ~~the~~ tropics, great numbers being found in South America. The Passifloras are mainly cultivated for their flowers which are large and showy, but also for their fruit which in many species <sup>e.g.</sup> Passiflora edulis, Tacsonia molissima is edible.

Propagation is usually effected by seed though artificial fertilization is often necessary, many Passifloras, Tacsonia being self sterile. By cross fertilization in this way many hybrids have been obtained, ~~The~~ especially in these two genera. The seed of the Egg fruits or granadillas is treated in the same way as that of Melons dried and ~~preserv~~ till the following <sup>spring</sup> for sowing.

Vegetative propagation is also effected in most ~~genera~~ <sup>† some genera</sup> climbers by ~~the~~ means of stem cuttings ( Jacaratia dodecaphylla is an exception ).

Root and leaf cuttings have not been investigated.

The regeneration of tendrils is not only <sup>an</sup> interesting phenomenon in itself, but accidentally gives a biological proof of the long known ~~the~~ fact that tendrils of the Passifloraceae are modified flower stalks (cp. tendrils of Leguminosae and see genia).

Layers with a nick just below the joint are a mode of increase for many of the Passifloras.



Taxifloraceae 1.

CARICA. Linn.

store evergreen trees.

I. stem cuttings: ripe shoots.

II. seed also.

III. *Carolinianensis* Pom. 6198. 946 912.2.76.

Papaya Pom. 2898-9.

9.12.99.

9.21.7.00

9.2.2.01.

IV. The Papaw tree. 93.5.79.  
(*C. papaya*)

DISEMMA. Labill.

leaf. hardy.

I. stem cuttings.

II. seed.

III. Habni 96.9.84.

GYNOPLEURA.

I.

II.

III. *humilis* Pom. 7645.

KERAMANTHUS.

III. Kiki Pom. 6271.

MADECCA.

Passifloraceae

JACARATIA. Maragr.

Stove tree -

Conditions for prop. stem cuttings not yet determined  
yet  
Soft wood in.

seed?

Dodecaphylla -

OPHIOCAULON. Hook f.

Stove climber

I, stem cuttings

II, seed?

III, Cissampeloides  
(Passiflora marmorata).

PASSIFLORA. Linn.

Hardy.  
Green house / 8 ft  
climbers.

I, stem cuttings easy - young shoots: spring or summer. 9.9.83 / 9.3.7

kudrilo .. see Winkler.

franchetii (also 9.2.7.98  
9.9.7.98.)  
punctata 10.11

II, seed .. 9.4.101

III, actinia 9.12.7.02

alata 9.17.5.84 / 9.25.12.97 / 9.12.2.98.

amabilis 9.22.6.99 (plate) -

Constance Elliott  
Coerulea 9.15.84 / 9.1.85 / 9.7.90

Passifloraceae 3.

PASSIFLORA. Contd.

caerulea Constance Elliott 97.5.87.

edulis 97.3.96. 91.9.00.

9c. 22.1.98. 98.11.02.

9c. 12.2.98. 9c. 19.9.03

galbana 9c. 7.11.96.

feminoza 9c. 4.12.97.

racemosa 9c. 18.3.99.

9c. 1.4.99.

Watsoniana. 925.8.94

93.9.04

— adiantifolia 922.11.90.

929.11.90.

arboorea 917.1.91.

caerulea. 911.9.83 / 98.11.84 / 921.3.85 / 928.4.88

(hardy) 927.10.94.

kermesiana. 921.2.91.

P. Margaree Wilson 9c. 11.2.99.

pectinifera 922.1.76

punctata B.C. 101.

quadraangularis 95.1.01.

(Granadilla).

Passifloraceae f.

PASSIFLORA. contd.

TACSONIA

half bushy, evergreen  
climber

18. Gen. Lit. on Passifloras.

- Passion Flowers. 927.5.76.  
93.3.88.

- Fruiting the edible Passion Flower 97.11.74.  
Passiflora edulis + other sp. 90.2.4.98.

- The Grauatilla 91.5.97

Passion Fl. for culting. 921.6.90.  
- (decoration) 94.11.93.

Shrimp Passion Flowers. 927.8.81.

Passiflora racemosa bothers 921.2.91.

Passion Flowers + their Culture 913.3.80/91.9.83.

Culture of Passifloras 93.7.86.

Lecture on Reprod. + Cross Fertilization  
of Passifloras. Robert Mendel. Date?

The Passion Flowers W. B. Hensley. 91.7.76.  
(Monograph)

Passifloraceae J.

TACSONIA. Juss.

half. hardy evergreen  
climbers

Cuttings of young shoots in summer -

Seed: sometimes not produced as in Van Volxemi; artificial fertility  
necessary.

exoniensis ♂ 18.12.86.  
♀ 26.9.91.  
♀ 25.12.97.

insignis ♂ 1.8.03.

militaris ♂ 30.12.99 / ♀ 17.3.00 / ♀ 5.1.01.

molissmia ♂ 18.10.90  
(fruit edible) ♀ 21.6.02.

Van Volxemi ♂ 5.12.74 / ♀ 28.3.85.  
♀ 14.10.99 / ♀ 4.11.99 / ♀ 11.11.99.

for other arts. See gen. arts -

Laesonia ♂ 14.3.85.

Laesonia as a Room Plant ♀ 27.12.84 / ♀ 17.1.85.

General note on the Pedalineeae

The Pedalineeae are a small order allied to the Scrophularineae and very like Gesnerads in appearance, found chiefly in tropical Asia S.Africa, Arabia. The order includes ~~the~~ according to Bentham and Hooker Artynia which is often separated e.g. in Engler -Prantl as a distinct order, the Pedalineeae being distinguished by their central placement, the presence of glands ) Pedaliium &c. The plants are mainly annuals and perennials, rarely herbs, not often seen in cultivation Sesasum species and especially S. indicum are important as oilbearing plants.

Propagation is effected in nature and in practice by means of seed.

The curious hooked fruits of Harpagophytum (Uncaria) procumbens, H. verticillata &c. are well adapted by nature for dispersal.

Pedaliaceae

MARTYNIA - Linn

half-hardy annuals

seeds in 8 pairs in slight heat.

ii. fragrans B.R. 1841. t. 6.

♀ 20.9.79 / ♂ 4.4.85

♀ 17.9.81 / ♂ 18.11.93.

lutea B.R. 934.

roboscida B.M. 1056.

iii. Martynias & their Culture 931.1.80.

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General note on the Peneaceae.

The Peneaceae are lowgrowing evergreen shrubs or subshrubs with leathery leaves found mainly in the Cape. The plants form a small order very near the <sup>h</sup>Tymeliaceae of more botaincal than horticultural interest. The various species of Sarcocoloon are however beautiful shrubs with ornamental flowers and pendent habit, which might be more often seen in cultivation than they are .



General note on the Phytolaccaceae .

The Phytolaccaceae are an order mainly distributed in tropical America and allied to Aizoaceae, Nyctagineae and others of the Centrospermae group. The members of the order in cultivation are mainly stove plants and are not valued very highly, as they are characterised by inconspicuous flowers. But two genera especially e.g. Rivina (species humilis, laevis &c. ) and Phytolacca decandra are more largely cultivated on account of their brightly coloured berries which make them an asset for table decoration in winter when other plants are not so plentiful .

Propagation is mainly effected by seed which is abundantly produced and usually germinated where it falls.

Vegetative propagation however is common. Stem cuttings strike without difficulty. Leaf cuttings of Rivina humilis were tried by Lindemuth but though roots were obtained after 16 days no shoots were formed. Leaves of Ledenbergia rosea were tried with more success though propagation by this method was too slow to be practicable. Shoots were obtained after a period of 48 days.

The roots of ~~/~~ many species are thick e.g. Phytolacca but root cuttings have not been investigated.

Phytolaccaceae, 1.

ERCILKA, A. Juss.

hardy climber.

- I. stem cuttings?
- II. seed: fast grower.
- III. spicata = *Beridgesia spicata*.  
 926.3.84  
 926.3.92.

> misl. HOUGHTYKPA

PETIVERIA, Plum.

stove evergreen.

- I. readily from stem cuttings: half-ripe shoots: spring.
- II. seed, also.
- III. alliacea B.C. 148.

