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# B830: An Atlas of the Native Woody Plants of Maine: A Revision of the Hyland Maps

Janet S. McMahon

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Fay Hyland

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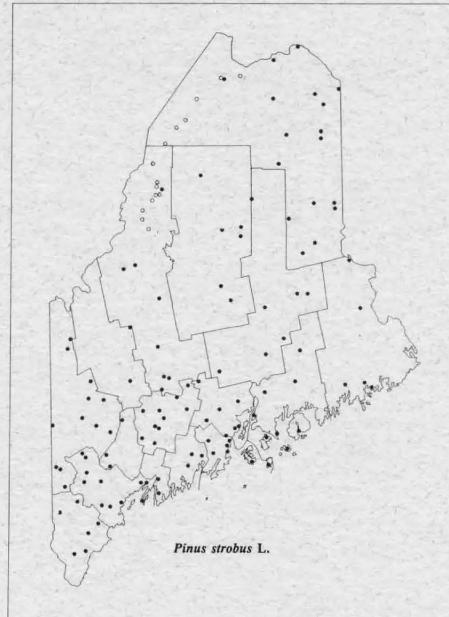


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# An Atlas of the Native Woody Plants of Maine: A Revision of the Hyland Maps

Janet S. McMahon  
George L. Jacobson, Jr.  
and  
Fay Hyland

Bulletin 830

July 1990



MAINE AGRICULTURAL EXPERIMENT STATION  
University of Maine

Maine Agricultural Experiment Station Miscellaneous  
An Atlas of the Native Woody Plants of Maine:  
A Revision of the Hyland Maps

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and

Fay Hyland

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## Maine Agricultural Experiment Station Bulletin 830

## DEDICATION

Perhaps more than any other single person in the 20th century, Professor Fay Hyland (1900–1984) played a central role in the development of botanical science in Maine. His enormous energies and enthusiasm were instrumental in expanding knowledge of Maine's flora and in passing along that knowledge to the students who took his courses at the University of Maine. For the nearly 20 years after his retirement in 1965, Professor Hyland continued to be an active researcher. He inspired all who knew him.

For this project, data from the herbaria of the state which Hyland visited were used. These included the New England Botanical Club, Longfellow, Arnold Arboretum, the Boston Society of Natural History, the Portland Society of Natural History, and several private collections. Herbarium records were assembled through the field surveys done. These records, along with those isolated from herbaria, from previously species on small scale (1:1,000,000) maps of Maine. Written descriptions of each map were summarized from the resulting maps and compiled into the between described above. The distribution maps themselves, however, were never published. The single (original) copy of Hyland's maps has been kept in the Special Collections of the University of Maine's Fogler Library since 1984. The last used to mark species occurrences on these maps is now being sufficiently to change the results.

To pursue this valuable resource and to evaluate patterns of species' richness in Maine, maps of all native species were digitized using AUTOCAD (1983). In all, 240 species meet Hyland's definition of woody plants ("those plants with trunks, perennial (annual or biennial) species which increase in diameter each year by formation of annual rings") and the criterion of natural occurrence. This includes varieties and subspecies that are the sole representation of a given species as well as 10 taxa whose distributions were not documented by Hyland (Table 1), because new stations have been documented for many species in the nearly 50 years since the original distribution maps were prepared; specimens in the University of Maine herbarium and the "Publication Rare Vascular Plants of Maine" were used to update Hyland's maps. A new record was tested only if it clarified or extended the range boundary of a species.

The maps are presented in alphabetical order by genus. Taxonomic nomenclature follows Kewer and Kartt (1983) and Hyland (1983). Hyphen symbols indicate that a specimen was actually seen by Hyland. Hollow circles indicate that a plant was not seen, but was authentic or historic. Geographical discontinuities are depicted by filled triangles.

## INTRODUCTION

In 1944 Fay Hyland and Ferdinand Steinmetz published *The Woody Plants of Maine: Their Occurrence and Distribution*. This small bulletin catalogs the state's native and exotic trees, shrubs, and woody vines. In-state distributions are given for 513 taxa, including 366 species, 111 varieties and named forms, and 36 hybrids. Hyland collected information for this comprehensive work from three sources: a systematic field survey of the state which he personally conducted between 1933 and 1939; a review of botanical publications on Maine flora; and herbarium records from the New England Botanical Club, Gray Herbarium, Arnold Arboretum, the Boston Society of Natural History, the Portland Society of Natural History, and several private collections. Eighteen thousand records were assembled through the field survey alone. These records, along with those tabulated from herbaria, were plotted by species on small-scale (1:1,000,000) maps of Maine. Written descriptions of each taxon were summarized from the resulting maps and compiled into the bulletin described above. The distribution maps themselves, however, were never published. The single (original) copy of Hyland's maps has been kept in the Special Collections of the University of Maine's Fogler Library since 1944. The ink used to mark species occurrences on those maps is now fading sufficiently to endanger the records.

To preserve this valuable resource and to evaluate patterns of species' richness in Maine, maps of all native species were digitized using AUTOCAD (1988). In all, 240 species meet Hyland's definition of woody plants ("those plants with ligneous, perennial [biennial in *Rubus*] stems which increase in diameter each year by formation of annual rings") and the criterion of natural occurrence. This includes varieties and subspecies that are the sole representative of a given species as well as 10 taxa whose distributions were not documented by Hyland (Table 1). Because new stations have been documented for many species in the nearly 50 years since the original distribution maps were prepared, specimens in the University of Maine Herbarium and the publication *Rare Vascular Plants of Maine* were used to update Hyland's maps. A new record was noted only if it clarified or extended the range boundary of a species.

The maps are presented in alphabetical order by genus. Taxonomic nomenclature follows Kartesz and Kartesz (1980) and Fernald (1950). Filled circles indicate that a specimen was actually seen by Hyland. Hollow circles indicate that a plant was not seen, but that authentic or historic records exist. New occurrences are depicted by filled triangles.

Table 1. Woody species documented since Hyland and Steinmetz (1944).

<i>Alnus serrulata</i>
<i>Amelanchier humilis</i>
<i>Aralia racemosa</i>
<i>Betula cordifolia</i>
<i>Carya cordiformis</i>
<i>Chimaphila maculata</i>
<i>Rubus chamaemorus</i>
<i>Salix argyrocarpa</i>
<i>Vaccinium boreale</i>
<i>Vitis aestivalis</i>

Because the taxonomic status of many of the species recognized by Hyland in 1944 has changed, only those species considered "valid" today are included in this atlas. The greatest number of revisions have occurred in the genera *Rubus*, *Crataegus*, and *Amelanchier*. The subgenus *Rubus* Eubatus (the blackberry family) was carefully scrutinized by Hodgdon and Steele in 1966. The 33 native species in this subgenus documented by Hyland in 1944 were subsequently grouped into 13 species in Hodgdon and Steele's provisional treatment. Although there is less agreement on the status of *Crataegus* (Bean et al. 1967) and *Amelanchier*, there has been a similar trend toward combining rather than splitting taxa. Of Hyland's 28 species of *Crataegus*, only nine are recognized today and of nine species of *Amelanchier*, five are considered distinct. The current status of species in all three genera was determined by cross checking all native species listed in Hyland and Steinmetz (1944) and Hodgdon and Steele (1966) with Kartesz and Kartesz's (1980) synonomized checklist. Where two or more taxa have been grouped into a single species, distribution maps have also been combined.

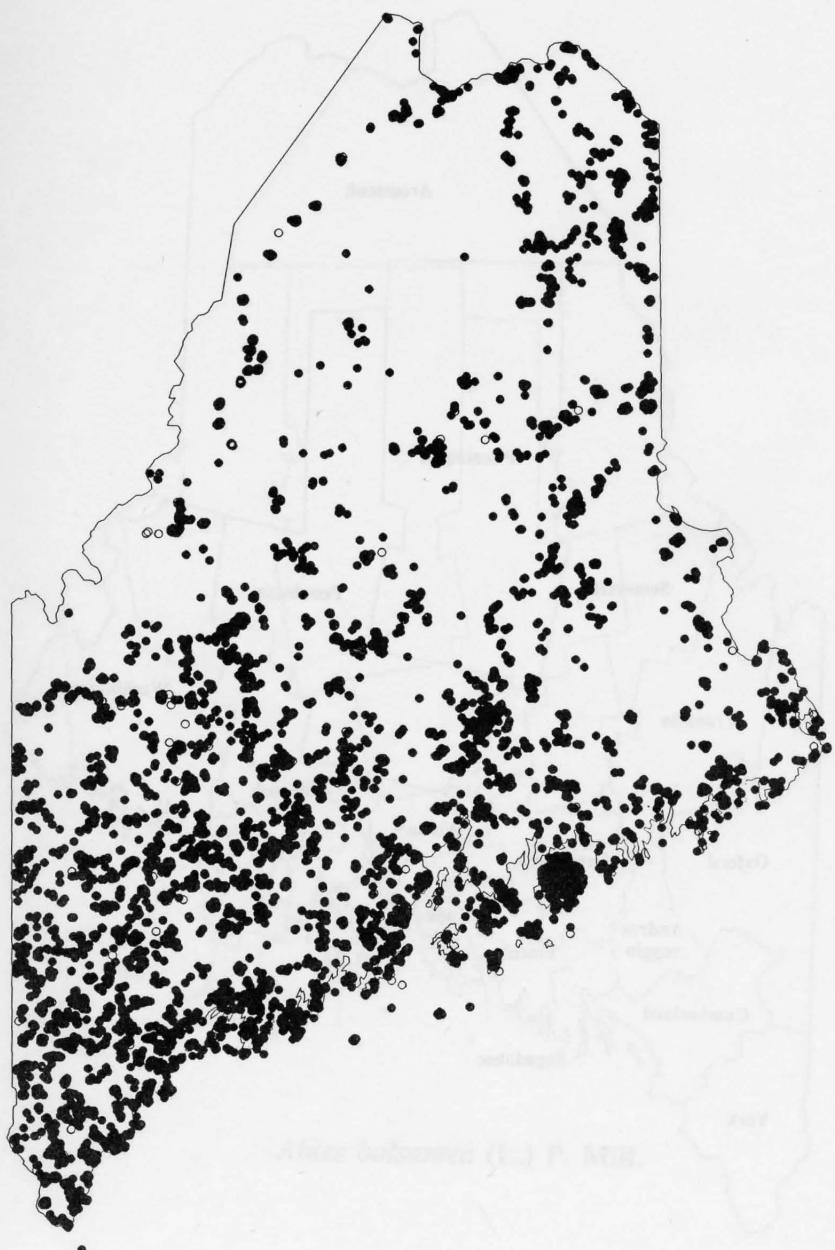
The intent of the maps is to show general geographic distribution. The fact that a particular plant is not shown as occurring in a given area (especially if it is abundant elsewhere in the surrounding region) probably indicates only that the site was not field checked by Hyland or that herbarium records do not exist. Although the maps have been updated to reflect all records archived in the University of Maine Herbarium, extant and historic stations are not differentiated. There are, for example, substantially fewer stations of *Sassafras albidum* and *Quercus coccinea* today than there were in 1944. The maps, however, do not reflect this.

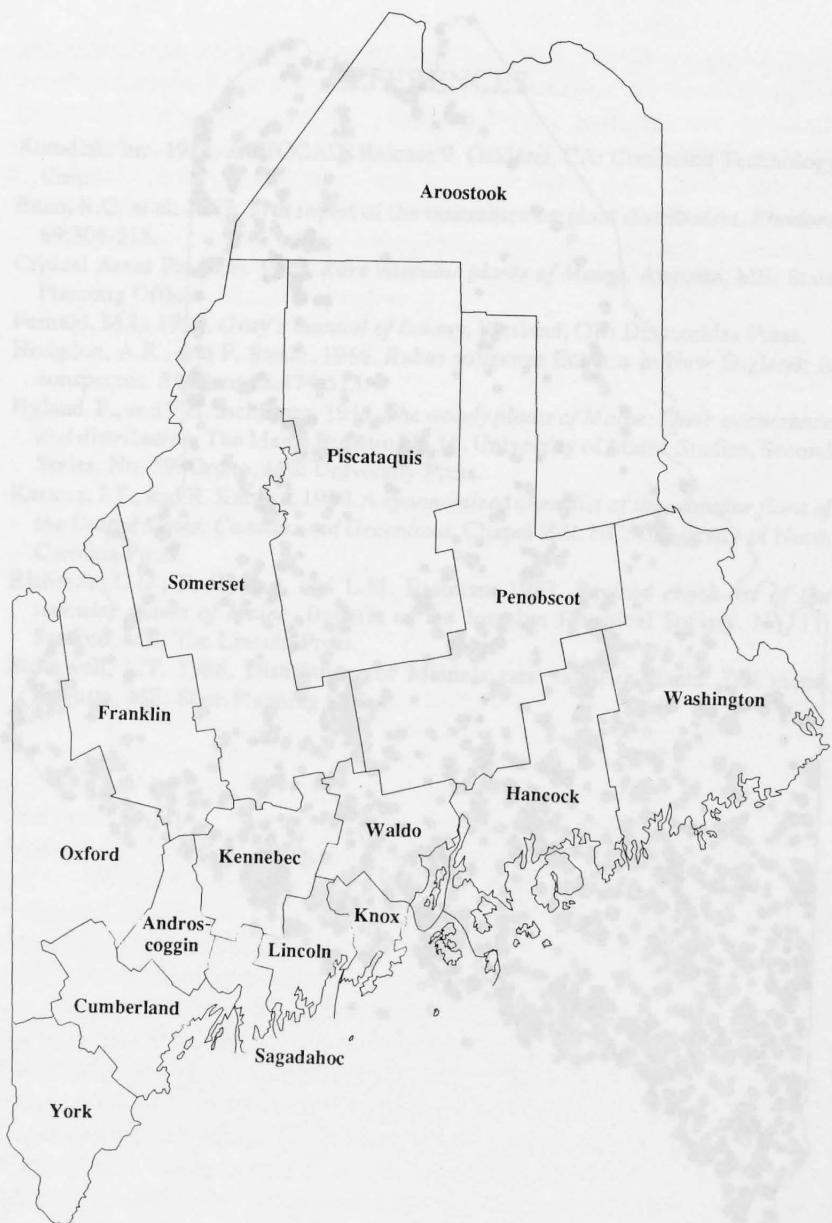
Although Hyland described his field survey as systematic, no record exists of the method he used to survey the state. Figure 1 is a composite of the 230 distribution maps prepared by Hyland. One can readily see that sampling was

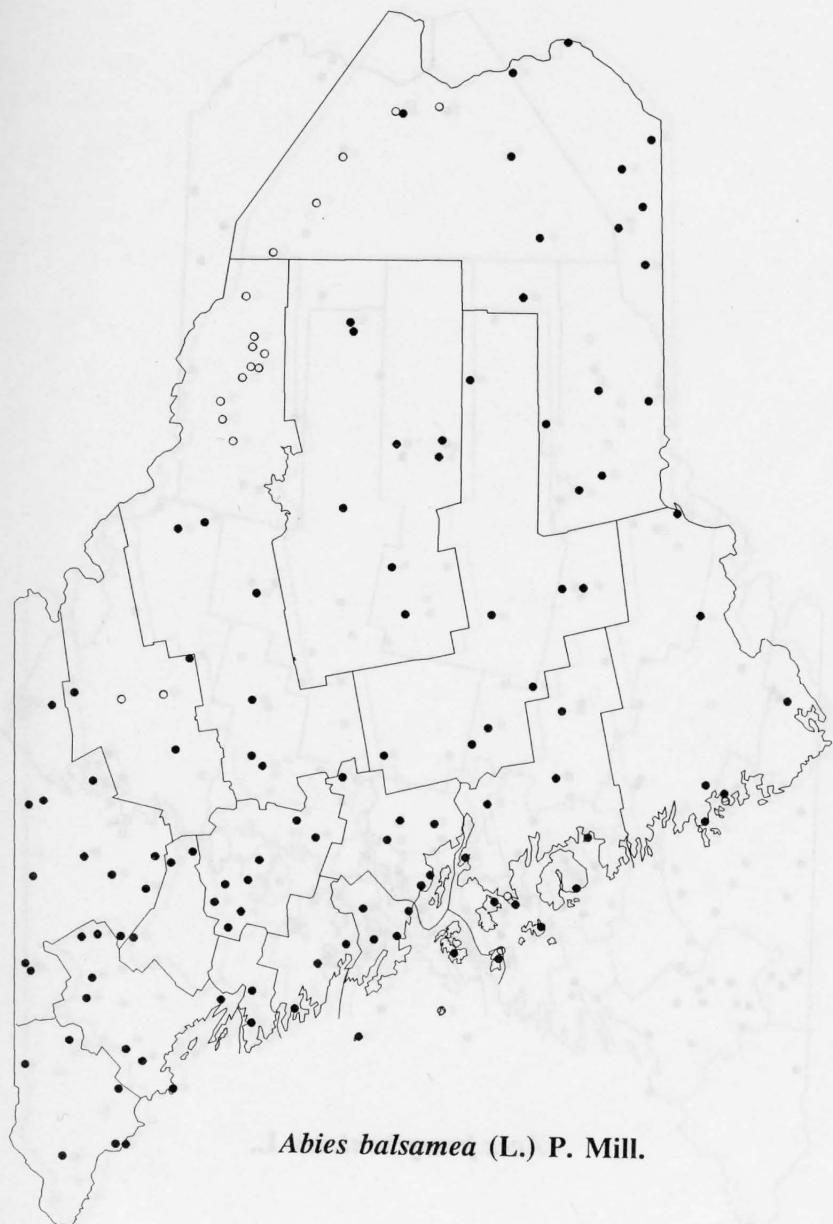
more concentrated in the southern half of the state, where it typically followed railroads. In northern Maine, especially in Somerset and western Aroostook Counties, the sampling pattern generally follows river valleys, as rivers provided the major access into the north woods at the time. In addition, certain portions of the state were surveyed more thoroughly than other areas because of a bias toward rarities. Nevertheless, the maps provide valuable information about the ecological ranges of Maine's native woody flora.

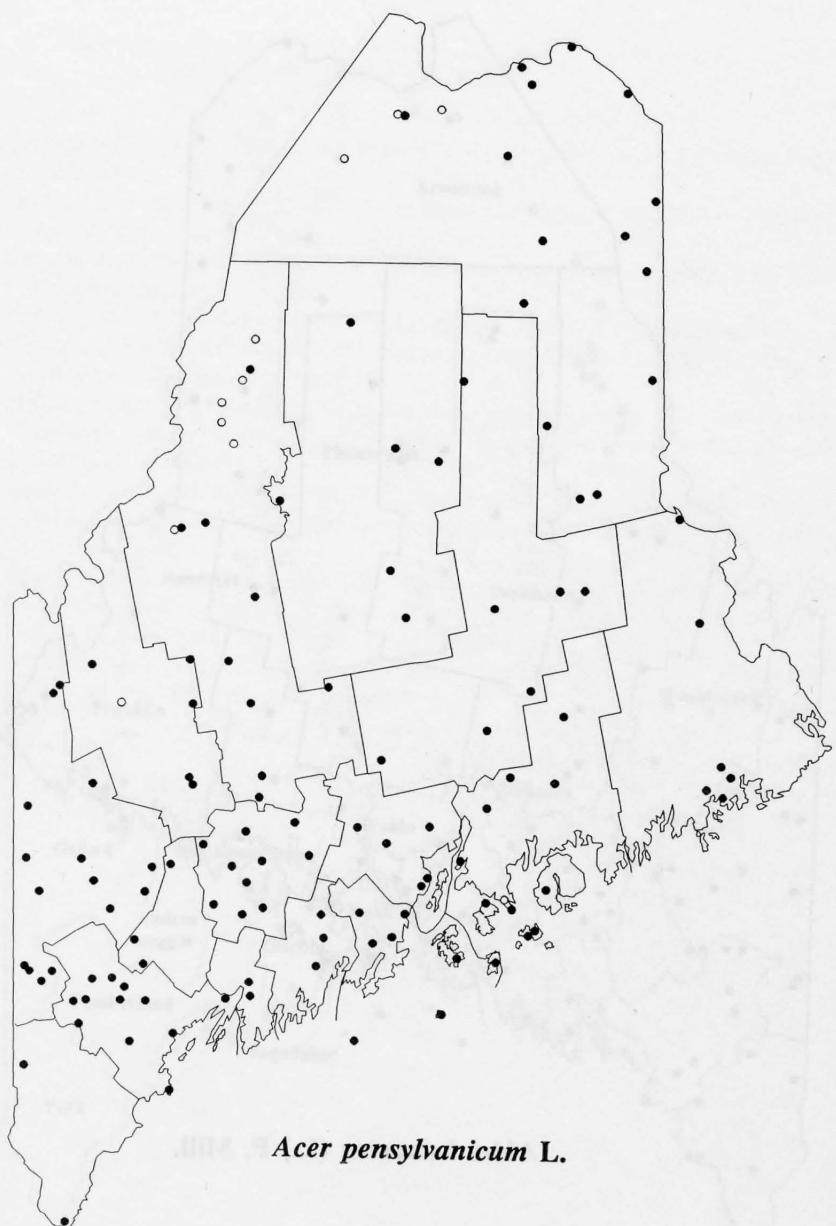
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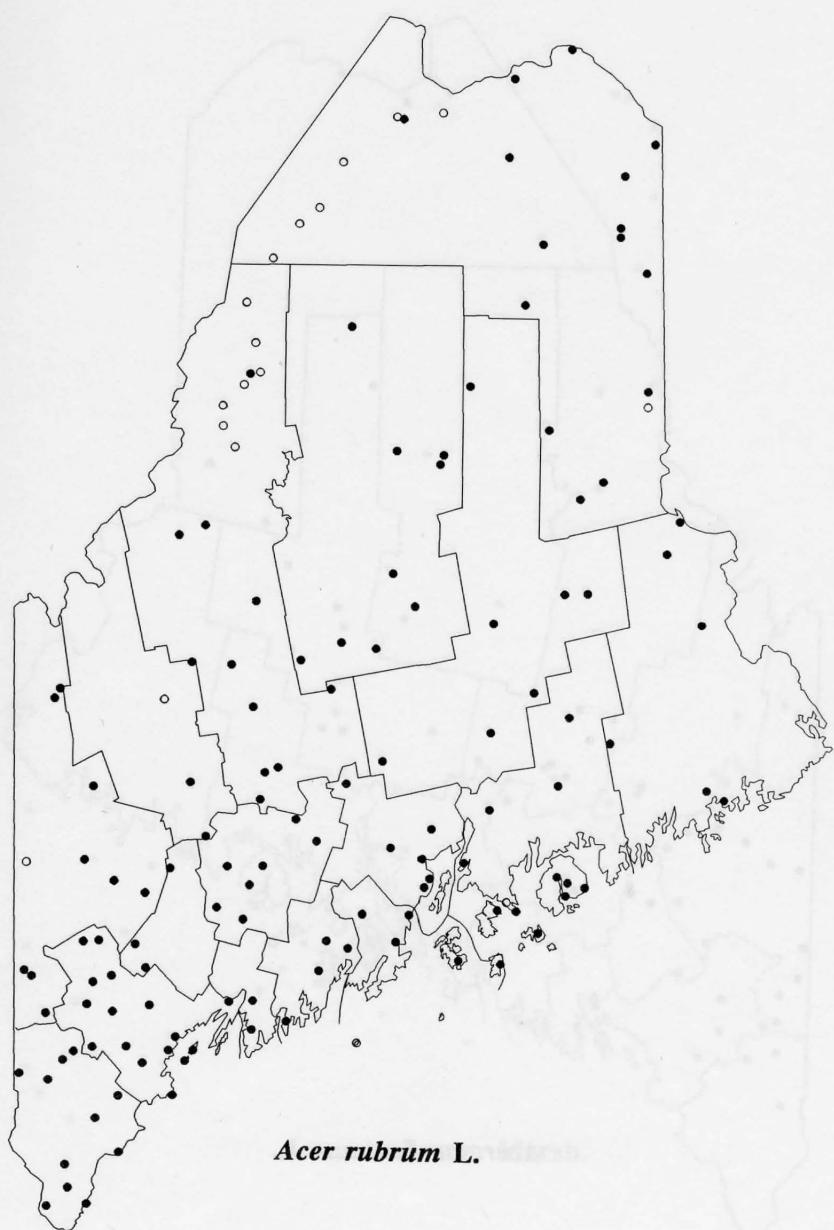
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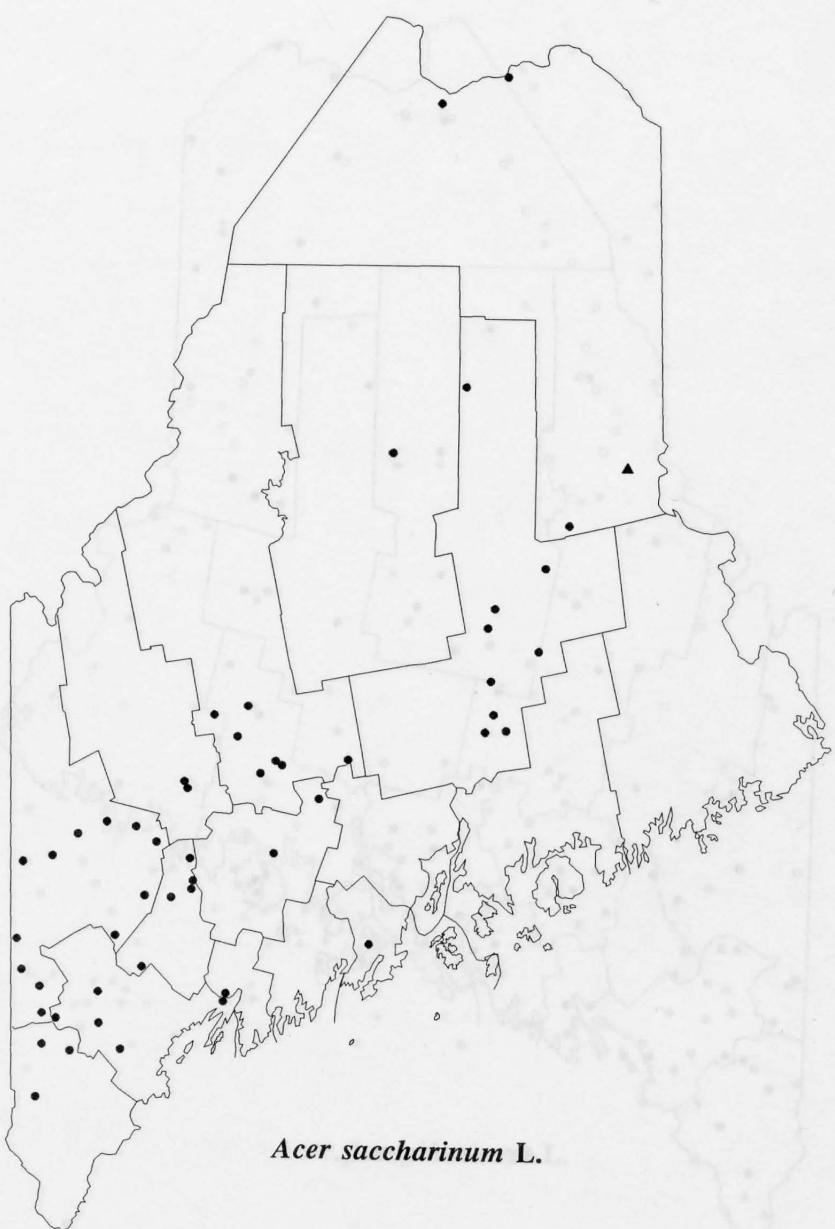