PHYLOLACCA, Linn.

mainly hardy herb.

- I. stem cuttings
- II. seed readily obtainable: preferable method to beget.
- III. albo variegata 97.5.84.  
 decandra 919.7.79 / 918.3.82 / 918.9.86.  
 (Pokeberry)  
 electrica 920.1.77.  
 icosandra 910.10.74.  
 purpurea 925.6.81.  
 purpurascens foliis variegatis 920.11.86.
- IV. Phytolaccas (note) 925.10.90.  
 Uses & Distribution of the Pokeberry 928.11.74.

Phytolaccaceae 2.

Greenhouse?  
Stove evergreen.

RIVINIA, Linn.

I. stem cuttings in sprays is usually included in this order, and

II. seed also, produces freely: read or means of increase.

III. flava. 913.12.73 / 98.10.81.

humilis Pom. 1781.

910.11.88 / 912.1.95.

926.3.98 / 915.10.98.

929.10.98 / 90.2.12.99.

laevis 920.12.79.

922.7.82.

929.7.82.

fructuosa.

IV. Risinas 95.2.82

98.12.83

90.12.12.98.

Rivnia humilis as a table plant. 918.11.76.

917.10.85.

R. humilis as a standard 922.12.83.

HOULTYNNIA, Thunberg.

Hardy or half hardy  
bog plants.

= ANEMIOPSIS. Hook. + Arn.

I. Division readily.

II. Seed also.

III. California. Pom. 5292.

- Anemioopsis

cordata

Pom. 2731.

General note on the Piperaceae.

The Piperaceae are an essentially <sup>Tropical</sup> order of wide distribution closely allied to the Saurureae which is usually included in this order, and Chloranthaceae. (The Saurureae contain hardy marsh plants e.g.

Saururus cernuus. The hardy Houttynia also belongs to this order.)

The Piperaceae are themselves stove plants grown for their ornamental foliage rather than for their flowers which are inconspicuous.

They are of easy culture and increase, characterised by soft tissues and usually somewhat fleshy leaves.

Seed is rarely employed for increase since vegetative propagation by stem and leaf cuttings is so easily effected. The roots are usually fibrous and are not suited <sup>or</sup> for propagation.

# PEPEROMIA.

mostly stone plants.

R. & P.

- I. stem cuttings easily.
- leaf cuttings - easily esp. for larger leaved vars.
- Division.
- Suckers.

not so much used: used when obtainable.

- III - argyrea 913.8.97
- = Saundersii 930.12.93.

- (marmorata -
- Chusicaefolia .

prostrata 910.9.81.

= nummulariaefolia .

resedaeflora 916.8.84 / 910.8.89 / 919.4.90.

(only one of Peperoms with ornamental flowers.)

Peperomias 922.12.83 .

# PIPER.

Stone Climbers

with MACROPIPER.

- I. very easy increase -
- Stem cuttings .
- leaf cuttings
- Suckers from base of plant.

II. Seed also .

III . P. Coriaceum . Be. 128 .

Piperaceae. 2.

PIPER cond.

III. Macropiper ornatum - 912. 11. 84.

peltatum 90. 10. 4. 97.

porphyrophyllum 910. 11. 77.

= Cissis porphyrophylla

garden var. see Cat. 3. Bollto. 1846 on.

IV. Black Pepper Tree 922. 1. 81.

General note on the Pittosporaceae.

The Pittosporaceae are for the most part woody herbs, shrubs and small trees limited in distribution to Australia, except Pittosporum which is also found in the tropics. The order is of doubtful affinities but possibly has relationships with the Saxifragaceae. The Pittosporaceae in cultivation are nearly all greenhouse shrubs. Some are <sup>half-</sup>hardy or even quite hardy e.g. Billardiera longiflora.

The plants in the order are comparatively easy of culture and increase, either by seed or vegetatively by means of stem cuttings at almost any season. Leaf and root cuttings have not been investigated.

Pittosporaceae. 1.

BILLARDIERIA. Sm.

hardy or greenhouse  
shrubs.

I. Stem cuttings: easy.

II. Seed also.

III. Cymosa.

longiflora (Autumn blue berry).  
926. 9. 79  
930. 8. 84  
B.M. 1507.

MARIANTHUS.  
mutabilis B.M. 1313.

Scandens B.M. 801.

BURSARIA. Cav.

greenhouse evergreen shrub.

I. Young cuttings: easy. heat.

II. Seed?

III. spinosa B.M. 1767.

CHEIRANTHERA. A. Cunn

(greenhouse  
shrub)

I. Stem cuttings at almost any season.

II. Sp. shrub.

III. linearis Hook. Ic. 1. Taf. XLVII.

parviflora B.M. 7361.



Pittosporaceae R.

HYMENOSPORUM - R.Br.

Greenhouse shrub.

= Pittosporum.

I. stem cuttings in heat.

II. seeds.

III. flavum - R.Br. 4799.  
= P. flavum

MARIANTHUS Hueg.

Greenhouse climber.

I. stem cuttings - : young side shoots.

II. seeds.

III. caeruleo-punctatus R.Br. 3893.

Drummondianus 930. 8. 90 R.Br. 5521.

virgens. R.Br. 5233. 9. 10. 93  
= Calopetalon virgens 9. 9. 94.

Sp. rarely seen in cultivation, though M. Drum. has pretty blue *Viola* like flowers.

PITTOSPORUM Banks.

half hardy.  
greenhouse evergreen  
shrubs.

I. stem cuttings - at almost any season. 922. 7. 90.  
ripe shoots. 925. 10. 82.

II. seeds also.

III. bicolor Lc. 19. 2. 98.

colensoi 918. 11. 76.

crassifolium Lc. 9. 9. 99 / Lc. 14. 12. 01.

PITTOSPORUM contd.

- III . eriocarpum - Pom. 7473 .
  - eugenioides - Gc. 4.9.97.
  - illicioides - Gc. 13.8.04.
  - mayi -
  - revolutum - G 3.3.01.
  - Lobaria - G 18.2.88
  - (evergreen) - G 22.2.90
  - G 19.3.92 .
  - undulatum - G 21.4.77.
- IV . Pittosporum G 14.11.74 / Gc. 18.11.99 .
- Pittosporum hardy in Ireland G 18.12.75.

SOLLYA Lindl.

Greenhouse evergreen  
climber

- I . stem cuttings root easily summer  
plant's flower more readily than seedling  
in lucaris to G 25.6.87 / G 15.6.89 / G 27.5.93.
  - II . seed readily for heterophylla to -  
in a year from sowing G 1.8.04 .
  - III . heterophylla G 1.1.98 / G 9.1.98 / G 1.8.04 .
  - lucaris  
- parviflora G 23.9.87 / G 25.6.87 / G 15.6.89 /  
G 19.6.81.
- IV . Sollyea G 2.5.91 .

General note on the Plantagineae.

The Plantagineae is not <sup>an order</sup> of horticultural interest except that it contains the troublesome weed Plantago. Litorella a British mud plant is also found in this order. The Plantagineae are found distributed over all the earth and vary in habit from the small lowgrowing Plantain to woody shrubs such as P. arborescens. The systematic position of the order is uncertain. possibly it has alliances with the Myoporineae, Labiatae &c.

Propagation in the order takes place in nature easily by seed or by pieces of the stem and root. (1) The leaf cutting has in spite of its unsuitable character for propagation ~~the~~ the power of regeneration to some degree (2).

(1) cf. Chap III Part I. Root Cuttings

(2) cf. Part I, Chap II. Leaf Cuttings.

Plantaginaceae

PLANTAGO. Linn.

hardy perennial.

I. division early.

Stew & root. Cuttings

II. for perenn. also.

III. most of the sp. esp. lanceolata + major are troublesome weeds  
(best remedy is pinch of salt. 923.12.93).

brasilienensis 80m. 2616.

maxima 924.9.04.

umbrosa 9e. 18.2.99.

IV. Plantains on lawns 927.9.82

99.12.83

General note on the Platanaceae.