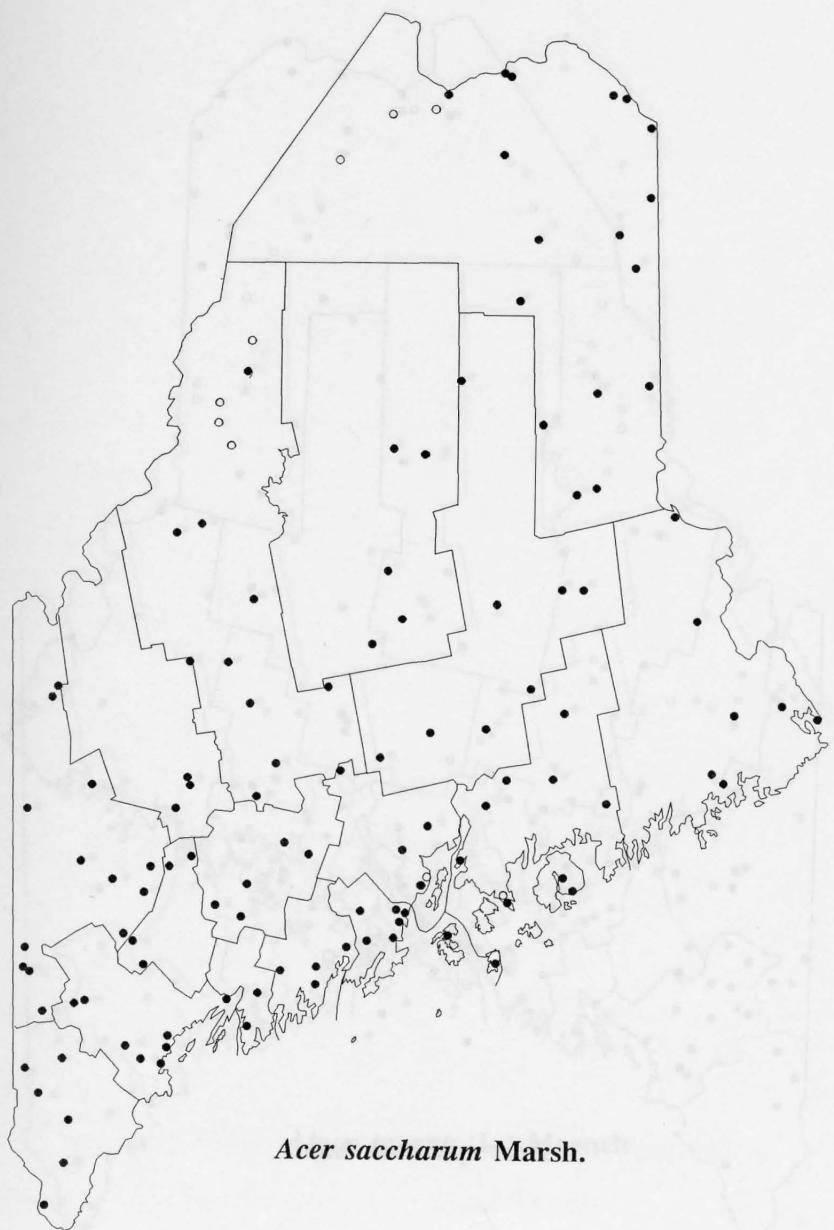


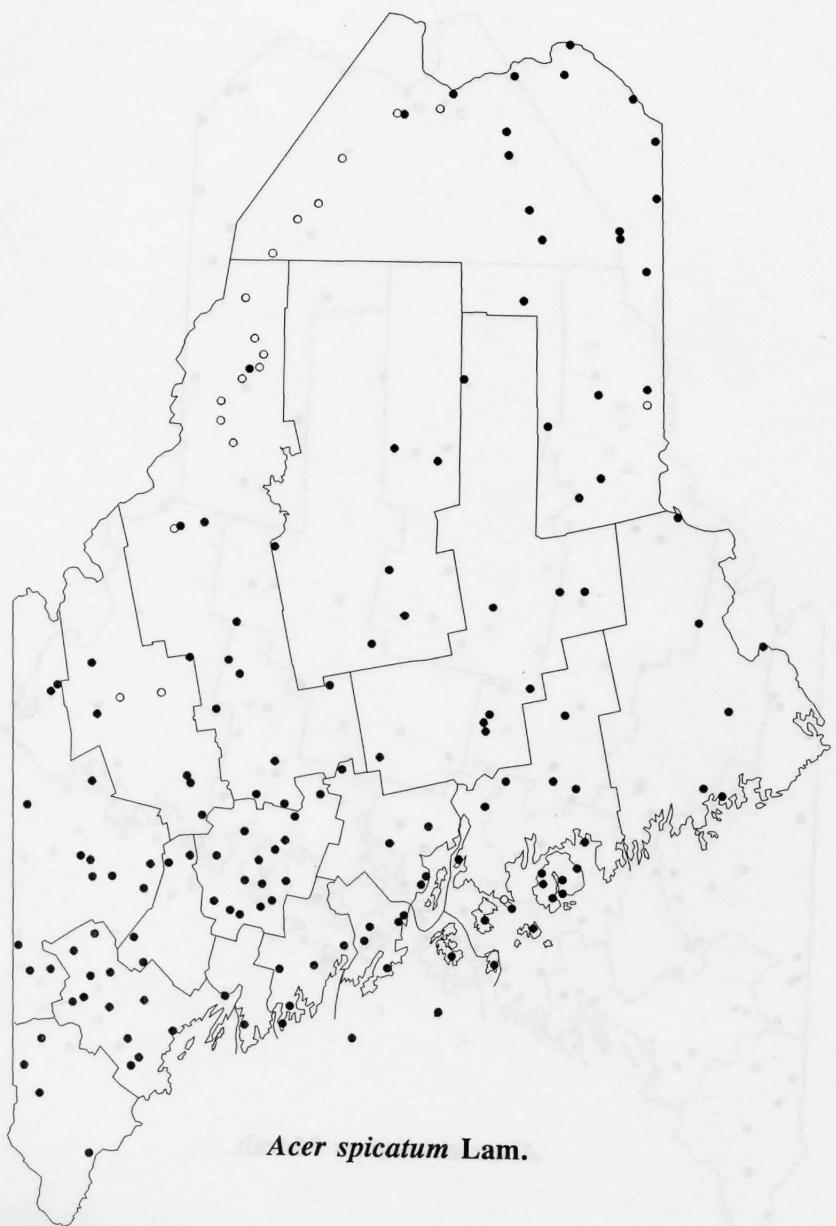


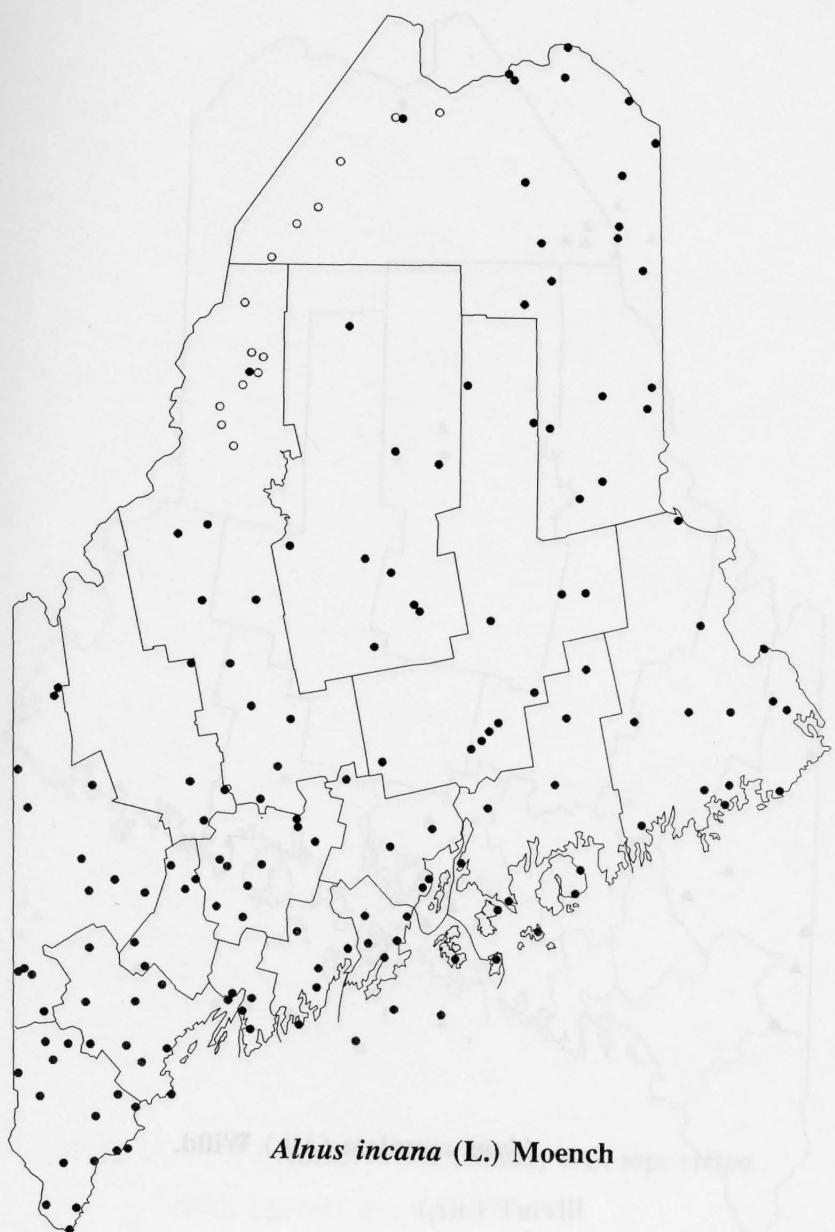


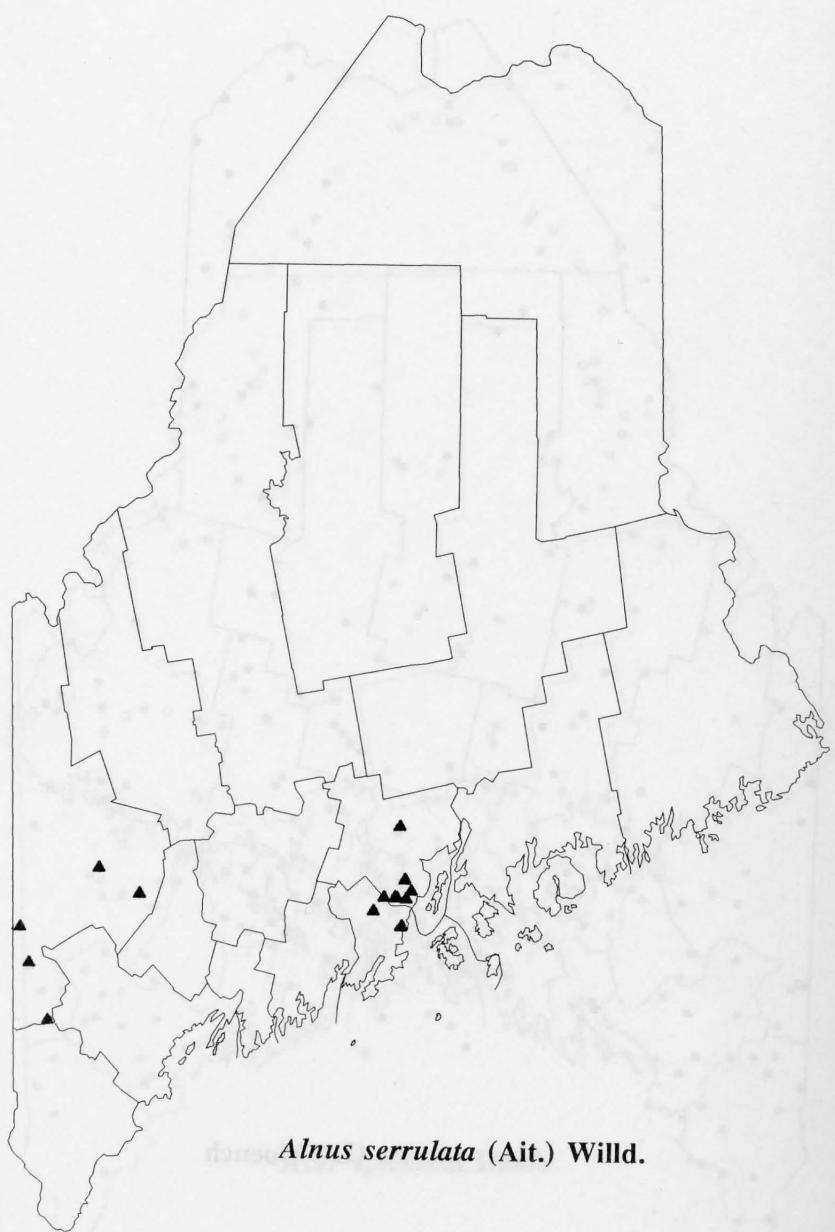




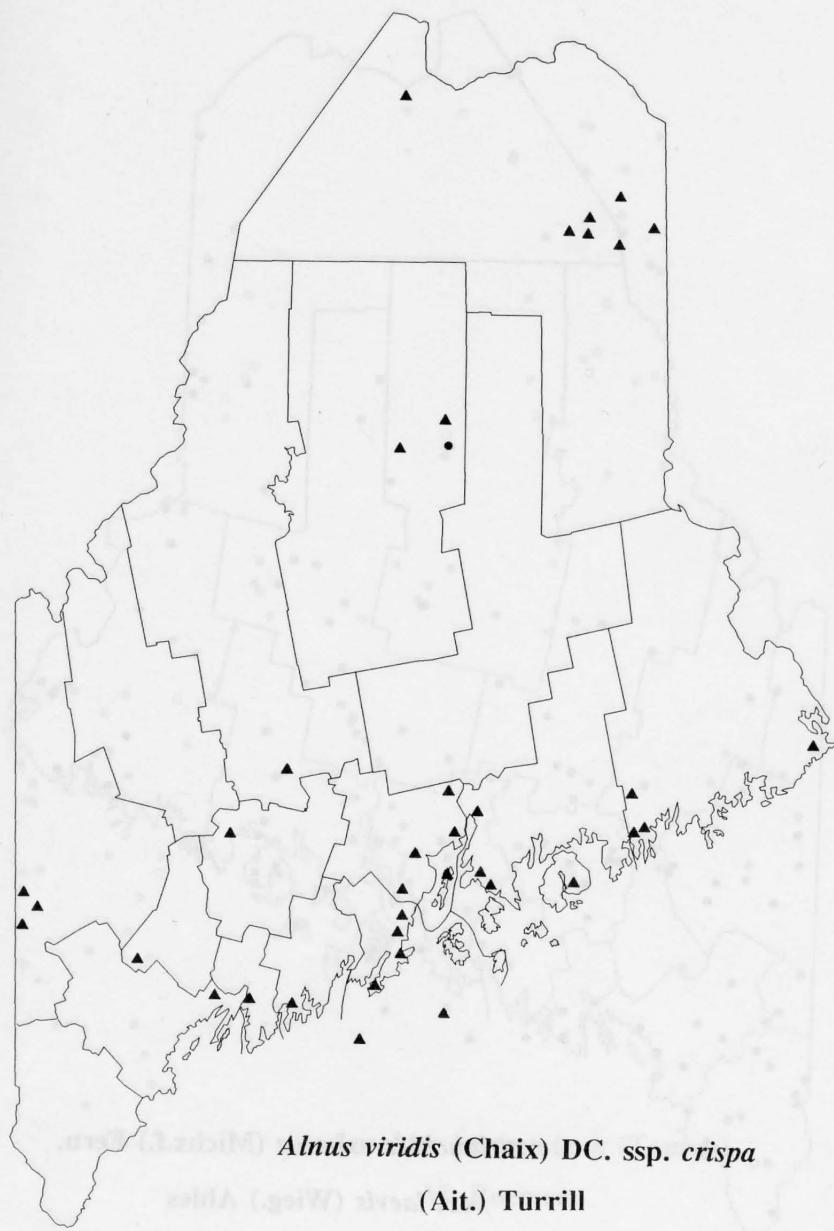


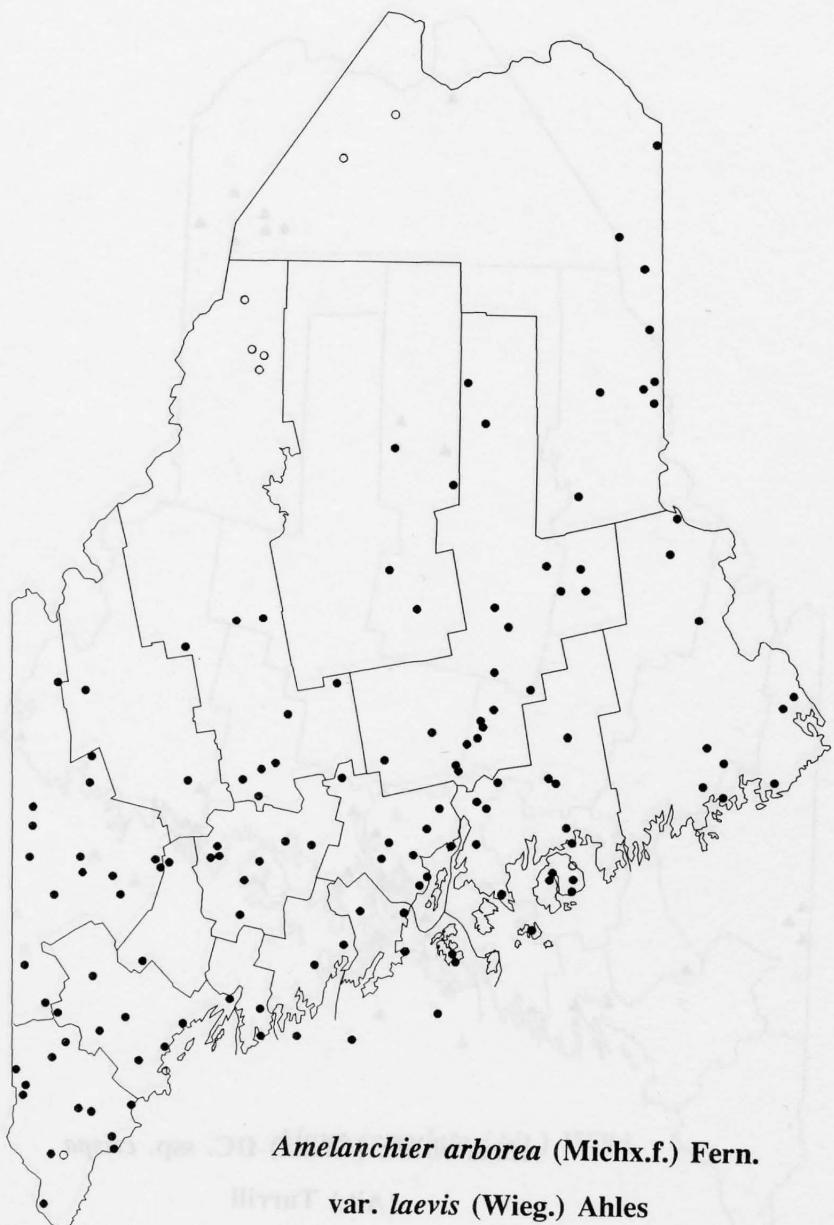


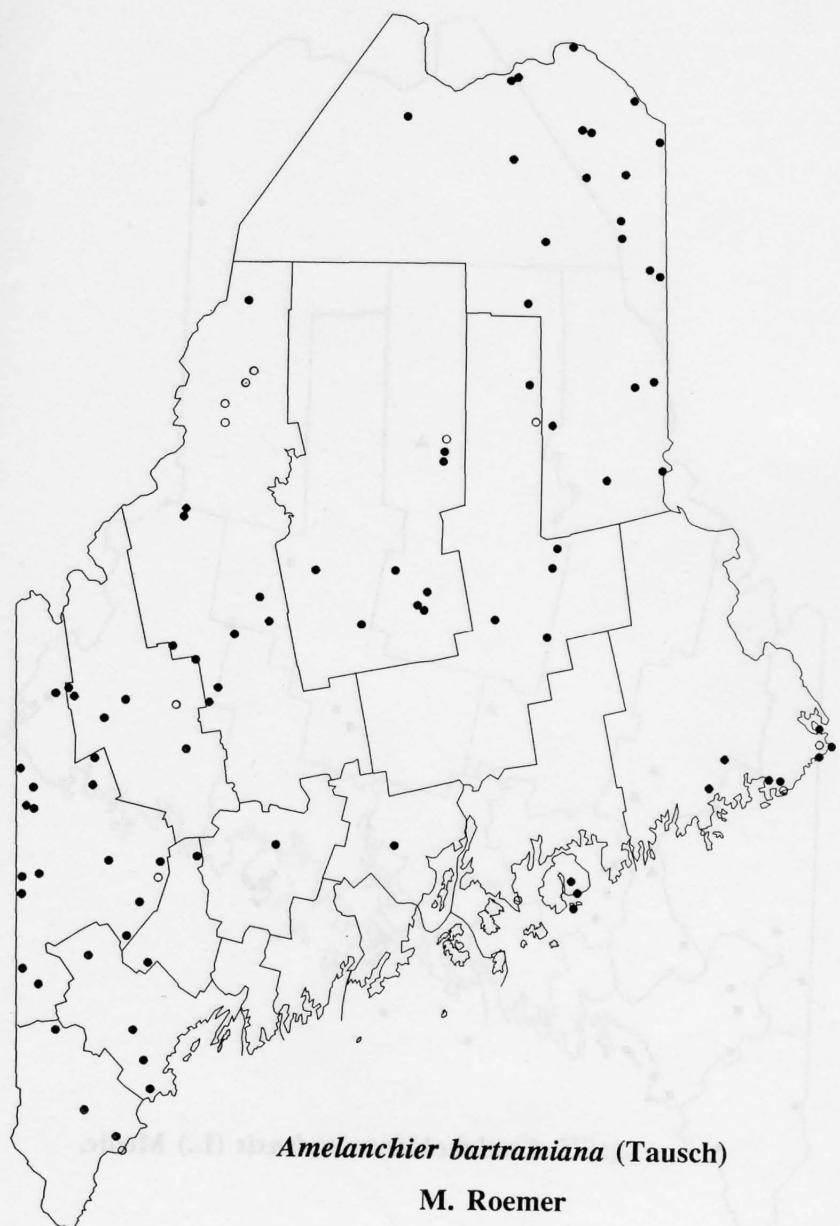


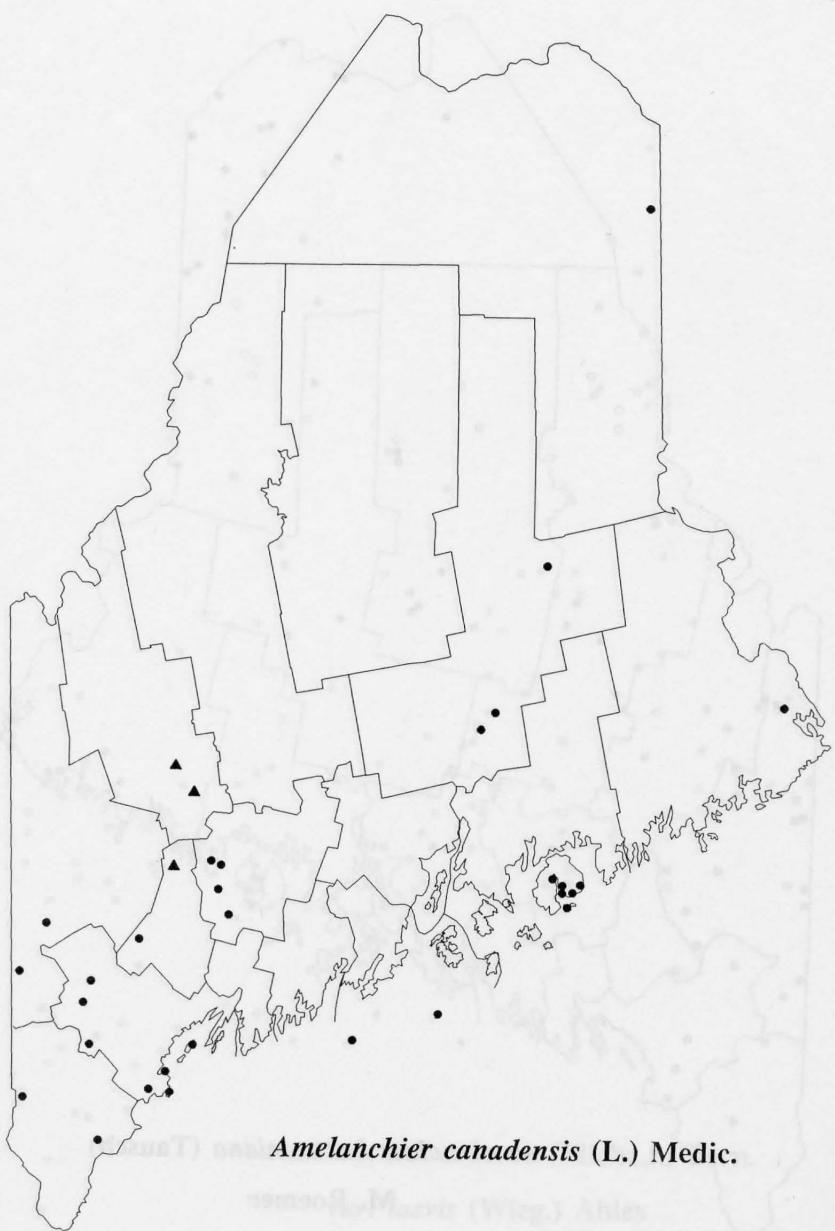


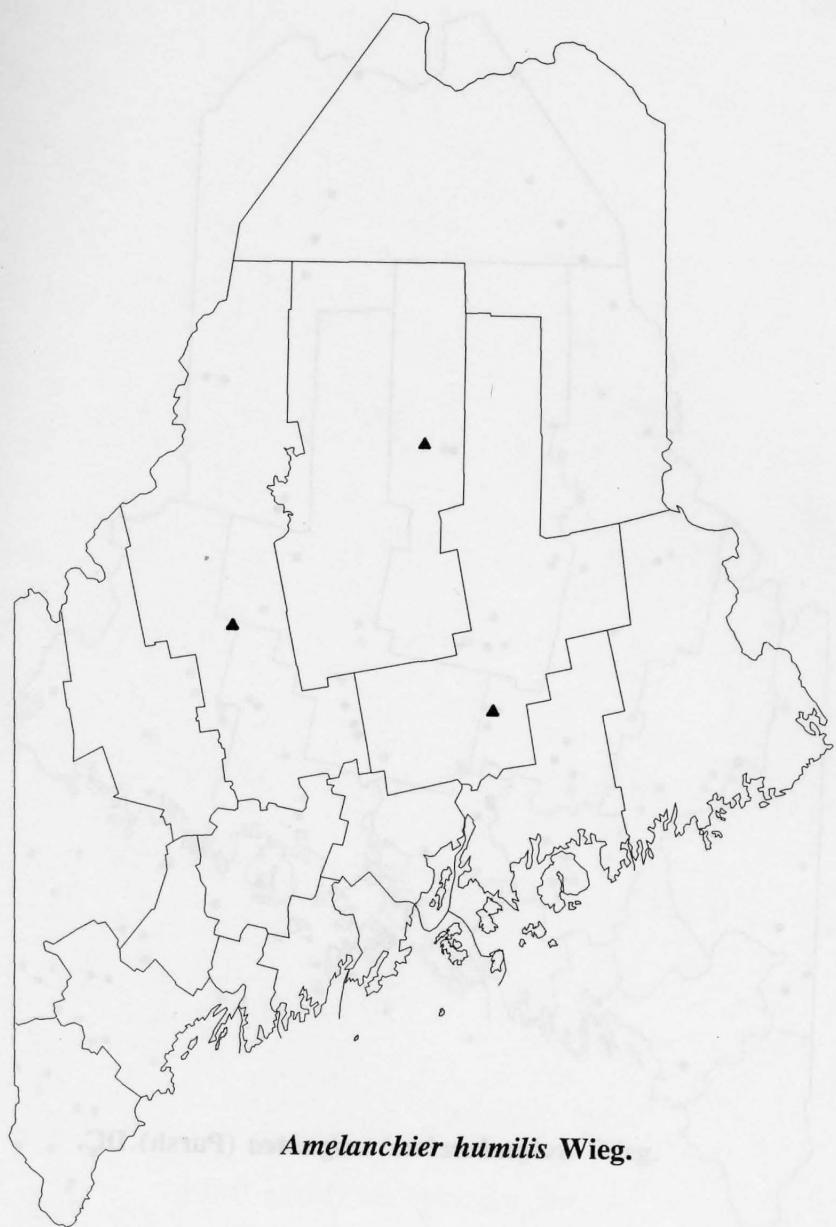
*Alnus serrulata* (Ait.) Willd.



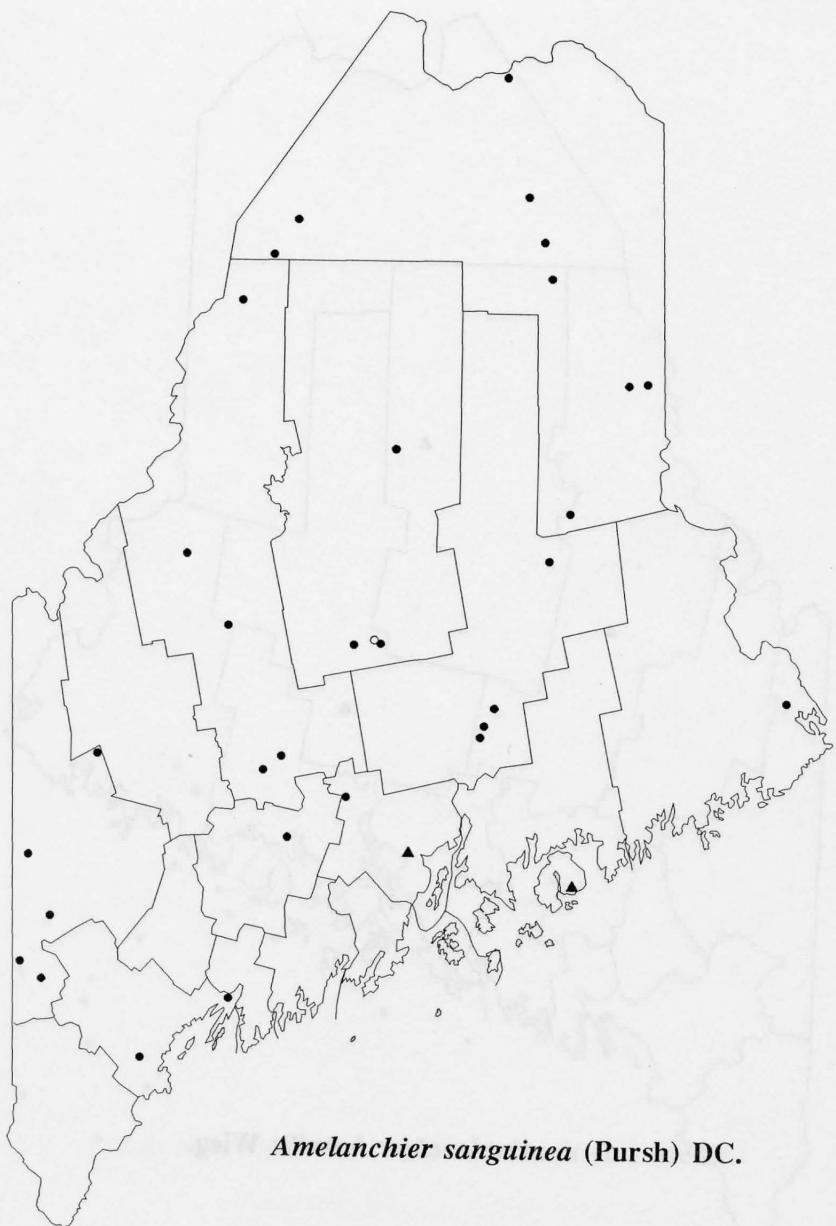


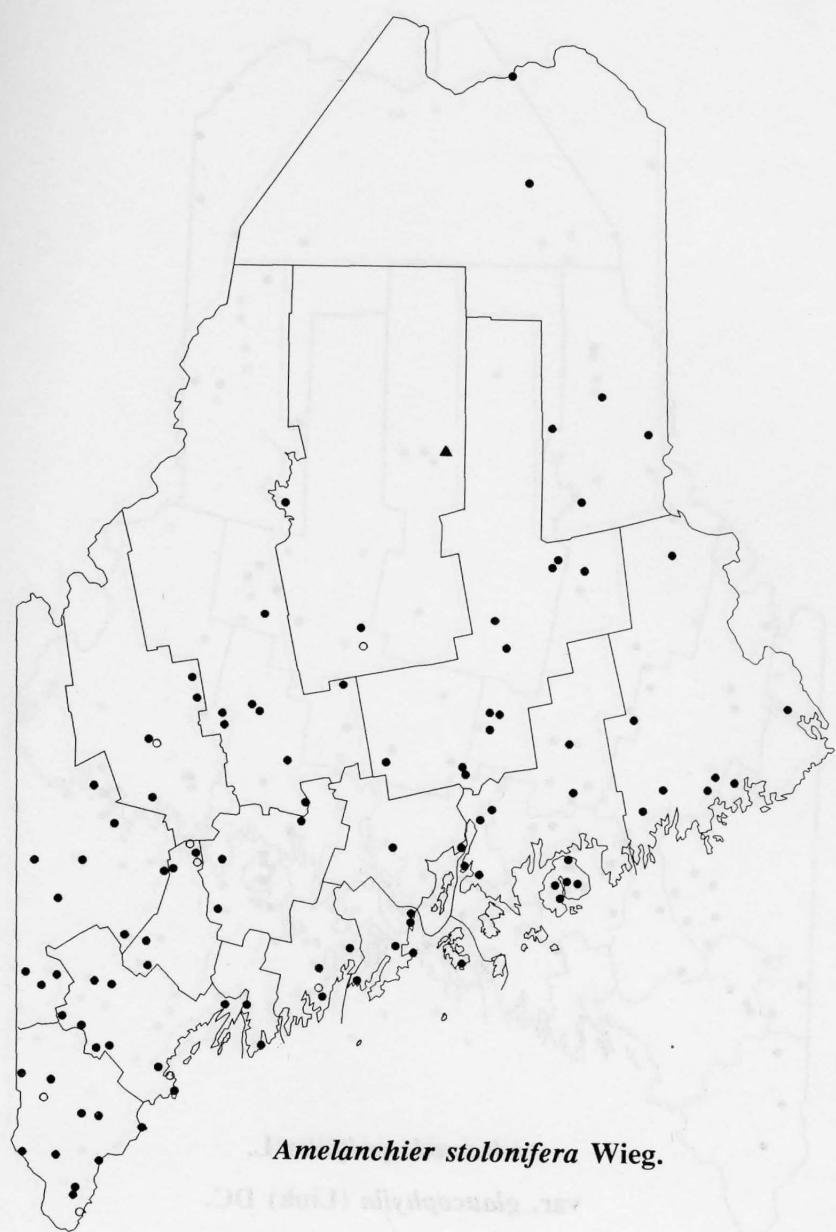


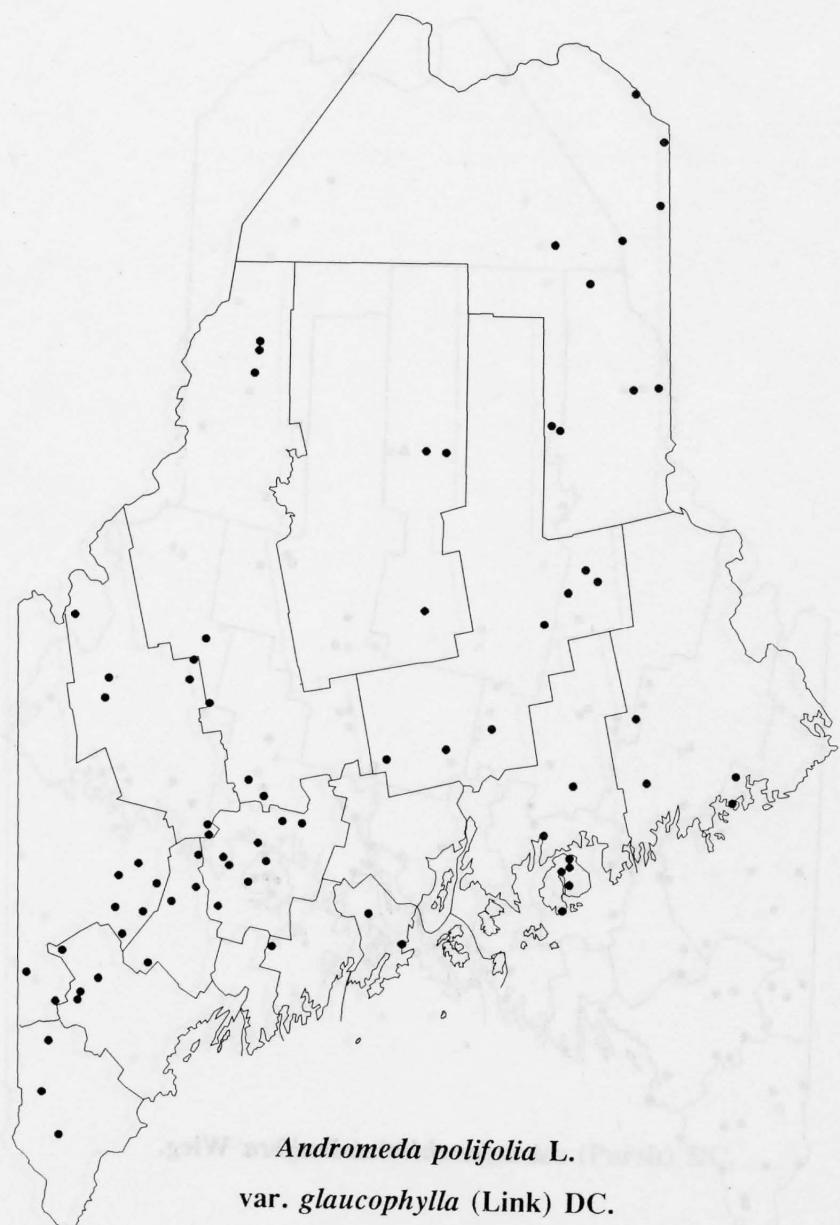


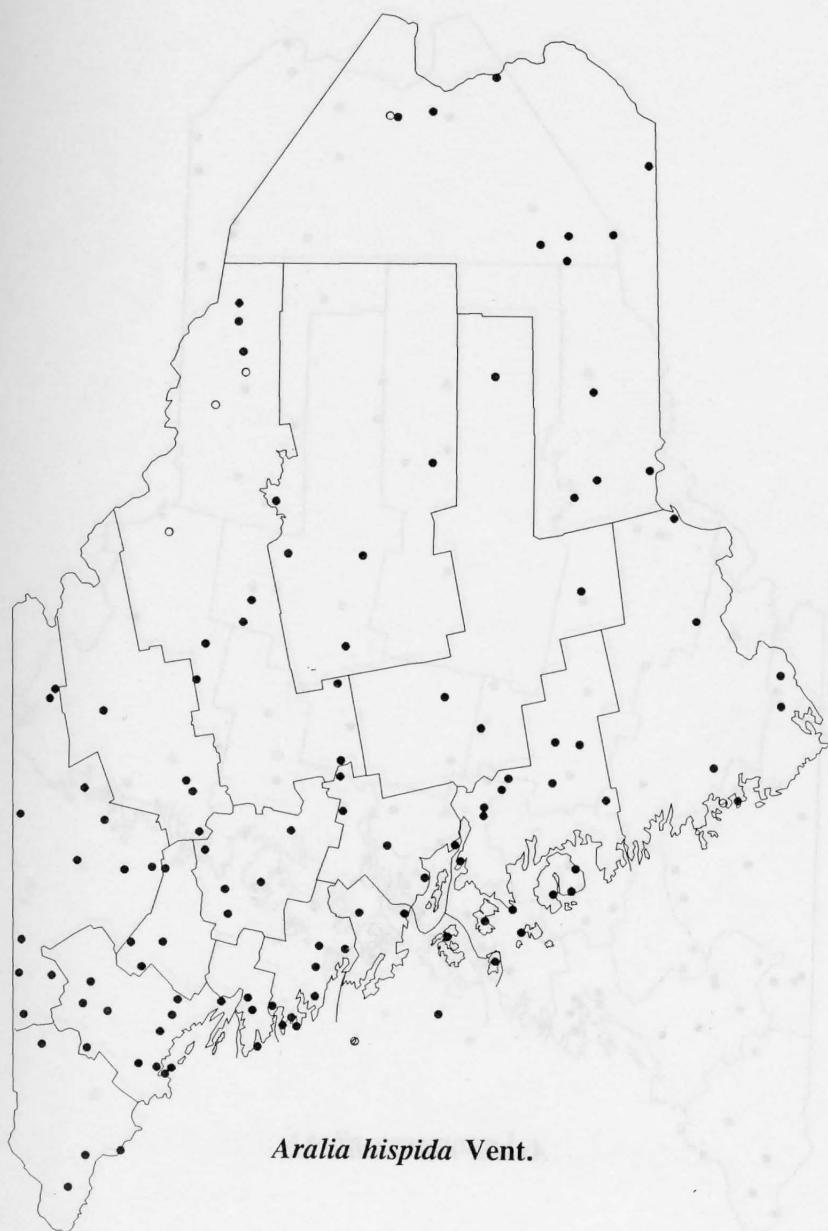


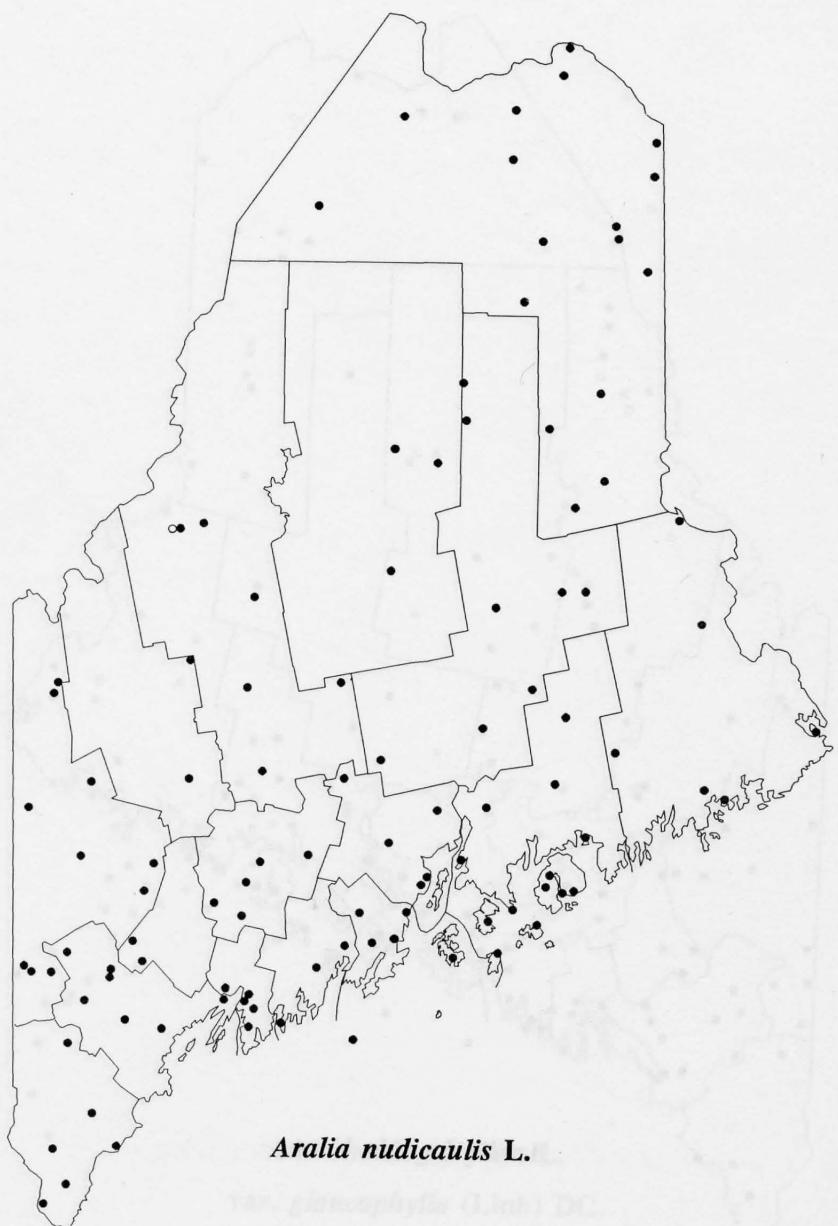
*Amelanchier humilis* Wieg.