The Platanaceae are a small order of trees belonging to temperate regions in Europe Asia. ~~It~~ The Plane has been introduced into N. America &c. The Planes form an order distinct from the Aceraceae (to which the Maple or 'Scotch Plane' belongs) and are closely allied to the Saxifragaceae, Hamamelidae and other members of the Rosales cohort. *Platanus* (the Plane) is the only genus of horticultural or economic value. It is a tree that is well able to withstand the smoke of cities and is much grown in London.

Increase takes place both sexually and vegetatively .

(see general arts. under *Platanus*.)

Platanaceae.

PLATANUS. Linn.

hardy decid. trees.

I. stem cuttings: apt to die back in unfavourable seasons in *P. orientalis*,  
for *P. orientalis* & *occidentalis* (easier see 98.10.81.  
easy for *P. pyramidalis*.  
layers: the most certain & most speedy method: spring & autumn:

II. Seed in spring & autumn.  
rockery; particularly the Statice, Armeria, Plumbago Larport etc.

III. acerifolia. flowers of an exquisite blue colour as in Plumbago

- californica 925.12.86  
92.8.85.

- viriodendrofolia 95.9.85.

- occidentalis 930.7.87  
914.9.89.

variegata 913.3.75.  
var. fol. argent. variegat. 97.9.85 / 924.7.97.

- orientalis 929.10.81  
926.11.81.  
91.1.87.

pyramidalis  
racemosa 916.4.81 / 920.8.81.  
920.6.74

striata 916.4.81.

IV. The Plane Lc. 8.6.01.  
98.6.77 (Mon. by P. Gordon.)

The Plane. 94.10.73. (Chap. on Trees. a Pop. Account of  
their Names & Uses M. & E. Kirby.)  
Lc. 10.9.98.

The Western Plane 98.6.72  
(*P. occidentalis*)

The London Plane 914.12.89.

General note on the Plumbagineae.

The Plumbagineae are a widely distributed order being found over the whole world particularly on seacoasts steppes and alpine habitats. They are closely allied to the Myrtaceae and Primulaceae. The majority of the plants in the order are perennial herbs or shrubs. From their xerophytic lowgrowing habit many are well suited for the rockery, particularly the Statice, Armerias, Plumbago Larpentae. The beauty of the flowers, of an exquisite blue colour as in Plumbago capensis, P. Larpentae, or massed together as in large and beautiful heads as in Statice Acantholimon cause the Plumbagineae to be commonly cultivated.

Increase is easily effected by seed which is abundantly produced or more readily by division for the lowgrowing herbaceous species. Acantholimon venustum and Armeria caespitosa are slow of increase.

Stem cuttings may also be employed, particularly for the shrubby species. Leaf and root cuttings are not practicable.

Plumbaginaceae 1.

CANTHOLIMON, Boiss.

(hardy rock plant)

Division if carefully performed in spring.

Stem cuttings, best in early autumn.

(best not at joint but slits torn off with heel.

913.11.97.

Layering, also like Carnation. 913.8.98.

seeds increase slowly e.g. venustum + rarely produced

androsaceum

= Statice Schinus 913.11.94.

glumaceum

916.4.84

918.7.99

913.11.00.

venustum

9127.8.84.

9121.5.98

9123.7.98

9122.7.99.

Acaulonon

919.3.78.

916.4.84

(Propagating)

9129.10.98

(hardy grassland / stone pavement)

Acautholimon.

913.11.97.

The Prickly Shrift

914.5.98.

ARMERIA, Willd.

(hardy herb. perenn.)

I. Division: 9122.12.00  
9127.5.76

leaves + slips pulled off + planted 919.1.01.



*Plumbago* 2.

*PLUMBA* alpina 925.5.81.

*Caespitosa* 924.4.97.

*Cephalotes* P.M. 4128.

922.12.00

919.1.01.

var: alba. 916.6.00.

*juncea*.

*latifolia* P.M. 7313

*lauehana* 94.6.98.

*leucocephala* 921.7.00.

*maritima*. 922.5.75.

*Setacea* 91.6.78 / 917.9.81.

The *Armeria* or *Thrift* 916.7.81.

Dwarf Alpine *Armeria* 921.9.78.

The Great *Thrift* (A. *cephalotes*) 923.1.74.

*Armeria* 917.9.81.

(hardy / greenhouse  
annual/perennial)

care in case deep of

PLUMBAGO. Linn

(hardy. greenhouse /  
store perennials)

stem cuttings of young wood: short side shoots.

Division of roots, e.g. *harpentae*.

eyes: also but slow for *capensis* 916.11.80.

Seeds also for hardy sp.

*capensis* 916.11.80 / 923 915.10.98  
(greenhouse + hardy) 921.10.93

c. var. *alba* 930.7.81 / 921.4.88 / 923.9.93.

*harpentae* (hardy)

(*Ceratostigma plumbago* Loek)

91.10.98 / 92.11.3.99 / 914.10.99 /

Plumbagineae 3.

PLUMBAEO contd.

Rosea (Rosea) - Bm. 230/5763.

♀ 2.17.76 - / ♀ 5.8.88.  
♀ 7.4.88 / ♀ 6.2.97.

r. var. *superba*. ♀ 6.2.97

r. var. *Coccolia* ♀ 24.10.91 / ♀ 7.11.91.

IV. The Leadwort ♀ 15.9.94.

The Blue & White Leadwort ♀ 1.4.88.

Plumbago (rosea) ♀ 5.1.84 / ♀ 7.4.88.

STATICE, Linn.

(hardy & greenhouse annuals/perennials.)

I. stem cuttings. (floribunda etc.) but care in case damp off.

- offsets for profusa.

- division for latifolia.

II. Seed. for annual. *spicata*: armeria bc.

III. armeria.

*arborescens* Paxt Mag. 217.

*Bonduelli* Bm. 5158. ♀ 7.10.99 / ♀ 3.11.00.

*Bourgiae* Bm. 5153. ♀ 19.9.91.

*Butcheri* ♀ 18.11.99. *Besseriana* ♀ 13.8.87

*Dodartii* ♀ 11.10.07.

*Lortunei* ♀ 10.10.96.

*floribunda* ♀ 20.8.87

♀ 25.1.90.

♀ 30.11.95.

*Holfordi* ♀ 14.4.77.

*latifolia* ♀ 29.6.77 / ♀ 2.11.95 / ♀ 2.2.95.

*Lambaguias* 4.

STATICE contd.

*iniata* 97.10.99.  
*profusa* 929.1.98 / 930.9.99.

*spathulata* 93.9.87.

*spicata* 98.5.80.

*sinuata* 94.6.81. B.M. 71.

*sinensis* 918.10.04

*Suzorowi* 915.9.88 / 918.8.83 / 924.8.04.

*superba* 97.4.88.

*taurica* 927.8.81.

*tatarica*;

*atro sanguinea* 920.9.79.

*Statice* + their Culture 912.2.87.

*Statice* 927.12.90.

9c. 22.8.96.

9c. 10.9.04.

*Statice* Tender + Hardy 95.2.76.

Annual Sea Lavenders 92.8.84.

TAXANTHEMA. Nees.

I.

II.

III. Brit. Fl. Sard Sweet Ser. 1. vol. 1. 105/37/1272.

VOGELIA. Lam.

I.

II.

III. *pendula*...

General note on the Podostemaceae

Possibly near the Saxifragaceae, like the Brunoniaceae, but of doubtful affinities, the Podostemaceae form a small isolated order of purely botanical interest. The plants including Angolea, Podostemon and Shaerothylix, mainly inhabit tropical America and the Indies. They are small algalike plants found in swift running water or in water falls.

Vegetative increase takes place naturally by means of stems arising on the metamorphosed roots (1).

see Goebel.

General note on Polemoniaceae.

The Polemoniaceae are composed mainly of herbaceous plants distributed in temperate regions of N. America Europe &c. The order is closely allied to the Convolvulaceae and to other members of the Polemoniales cohort. The plants are somewhat showy in character particularly species of Gilia, Phlox and are prized in horticulture from the variety of colours which can now be had in the different species (see under Phlox especially) . As most of the plants in the order are either annuals or biennials, propagation by seed which is freely produced and easily germinated is the common method. Phlox and Gilia lend themselves very easily to crossfertilization, so that many hybrids have been obtained.