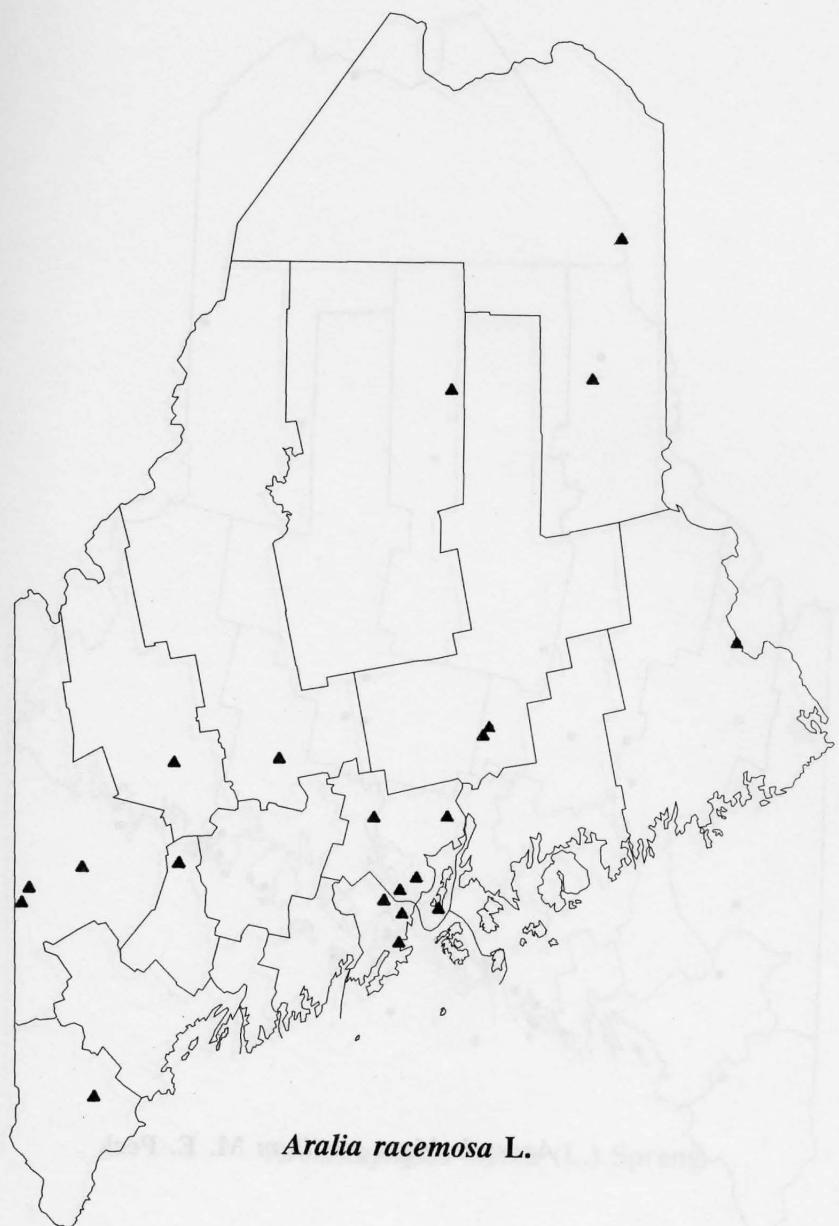




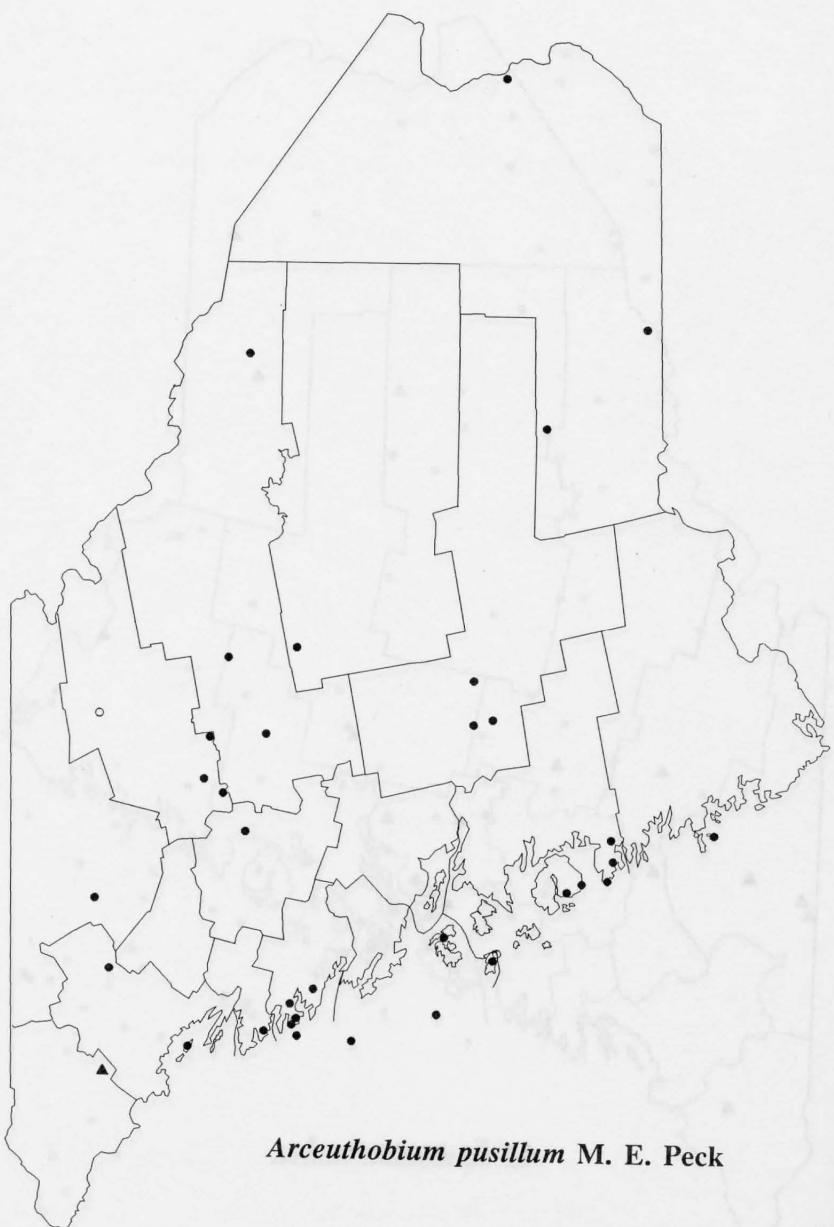


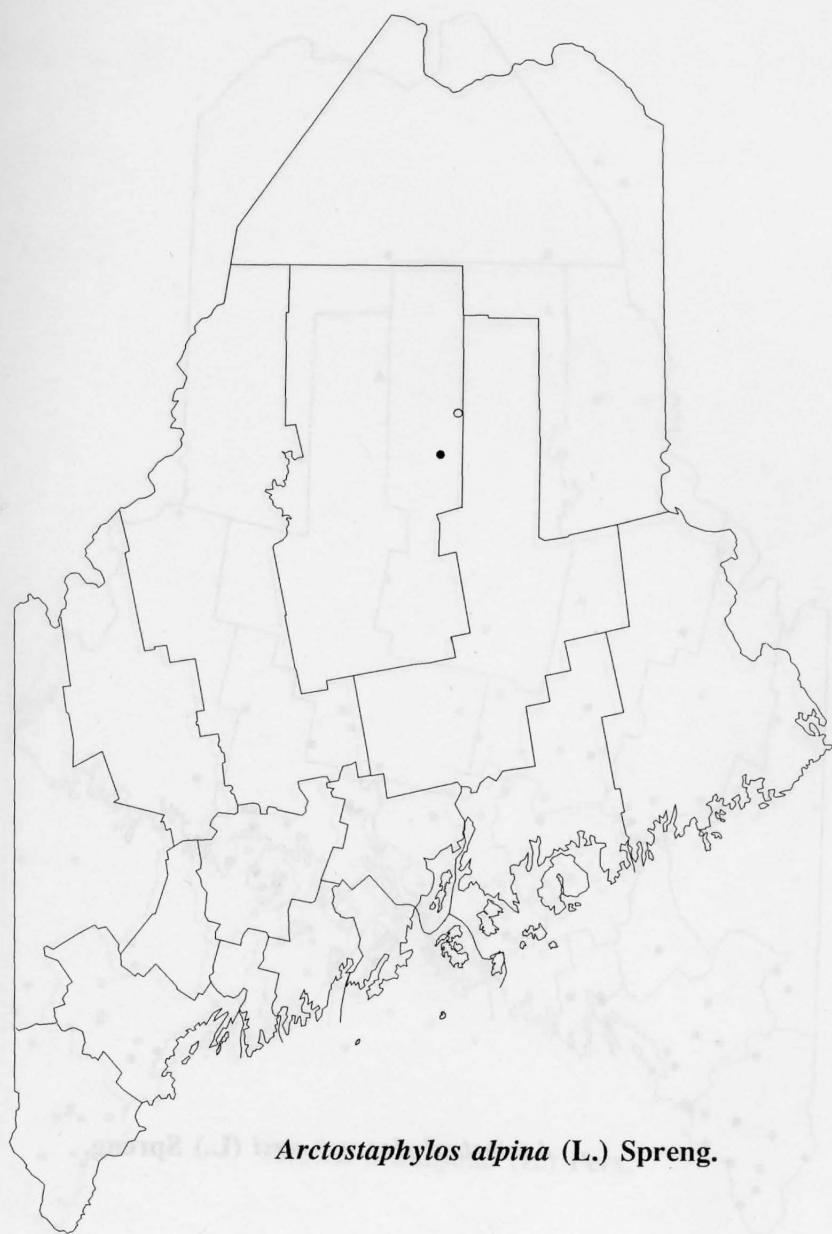


*Aralia nudicaulis* L.

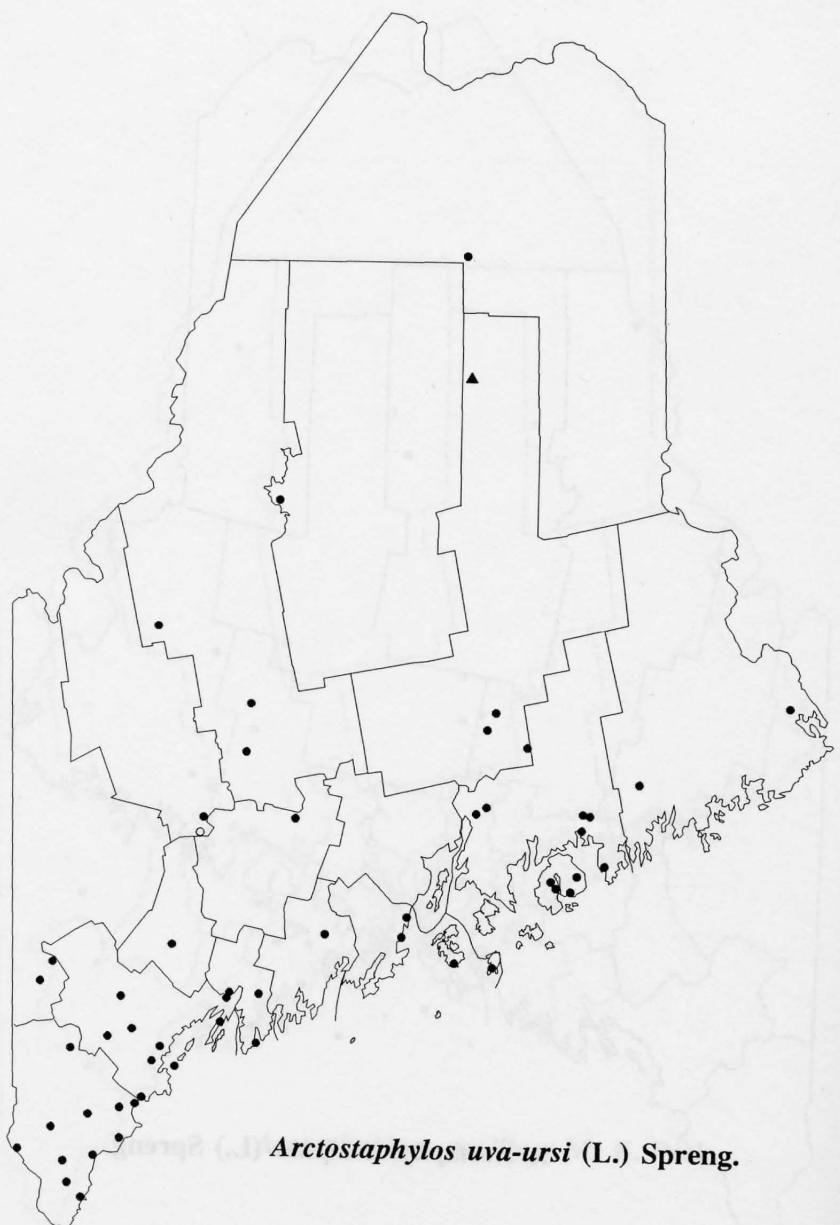


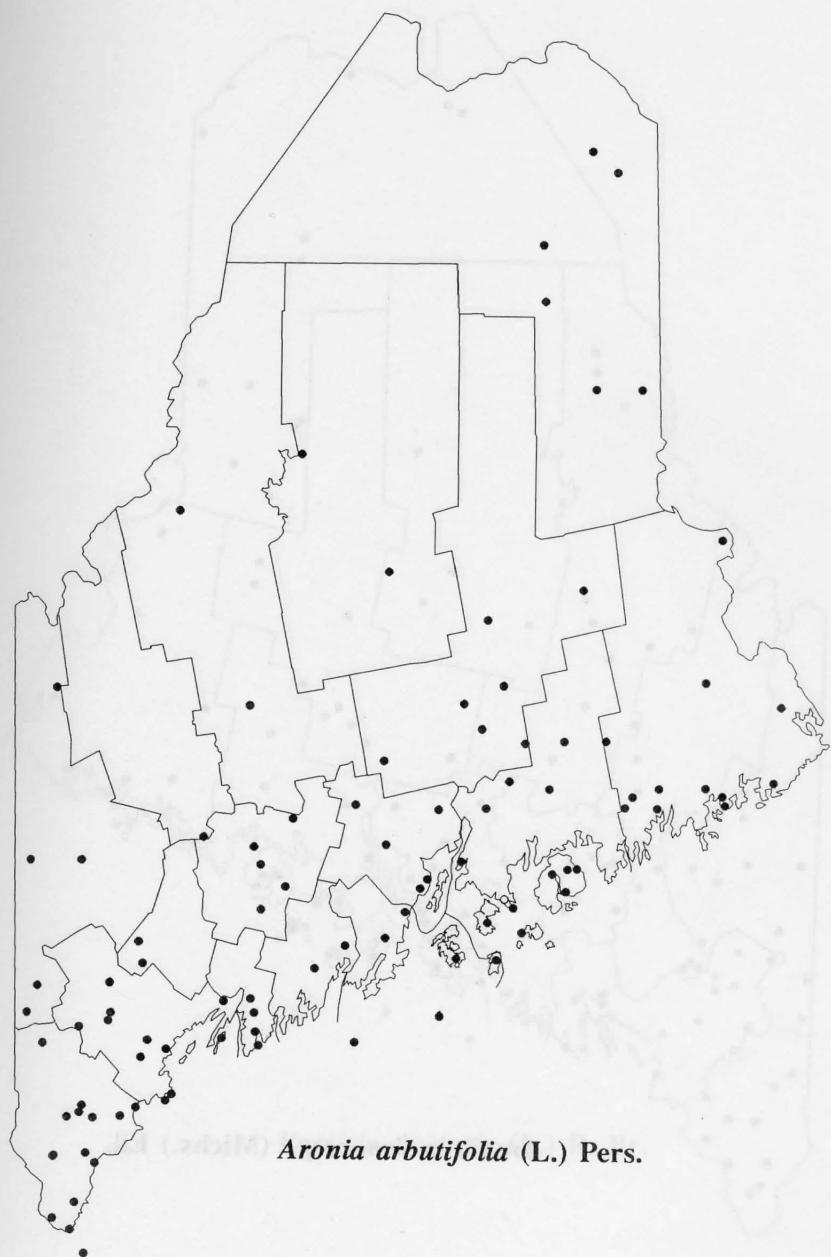
*Aralia racemosa* L.

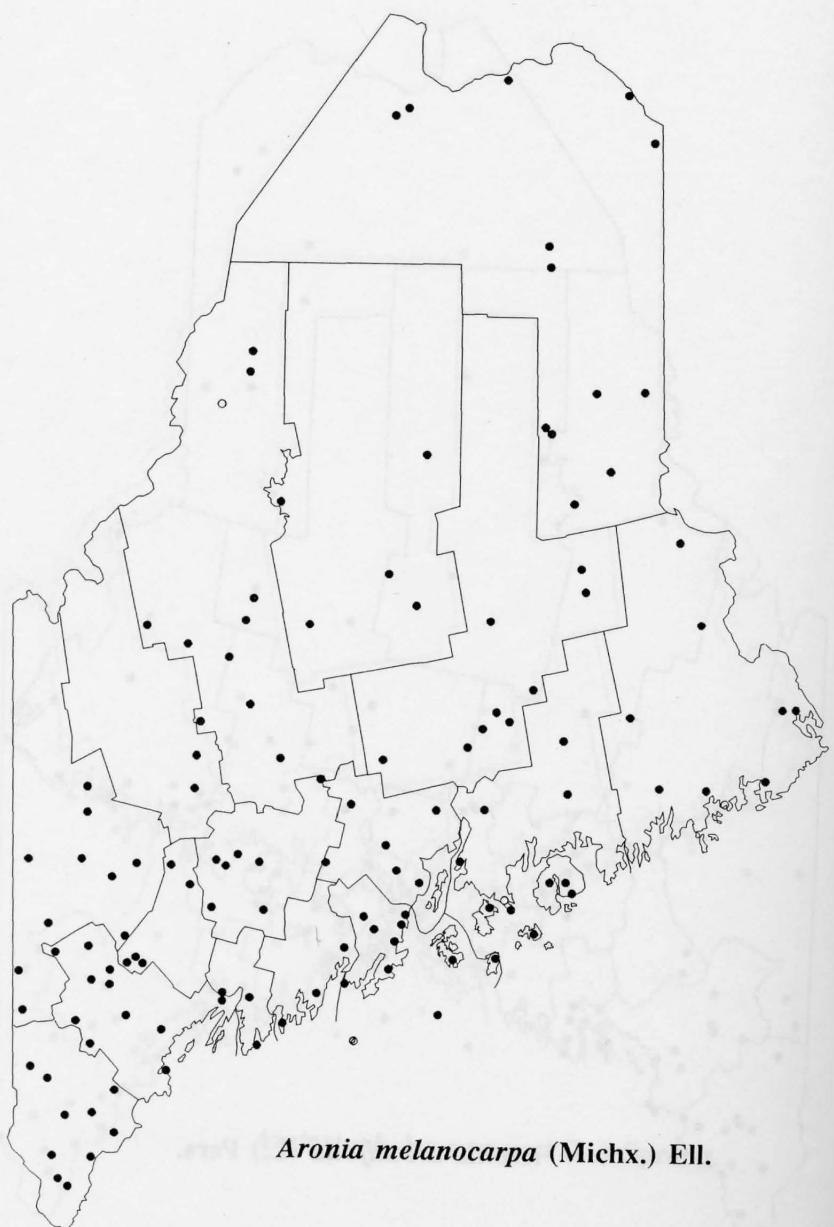


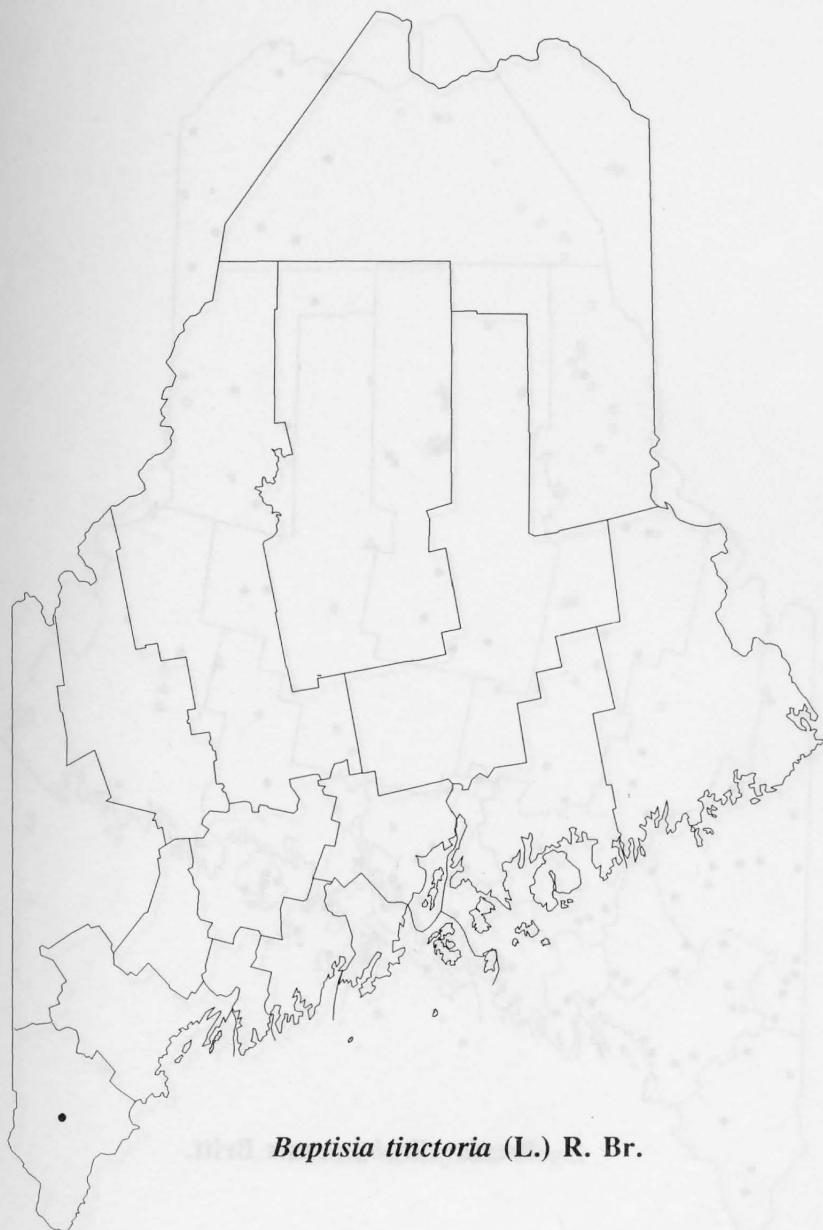


*Arctostaphylos alpina* (L.) Spreng.

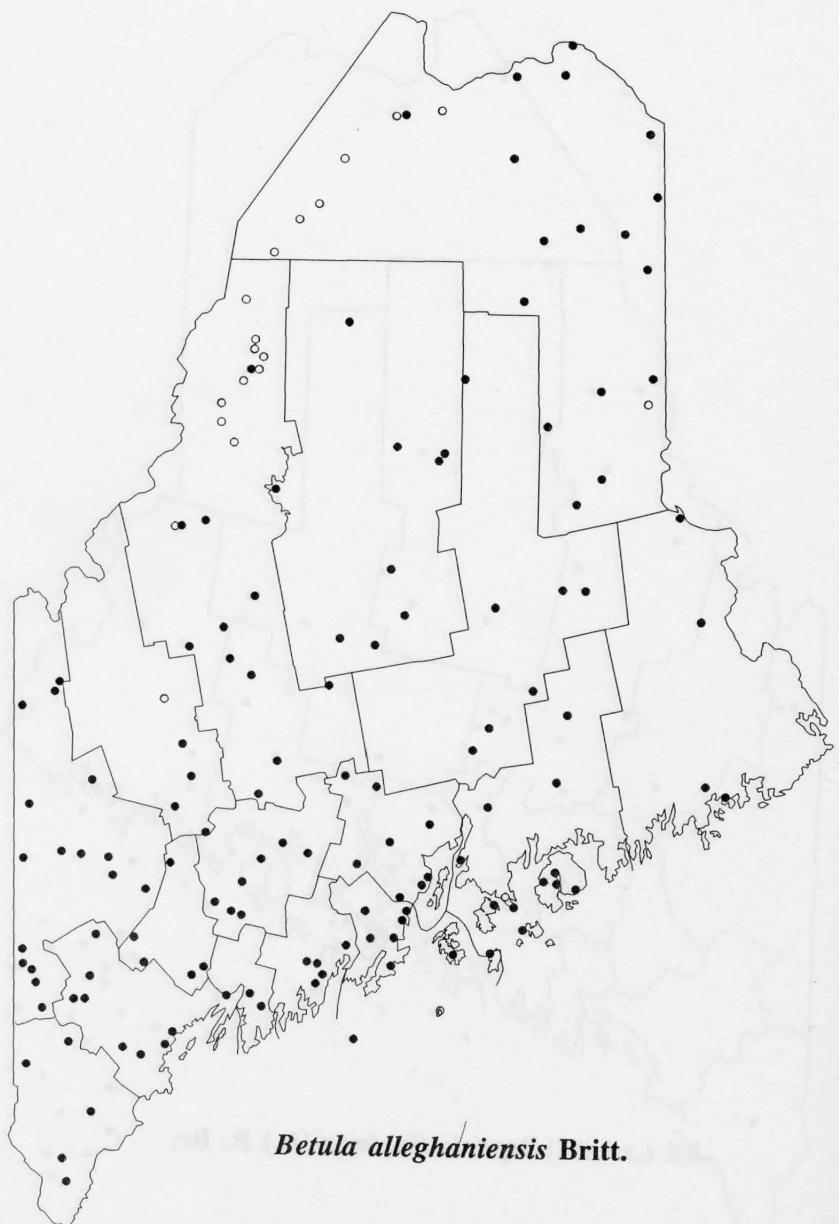


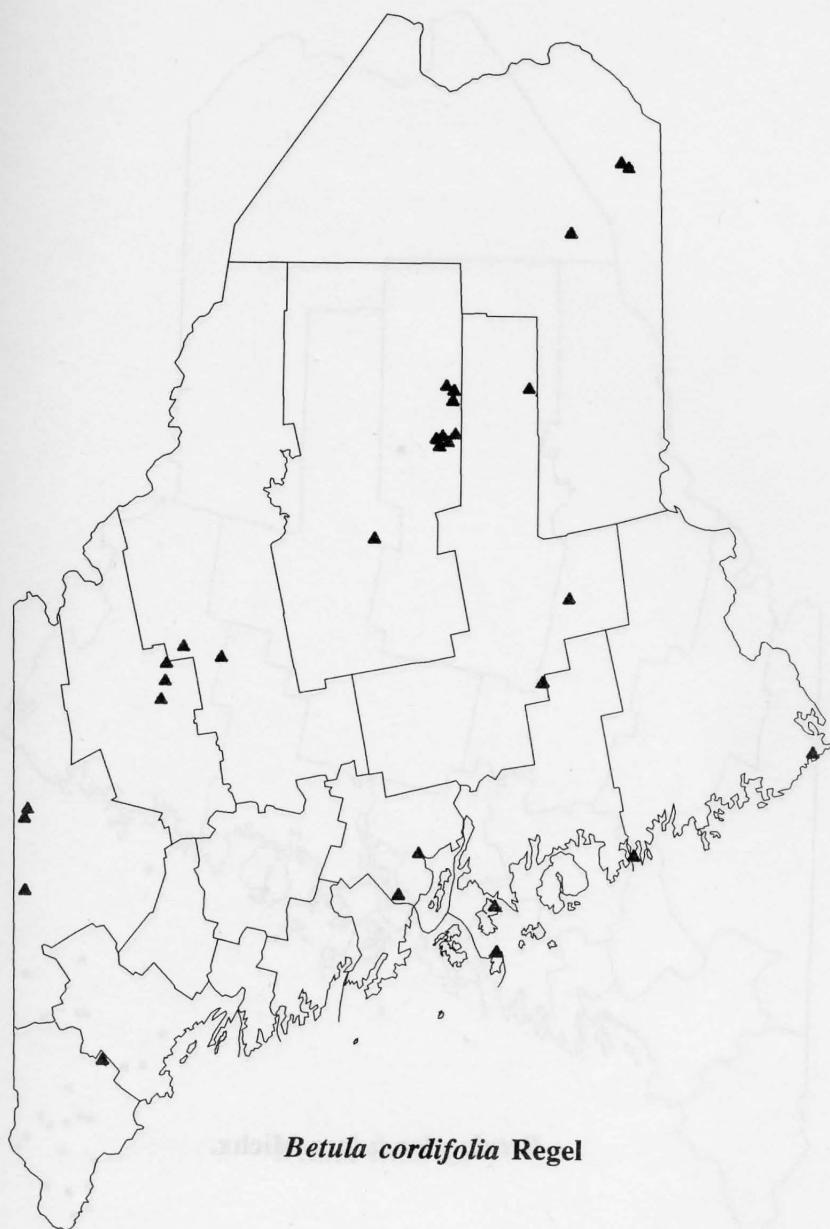


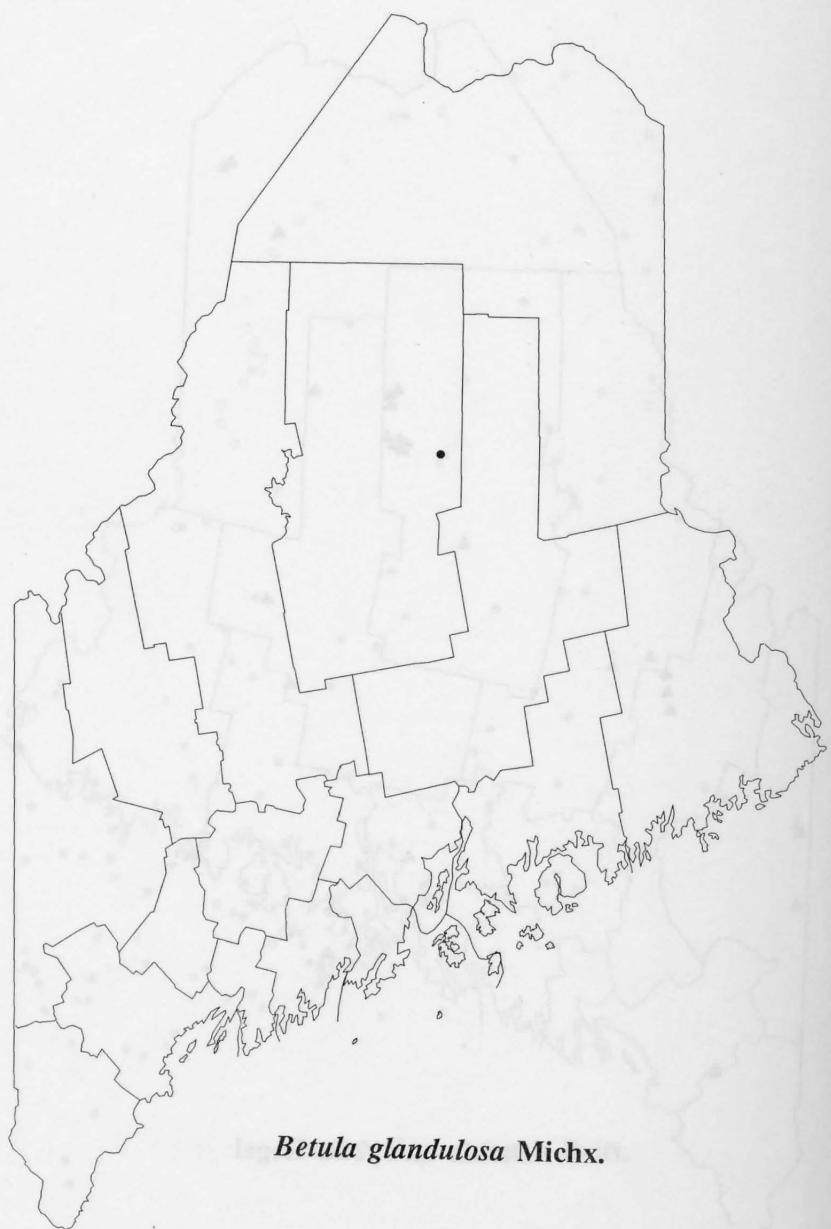




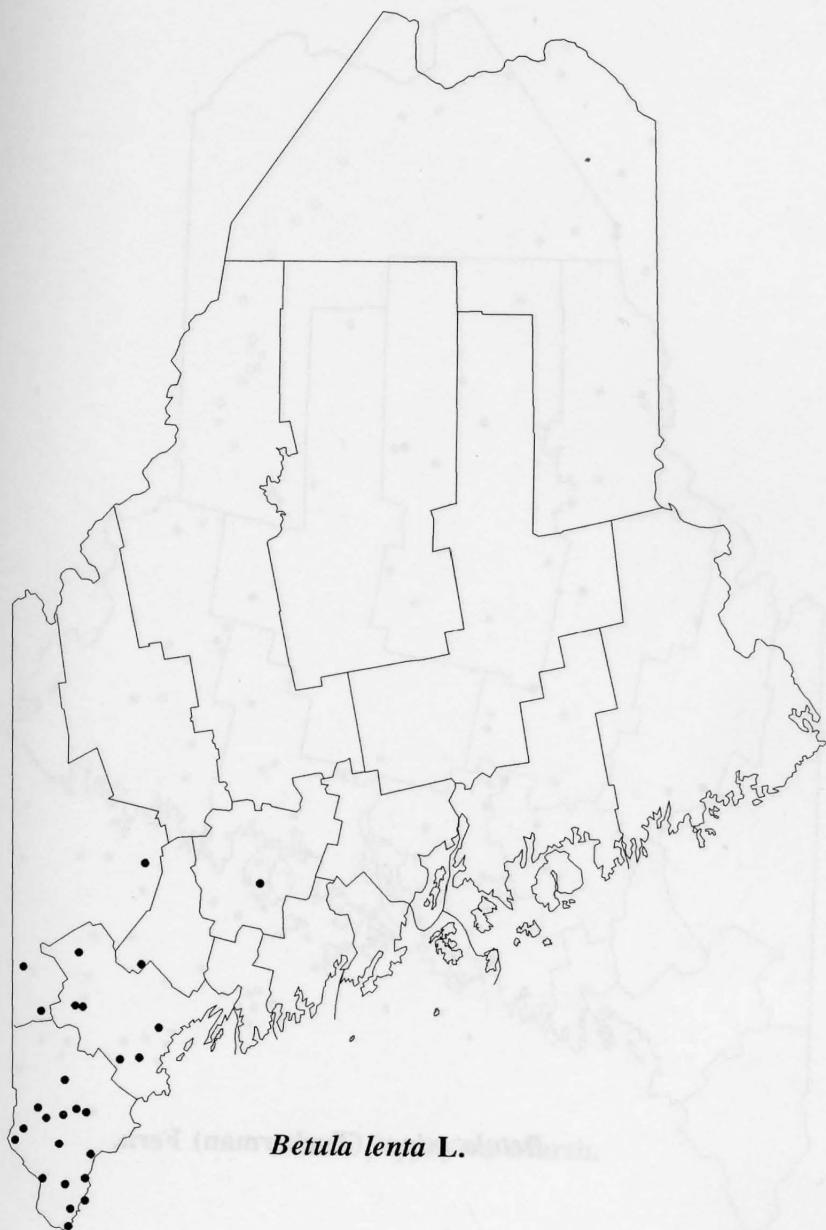
*Baptisia tinctoria* (L.) R. Br.



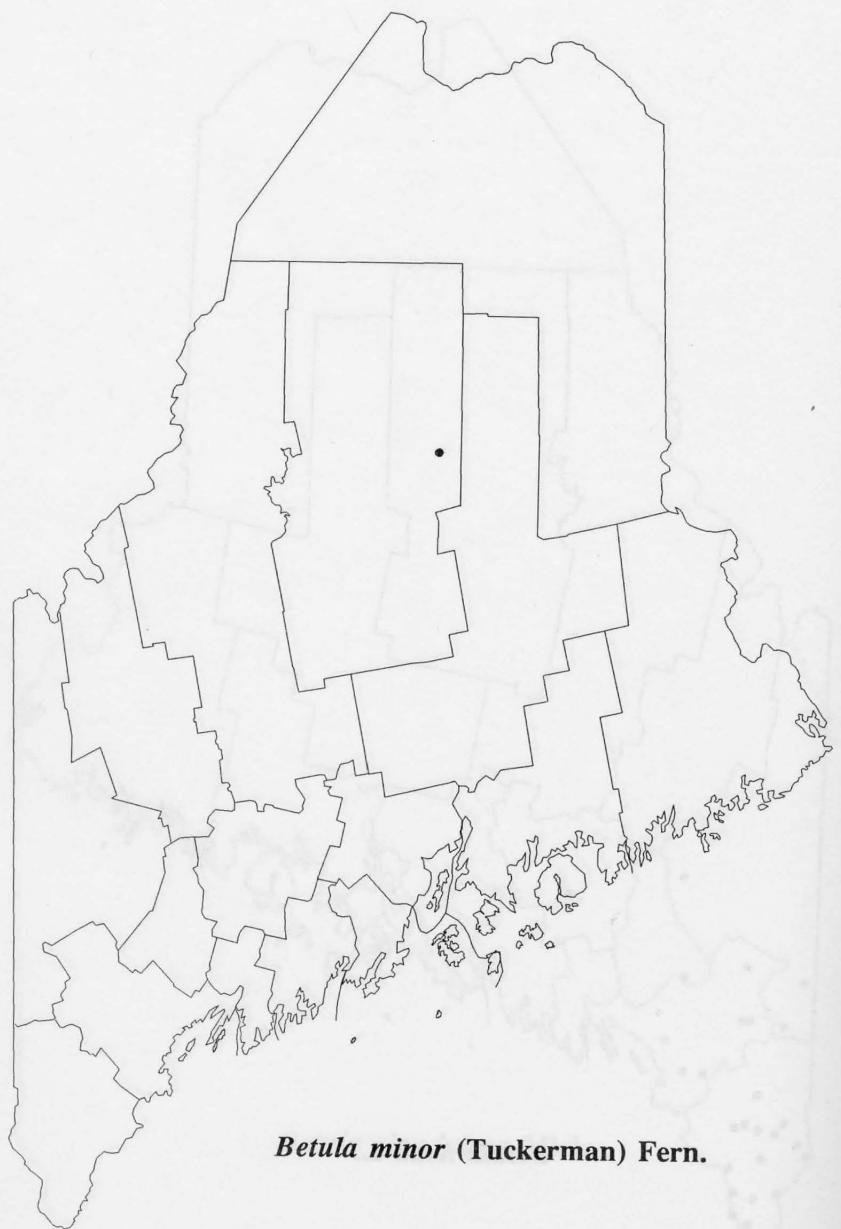




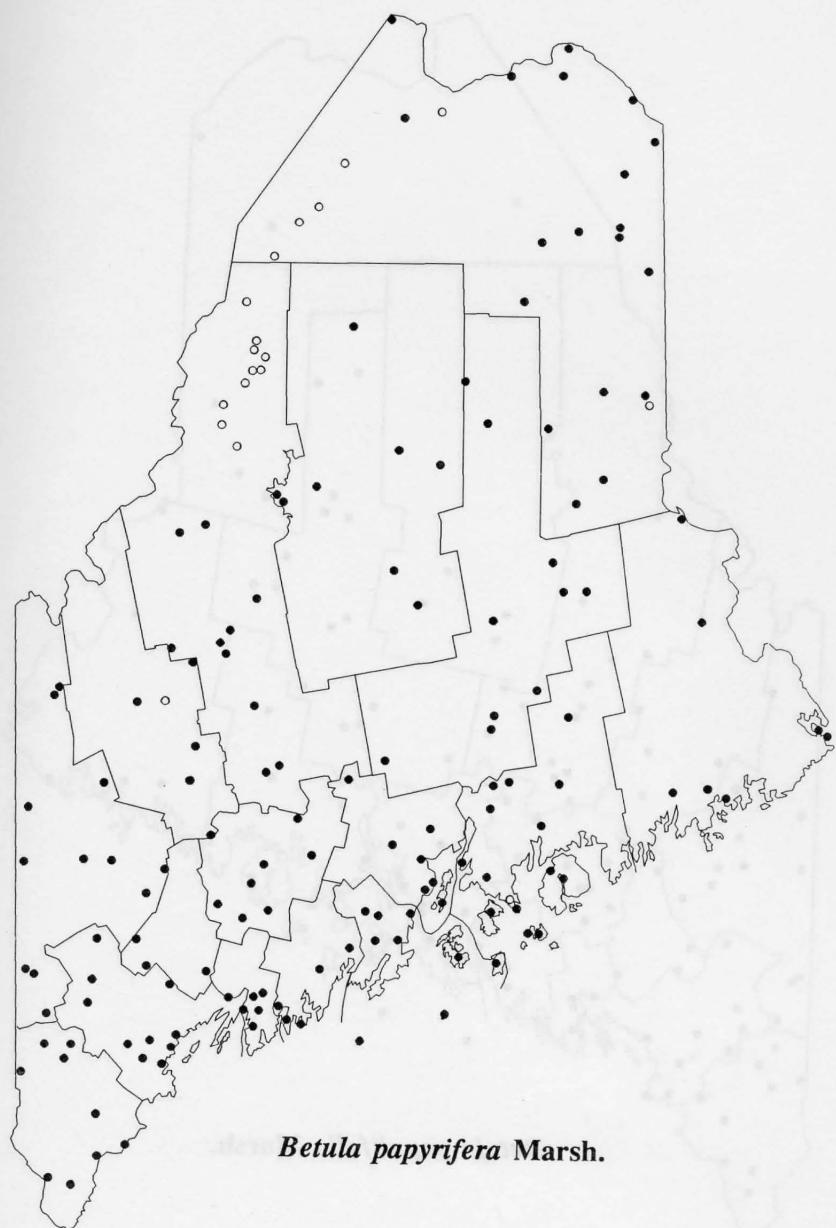
*Betula glandulosa* Michx.



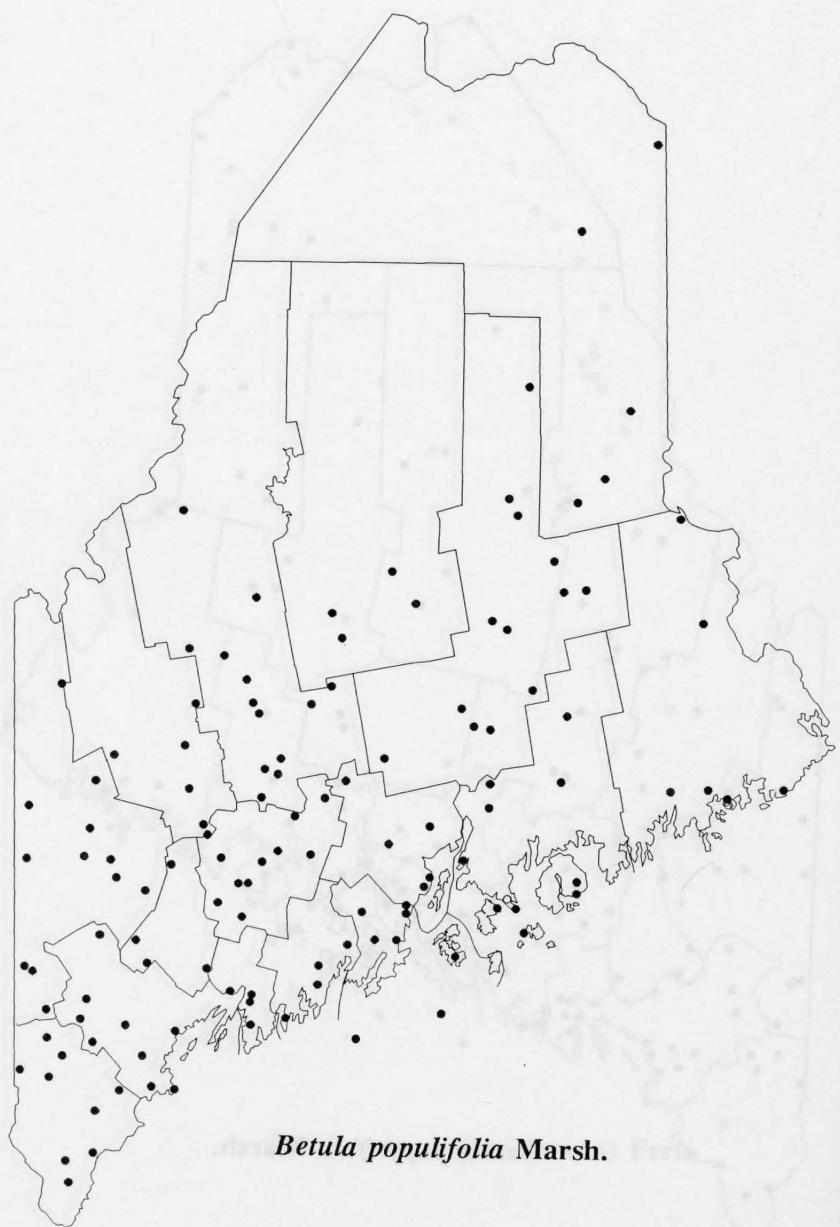
*Betula lenta* L.

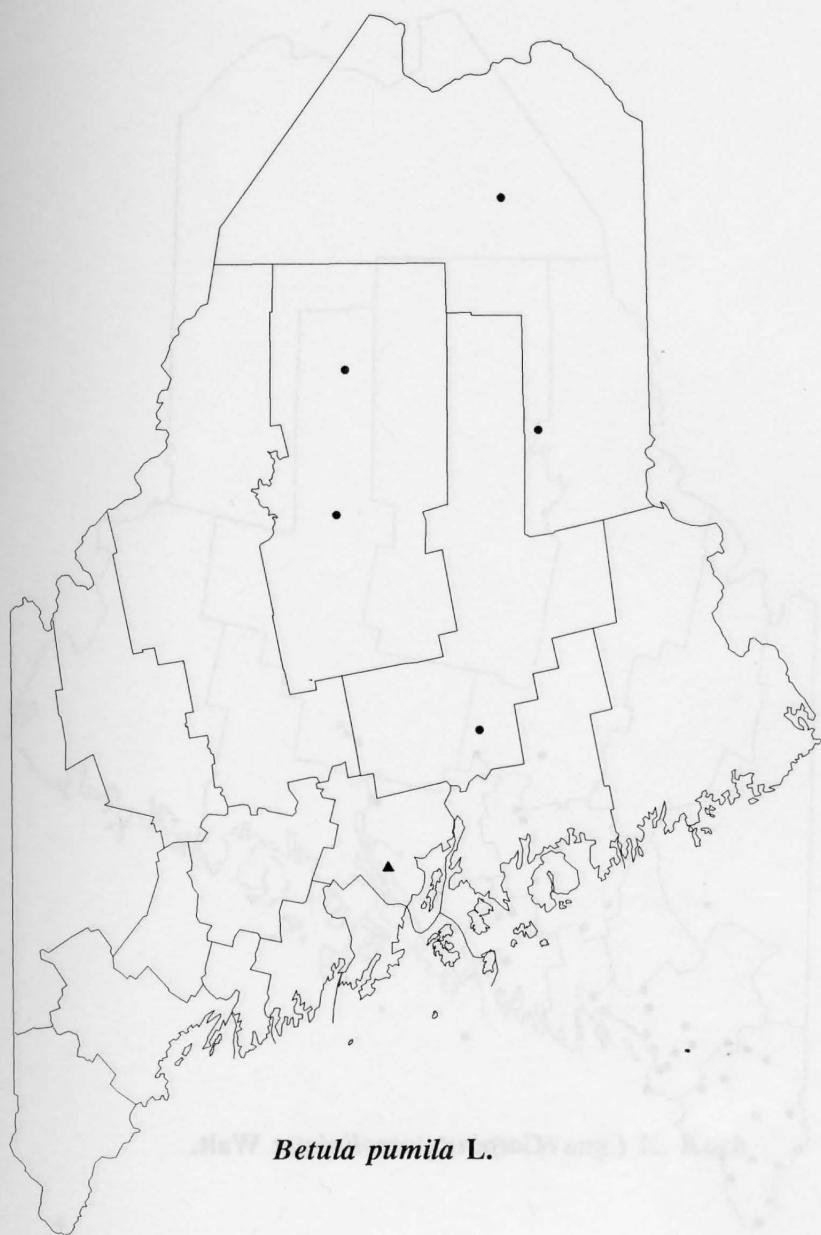


***Betula minor* (Tuckerman) Fern.**

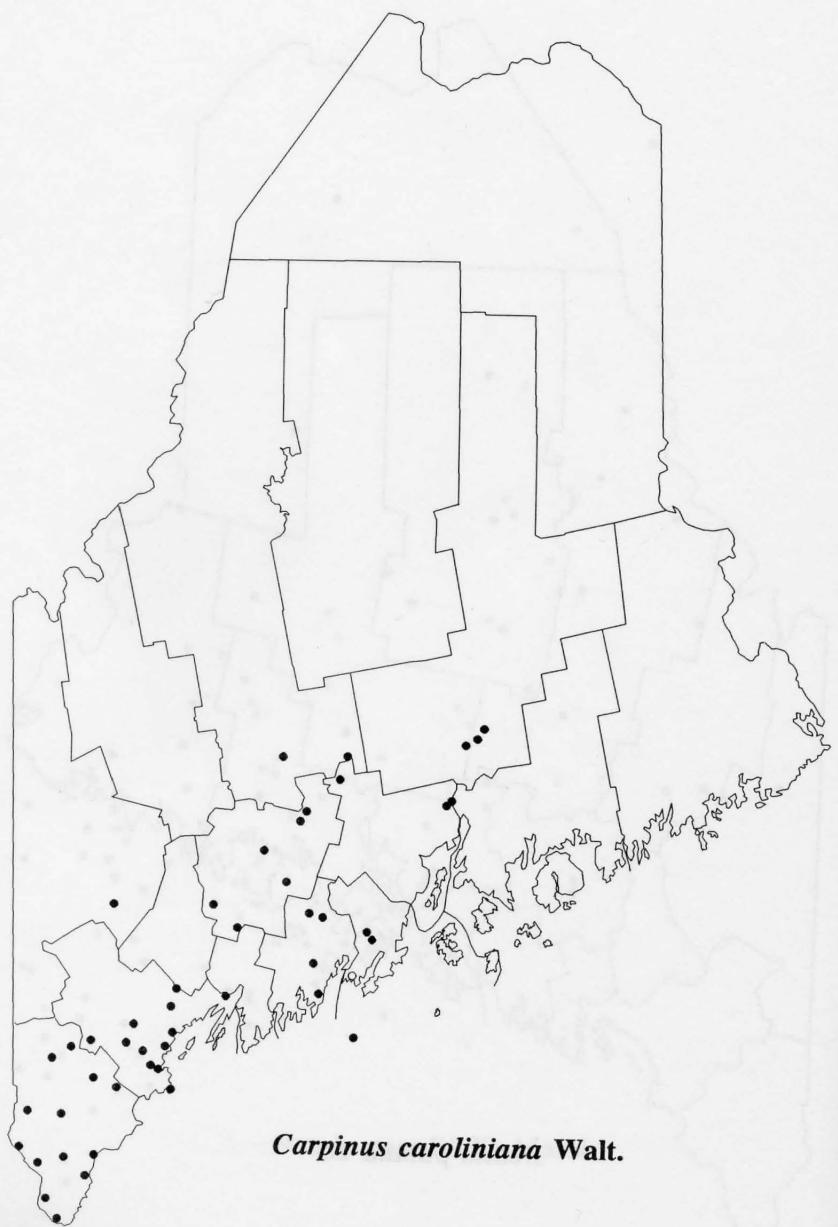


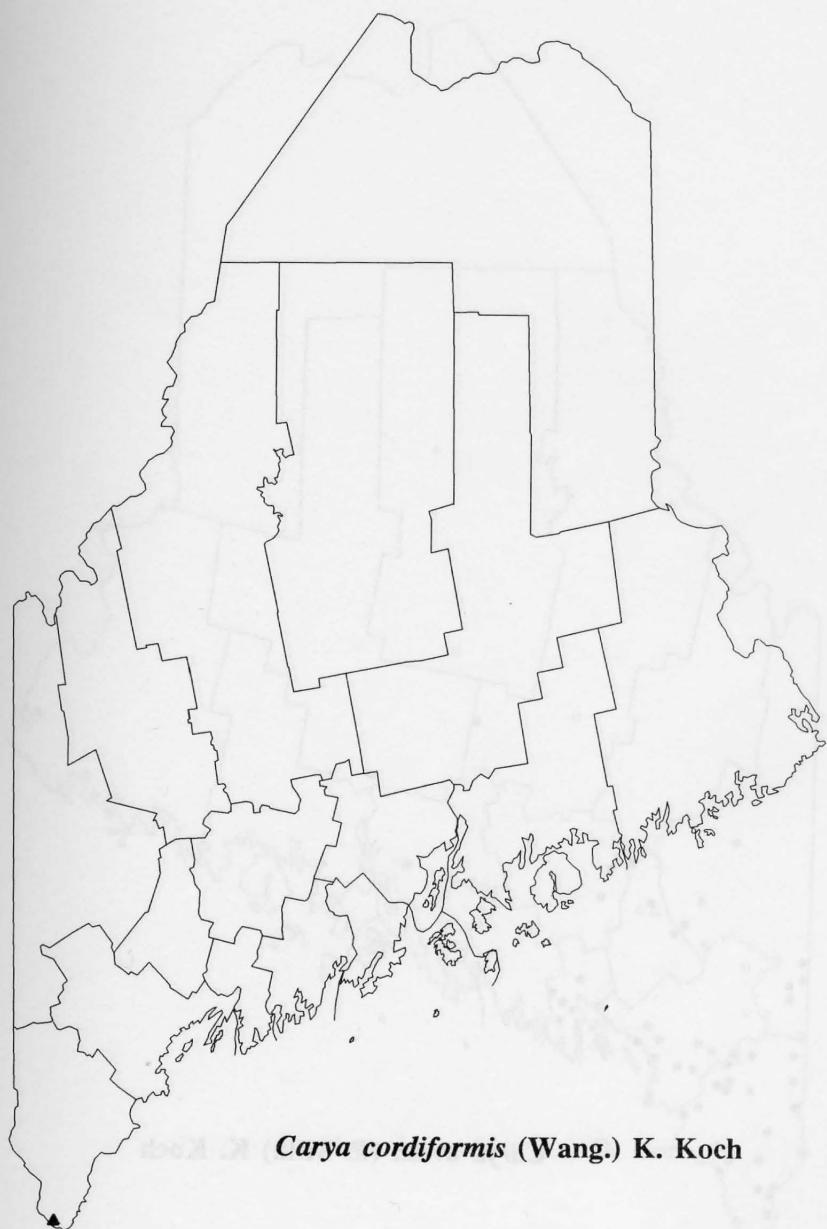
*Betula papyrifera* Marsh.



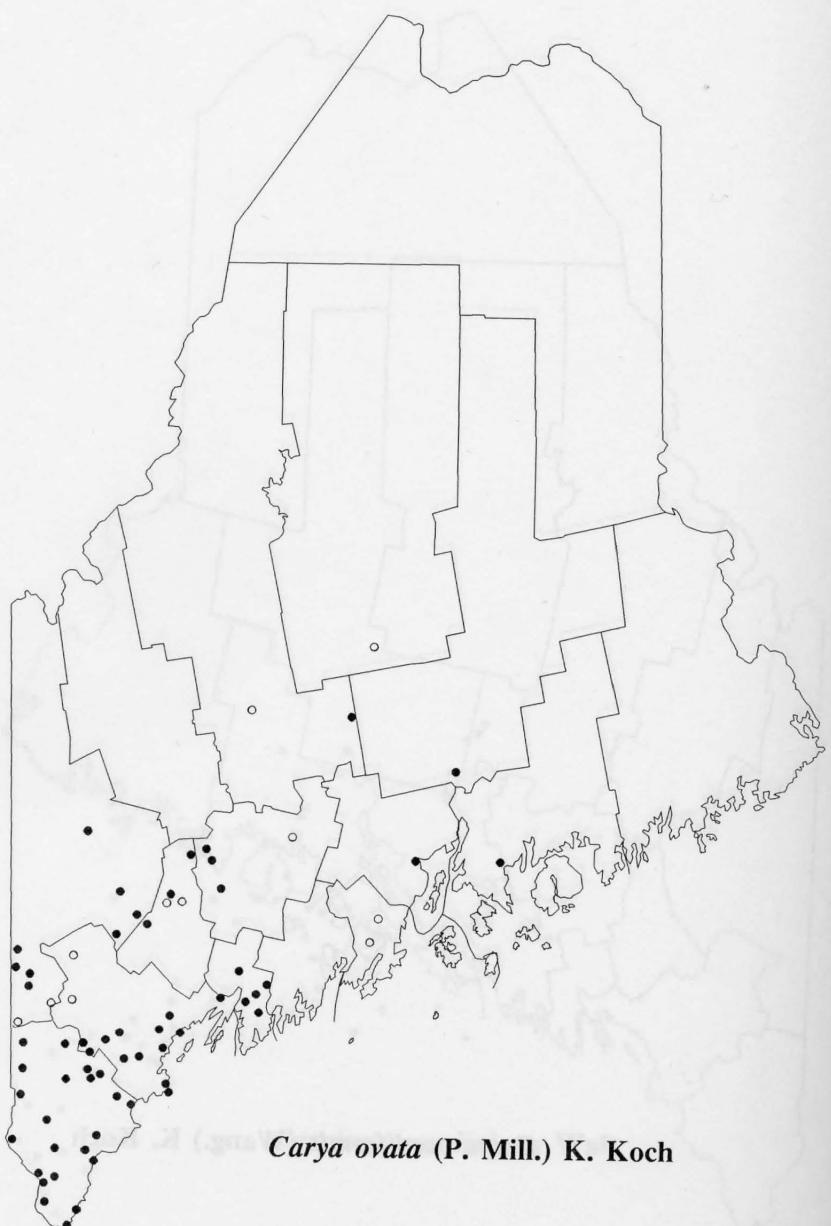


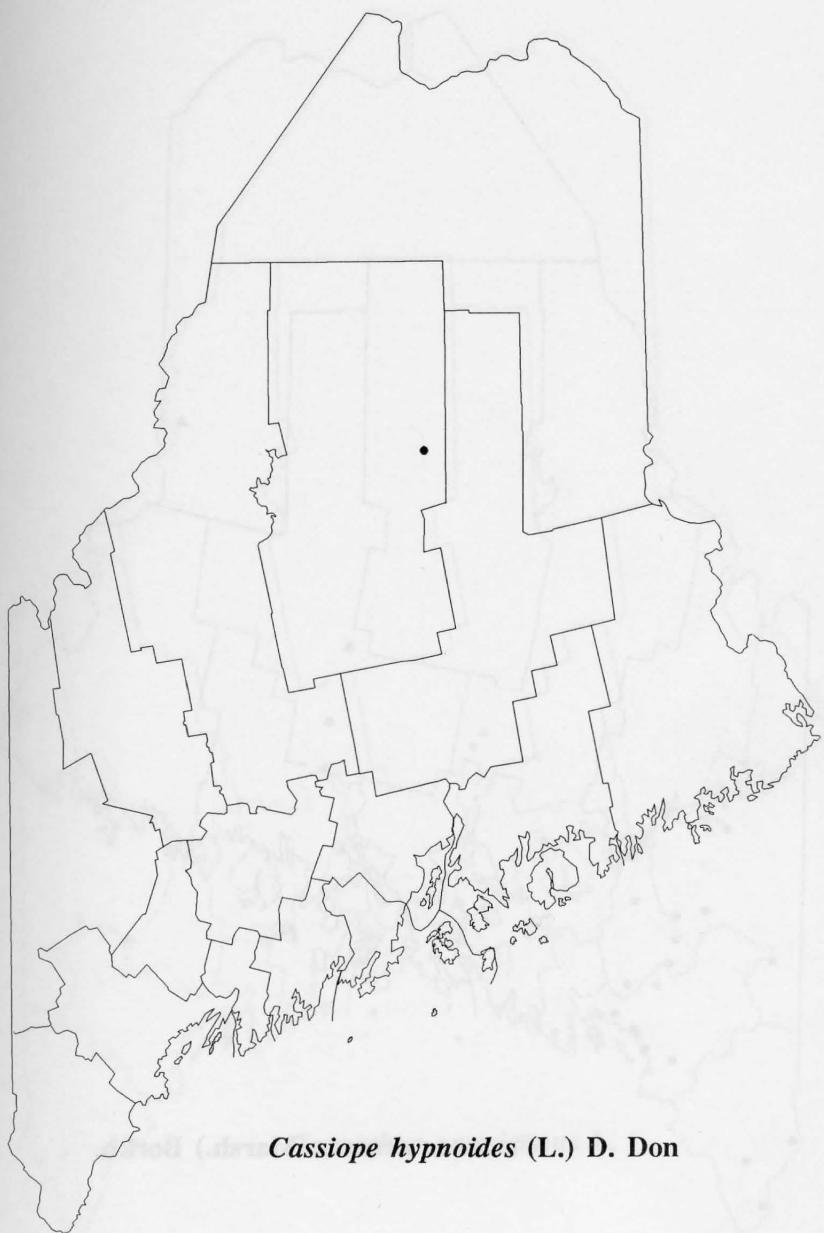
*Betula pumila* L.



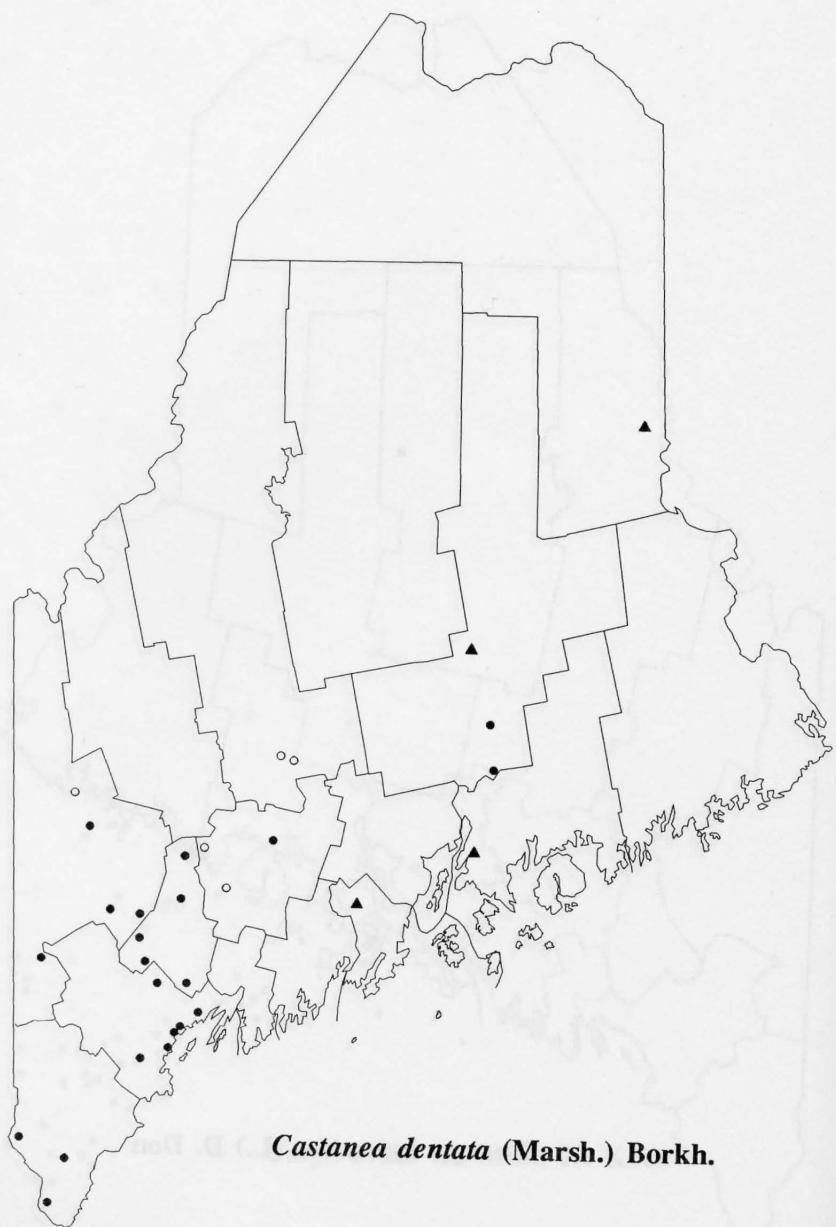


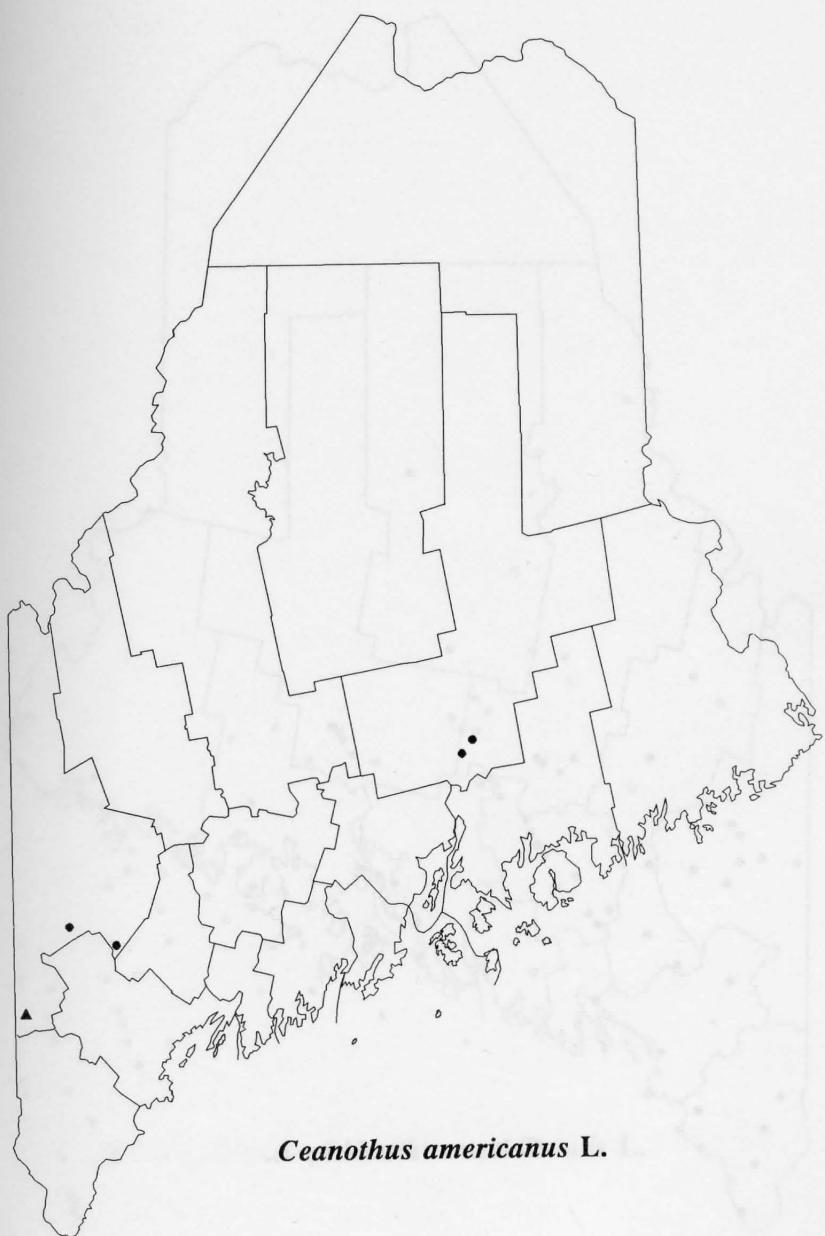
*Carya cordiformis* (Wang.) K. Koch



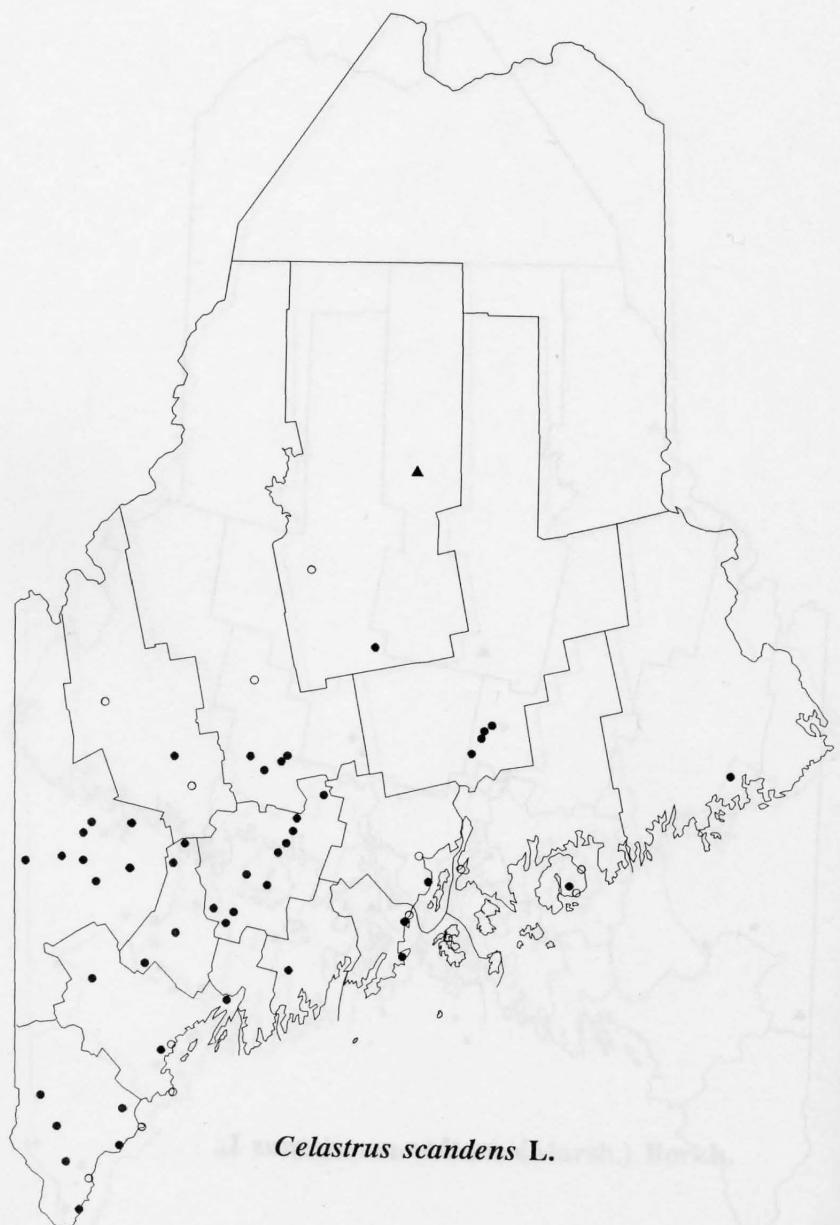


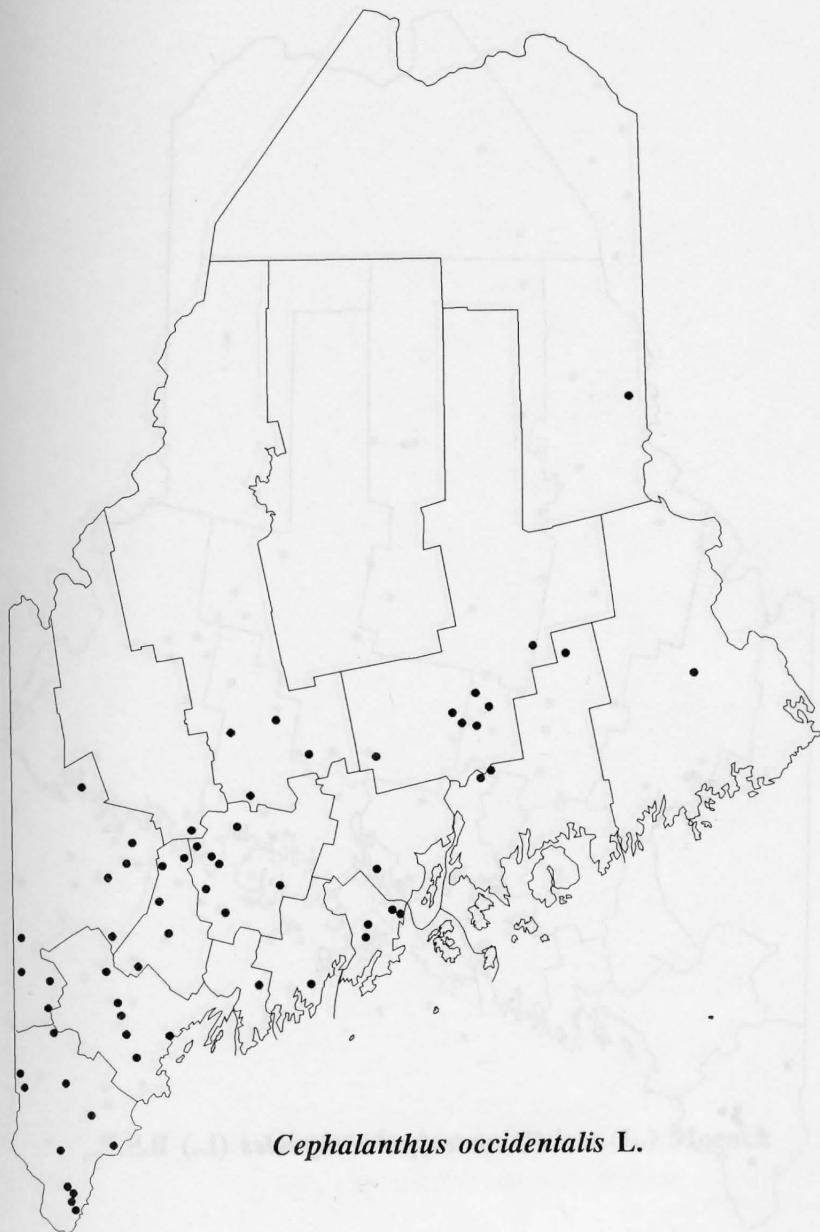
*Cassiope hypnoides* (L.) D. Don

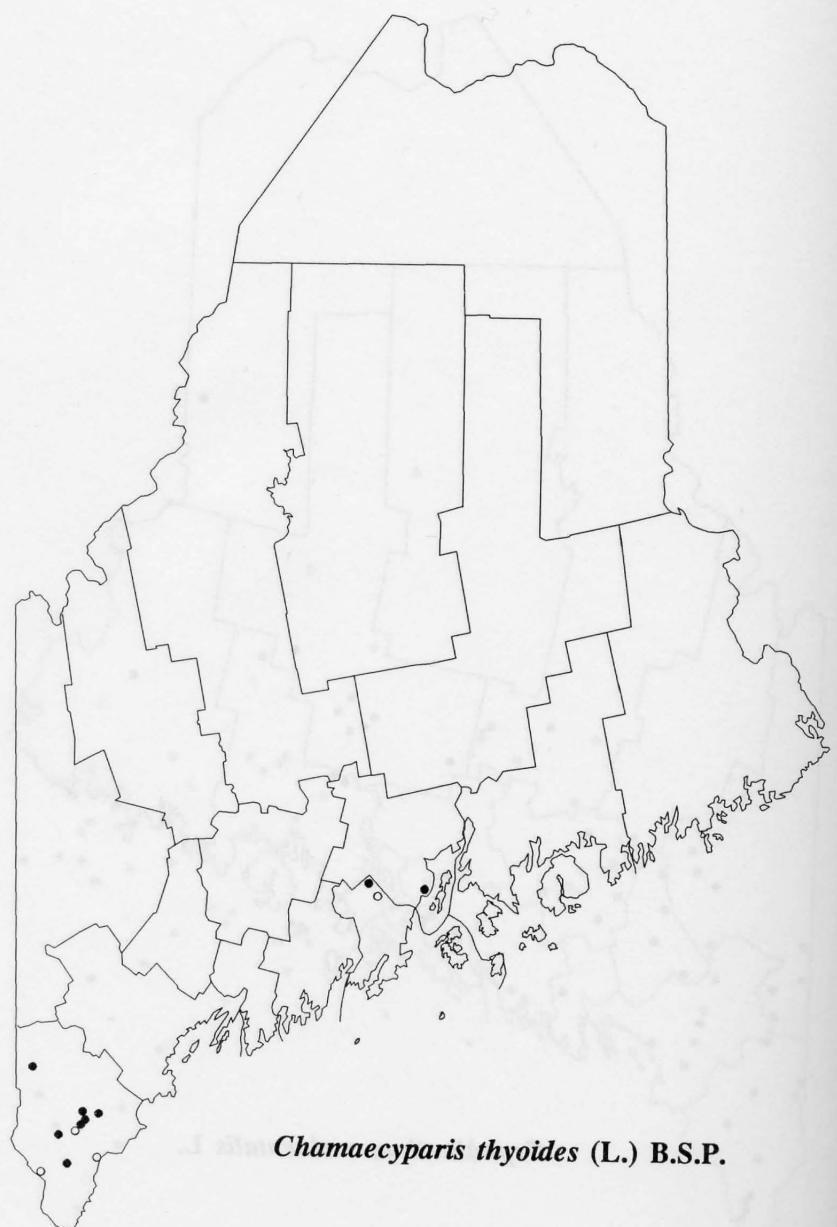


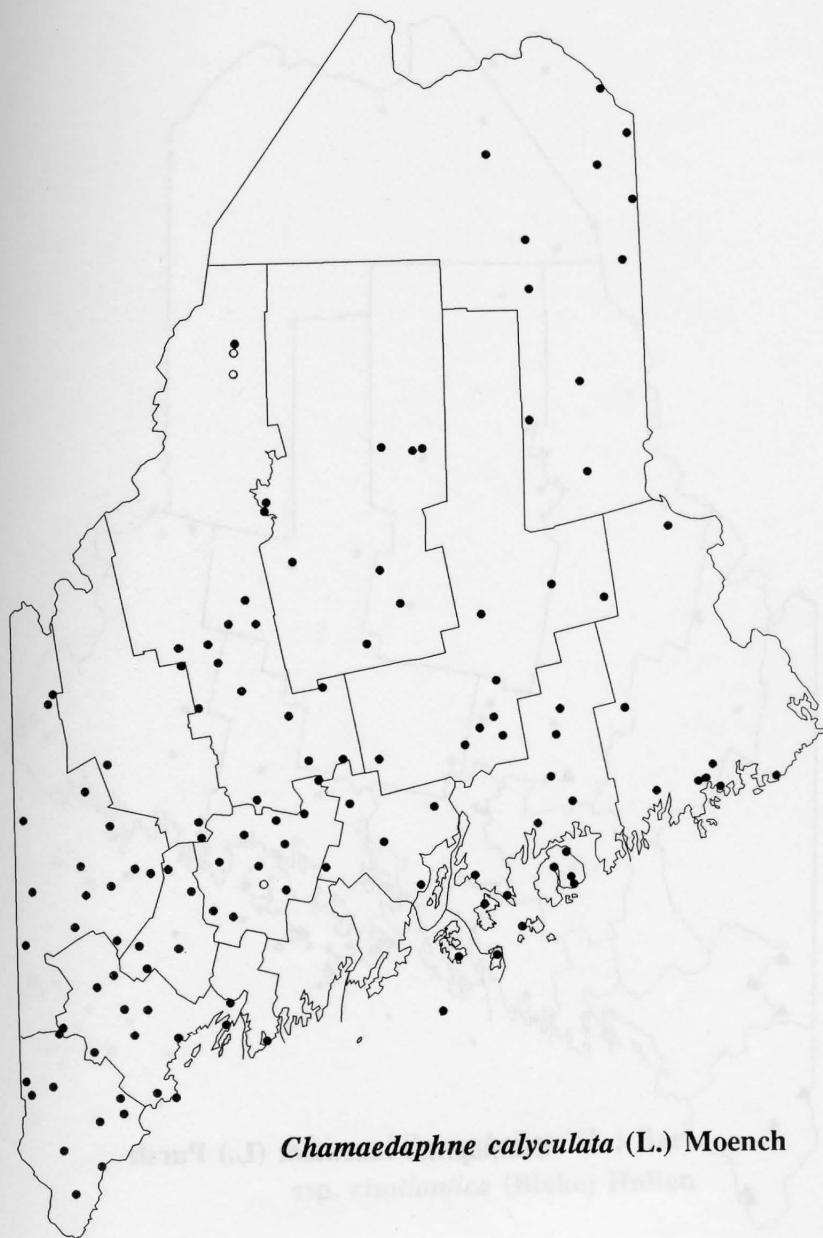


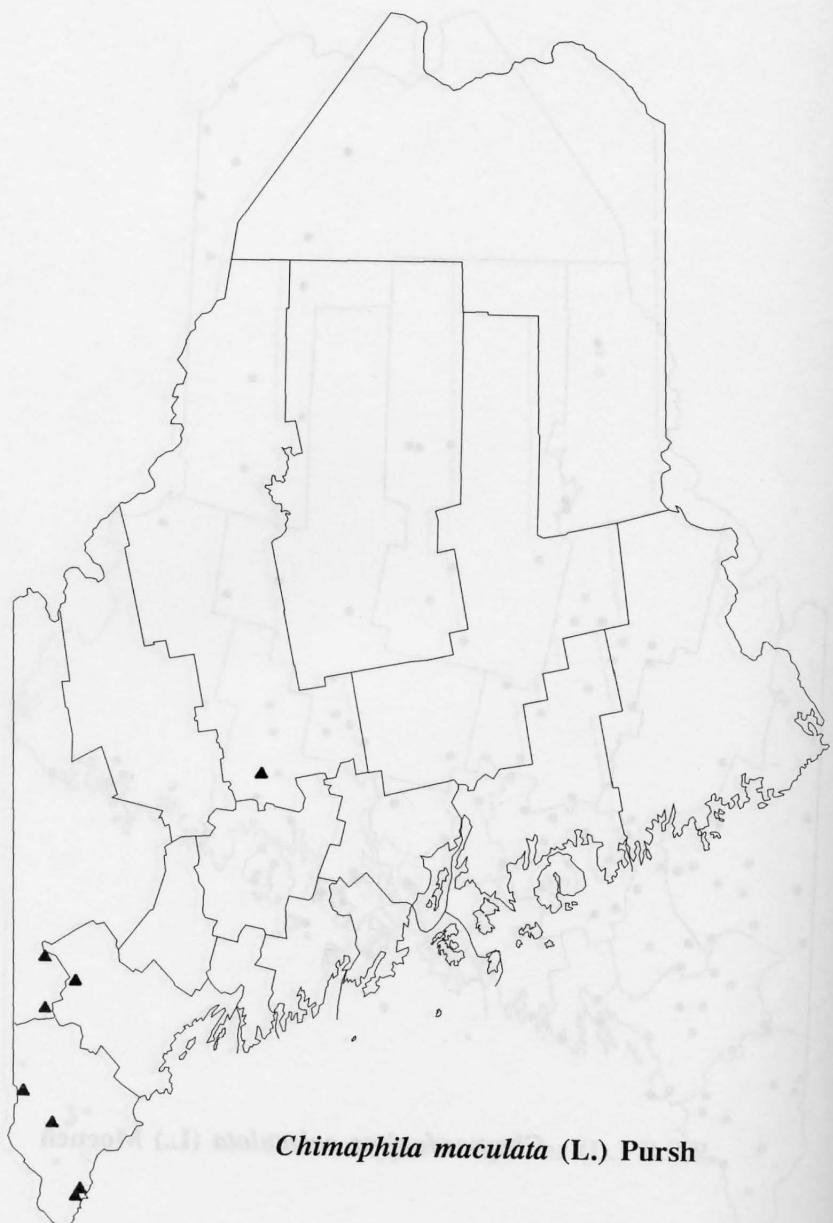
*Ceanothus americanus* L.