Vegetative increase by means of division is common, and stem cuttings also for the few shrubby species e.g. Cantua, Leptodactylon &c. ~~They~~ Leaf and root cuttings have not been investigated for the shrubby species. They are impracticable for the <sup>R</sup>Herbaceous species.

Polkoniaceae. 1.

BONPLANDIA. Willd.

- I. ?
- II. scandens 924.8.77. ...
- III. trifoliata.

CANTUA. Juss.

greenhouse evergreen  
strawb.

stem cuttings: young or half-ripe wood.  
Soft cuttings for buxifolia (road work.)

- I. seeds ?
- II. bicolor, see genus art.  
buxifolia 926.2.87.  
coronopifolia  
dependens 99.4.81.  
(diff. of increase)  
pyrifolia.

IV. 912.9.85. The Cantuas.

COBAEA. Cav.

hardy or  
half-hardy perennial

I. stem cuttings in spring: young:  
(c. scandens variegata difficult.) 931.8.78.  
layers, better for c. scandens var.

II. seed: in spring.

Polemoniaceae 2.

COBAREA. contd.

- III. *macrostema* 97.11.96.
- penduliflora* 96.12.80.
- Seandens* 926.3.77. 913.4.89 - 927.5.99.
- Coronopifolia* 990.12.84. 910.4.97
- Variegata* 931.8.78 | 96.11.95.
- Superba* 917.6.82.
- IV. *The Cobarea* 917.4.80.
- V. *Cobaea* 923.4.87.
- The best Silian* 919.12.88.

COLLOMIA. Nutt.

hardy annuals.

LEPTODACTYLON. Hook. + Arn.

hardy shrubby perennial

- II. seeds in open border in sprays.
- III. *Cavanillesii* B.M. 3468.
- Cocconia* B.R. 1672.
- grandiflora* B.R. 1174. 910.8.95.
- heterophylla* B.R. 1346. B.M. 2895.

GILIA. Ruiz. + Pav.

hardy annuals + biennials

= *Dipomopsis*  
= *Leptosiphon*.

- II. the usual method: usually, seed out mucilag. filaments except *G. Coronopifolia* = *D. elegans*

- III. *Androsaceus* B.M. 3491.
- achilleaeifolia*.

Tolimoniacae 3.

IIIA. contd.  
aggregata see 918.10.73.

Coronopolia 918.10.73 / 927.10.83.

Dianthoides - Bm. 4846.

elegans

(Dipomopsis)

= P. coronopolia

— liniflora 930.3.72

rosea

(Leptostemon) - 923.10.75 / 96.11.75.

Superba

tricolor. Paxt Mag. 150.

IV, Leptostemon (note) 919.4.02.

The best Silais 919.12.85.

LEPTODACTYLON, Hook. + Arn. Hardy shrubby perennial

Hook. + Arn.

I, stem cuttings. Difficult? : young shoots

II, seed also.

III, californicum Bm. 4842

= *L. californica*

PHLOX - Linn.

mainly hardy. herb. perenn.

I, stem + root cuttings. for new + rare varieties.

Division, also for herb.

II, seed the usual method. freely produces.

variable for varieties however. best for annual *P. drummondii*



Polemoniaceae f.

PHLOX. Contd.

III. *divaricata* 95.6.86.  
918.6.98.

*Drummondii* 914.3.85. 913.4.89.  
929.8.86. 914.  
918.9.86  
911.6.84.

(See gen. arb. for longer. acc.)-

*glaberrima* 923.7.81.

*maculata* *nivalis* 930.6.94 / 927.5.99.  
*paniculata*.

*Setacea* 97.7.00.

*Subulata* 92.7.92 / 921.5.92 / 92.30.6.00.

*Stellaria* 98.9.88 / 99.9.96.

*verna*.

IV. Gen. Articles on Phlox.

Herbaceous Phloxes.	916.7.81.	928.5.92.	96.9.02
	911.4.91.	921.12.93.	929.8.03
	915.8.91.	911.9.97.	93.9.04.
	92.8.90.	930.8.02.	9

Notes on Herbaceous Phloxes 97.9.95.

Use (best) 918.8.94.

All Phloxes 97.7.77 / 920.8.92.

Dwarf Phloxes 96.6.91.  
921.5.81.

Alpine Phloxes. 96.6.91.

Polemoniaceae 3.

The Species of Phlox.

1899.9.77.

(Monograph by J. Britten.)

The Phlox 928.1.93 / 921.9.95 / 91.1.96.

Annual Phloxes. 928.3.91 / 91.1.98.

Perennial Phloxes 913.7.78 / 94.9.97.

Mossy Phloxes 97.7.00.

POLEMONIUM. Linn.

(hardy herb.  
perennial)

I. Division usual method.

II. Seed also common.

III. Confertum. (diff.) 924.5.02.

C. variegatum. 913.9.73.  
914.8.75.  
94.11.76.

C. melitum 95.5.00  
912.5.00  
924.5.02.

- Caeeruleum 93.6.82.

flavum 928.6.90.

lunialicium.

humile 911.11.93 / 914.7.94.

puleherrimum Bon. 2979. 926.2.87 / 922.6.89 / 916.8.90 / 921.5.92.

IV. The Polemoniums 925.11.76.  
96.6.91.

General note on the Polygalaceae.

The Polygalaceae are a small order composed mainly of herbaceous plants having a large distribution both in temperate and tropical regions. The affinities are not marked and the order stands somewhat isolated. The species Polygala vulgaris is British. Other species of Polygala are known in horticulture and are interesting for their curious construction of their flowers. Other genera of theoretical interest only are the climbing Securidacas and a saprophytic genus Epirrhizanthos.

Propagation is effected both by seed and vegetatively by means of stem cuttings. Neither leaf nor root cuttings have been investigated.

Polygalaceae, 1.

MONNINA. Ruiz. & Pav.

Greenhouse evergreen.

- I. stem cutting: best side shoots in fruiting.
- II. seeds in fruit.
- III. obtusifolia Pom. 3122. 9.13.10.83.

MURALTIA. Nees.

Greenhouse evergreen

- I.
- II.
- III. sp. usually included under Polygala.

POLYGALA. Linn.

(Hardy & greenhouse annuals, & perennial & shrubby).

- I. stem cutting. for shrubby sp. e.g. Chamaebuxus, etc. snekers. & division of plant.

- II. seed also.

- III. Chamaebuxus. 910.1.85 / 920.19.7.98.

dalmatiana 912.4.02 / 912.3.04.

= myrtifolia grandiflora.

c. var. purpurea. see 914.8.86.

919.11.87. 914.11.03.

910.12.84.

myrtifolia 928.12.89 / 917.3.94 / 923.3.95.

oppositifolia 917.1.99 / 921.1.99.

paucifolia 920.11.97.

vulgaris 920.5.9.03 / 920.12.9.03.

- IV. Polygalas 915.10.87.

General note on the Polygonaceae.

The Polygonaceae are an order distributed in the north temperate zones rather isolated in systematic position but allied in many ways to the Amarantaceae &c. Many of the plants e.g. Rumex, Polygonum and others are common British weeds and the order as a whole is not much in favour in horticulture owing to the small inconspicuous flowers. The spikes of flowers are more conspicuous in the Polygonums and the persistent flowering e.g. P. vacciniifolium and the fine effect of foliage in P. lanigerum, Rheum sp. give them a place in horticulture which they would not otherwise have. The handsome appearance of the hardy climber P. baldshuanicum has earned for it the name of the Foam bush.

Increase in the order is very easily effected either by seed which is profusely borne or vegetatively by division, stem and root cuttings. Leaf cuttings have not been investigated.

Polypodiaceae. 1.

ANTIGONON. Endl.

Stems culms

Stem cuttings: spring & summer, 9/15.12.83.

seed

anabile

- insigne 9/29.10.81.

guatemalensis 9/20.12.79.

leptobus Bm. 5'816.

9/29.10.81. | 9/21.3.03

9/10.11.83 | 9/9.5.03

9/20.6.03.

l. var. albiflora. 9/7.3.03.

speciosum.

ANTRAPHRAXIS. Ruiz

hardy shrubs.

Stem cuttings

seed

Musechketowi Bm. 7436.

spinosa 9/2.11.78 | 9/6.1.89

CALLIGONUM. Ruiz

- I.
- II.
- III. pallasia. (Lagacanth of Siberia.)