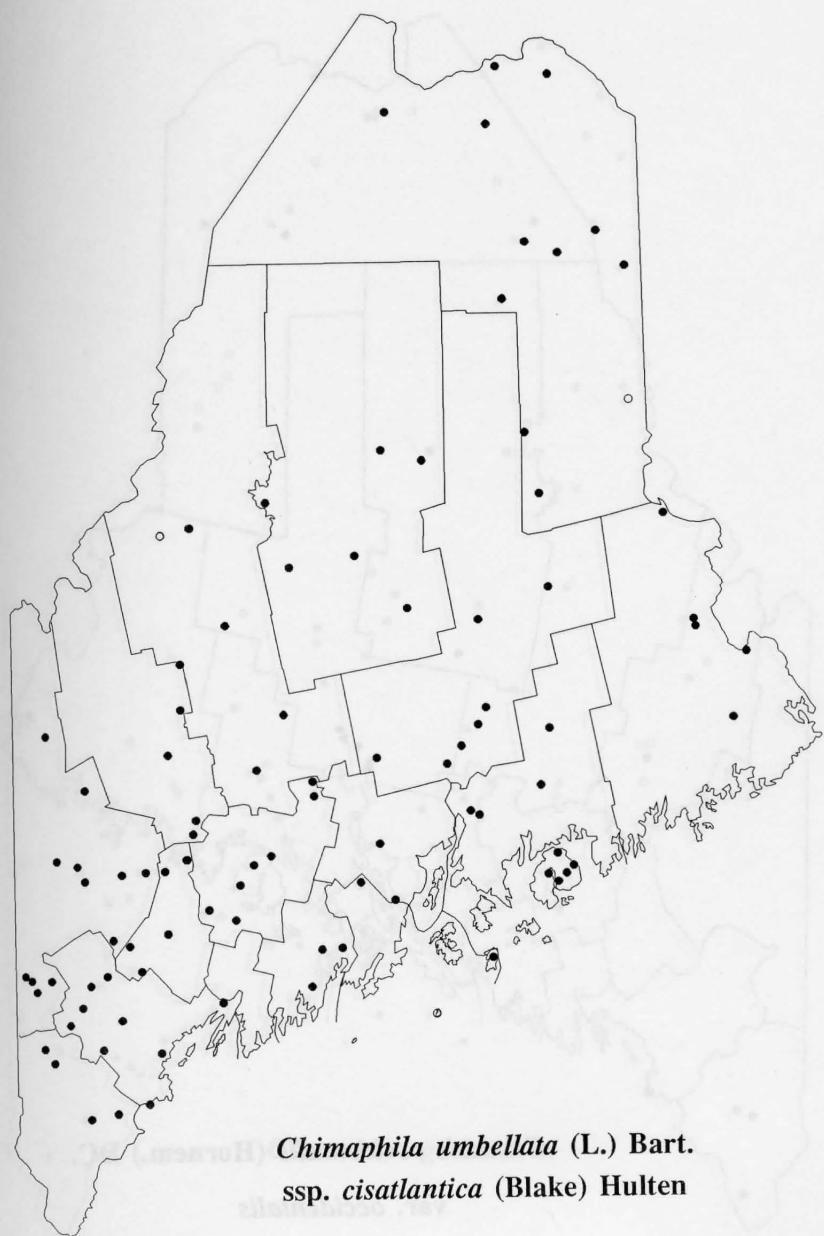


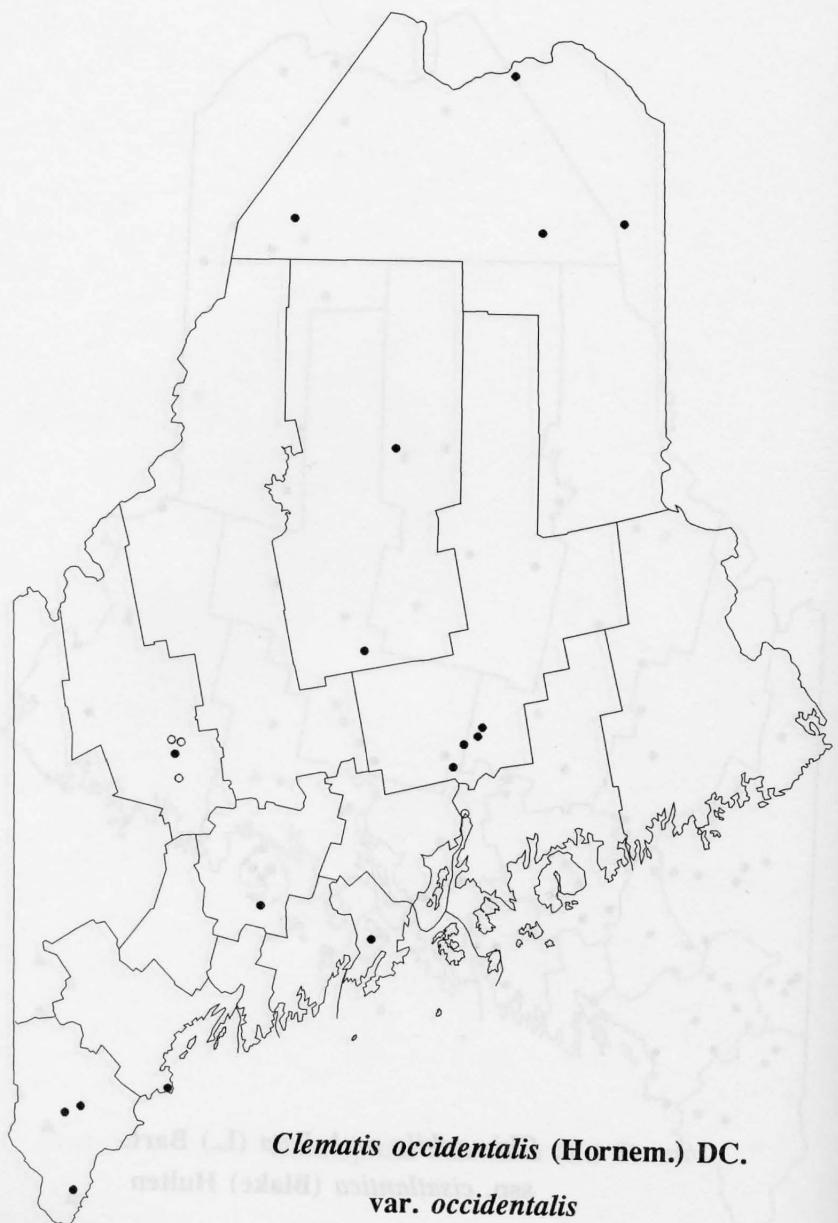


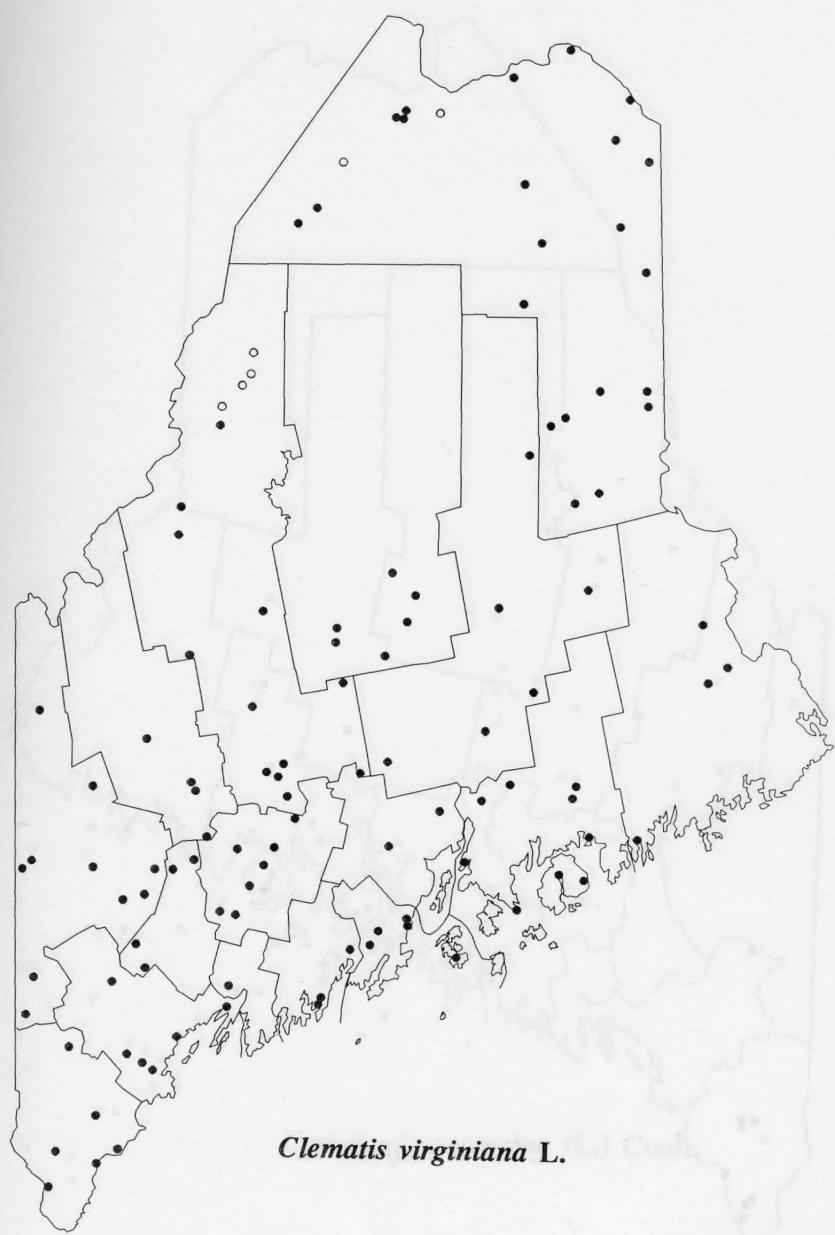




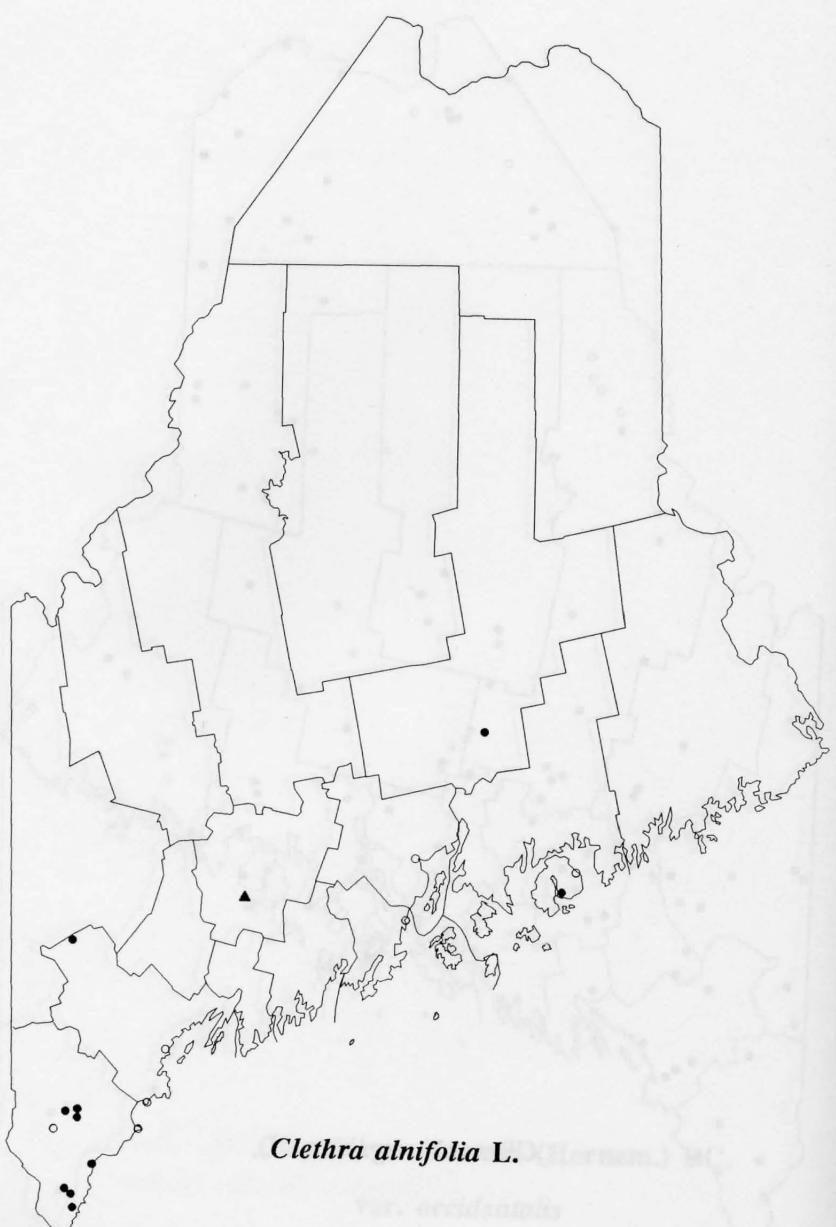


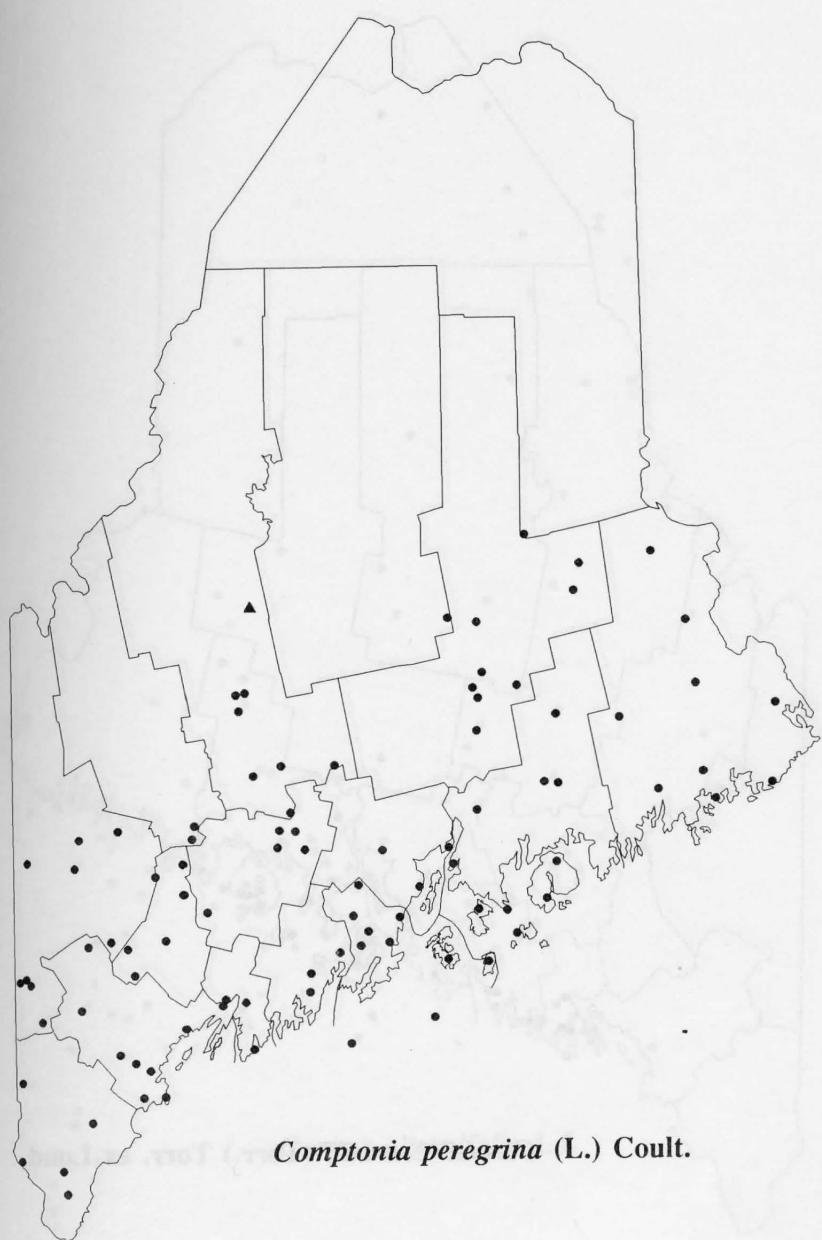




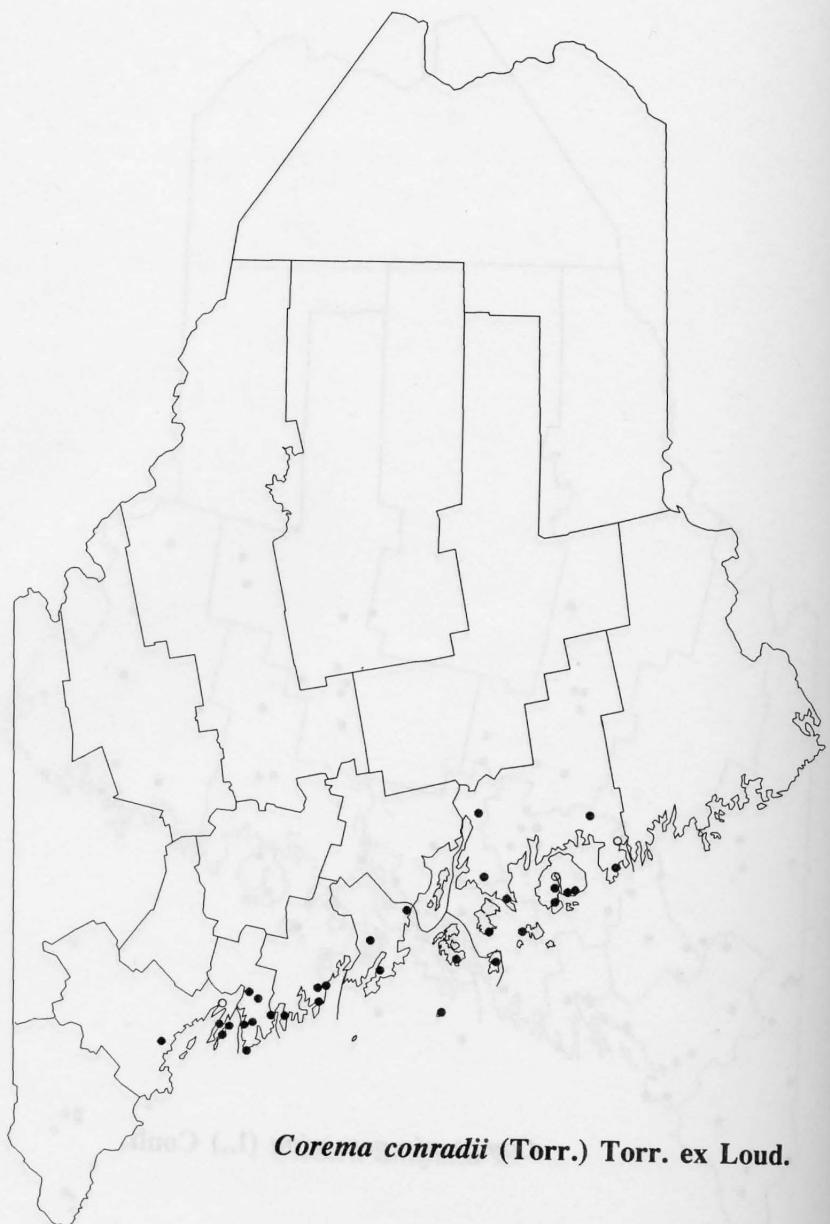


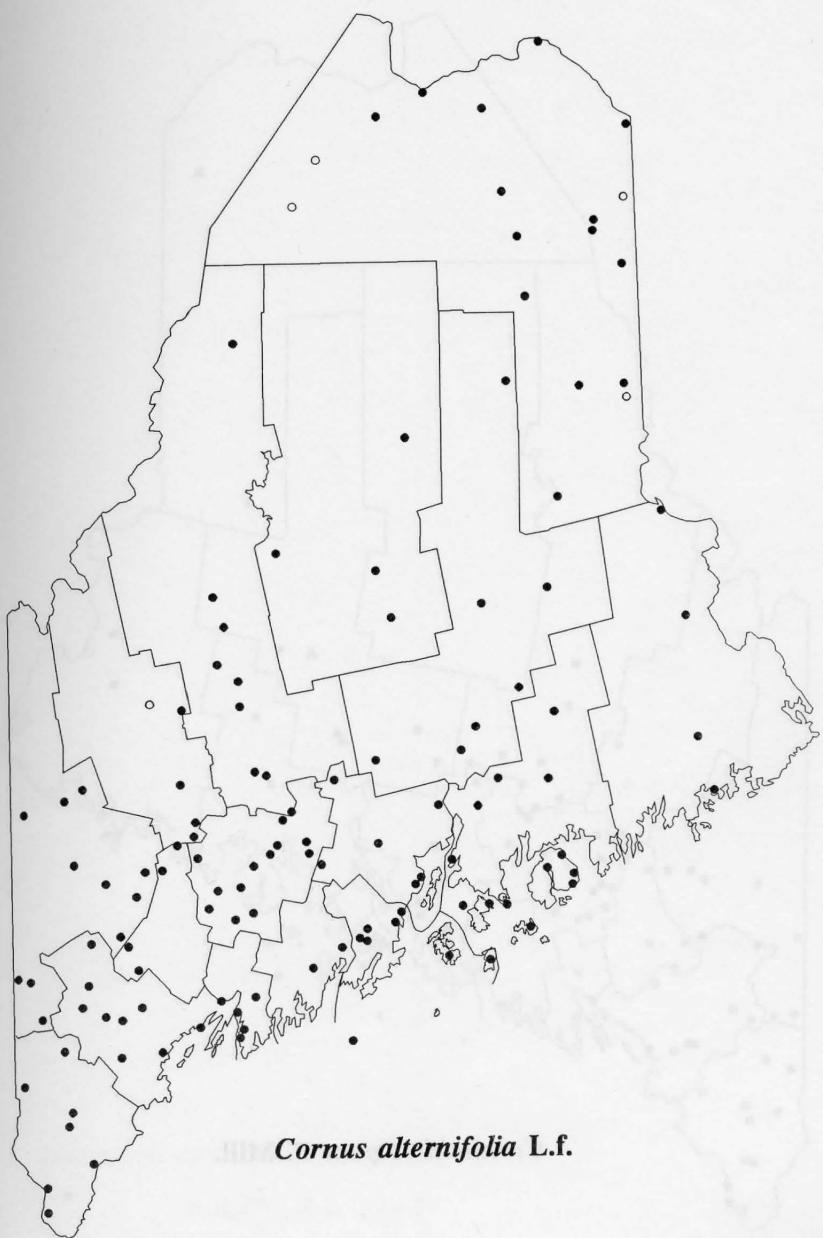
*Clematis virginiana* L.



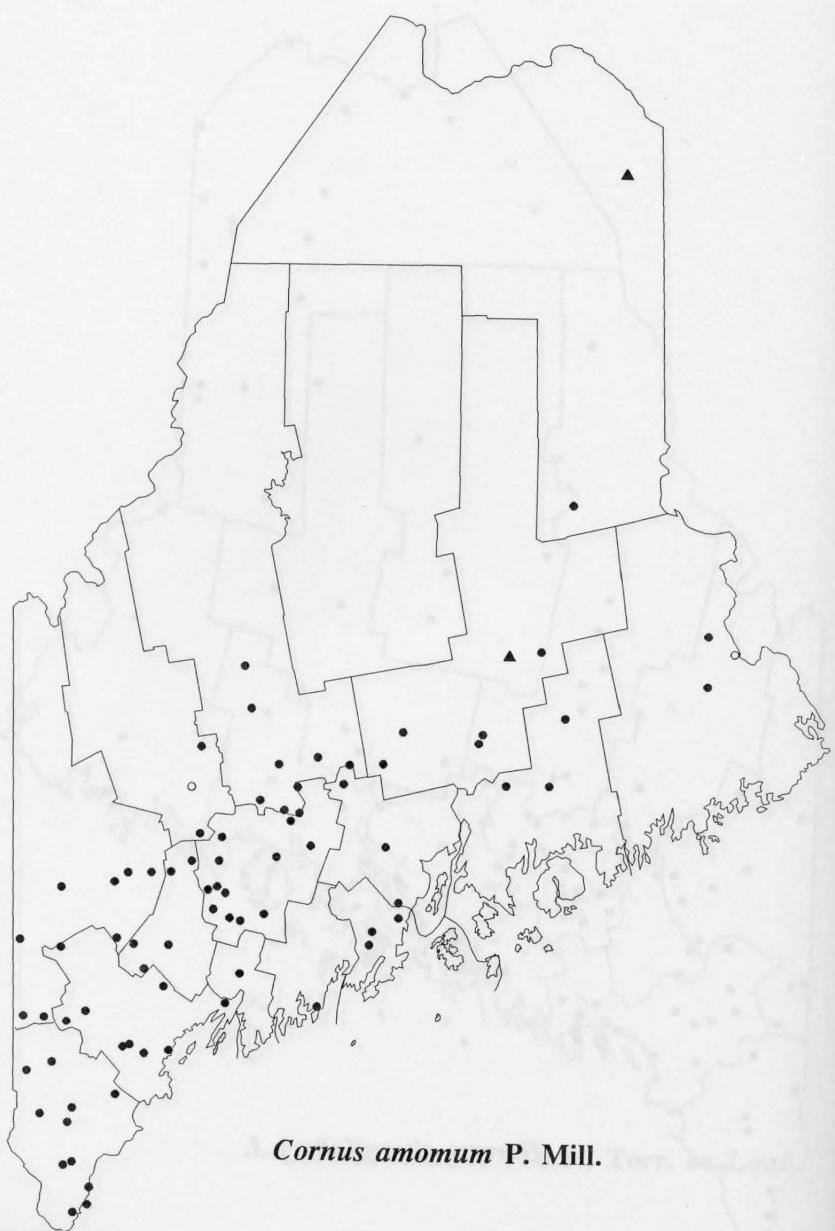


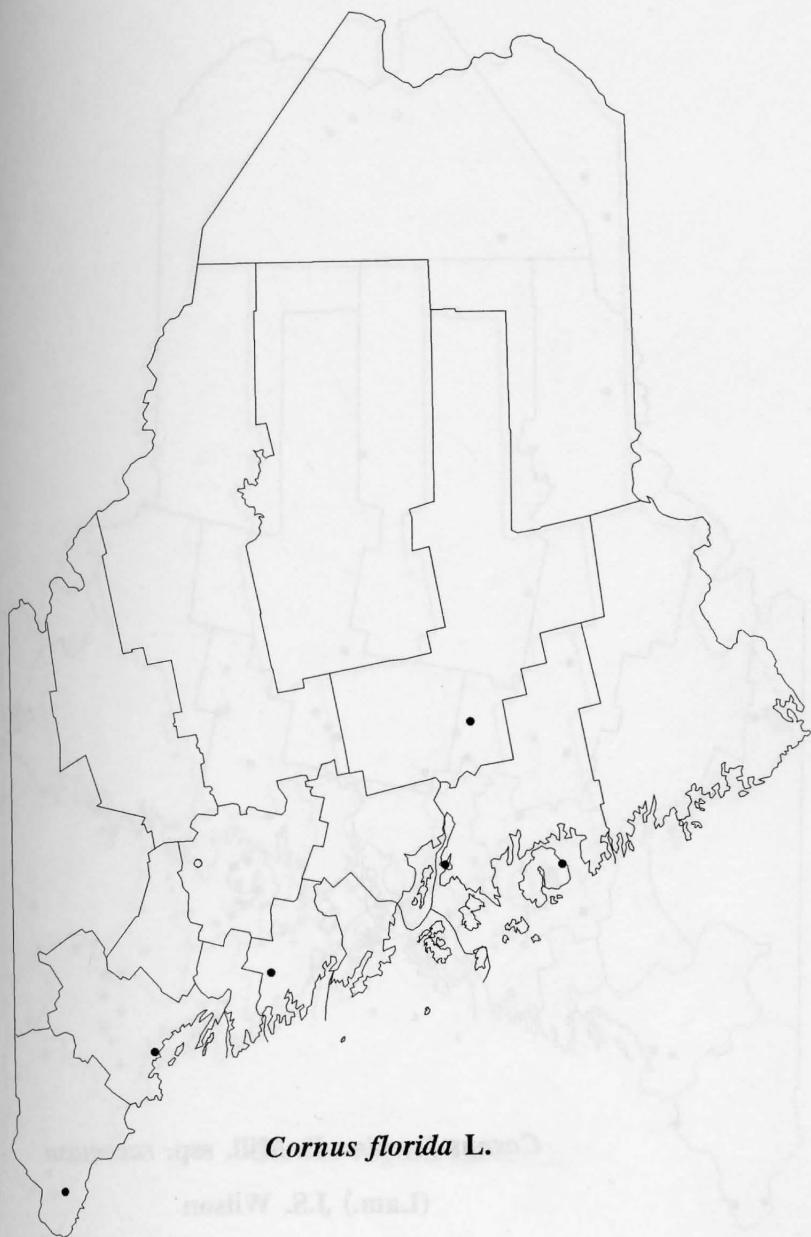
*Comptonia peregrina* (L.) Coult.





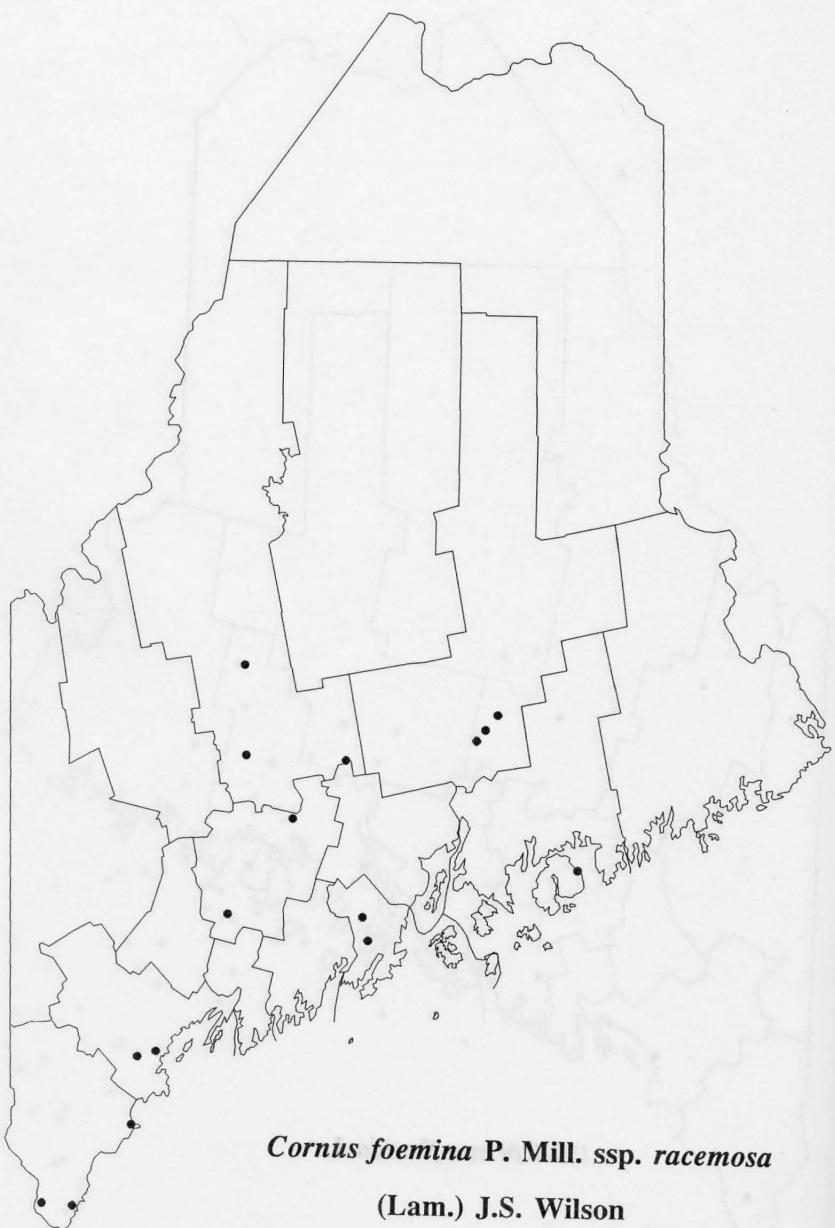
*Cornus alternifolia* L.f.

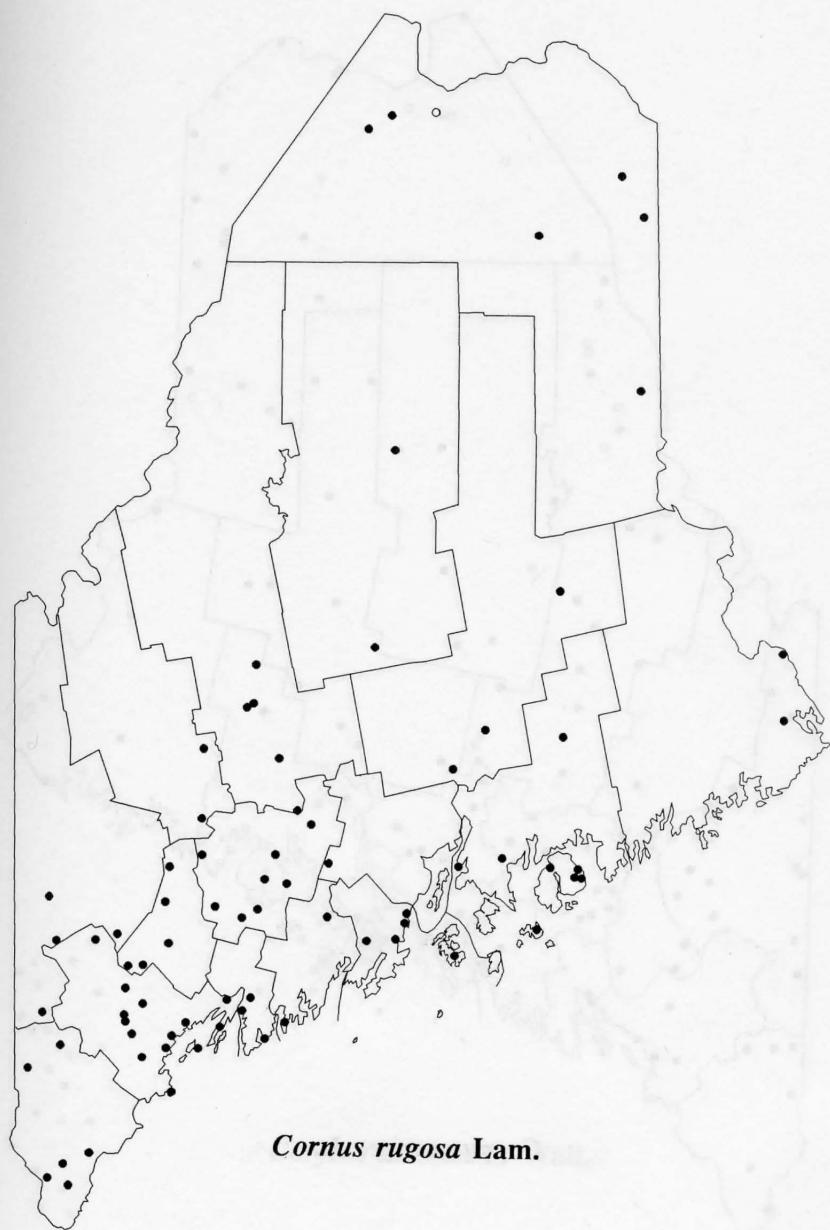




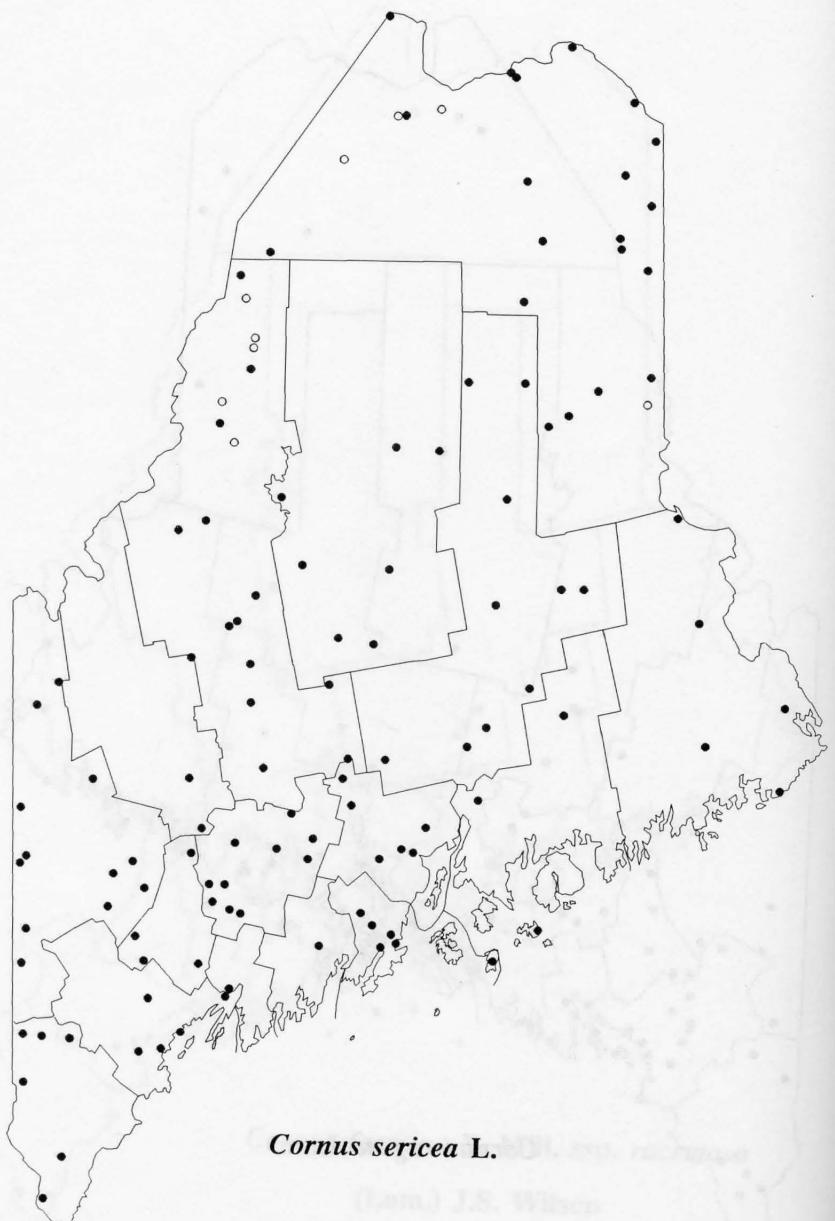
*Cornus florida L.*

native 2.1 (ms.)