Polygonaceae - 2

COCCOLOBA Linn

Stone evergreen.

- I. stem cuttings - from young shoots in spring or summer.
  - II. Seed.
  - III. grandifolia G30.7.04
  - platyclada Bm. 5382
  - pubescens Bm. 3166
  - unifera Bm. 3130
- sp. of no great importance. All ornamental.

ERIOGONUM Rich.

hardy herb. + shrubby perennials. Suitable for rockeries

- I. Division
- II. Seed & in spring
- III. Compositum P.R. 1774
- giganteum G. 10.11.00
- subumbellatum G. 1.7.99
- umbellatum G. 6.7.72 | G. 5.7.84 | G. 3.6.93

POLYGONUM

- um. Sileri G. 18.8.77
- Hrightii

JAGOPYRUM Linn

hardy annuals

- II. Seeds in spring
- III. Cymosum P.R. 1846 L. 76
- excellentum Buckwheat

MUHLENBECKIA, Mercur.

Greenhouse half shrub  
/ perenn: clusters of bracts

I. Stem Cuttings: best from thicker shoots near the ground to left.  
not from upper twiggy shoots which are slow 95.12.74

II. Seeds -

III. Complex a. 95.12.74. 913.12.90  
95.11.81. 913.7.94  
911.3.85. 912.10.97.

varians -

IV. Muhlenbeckias (note) 920.7.78.

OXYRIA, Hill.

British plant.

I.  
II.  
III. reniformis 917.12.81.

of no value for the garden.

POLYGONUM, Rein.

mainly hardy ann & perenn  
suitable for rockery

I. Division  
stem cuttings for greenhouse shrubs.

(P. baldschuanicum somewhat st. difficult - best by  
piece, woody stem with 'eyes'.) 918.7.99 / 913.2.00 / 913.3.00

layers also P. bald. slow.

II. Seeds: some slow growers as P. sphaerostachyum.



Polygonaceae f.

alpinum 911.7.91  
930.8.02

affine 915.8.91 / 919.9.03  
(hardy) 914.11.03 / 96.10.00

amplexicaule 94.9.80 / 911.12.97. a. var: triaroxyphyllum 97.11.03.  
baldschuanicum Bon. 7544.

(hardy clamber) 916.10.97 / 96.1.00  
924.6.99 / 91.9.00 / 914.11.03  
98.7.99 / 96.6.10.00  
96.16.1.97 / 93.3.00

Brunonia 915.10.98.  
Chinensis Bon. 5238

Capitulum 922.6.95

Cuspidatum 920.12.79 / 920.3.96.  
93.1.80.

Cur. compactum 911.1.76 / 924.1.03 / 98.9.00

Cymosum 93.11.94 / 914.11.03

Equisetiforme 91.8.04

lanigerum 915.11.02  
orientale 918.9.97 / 91.9.00  
Sachalinense 922.11.73 / 927.6.96 / 918.6.04  
922.12.77 / 915.9.00  
922.4.82 / 917.1.03

Sphaerostachyum Bon. 6847

(hardy herb.) 928.7.91 / 94.12.97  
926.10.95 / 911.12.97  
926.6.97 / 94.6.98

Vacciniifolium 911.11.82 / 98.11.89  
(hardy trailer) 93.11.83 / 917.6.93  
918.10.84 / 920.11.97

Polygonaceae s.

iv. Polygonum 918.6.64.

Giant Knotweeds 911.10.84 / 913.8.87.

Polygonum by the water side 927.12.02 / 917.1.03

P. saichalinense (A useful forage plant) 92.9.93.

Perennial Knotweeds 90.13.6.91.

The Knotweeds 922.11.79.

Autumn Polygonum 92.11.89.

RHEUM Linn.

(hardy herb. perennials)

I. Division in spring.

II. Seed in spring.

III. Smodi 94.8.75 / 901.7.83.

nobile 98.1.76, 927.11.80.

926.6.80 / 919.6.80.

923.10.80 / 916.6.88.

officinale 97.3.74

923.5.74

927.2.75.

palmatum 921.6.90 / 911.6.92.

p. floribus rubris 96.7.01.

p. tanguticum 911.5.78.

IV. Rheum 923.5.91 / 920.4.01.

Ornamental Rhubarbs 910.7.86.

Rhubarb as ornamental plants 917.2.72 / 914.8.89.

Rhubarb for use & Beauty 914.9.90.

Polygonaceae 6.

RUMEX Linn.

hardy herb. perennial.  
creeds.

- I. very easy increase of divided (stem + root cuttings & division)
- II. seed naturally.
- III. patience 87. 8. 80. (most of sp. *acetosella*, *acetosella*. Gumbo some seeds.)

RUPRECHTIA C.A. Mey.

- I. ...
- II. ...
- III. ...
- IV. ...

TRIPPLARIS Linn.

- I. ...
- II. ...
- III. ...
- IV. ...

## General note on the Portulacaceae.

The Portulacaceae are variously distributed in America and ~~Assaralia~~ <sup>an</sup> and are ~~an~~ order composed mainly of annual plants and a few herbs and shrubs. The order has affinities to the Caryophyllaceae and Ficoideae. Portulaca and Talinum are very similar to plants like Mesembryanthemum in the last mentioned order. Though a large order, few plants in it are important in horticulture. The genus Lewisia redéiviva is interesting as a curiosity on account of its extraordinary vitality, though on the other hand L. Tweedii is a 'miffy' or uncertain plant to establish in the garden.

Increase is almost exclusively effected by seed which is abundantly produced though late in autumn.

Vegetative increase by division is the usual method <sup>for the</sup> ~~in~~ perennials.

Stem cuttings are employed for the perennials and shrubby species e.g. Calandreinia umbellata, Talinum sp. Leafcuttings of the <sup>u</sup> succulent species succeed, though somewhat slow of increase. Root cuttings] have not been investigated to any great extent. In Occ<sup>p</sup>aytonia grandiflora, tuberosa and others the roots are tuberous and afford a means of propagation while in Lewisia redéiviva the roots are thick and full of vitality.

ANACAMPSEROS - Linn.

Excellent greenhouse plants.

I. stem cuttings - easily - at any season.  
Dries first to heal.

leaf cuttings, also.

II. seeds in sprout.

III. *arachnoides* Bm. 1368.

*filameulosa* Bm. 1369.

*rotundifolia* B.C. 591.

*telephium* - *Talwin anacampseros*.

CALANDRINIA, H.B.K.

hardy greenhouse  
succ. perenn + shrubs.

I. Division

Stem cuttings also for *umbellata* to -

II. seeds - for animals - to others, needless. the usual method.  
freely produces.

cuttings for sprout flowering.

III. *arenaria* B.R. 1605.  
(annual)

*discolor* 93.8.01.

(perenn)  
greenhouse. *Leana* 18.6.98

*grandiflora* 928.8.80 Bm. 3369.

(Shrub) 99.4.81.

*Menziesii speciosa* B.R. 1598 - (hardy shrub).

*nitida* 930.8.79

(greenhouse) *oppositifolia* 928.11.91. Bm. 7051.

*setosa* 913.8.97.

(umbellata) 930.7.84 / 98.7.93

*Sveedii* = *Lewisia Sweedii* 949 921.5.98 / 927.5.99 / 919.9.03

CALANDRINIA. contd.

- I. Calandrinia (grandiflora, 99.4.81.  
+ other sp) 923.4.81.

CALYPTRIDIDIUM. Nutt.

- I. Sweet's
- II. Calandrinia
- III.
- IV.

CLAYTONIA. Linn.

hardy and perennial.

- I. Cultivars for C. sibirica.  
Division of tubers & offsets. for tuberos roots (C. grandiflora).
- II. seed which is freely produced.
- III. Caroliniana (tuberos) 99.3.78.  
grandiflora (tuberos). Pom. 941. 923.4.84 / 930.4.84  
= virginica 926.2.98.
- Sibirica Pom. 2243 / 923.1.97.

LEWISIA. Pursh.

hardy herb. perennial.