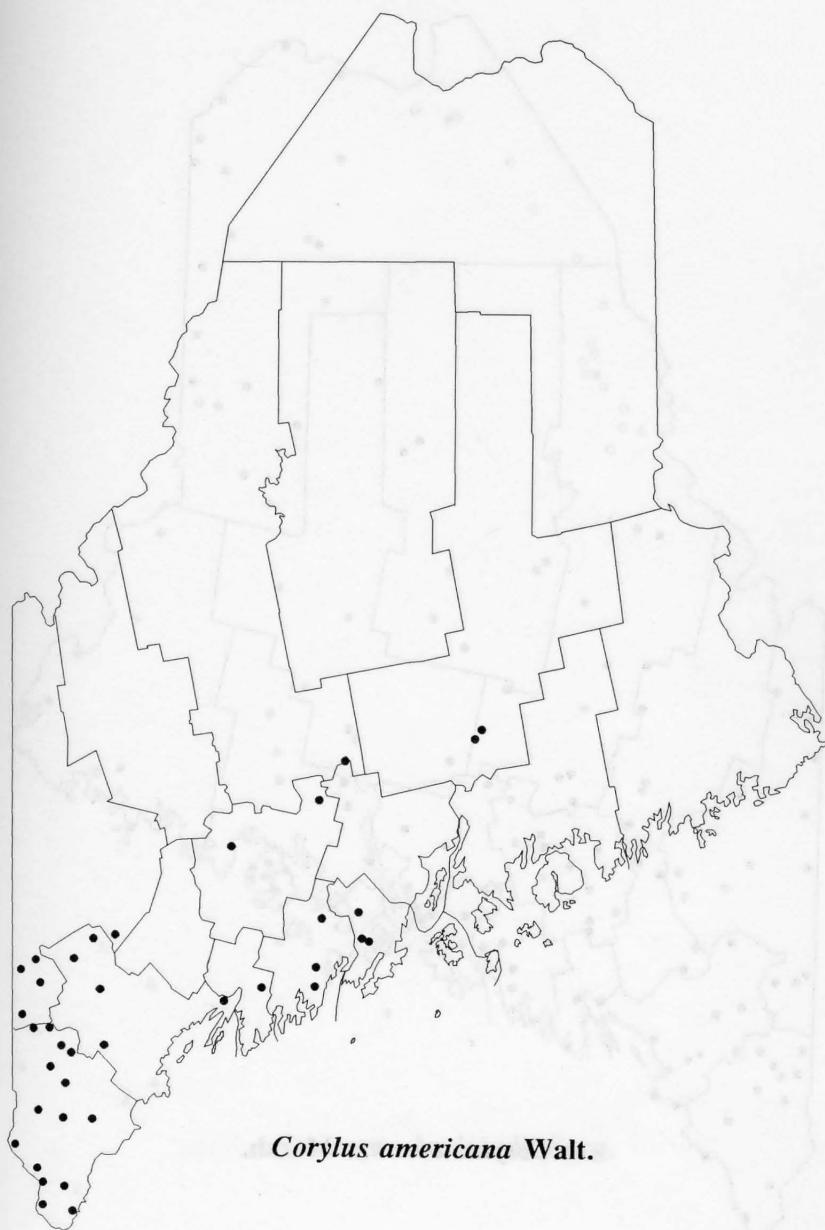


*Cornus rugosa* Lam.

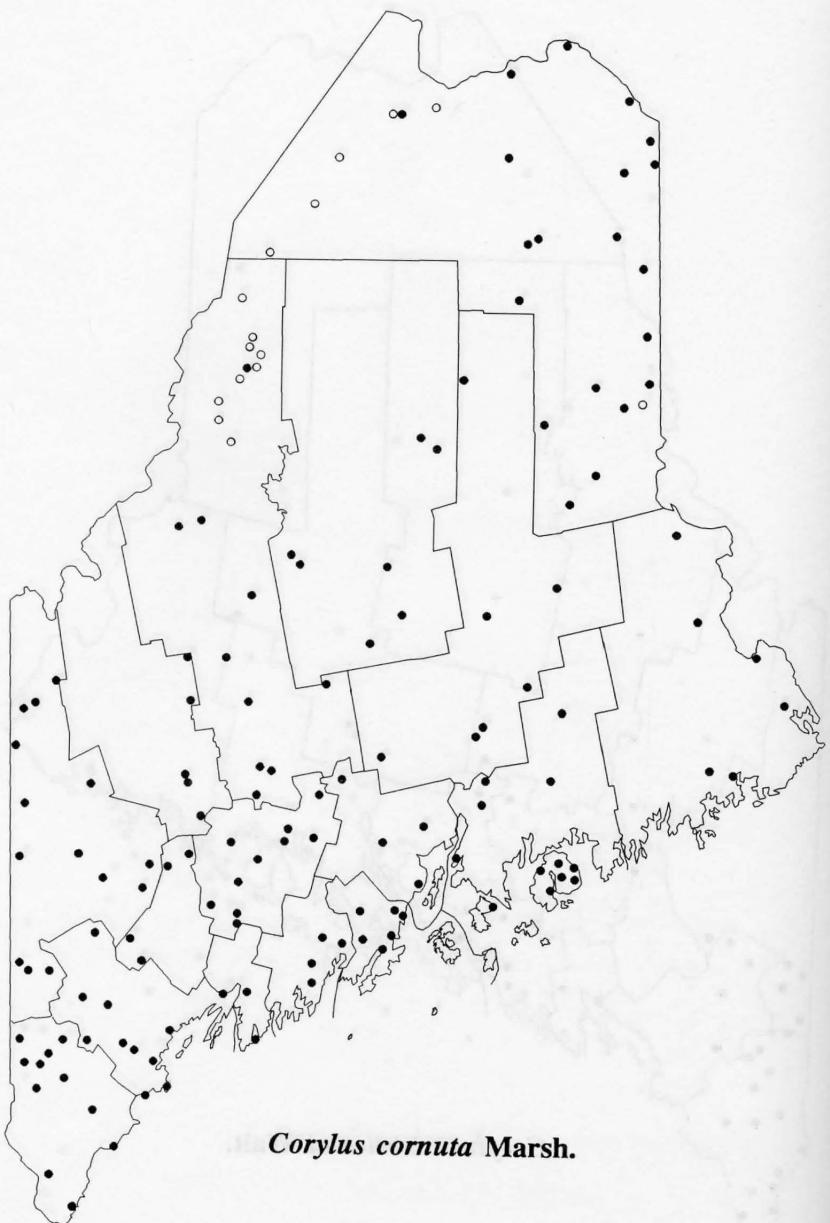


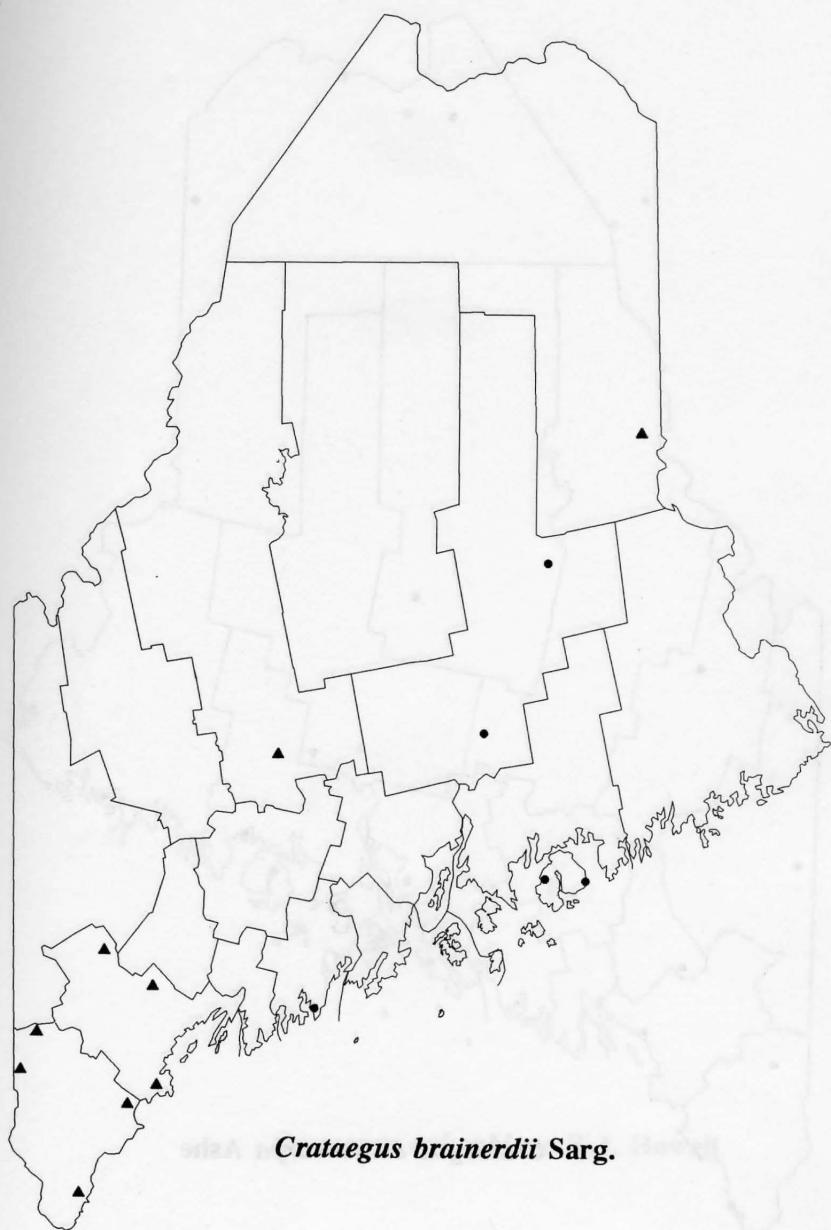
*Cornus sericea* L.

From J. S. Wilson

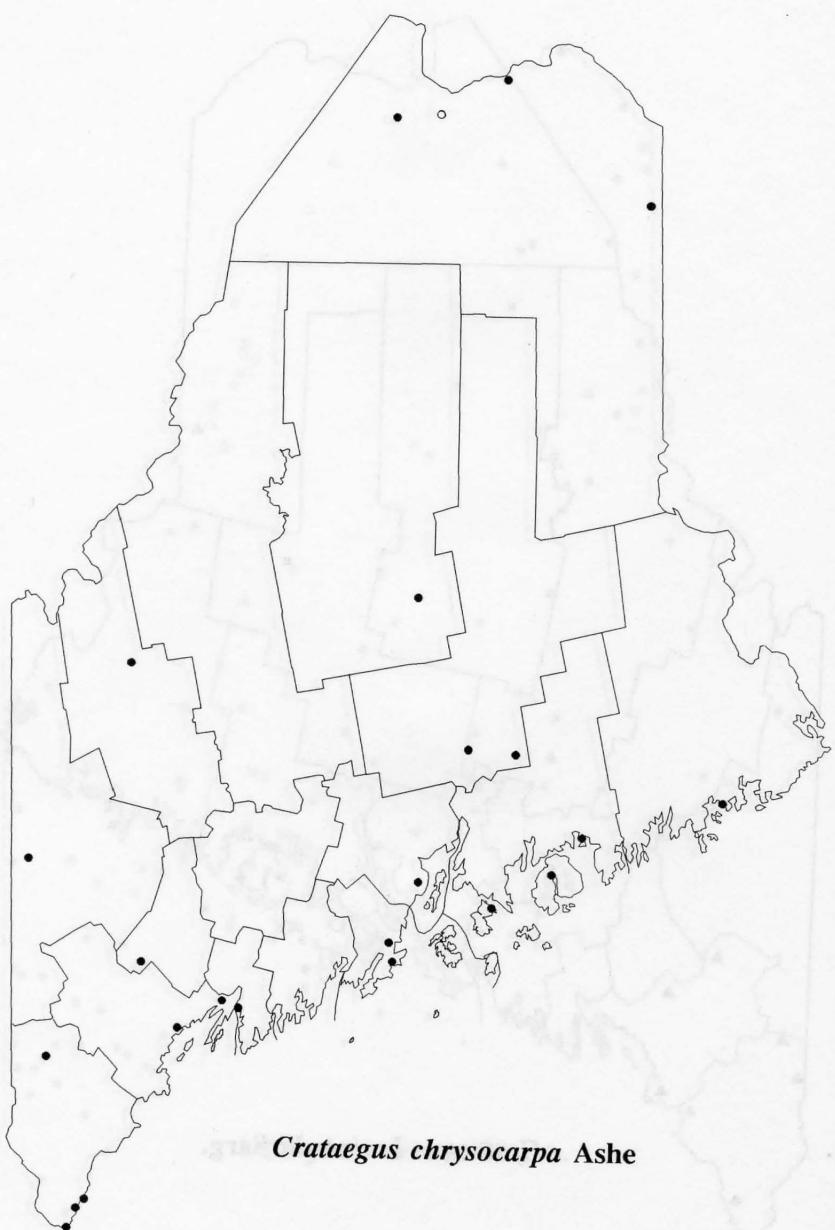


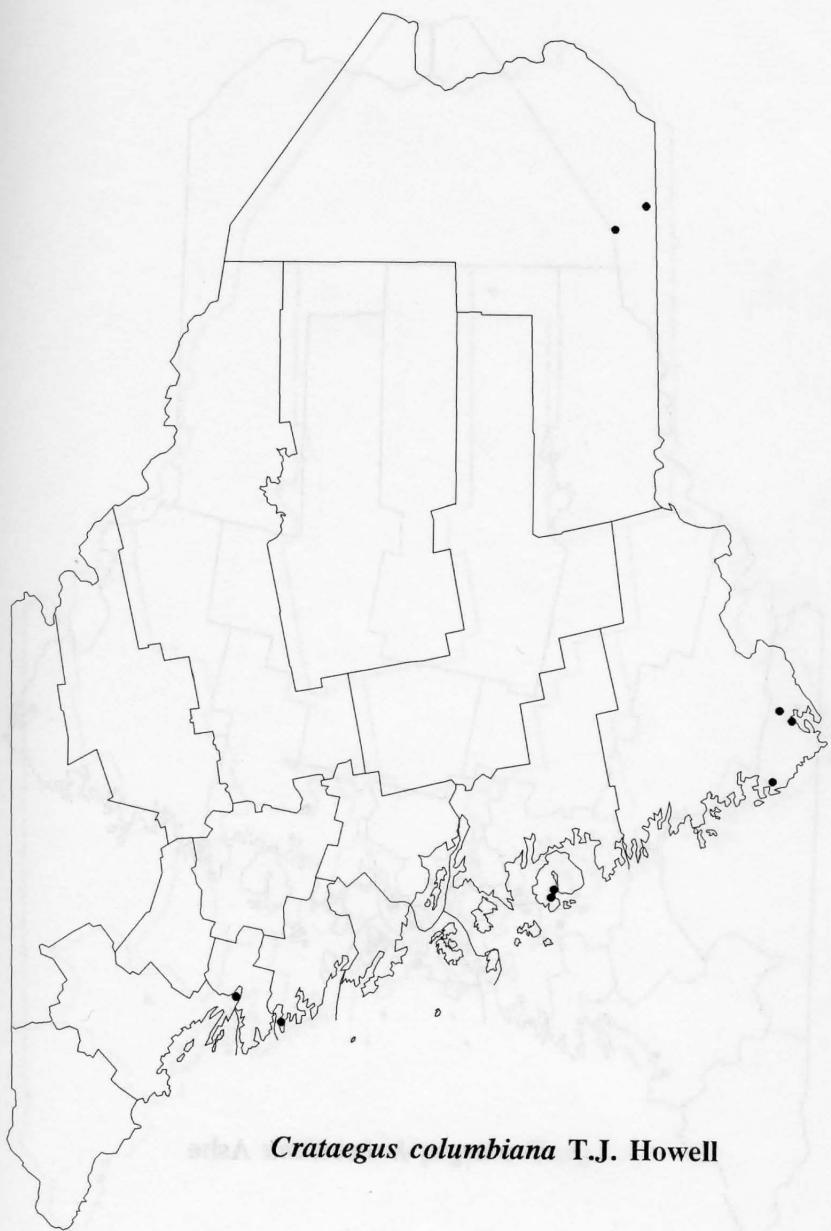
*Corylus americana* Walt.



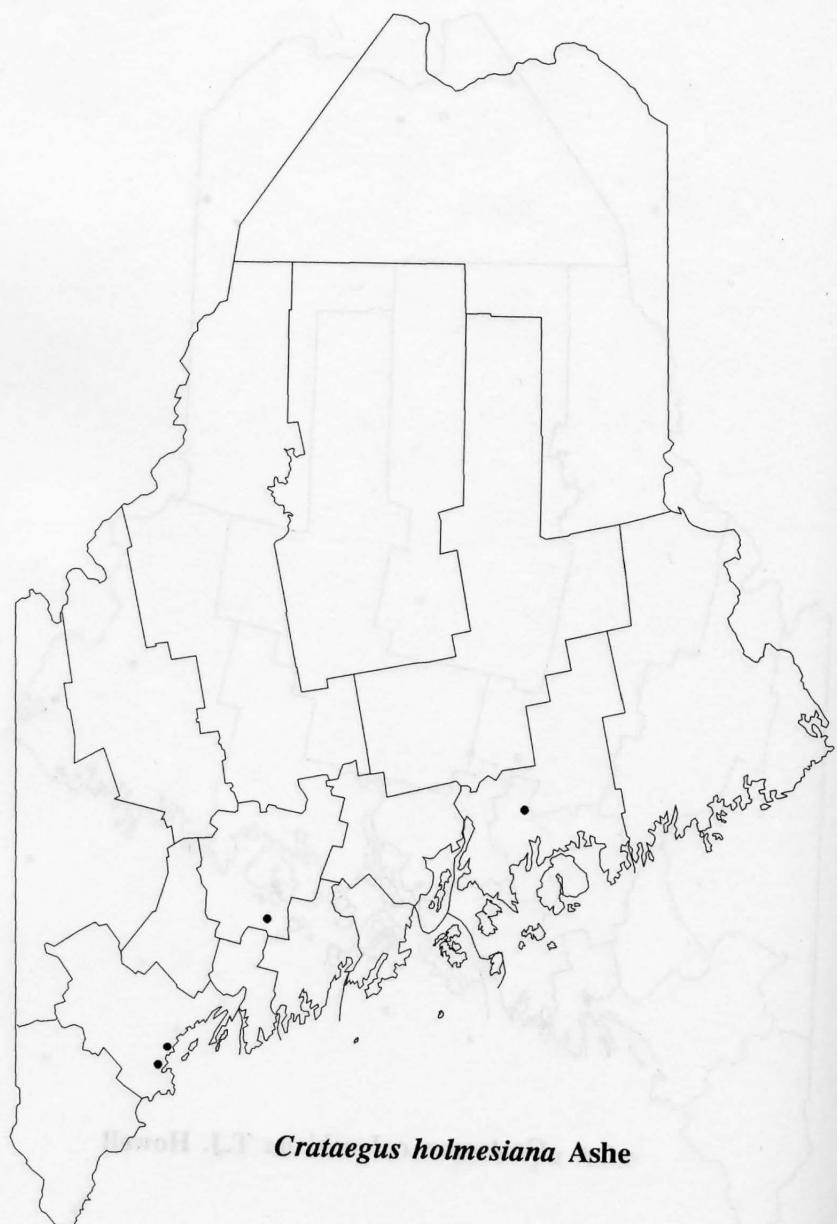


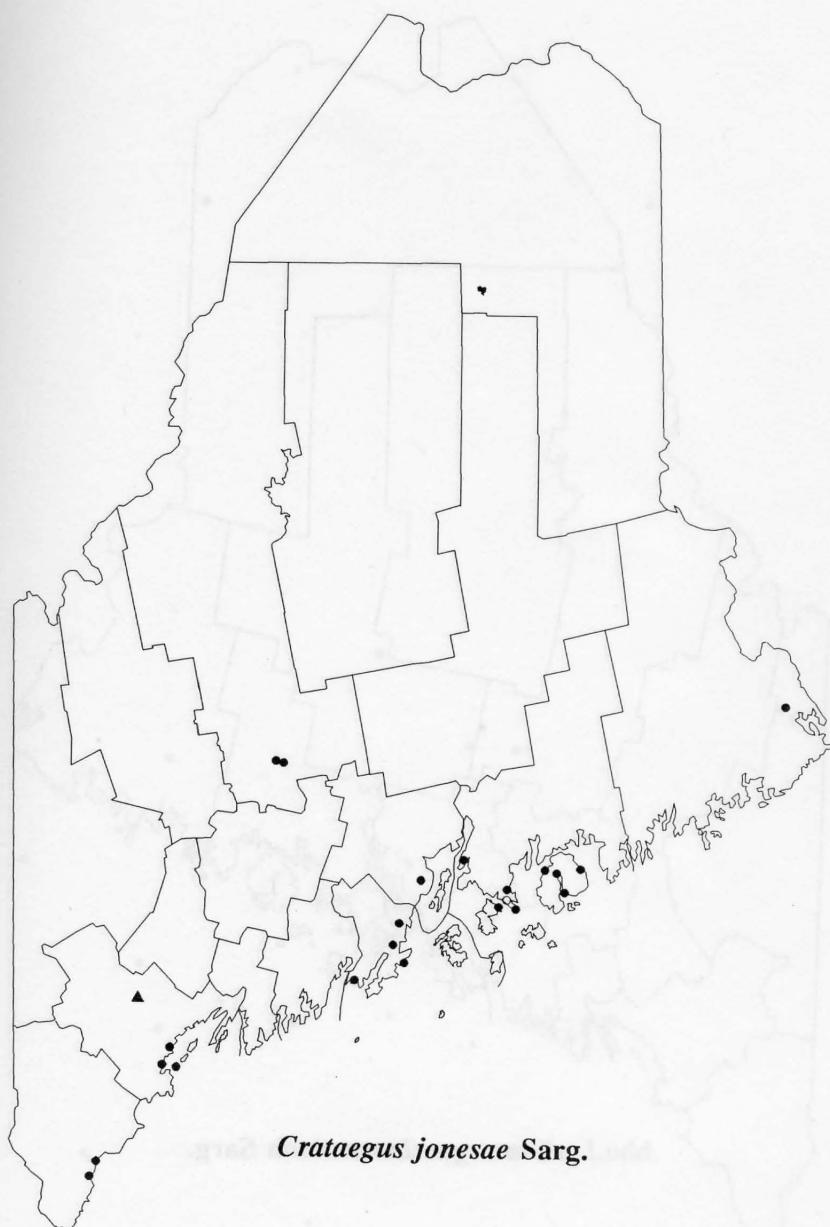
*Crataegus brainerdii* Sarg.



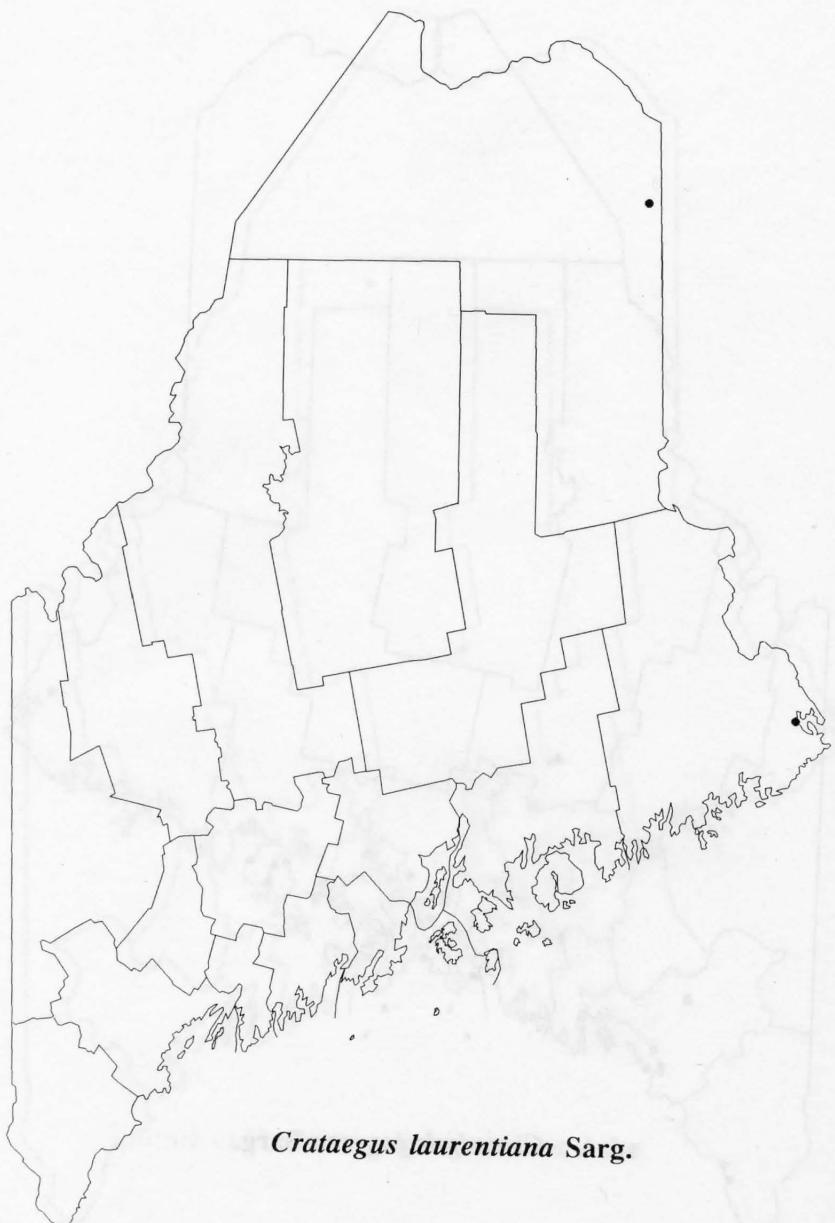


*Crataegus columbiana* T.J. Howell

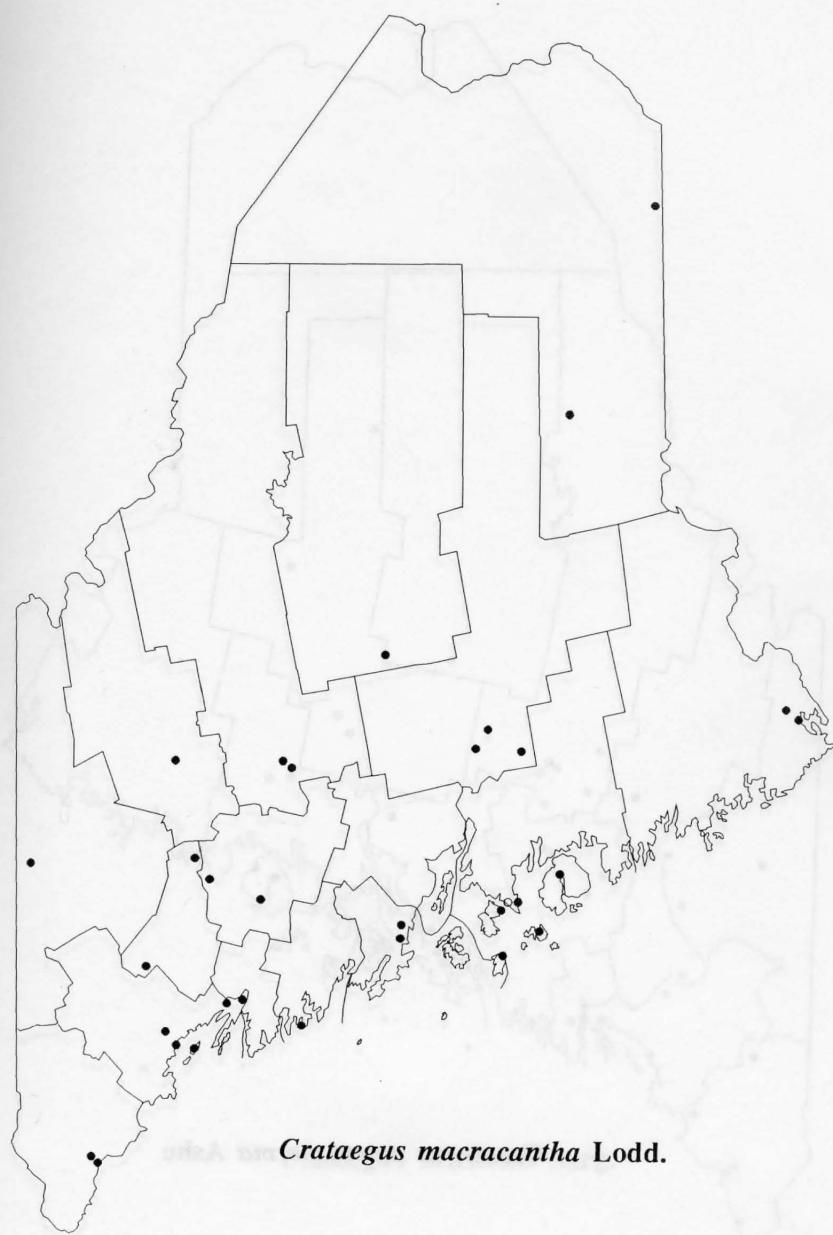




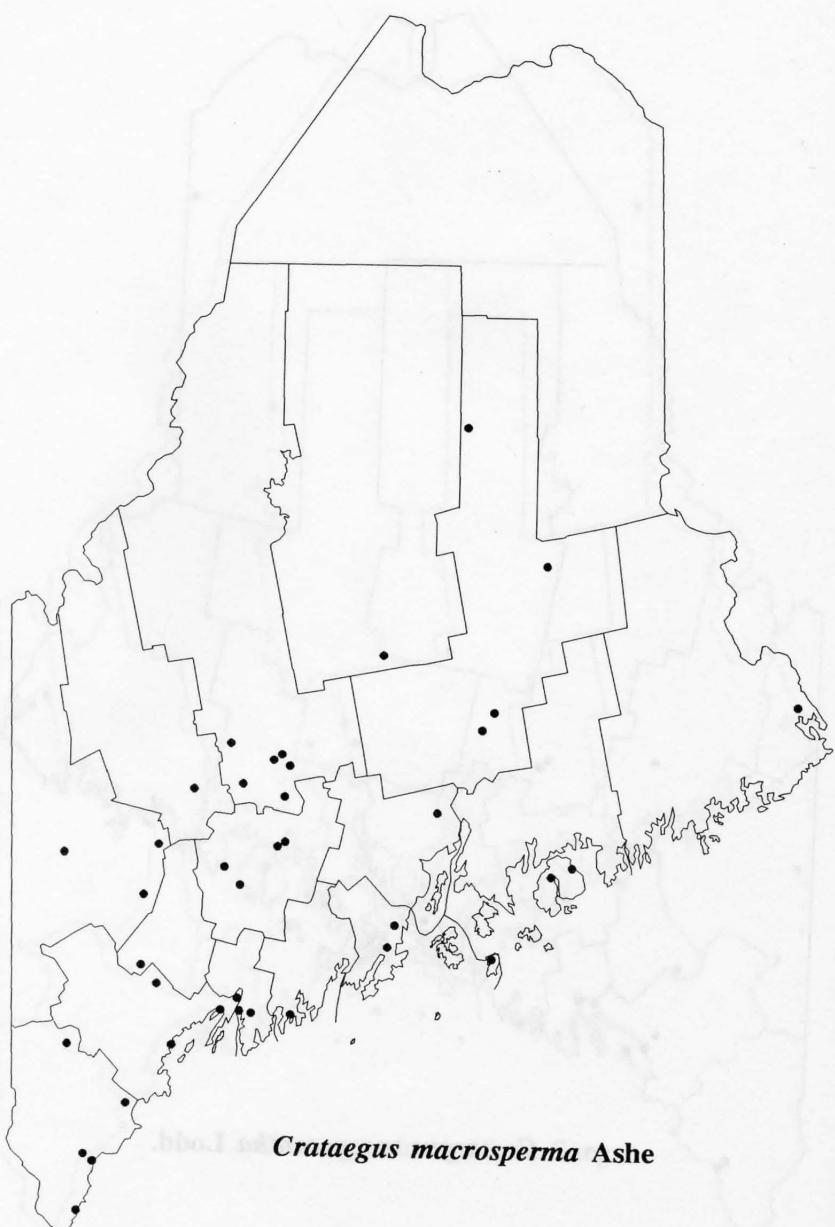
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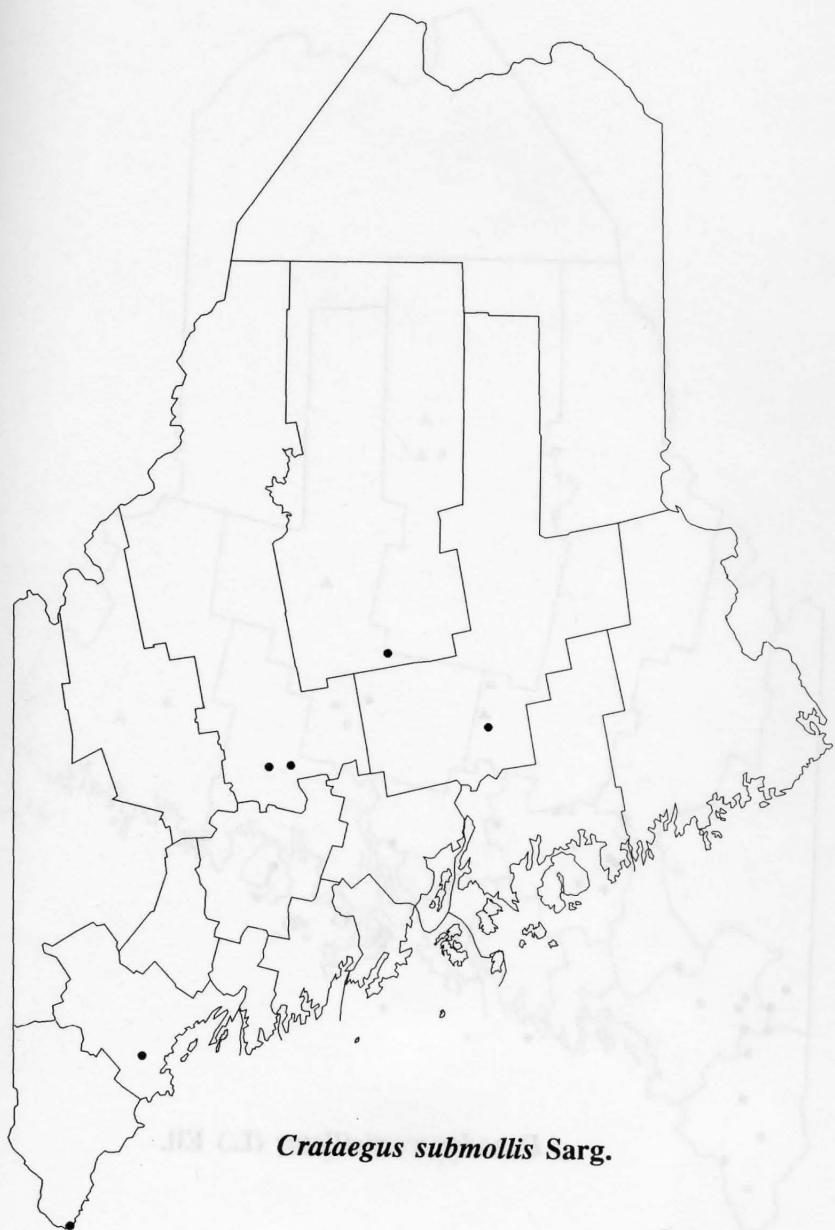


*Crataegus laurentiana* Sarg.