- I. Division of roots in spring - but store. (miffy plant).  
Although fleshy roots are full of vitality - pieces will continue to live  
in herbarium. (P. rediowira)
- II. Seed succeeds better. (Sweet's does not seed easily)

PORTULACACEAE. 3.

LENISIA Condr.

III. Cotyledon Pom. 8770.

rediviva. Pom. 5395.

(Spatium).

or Canadian Bitter-Root.

929.6.72

918.9.75

955.2.84

926.12.91

919.6.97

Luwee yi.

=(Calandrinia Luweeii)

920.5.99

93.6.99

98.6.01

Pom. 4633.

MONTIA. Mich.

aquatic.

I. pieces of stem will vegetate.

II. seed also.

III. fontana. (Water, Chickweed

or Pinks)

no hort. importance.

PLEUROPETALUM. Hook. fil.

Stone Island

I. stem cuttings - same, heat.

II. seed?

III. costaricense. Pom. 6674.

Portulacaceae f.

PORTULACA. Linn.

(Hardy ann. greenhouse  
& stove)

I. stem cuttings for stove & greenhouse plants -  
division.

Leaf cuttings for fleshy sp e.g. P. pilosa - ?

II. annuals - see 922.4.76.

seeds self-sown - produces abundantly.

III. apifoliosa

grandiflora. Bk 2885. 926.3.94.

oleracea - (See Portulaca) -

pilosa -

quadrifida -

IV. Portulacas 918.4.82 / 914.10.82 / 929.8.85.

Portulacas & their Cultivars 919.10.78.

Portulacas for rockeries 917.10.85.

Portulacas single & double 921.8.86.

SPRAGUEA. Torr.

hardy perennial.

I. stem cuttings.

II. but best from seed. treated as annuals as impatient of disturbance when young.

III. umbellata 921.12.72. Bk 5143.



Primulaceae S.

TALINUM, Adams.

hardy ann. perenn  
+ shrubs

I. stem cuttings easily: dried before in section  
leaf cutting also.

II. Seed for ann. + biennials.

III. Arnottii B.M. 6220. G.S. 4. 76.

pateus

polyandrum B.M. 4833.

roseum

terre bifolium B.R. 1843 t. 1.

The best and quickest mode of propagation since the majority of the plants are either annuals or biennials is seed. Even when the species are perennials, the general method is to increase the stock by seed each year. Much hybridization has been effected in the species Anagallis, Primula (Auricula) etc. Vegetative propagation is also employed particularly the method of division. As the plants are low growing the method is more convenient than stem cuttings. In Androsace etc. cuttings of the lower of the

## General note on the Primulaceae.

The Primulaceae are an order widely distributed being found all over the earth but especially in the northern hemisphere. It is closely related to the Myrsinaceae and Plumbagineae. The majority of the plants are lowgrowing alpine suitable for the border and rockery] e.g. Primula, Androsace &c. Most of them are shade loving e.g. Primula, Trientalis, Dodecatheon &c. The flowers of the Primulaceae are usually conspicuous bright and sweetly scented though there may exist great variations even in the one species. For example Primula Littoniana possesses spiked florets, P. bulleyana large single flowers and again P. taliensis and gratissima small flowers. Cultivators have therefore been busy and in the Cyclamen have produced the crested and fringed <sup>forms</sup> from the simple natural (cp. the sweet pea)

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Vegetative propagation is also employed particularly the method of division. As the plants are lowgrowing the method is more convenient than stem cuttings. In Androsace &c. cuttings of the tops of the

shoots root easily and quickly.

Layering is also employed (see Androsace and Samolinus )

Leaf cuttings are not generally <sup>used</sup> but succeed for Cyclamen, Lysamachia

Root cuttings are on the whole impracticable.

ANAGALLIS. Linn.

half hardy ann: 4 ferns.

I. stem cutting in sprays

II. annuals: seeds.

III. *Coerulea* § 25.9.86  
 § 2.10.86  
 § 9.10.86.

*linifolia* § 30.5.96

§ 29.9.00.

*monelli* Pom. 319. § 5.10.95.

var. *willmoreana*. Pom. 3386.  
 = *A. collina*.

*Philipposi* § 2.8.84.

IV. *Anagallis* § 3.9.81.

*Anagallis* as a dry weather annual § 3.10.96.

ANDROSACE. Linn.

hardy rocky plants

I. stem cutting - tops of prostrate stems - of *lanuginosa* § 25.10.02.  
 layers.

Division in spray.

runners - for *sarmentosa* + *sempervivoides*

offshoots at base of stem for *A. foliosa*.

II. also see § 6.4.01.

III. *carnea* § 2.4.98  
 § 15.4.99  
 § 21.4.00.

*Charpentieri* § 30.11.95

§ 27.6.96

Primulaceae 2.

ANDROSACE contd.

Coronopifolia 926.9.85.  
924.9.81.

Hedreantha 930.4.04  
foliosa (plate) in 96.10.83.  
916.7.87  
919.11.87  
926.6.97.

laggeri 930.8.79 / 99.4.81.  
97.2.80 / 918.4.91.

lanuginosa plate in 931.7.86.

CORIS. Lindl. 929.12.83. 96.11.97.  
926.9.91. 925.10.02.  
917.2.94 915.3.02.  
917.8.95. 9.C. 30.5.03  
928.11.03.

maerantha 927.11.97.

pyrenaica 917.4.97 / 929.9.97 / 92.10.97  
926.2.98  
925.4.03

rotundifolia glandulosa 921.5.98.

Sarmentosa B.M. 6210. plate in 92.20.3.03.  
925.11.93  
913.8.98  
9.C. 13.8.98.

Sempervivoides 9.C. 12.5.00 / 92.13.4.01.

villosa B.M. 743.  
912.5.77.  
97.5.96.

vitalina B.C. 166.

Rumicaceae 3.

ANDROSACE contd.

The Himalayan Androsaces 96.10.83 / 931.7.86  
917.9.87.

The Androsaces 93.9.81. 96.6.03

918.8.83

918.4.9.

918.11.93.

90.28.3.03.

The Androsaces 919.5.76. 916.5.03  
(Monograph by H. Correvon) 923.5.03.

insert BRYOCARPUM.

CORIS. Linn.

hardy perennial.  
Sunny rockery)

best by fresh seeds 95.8.99.

monspeliensis Arn. 2131. Bot. 5'36.  
918.9.97 / 925.9.97 / 92.10.97.

CORTUSA. Linn.

hardy perennial.  
rockery or border.

I. Division of roots - in spring

II. Better from seeds.

III. Matthioli Arn. 984.

925.6.84

94.3.93

pubens. 911.5.78

915.5.80

920.5.82.

Rumilaceae A.

CYCLAMEN. Linn.

hardy & greenhouse

Cutting of tubers in spring. - with eye to each piece.

Cutting of leaves with small portion of tuber attached.

Best method is seed: for hardy Cyclamens.

best to sow fresh, though seeds have a long period of vitality.

africanum 514.12.01. / Atkinsoni 930.3.89.

Corn B.M. 4. 913.1.00 / 910.2.00 / 912.02

Cyprium 919.8.76. 97.4.00.

europaeum 919.8.76 925.1.90.

hederifolium 919.8.76. 916.1.97  
(neapolitanum) 911.1.87 920.2.97.

ibericum 913.10.88. 918.10.02.

latifolium 99.1.86 / 912.3.04.

persicum 910.6.99.  
libanoticum 973.3.01 90.6.4.01.

cilicicum 90.5.2.98.

repandum 927.6.85 / 915.9.97.

Persicum B.M. 44. 911.6.95.

917.9.95.

Cyclamen 917.9.95. 930.4.98

913.5.99.

p. giganteum 90.12.3.98

930.1.04

928.5.04.

IV. Cyclamen Culture 916.12.76 98.6.95.

99.10.80. 927.3.97.

916.4.81.

928.8.86

911.9.86

Primulaceae J.

CYCLAMEN. contd.

IV

The Culture of the Cyclamen. G27.4.72  
G29.6.72

Gc. 29.2.96  
Gc. 7.11.96  
Gc. 12.8.99.

Cyclamens G21.12.95  
G24.1.91.

Hardy Cyclamens G6.11.86. G17.3.94.  
G19.3.84. G13.2.97  
G9.8.90. G27.2.97.  
G9.4.92. G30.11.01.