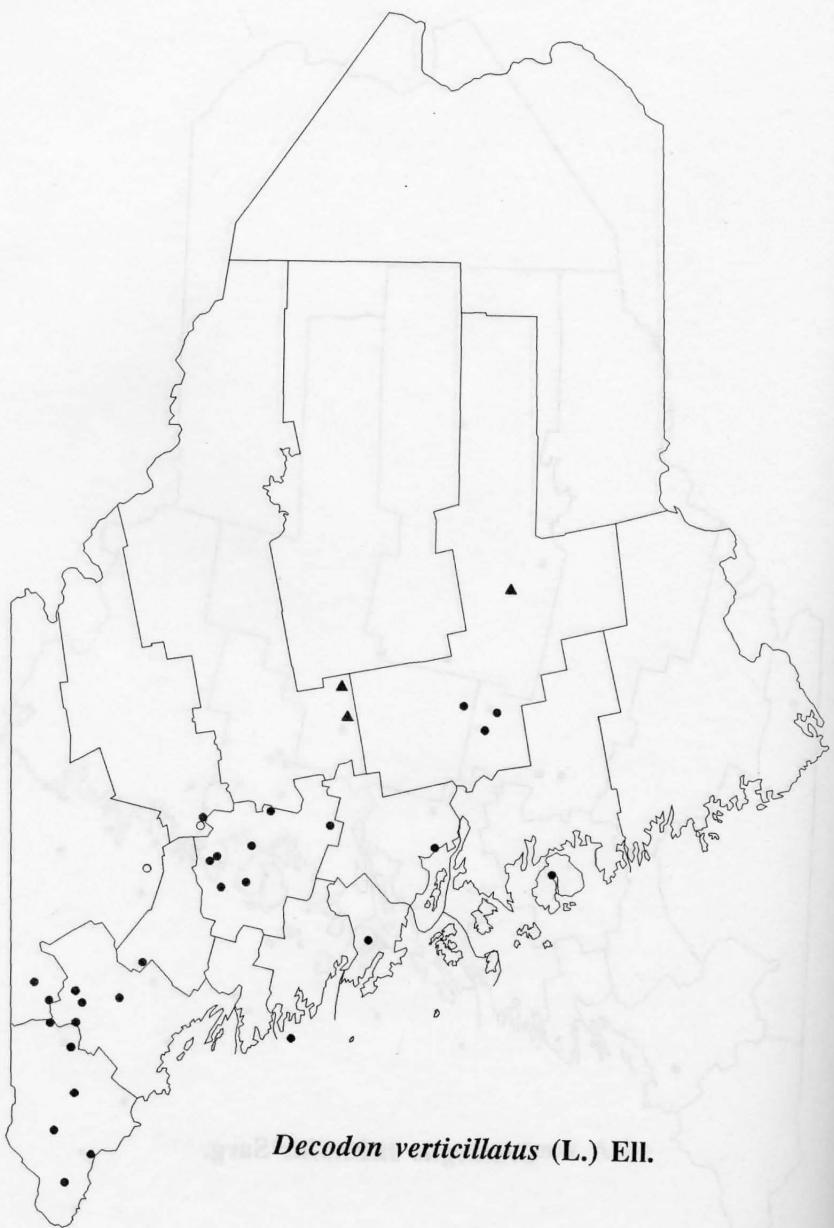


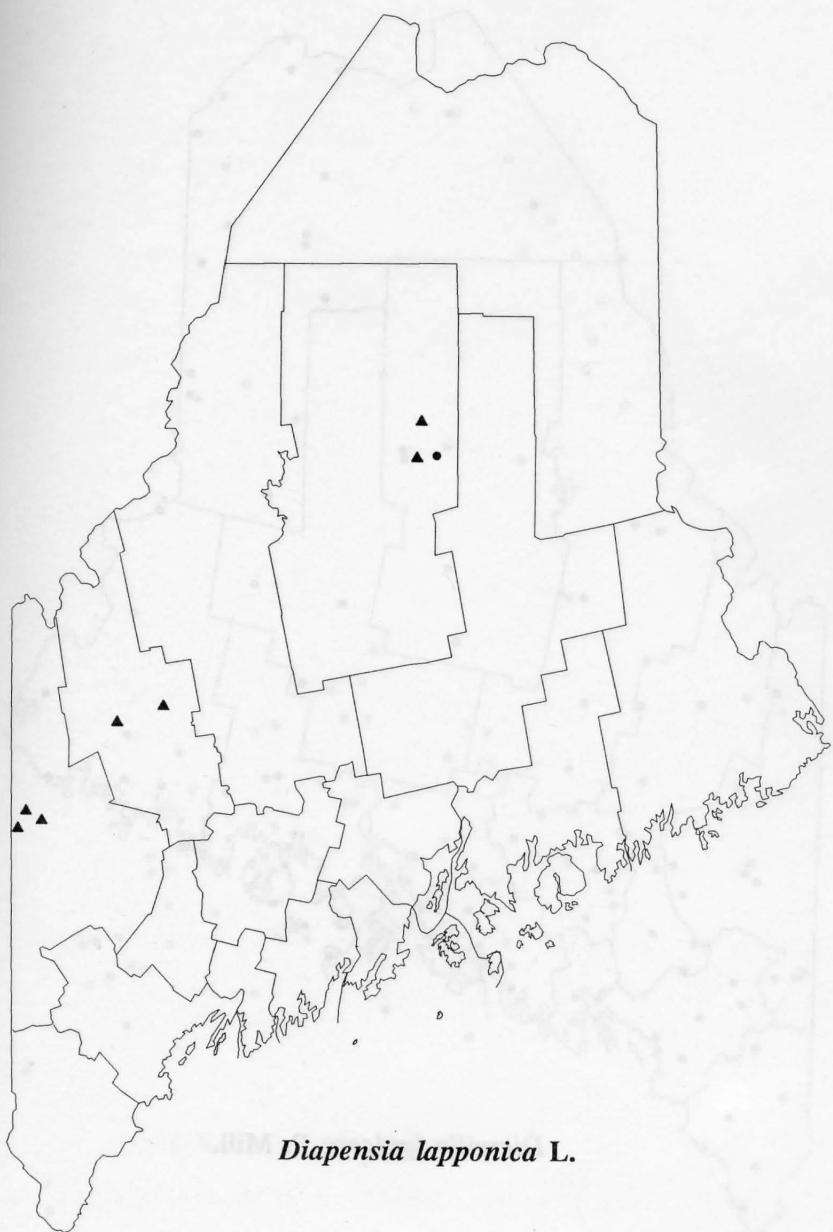
*Crataegus macracantha* Lodd.



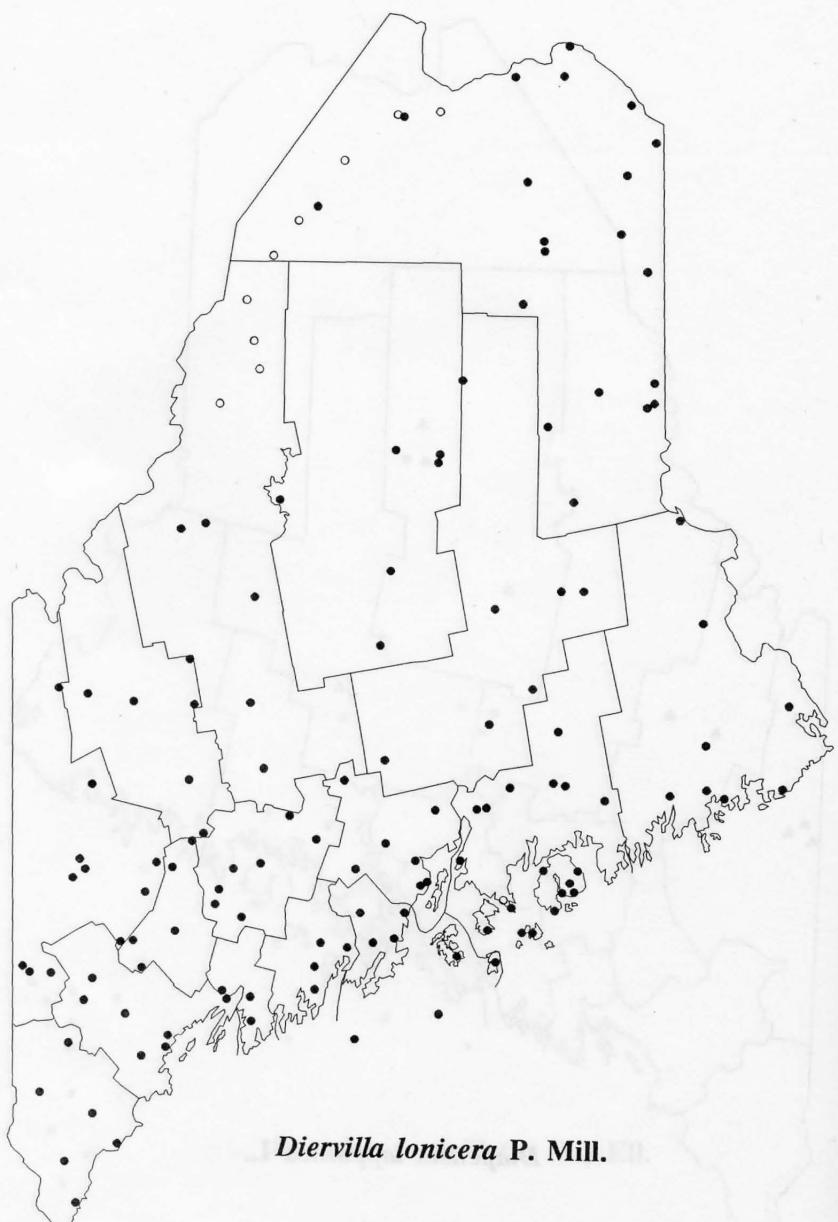


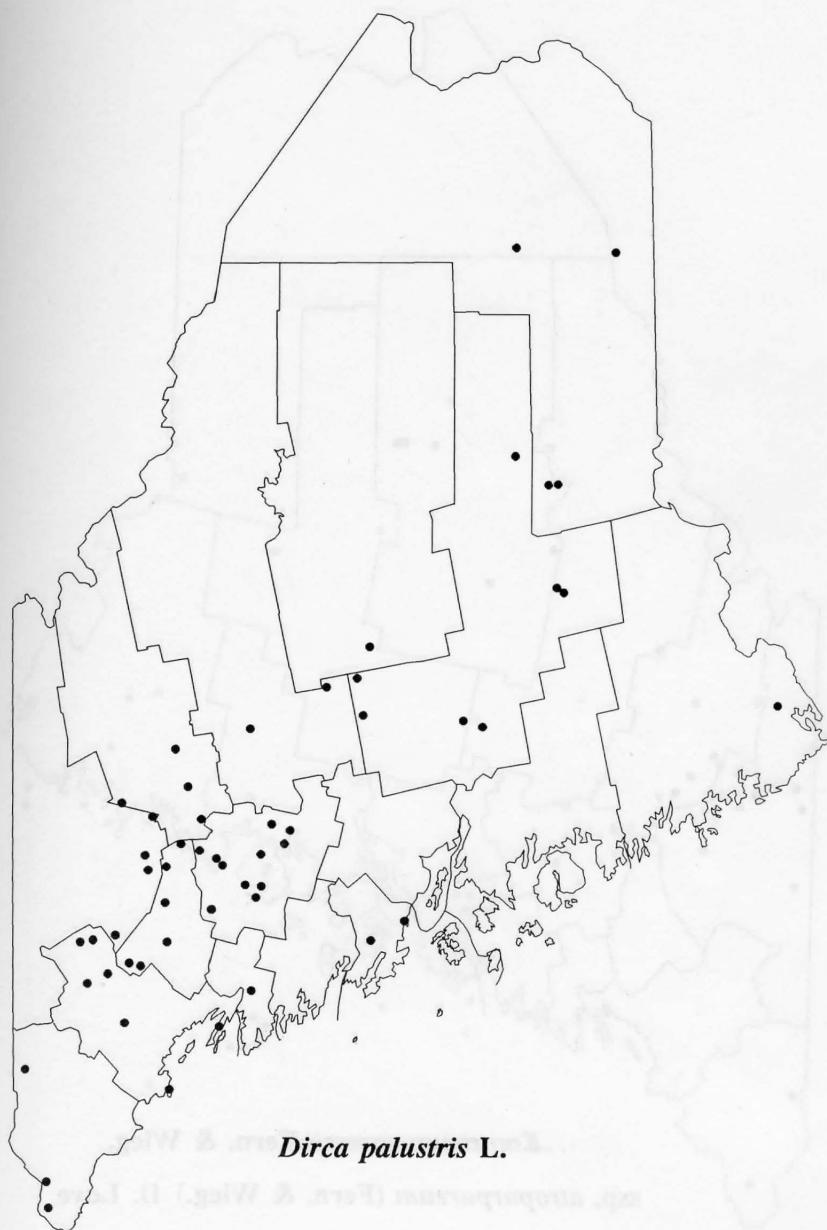
*Crataegus submollis* Sarg.



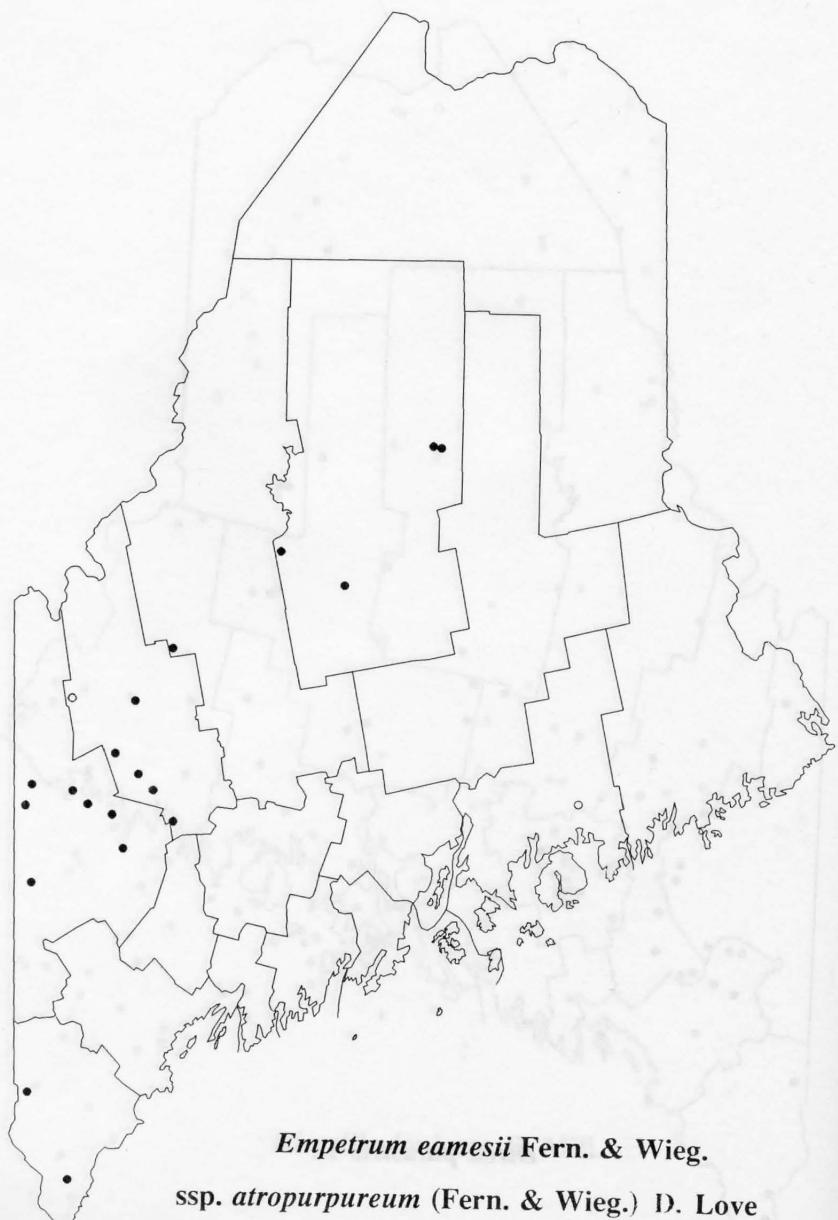


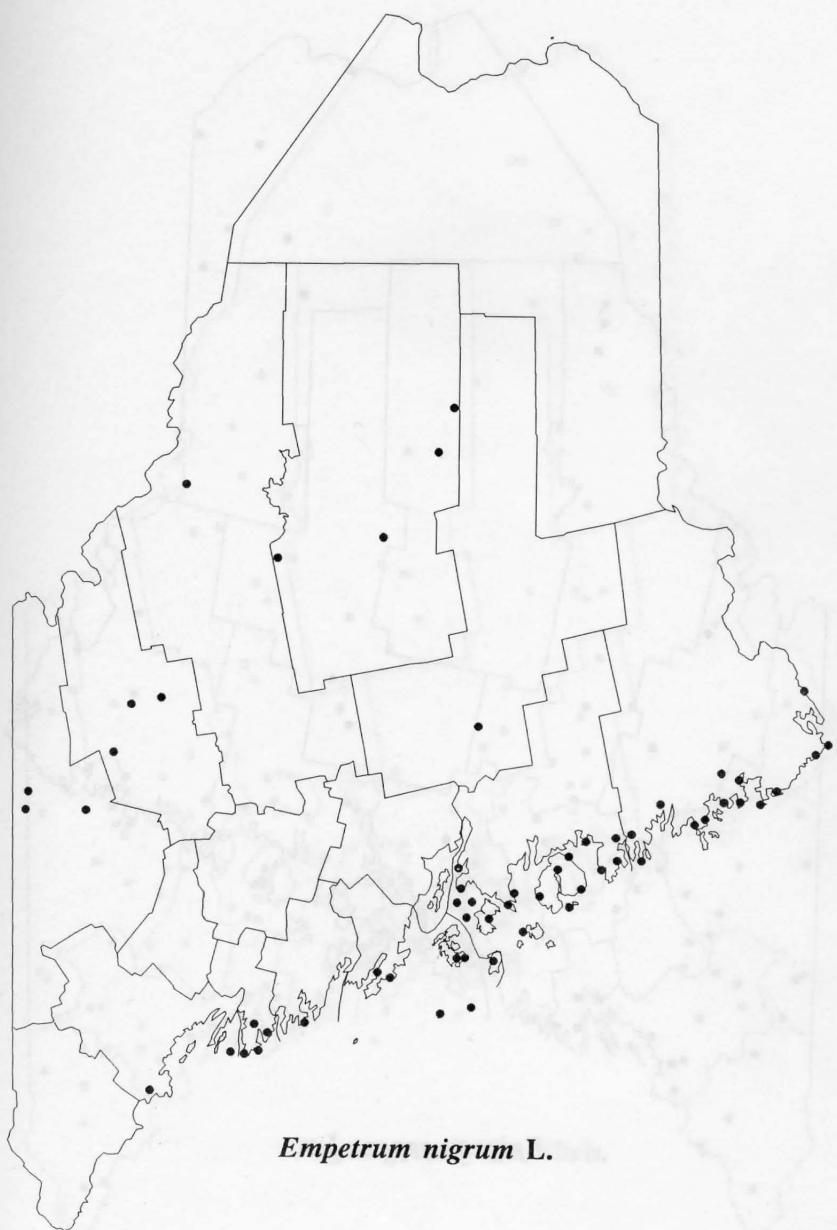
*Diapensia lapponica* L.

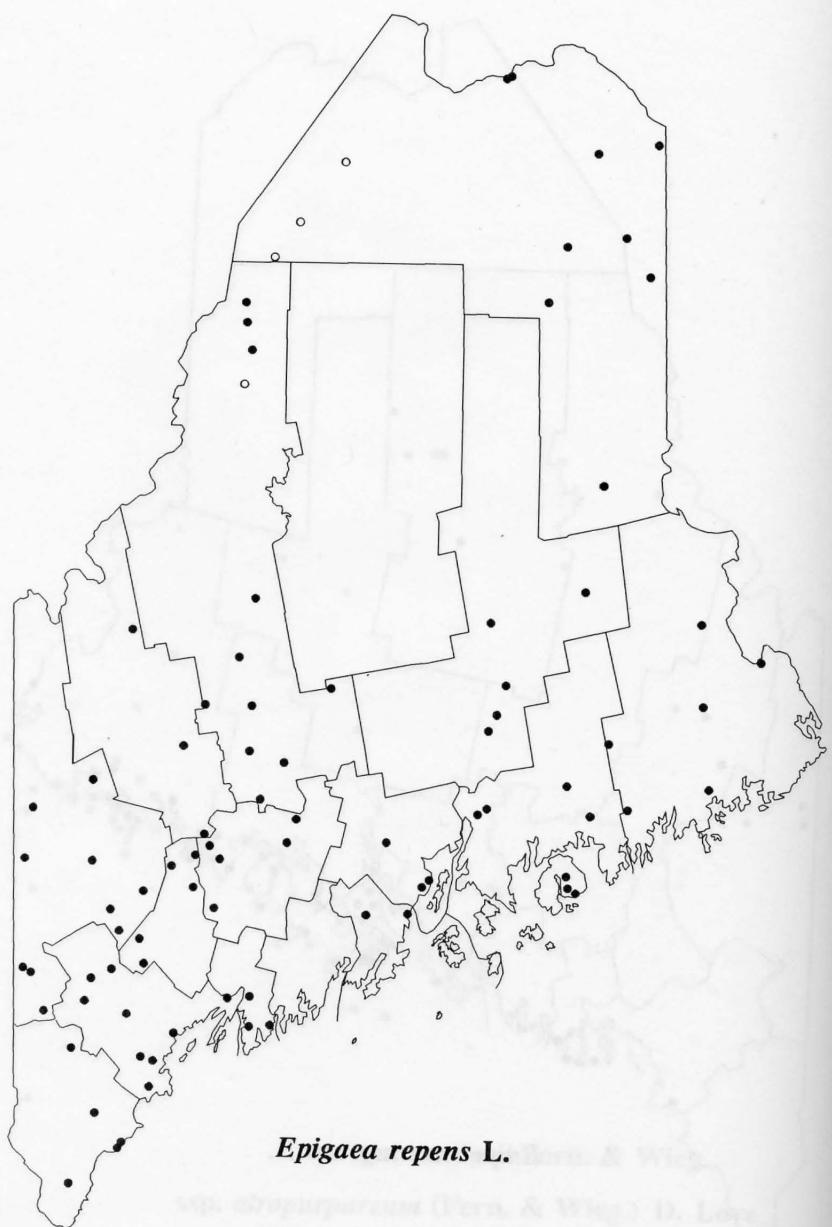


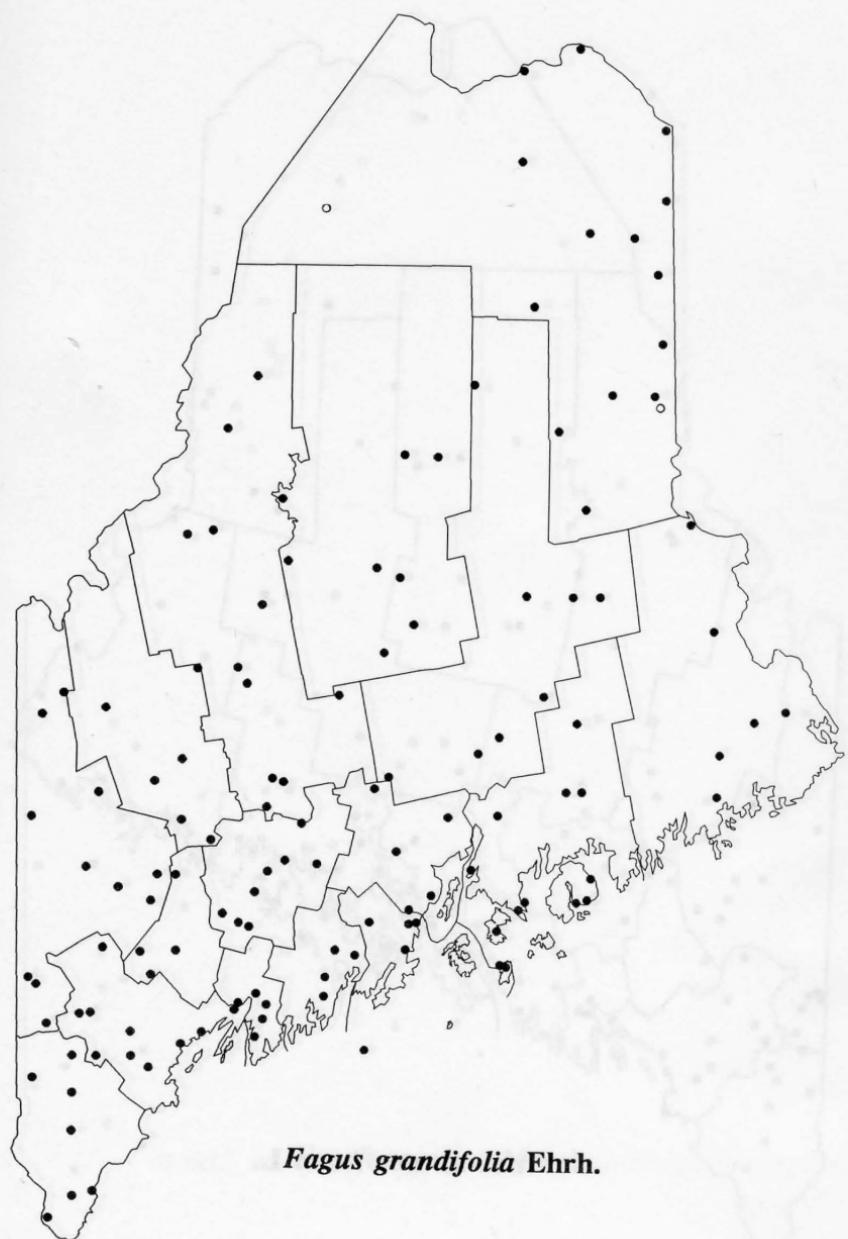


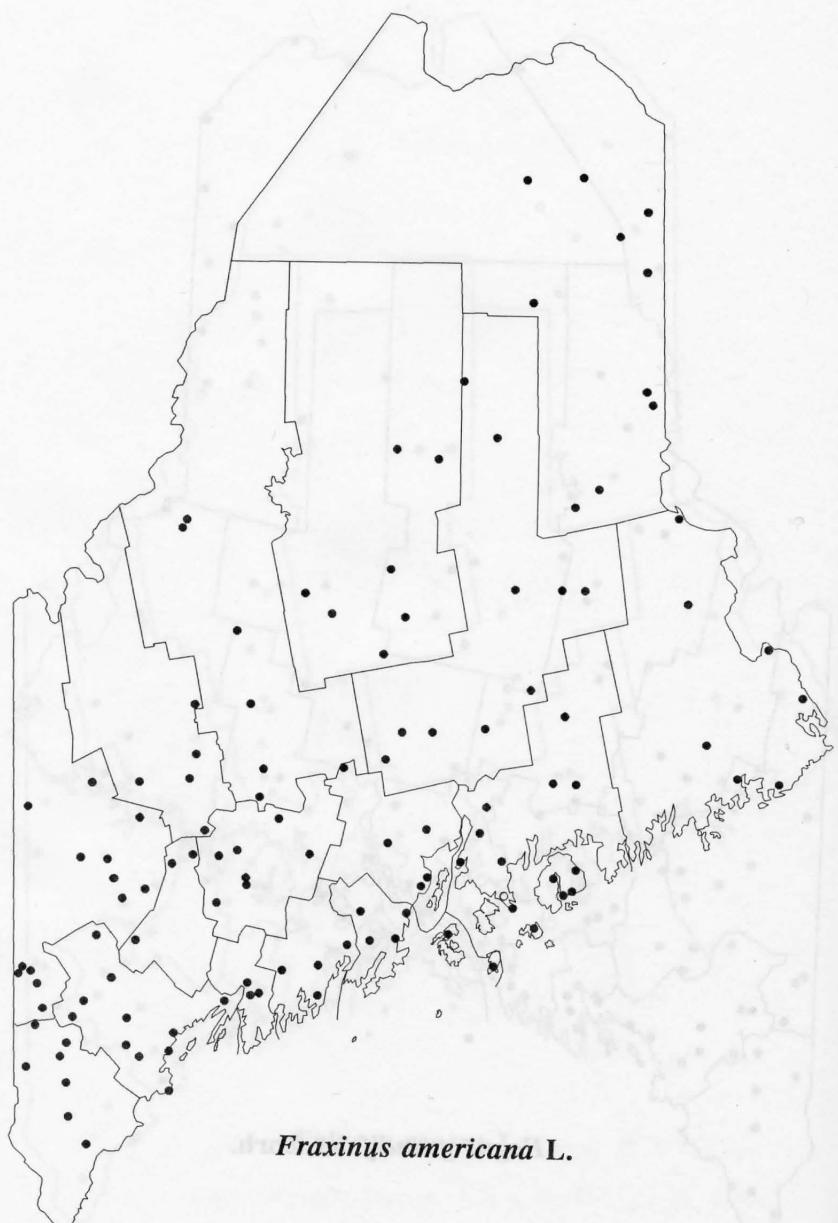
*Dirca palustris* L.