Trilled or Crested  
Cyclamens. Gc. 22.8.97 G21.4.00.  
Gc. 3.6.97. Gc. 7.4.00  
Gc. 13.3.97 G5.8.00  
Gc. 30.1.97. G1.3.02.

Notes on Cyclamens G2.11.89.

Cyclamen Seed. G9.7.81  
G23.7.81.

Cyclamens not opening  
their flowers. G15.12.96  
G17.12.96  
Gc. 19.12.96  
Gc. 14.11.96.

Time for Cyclamens G26.3.84 / G30.4.87.

Persian Cyclamens. G19.11.81. Gc. 9.1.97.  
G16.12.82. G25.5.01.  
G29.11.84.  
G26.10.89

The Cyclamen (Monograph by D. Guibeneut) G12.3.98.



Fumitaceae - 6.  
for CORIS.

BRYOCARPUM. Hook. & Thoms.

i. Division?

ii. Seed.

iii. Himalaicum -

DODECATHEON. Linn.

hardy herb. perennial

i. Division of root left. Jan. or Feb.

ii. Seed early, but only in favoured situations.  
Sown as soon as ripe.

iii. ellipticum

iv. palmatum (& tetrandrum) G.C. 26.5.00

integripolium + other sp. 9.7.10.76  
9.1.12.88.

Jeffreyanum 9.16.1.92.

meadia 9.4.10.73.

splendidum L. 9.29.5.97.

v. The Dodecatheon. 9.6.12.02.

American Cowslips 9.17.11.83

9.8.12.83.

Dodecatheons 9.8.8.04.

Hybrids of Dodecatheon G.C. 21.5.98.

brachybotrys 9.29.7.83.

Fortunei 9.15.10.76.

immulare 9.16.2.76 9.12.8.83/9.29.98.

Primulaceae 7.

GLAUX, Linn.

hardy perenn.  
rock.

- I. Division POLYARTHES
- II. Seed - AURICOLA
- III. maritima - (Sea Milkwort)  
    + oav. alba.

Sp. not usually cultivated - found in nature near sea - in rocks etc

HOTTONIA, Linn.

hardy aquatic or bo

- I. Division in spring
- II. seeds - R.B.G notes
- III. palustris (Water Violet.)  
    §14.6.90  
    §4.7.91.

LYSIMACHIA, Linn.  
= LUBINIA.

hardy + greenhouses  
herbs -

- I. stem cuttings in spring + autumn  
    Division also easy.

- II. seed also.

- III. amoena -
- aurea -
- azorica B.M. 3273.
- brachytaelyp §29.7.82,      bulbifera B.M. 104,
- clethroides - 97.10.76
- Fortunei §15.10.04,

nummularia §14.3.74 / §12.8.82 / §20.9.84.

quadriflora B.M. 660

Primulaceae. 8.

PRIMULA. Linn.

incl. var. POLYANTHES.  
+ AURICULA.

hardy <sup>herb.</sup> perenn

i. Division of crowns in Primula -  
offsets in Auricula.

ii. Seed best method - though not the profusion of seed, which might be expected from the bloom.

Seeds variable for vars. Polyanthes + Primula hybrids -  
(See Elyn A. Skright & true from seed 920.5.76) -

iii. for new species of Primula collected by Mrs. S. Foster. for Mexico. P.  
See R.B.G. notes. -

for <sup>vars.</sup> of Primula, Polyanthes + Auricula see under gen. articles -

iv. a. Auricula.

Alpine Auriculas 925.10.84  
9C.1.6.01.

The Auricula - 91.10.87  
9C.25.9.87  
9C.30.10.87.  
91.12.00.  
98.12.00.

Auriculas 9C.20.5.99  
93.2.00.

Double Auriculas 918.6.98.  
913.4.89.

Yellow Auriculas 914.6.02 | 916.5.96  
9C.25.4.03 | 913.5.99  
95.5.00.

Auriculas in Pots. 920.5.99.

Panicaceae 9.  
AURICULA contd.

Show Auriculas 99.6.00.  
90.9.02  
91.4.04.

Auriculas from seed 916.10.80.  
916.6.00.

Intro. of the Florist's Auricula. 926.4.02.  
(H. Corveon)

Auricula - month by month. see continuing conts.

History of the Auricula. 922.10.80 / 916.6.85 / 91.5.86.

For other gen: articles on the Auricula see in periodicals

weeder Alpine, Shades & Unshaded, Show, Border, End of Doors. to -

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b. Polyanthus

The Polyanthus 913.7.72  
920.9.79.

Polyanthuses 922.10.81  
917.1.91  
910.2.94.

Border Polyanthus 99.2.89  
921.4.91.  
93.12.98.

Double Polyanthus 96.4.78  
914.5.82.

Hose-in-Hose Polyanthus 923.6.77  
930.6.77.

Primulaceae 10.

7. Polyanthus contd.

Gold Laced Polyanthus.

918.5.78  
911.2.82  
911.3.82  
925.3.82  
920.5.82  
919.5.83  
91.10.81  
95.11.81  
95.18.4.96  
95.9.8.96

Old Stage Polyanthus

928.1.82.

c. Primula.

Primulas 924.4.86.

Species of Primulas 914.3.91  
94.4.91.

Primroses & their allies 9c. 26.5.00.

Hardy Primroses 913.12.90.  
92.1.91.  
921.2.91.  
92.4.92.  
920.8.98.

Blue flowered Hardy Primroses.

91.5.86  
927.6.91.  
923.89.  
929.4.93.  
916.5.91.

Hybrid Primroses 921.4.00.

Primrose + Darwinism

926.7.02  
920.9.02  
9c. 11.4.03.

Double Primroses

920.12.84  
929.10.84  
920.10.88.

Himalayan Primroses

95.7.79.

Primulaceae II.

TRIDENTATA Linn.

SANTOLUS. Linn.

dissectum. SHEFFIELDIA. 4 ny.

hardy herb. perenn.

half-hardy herb.  
perenn.

I. Stem cuttings.

Division in spring.

layers. as tips of branches root readily when in contact with soil.

II. Seed.

III. littoralis B.S. 433 9.11.10.79 / 5.17.10.85.

abraeacalis. R.B.S.

repens 9.20.9.84.

valerandi (hardy) -

SOLDANELLA. Linn.

half-hardy herb.  
perennials -

I. Division of tufts in spring.

II. Seed the usual method -

III. alpina B.M. 49.

9.9.4.84

9.21.4.97

5.6.4.02

a. var. pyrolaeifolia 9.25.5.01.

Clusii 9.19.3.98.

minima - 9.21.4.88. m. var. alba 9.23.5.91 / 9.7.5.92.

pusilla 9.27.3.97.

IV. The Soldanellas. 9.22.7.02.

(Monograph by H. Coxson)

Soldanellas

9.9.2.95 / 9.8.7.02.

TRIENTALIS Linn .

hardy herb. perennial

I. Division of roots - 923.4.84.

II. Seed ?

III. americana - 911.6.98

Caropæus 914.6.84, Be. 105.

926.6.86

923.4.84

... as interesting order practically confined to ...  
 ... nearly all greenhouses ...  
 ... in cultivation though its ...  
 ... through the the ... The ...  
 ... in cultivation ... of ...  
 ... take up a good deal of room (e.g. ...  
 ... for providing ...  
 ... than beautiful e.g. Protea and Banksia ...  
 ... they are for the most part difficult and very ...  
 ... plants such as the Ericaceae ...  
 ... very much grown, but now fashion has ...  
 ... the cultivation ...  
 ... and easy growth.

Propagation is slow. Seed is rarely produced in cultivation.  
 Fertilisation usually does not take place owing possibly to the  
 absence of the necessary insects. Seeds however may be imported  
 for reproduction. Seedlings require great care.

Vegetative propagation is that most usually employed.  
 Stem cuttings are made of ripe wood. The cuttings are usually very

General note on the Proteaceae.

The Proteaceae are an interesting order practically confined to Australia and S. Africa and in cultivation nearly all greenhouse shrubs. The order is isolated in position though its nearest alliances are with the Leguminosae through the the Mimosae. The various genera are not often with in cultivation outside of botanic gardens partly because some take up a good deal of room (e.g. Stenocarpus) many are of no use for providing cut-flowers (e.g. Knightia) which are more curious than beautiful e.g. Protea and Banksia and mainly because they are for the most part difficult and very slow to propagated. Once hardwooded plants such as the Proteaceae Myrtaceae and Ericaceae very much grown, but now fashion has veered round and an age of hurry and rush demands the cultivation of plants of more rapid and easy growth.

Propagation is slow. Seed is rarely produced in cultivation. Fertilization ususally does not take place owing possibly to the absence of the necessary insects. Seeds however may imported for reproduction. Seedlings require great care.

Vegetative propagation is that most usually employed.

Stem cuttings are made of ripe wood. The cuttings are usually very



slow to root and form first a large callus. Rootings may be considerably hastened by paring, supplying additional heat, or by wounding the callus in order to give an additional stimulus. (see Fig. ) (1)

Root cuttings are also employed e.g. Embothrium coccineum.

Leafcuttings are not usually practicable being ericoid in type.

Other vegetative methods are <sup>not</sup> employed except occasionally grafting.

for e.g. species of Grevillea .. Grevillea robusta is used as a stock.

(1) Fig. . . in Chap I, Part. I.

Proteaceae, l.

ADENANTHOS, Labill.

(Greenhouse evergreen)

I. stem cuttings in spring

II. ?

III. barbigeria.  
boata -

Sp. not seen in common cultivation

AGASTACHYS, R.Br.

Greenhouse evergreen

I. Cuttings: ripe wood.

II. -

III. odorata. (only sp.)  
not commonly seen in cultivation

AULAX, R.Br.

Greenhouse evergreen

I. ripe cuttings.

II. -

III. pinifolia Aud. Rep. 76.

umbellata. B.R. 1015, male.

Calophylla Aud. Rep. 248 female.

Sp. not in common cultivation.

BANKSIA, Linn. f.

greenhouse evergreen

I. Stem cuttings. slow, & difficult. : best cut at node of ripe wood. then callus pared : planted to small depth - layers.

II. Grafting also.

III. Seeds unsatisfactory : should be sown in spring when procurable - liable to damp off.

- III. *Crucifolia* Bm. 438.
- littoralis* Bm. 1863.
- praenosa* 1873-74.
- prostrata* - 1870-71.
- Suaevolens* S 21.11.03.
- Serrata* - 1870-71.

Sp. not seen in common cultis. outside Pot. Pav. because so slow increase.

GREVILLEA R.Br.

greenhouse evergreen

- TELEPHEA

DRYANDRA R.Br.

greenhouse evergreen

I. Stem cuttings : from side shoots.

II. seeds ?

- III. *armata* Bm. 3736.
- aretoidis* Bm. 4035.
- Calophylla* Bm. 4642. S 25.3.99.
- Carduaca*
- angustifolia* Bm 4317.
- formosa* Bm. 4102.
- longifolia* Paxt Mag 171.
- tenuifolia* Bm 3513.

IV. D. D. S. 1. 1. S 25.3.99

EMBOTHRIUM. Forst.

greenhouse evergreen.

I. stem cuttings - ripe wood. see 9.10.11.94 / 9.6.00.

Snakers. Gc. 3.5.02.

II. seeds. when obtainable. but rarely ripe.

III. *buxifolium*.

*Coccineum*

(The Fire Bush.)

9.16.12.76

9.28.5.92

9.10.11.94.

9.3.7.97.

9.30.6.00.

*Cynaroides* Gc. 10.6.99.

GREVILLEA. R.Br.

greenhouse evergreen

= *TELOPEA*.

I. cuttings of ripe wood: slow grafting for *glabra*.

II ?

III. *Banksii* B.M. 5870. var: *Forsteri* 9.11.7.03.

*canescens* - B.M. 3105.

*dubia* B.M. 3798.

*alpina* 9.31.5.90.

9.28.7.91.

9.29.11.97.

*asplenifolia* 9.5.9.91.

*glabrata* 9.20.4.72

= *Manefesii* 9.20.3.80

9.17.5.84

9.27.2.96.

Proteaceae A.

III. BREVILLEA. Condit.

Preisii B.M. 5837. 925.11.82.  
929.12.83.  
911.2.88.

rosarinifolia 96.2.04.

thelemanniana 924.10.91.  
911.1.02  
926.12.03.

robusta 910.1.80  
910.9.1.97  
915.13.2.97.

Sulphurea 96.5.82  
913.5.91.

IV. Grevilleas 91.10.81  
95.4.90.

Grevilleas in bloom 918.5.89.

Grevilleas as flowering plants. 916.4.89 / 923.11.89.

Grevilleas from seeds. 921.2.80.

GUEVINA. Mol.

Greenhouse East garden.  
Gue.

I. Skew cuttings. (ripe wood).

II. Seed (edible).

III. avellana G.C. . 84. (p. 41. vol XVIII).  
G.C. 26.7.02.

Proteaceae S.

HAKEA. Schrad.

greenhouse evergreen.

I. stem cuttings: ripe shoots.

II. seeds. freely in multilocata. G. 18.1.96.

III. dactyloides Pom. 3760.

launina Pom. 7127. G. 30.3.01.

linearis B.R. 1489.

microcarpa. B.R. 475. B.R. 219.

suavolens. G. 21.11.03.

IV. Hakeas G. 30.5.74.

Hakea (launina + other species.) G. 2.84.

ISOPOGON. R.Br.

greenhouse evergreen.

I. cuttings: ripe wood.

II. ?

III. attenuatus Pom. 4372.

formosus B.R. 1788.

londoni Pom. 4037. 3421.

seaber Pom. 4037.

sp. n. seen in common cultivation.

KNIGHTIA. R.Br.

greenhouse evergreen.

I. stem cuttings: ripe wood.

II. -

III. excelsa.



MACADAMIA. F.v. Muell.

greenhouse evergreen.

I. stem cuttings: ripe wood.

II. Seed? nuts are edible.

III. ternifolia G. 11. 72  
G. 1. 92.

IV. The Australian Nut Tree G. 19. 12. 91.  
(M. ternifolia.) G. 1870. p. 1181.

PERSOONIA. Sm.

greenhouse evergreen

I. stem cuttings: ripe wood: slow. esp. latifolia.

II. Seeds - produces fairly freely in lanceolata -  
not perfected well in other sp.

III. hirsuta B.C. 327.

lanceolata And. Rep. 74. B.C. 25.

latifolia And. Rep. 380.

linearis Pom. 460. And. Rep. 77.

PETROPHILA. R.Br.

greenhouse evergreen

I. stem cuttings: ripe shoots

II. ?

III. acicularis B.M. 3469.

brevifolia B.R. 1839.



Proteaceae 8.

PROTEA. (Linn.) R.Br.

free house evergreen.

I. stem cuttings: ripe wood. Flon.

II. ?

III. *cygnaroides elliptica* 913.11.97.

*longiflora* 931.10.91.

BR. 47.

*mellifera* Pom. 346. Gc. 8.8.03.

*nana* - 927.4.89

928.5.92.

for other sp. see And. Rep.

ROUPAKA. Aubl.

free house evergreen

= RHOPAKA.

I. stem cuttings: ripe wood. nil too fine

93.9.84.

II. -

III. *elegantissima* 95.1.78 (note).

*magnifica*

*Porteana*

to see gen. art.

IV. *Rhopalos* 93.9.84.

Proteaceae 9.

STEMOCARPUS. R.Br.

(Agnostico.)

Stems of greenhouse  
Grows.

I. ripe stem cuttings :

II. ?

III. Salignum B.R. 441.

Cunninghami 930.11.78. B.R. 4263.

= sinuatus. La Sem. Hort. 10.7.97.

TELOPEA. R.Br.

greenhouse evergreen

I. stem cuttings : ripe wood base of plant better than side growth.  
Stems.

layers also. 94.11.82

II. not often produced : does not even flower freely.

III. speciosissima 915.4.82.

(Australian Waratah). Part. Mag. 73.

= Imbolithium spatulatum.

IV. The Waratah 94.11.82

XYLOMELUM. Sm.

greenhouse shrub

I. stem cuttings. ripe wood

II. -

III. pyriforme.