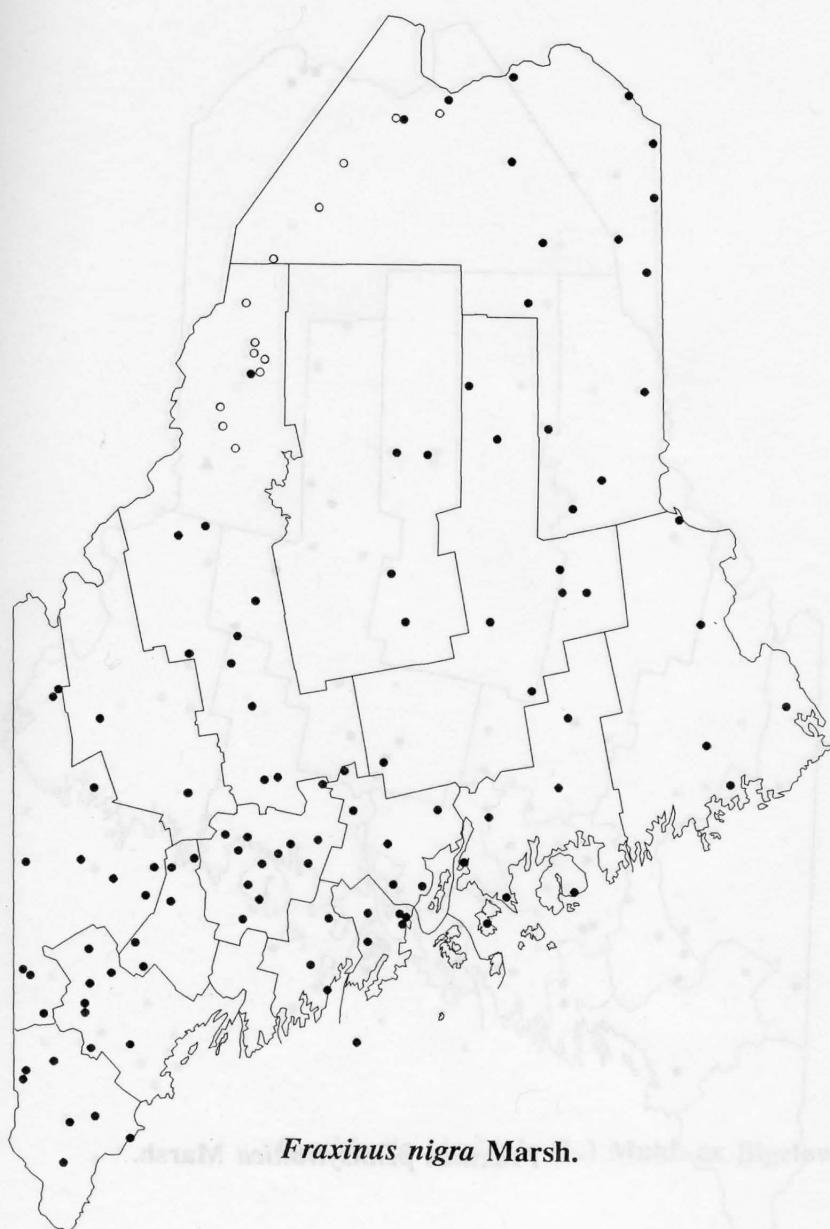


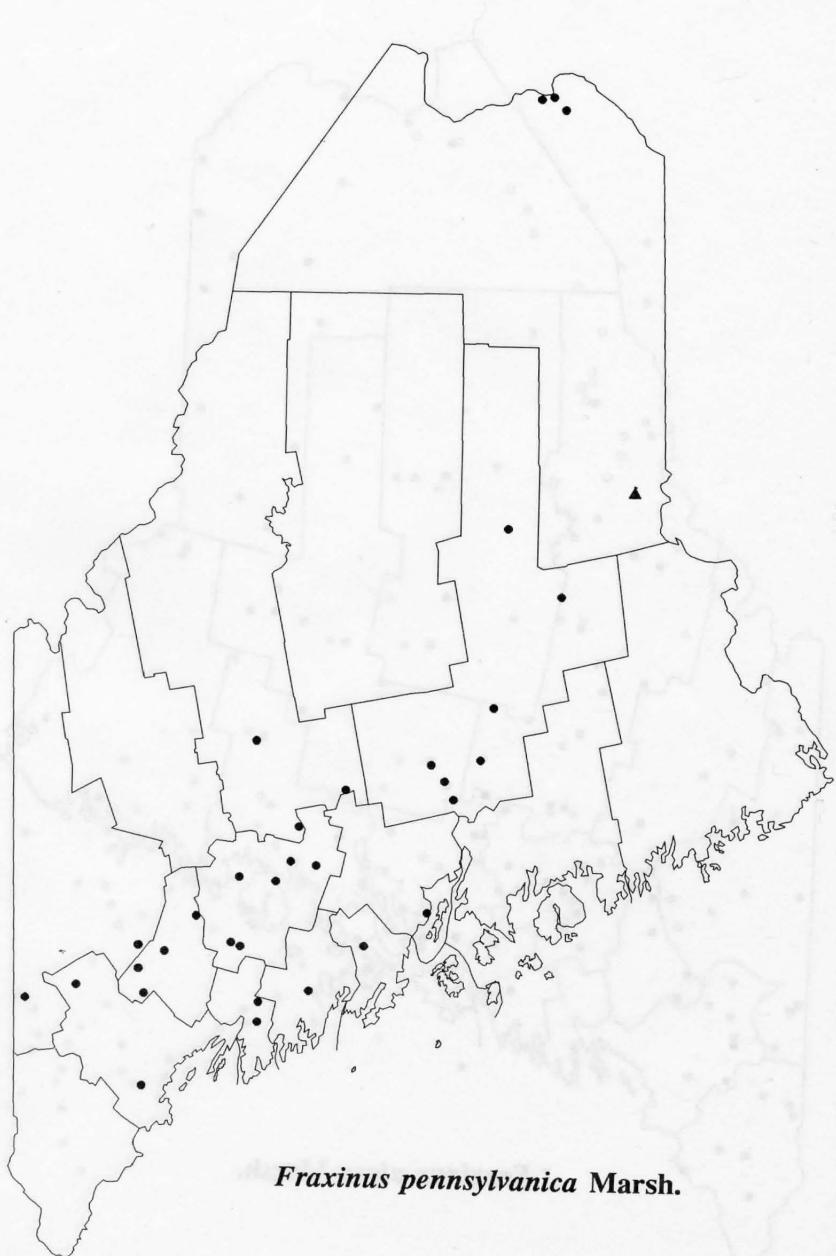


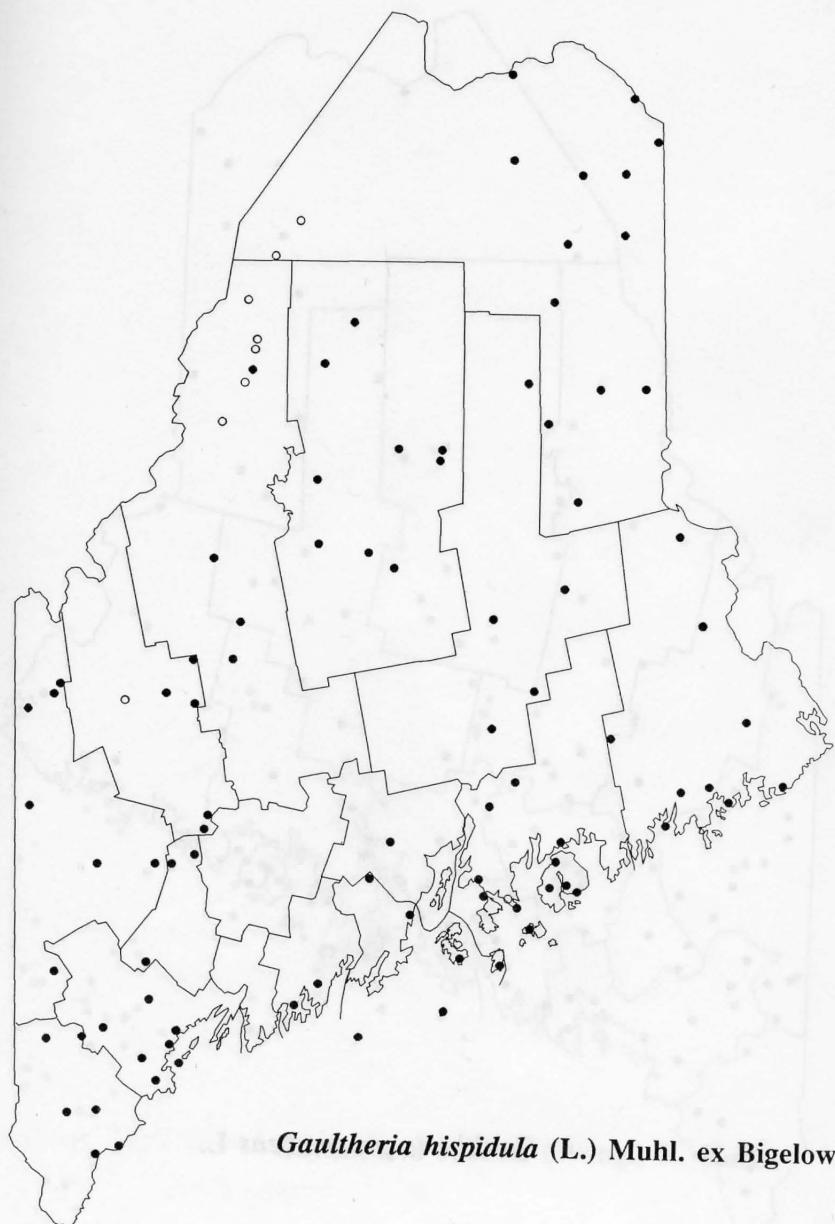




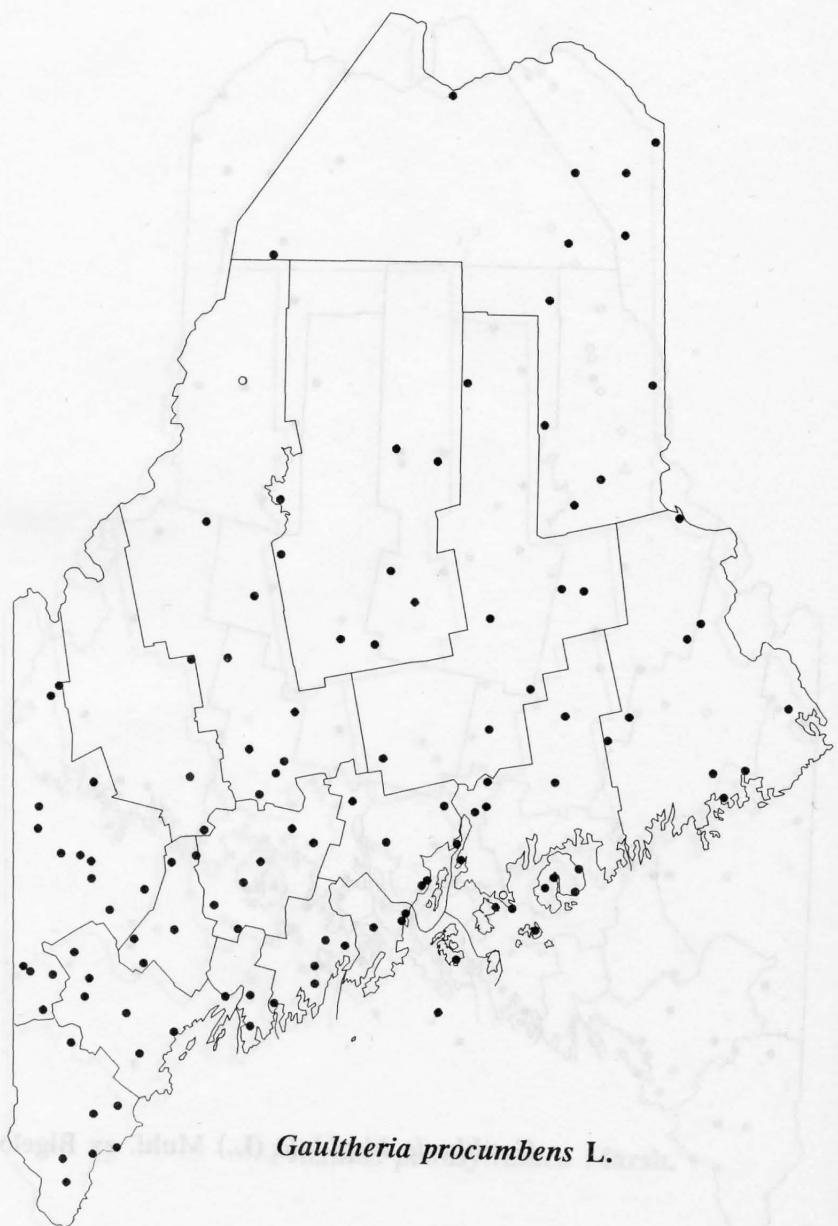


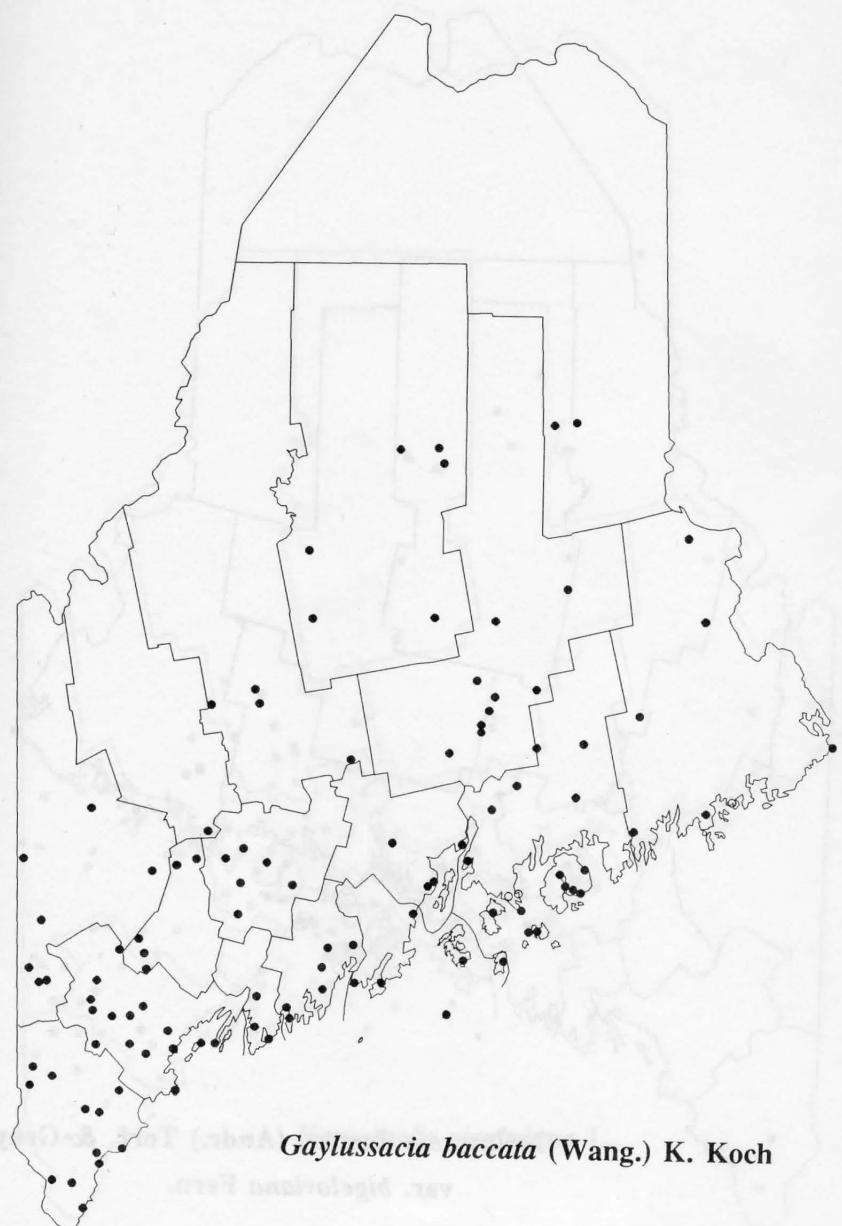


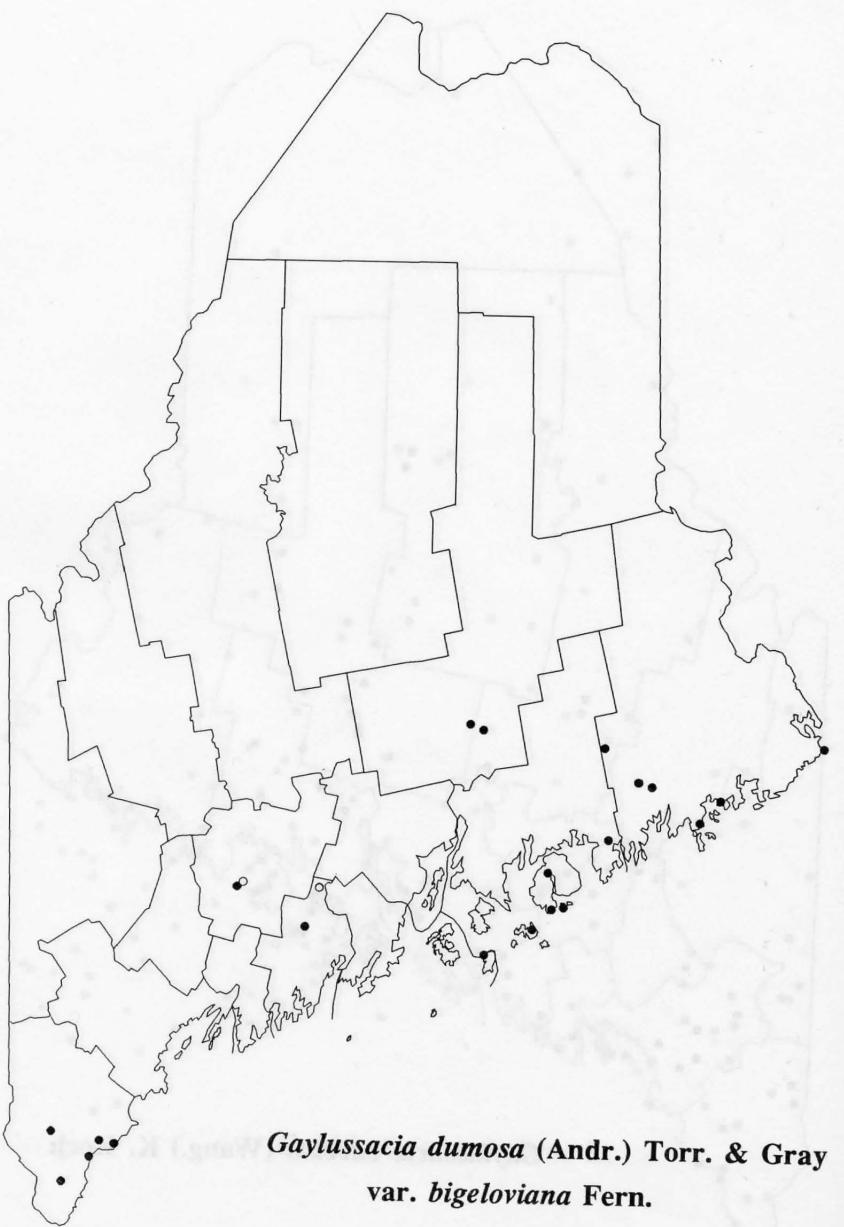


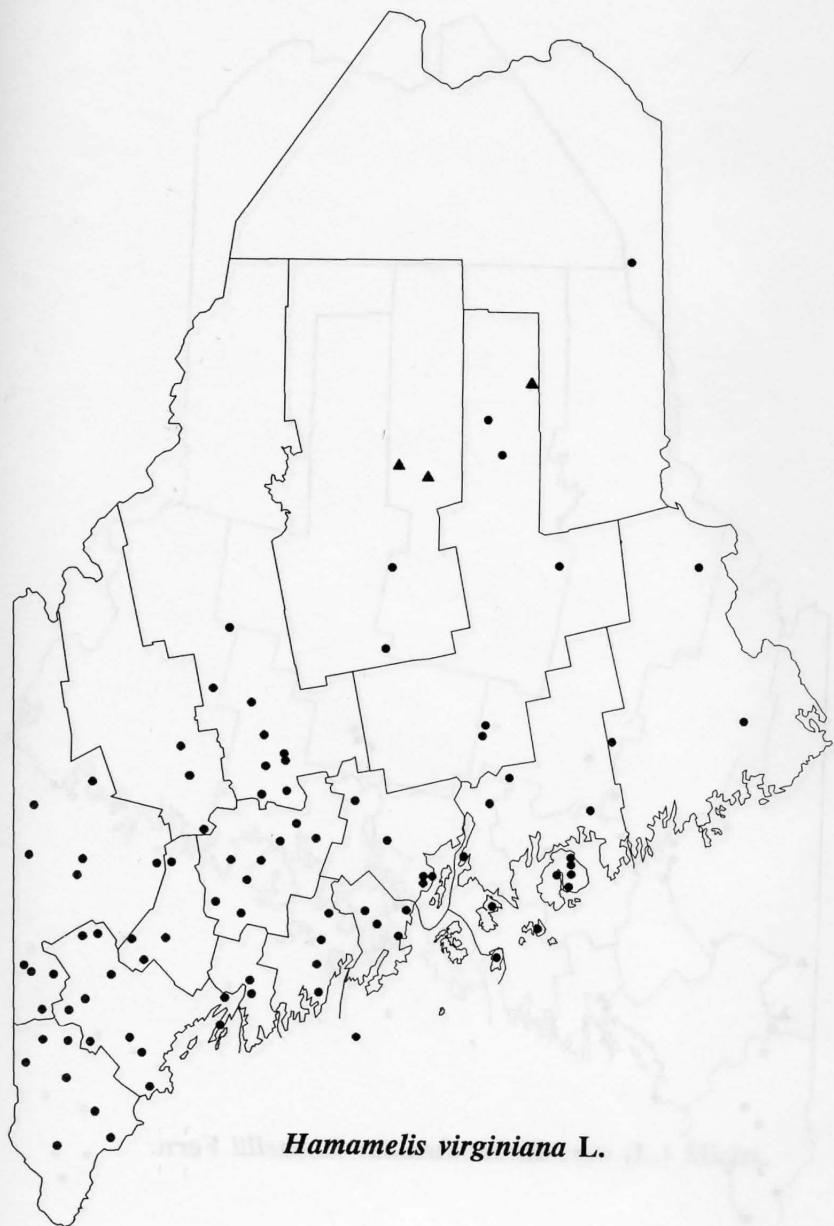


*Gaultheria hispidula* (L.) Muhl. ex Bigelow

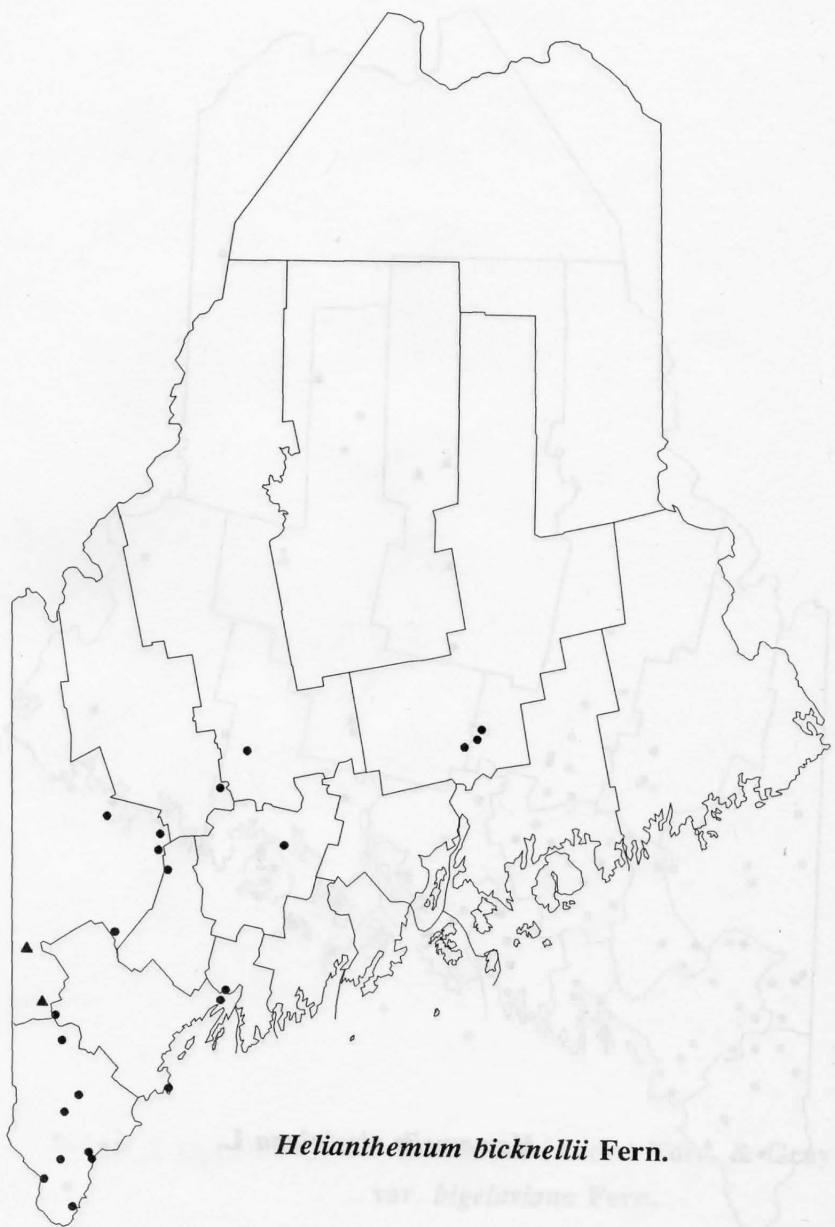


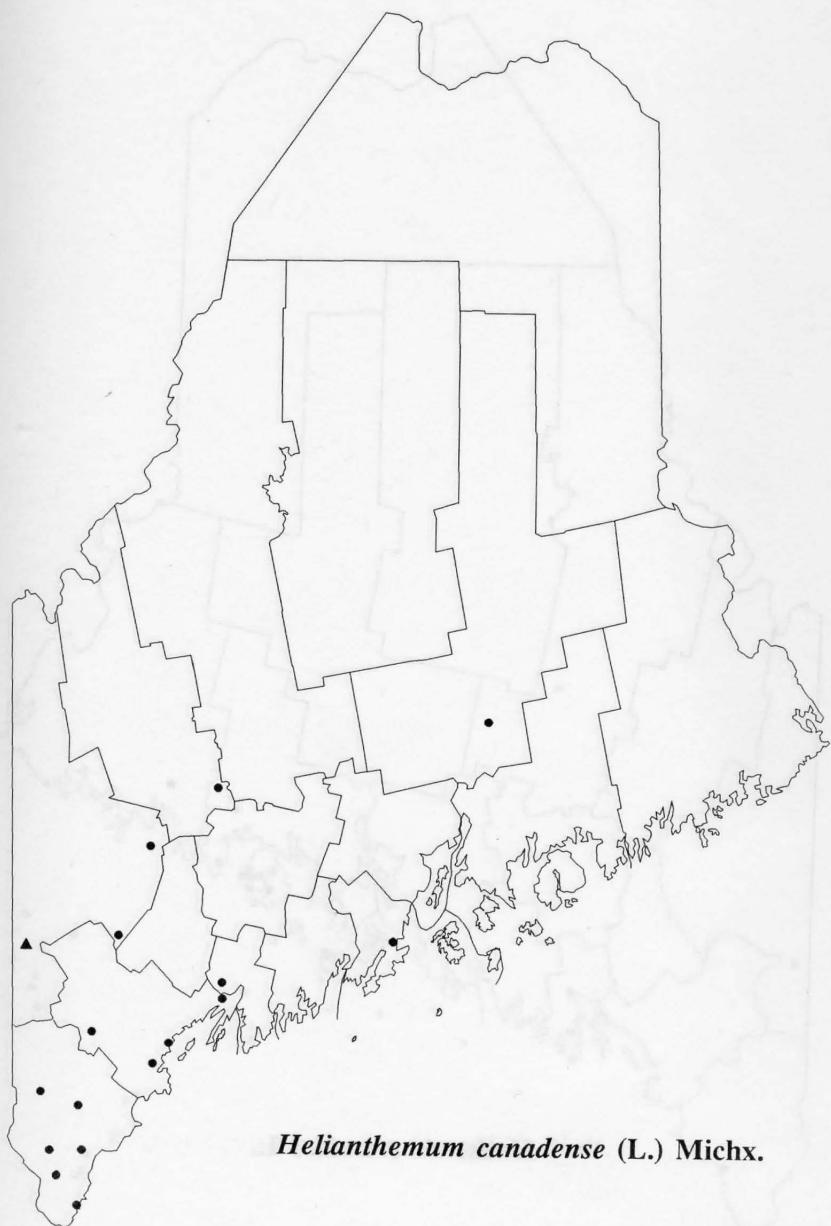




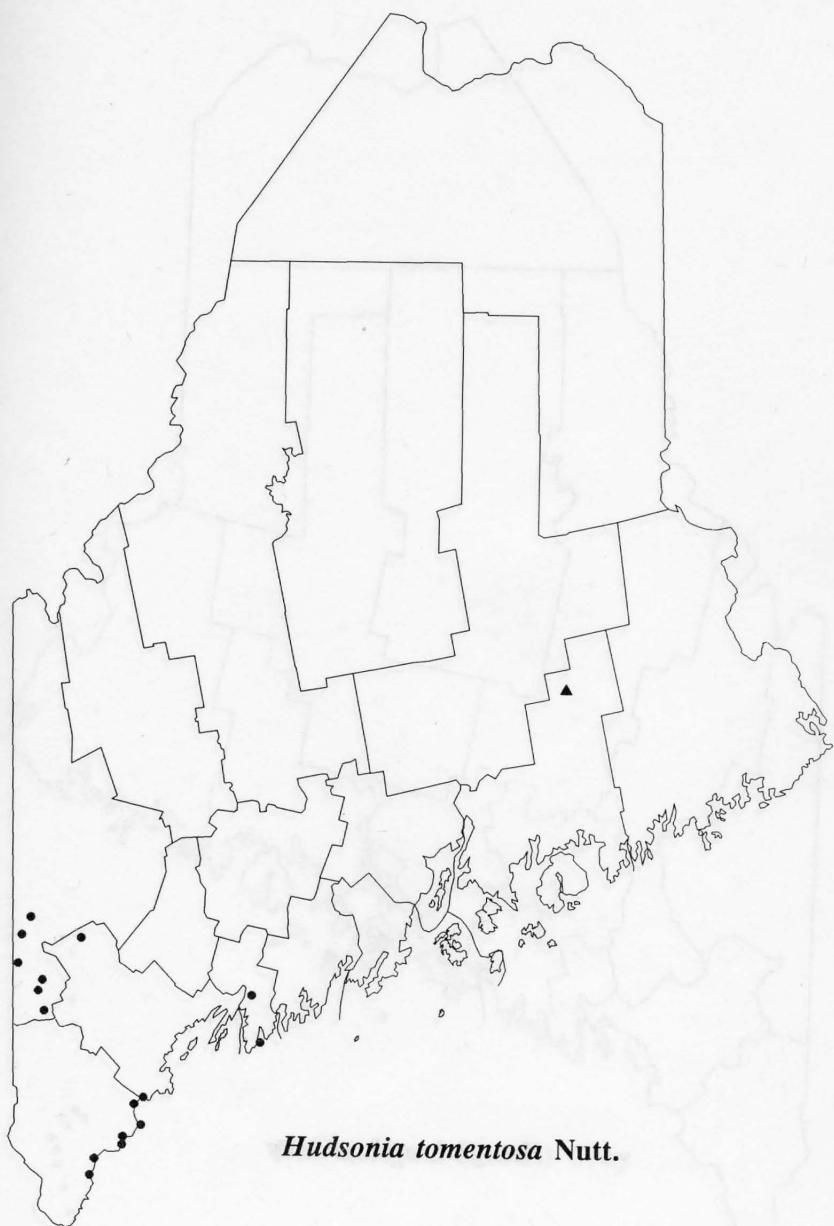


*Hamamelis virginiana* L.





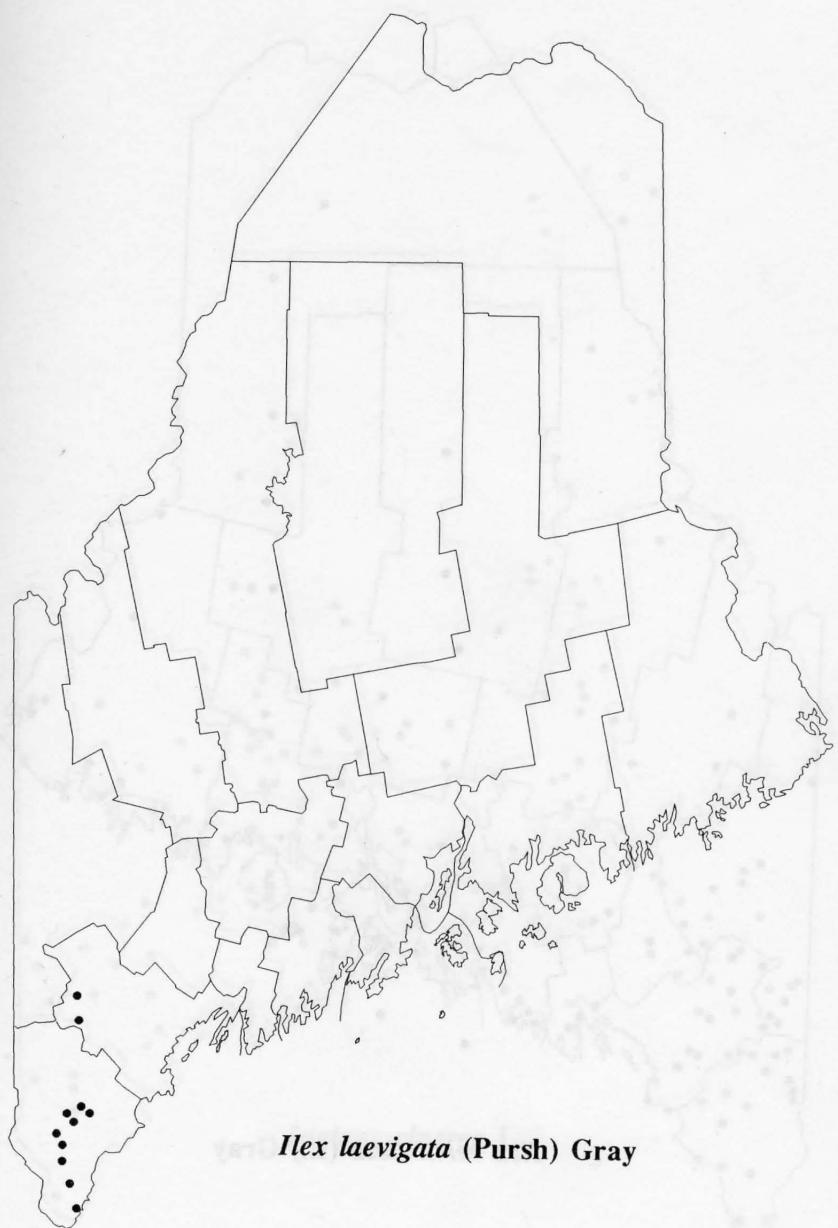




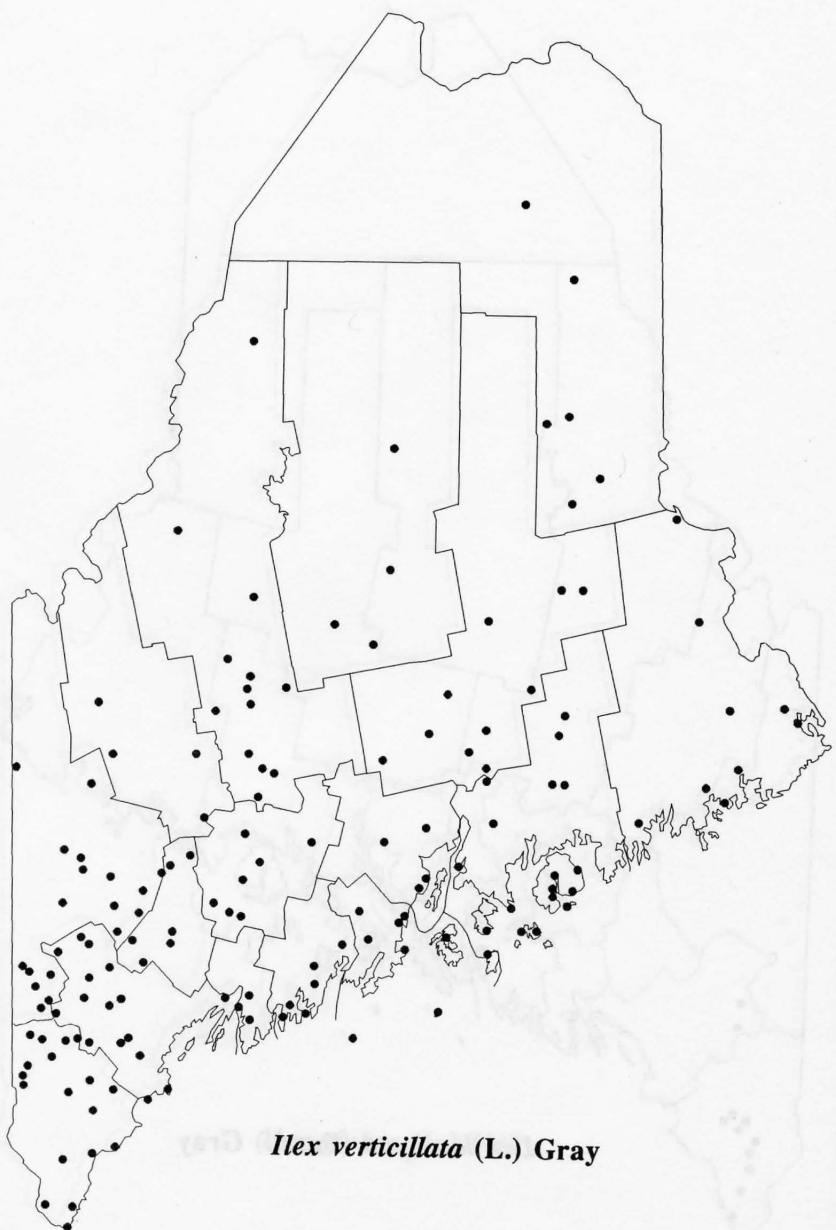
***Hudsonia tomentosa* Nutt.**

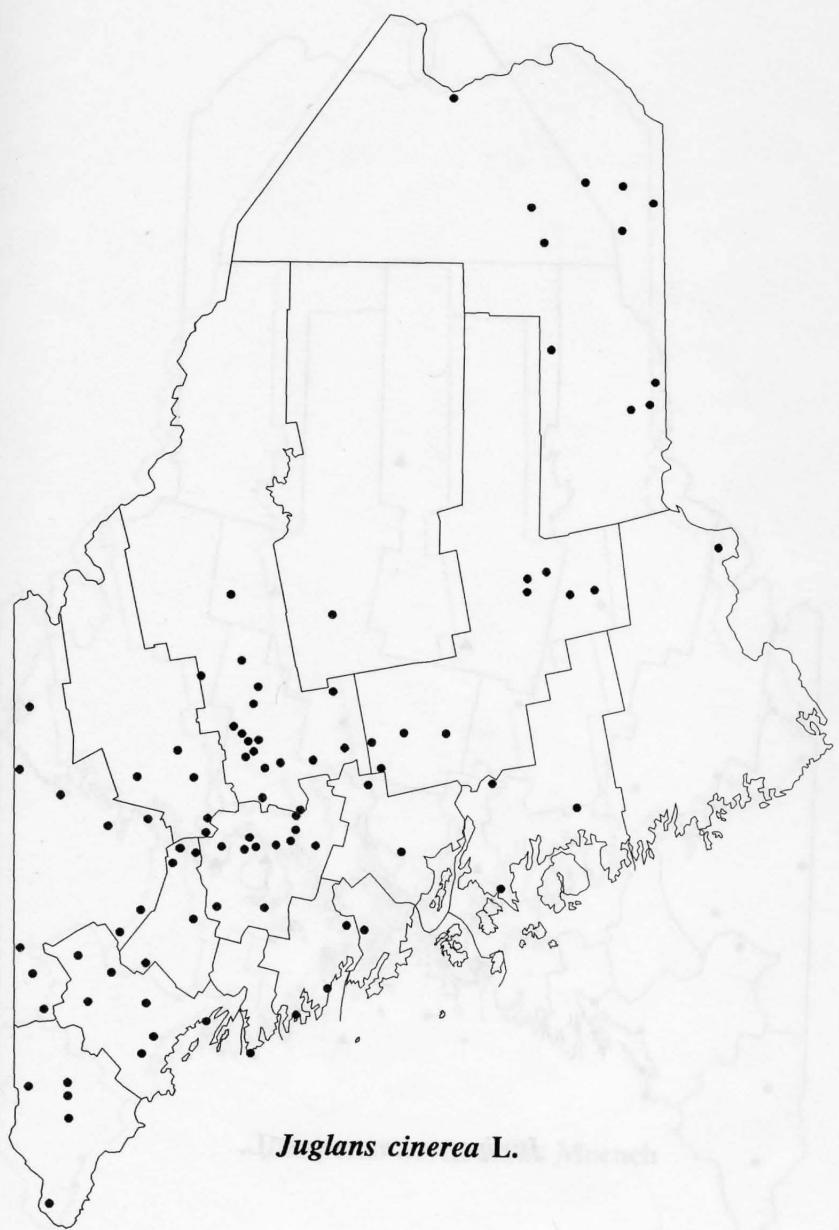


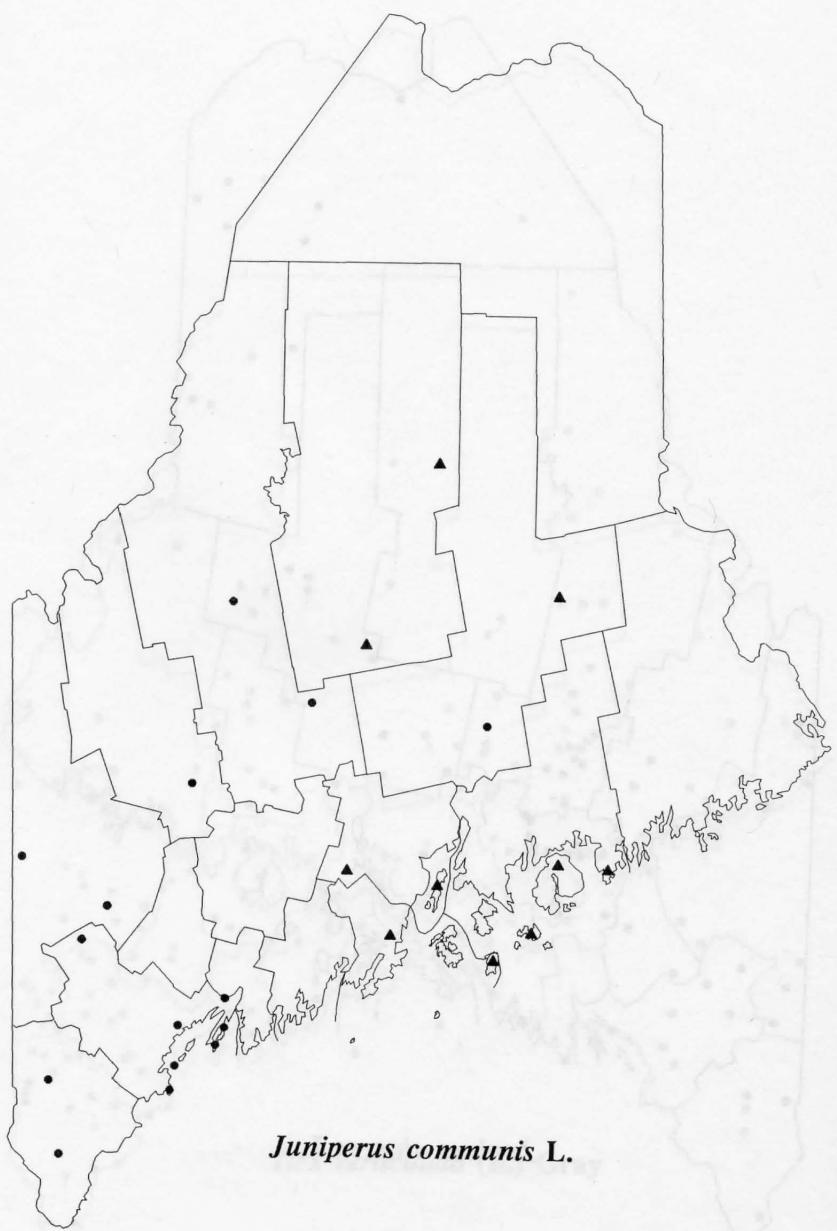
*Ilex glabra* (L.) Gray

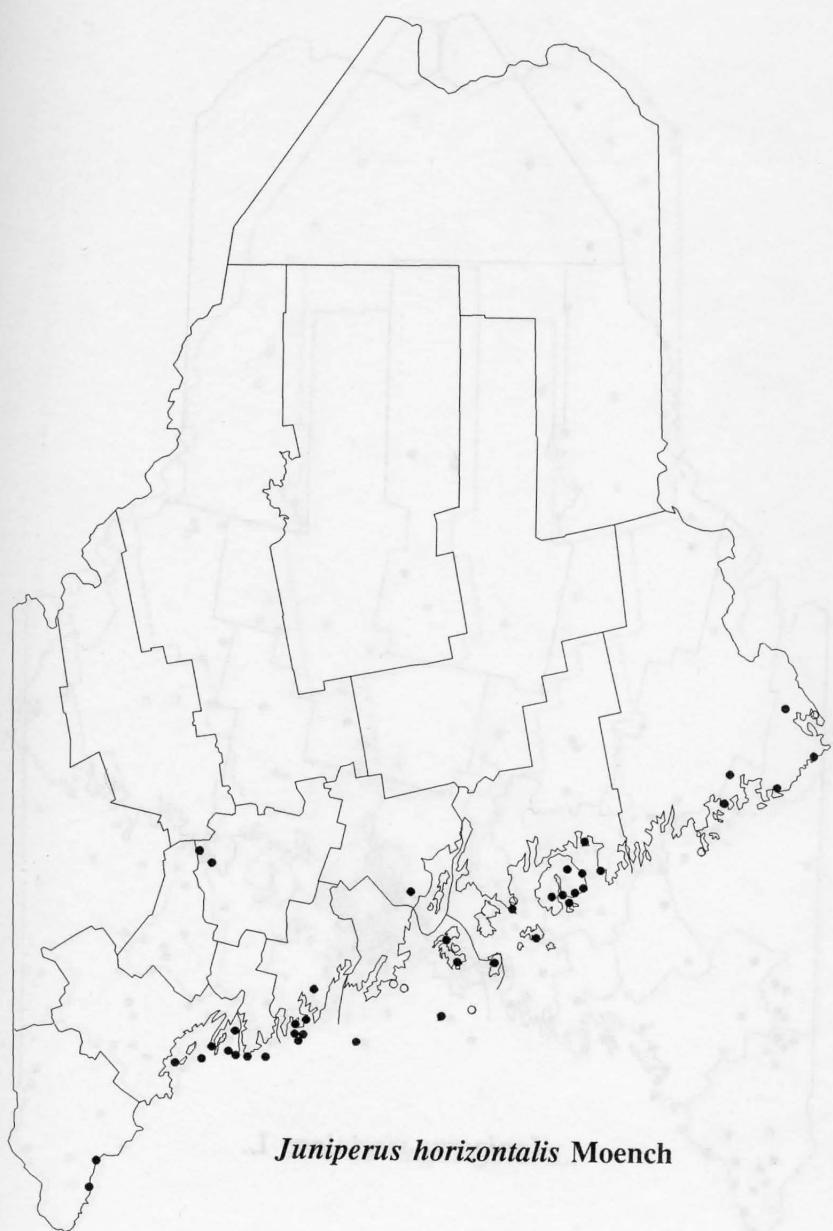


*Ilex laevigata* (Pursh) Gray

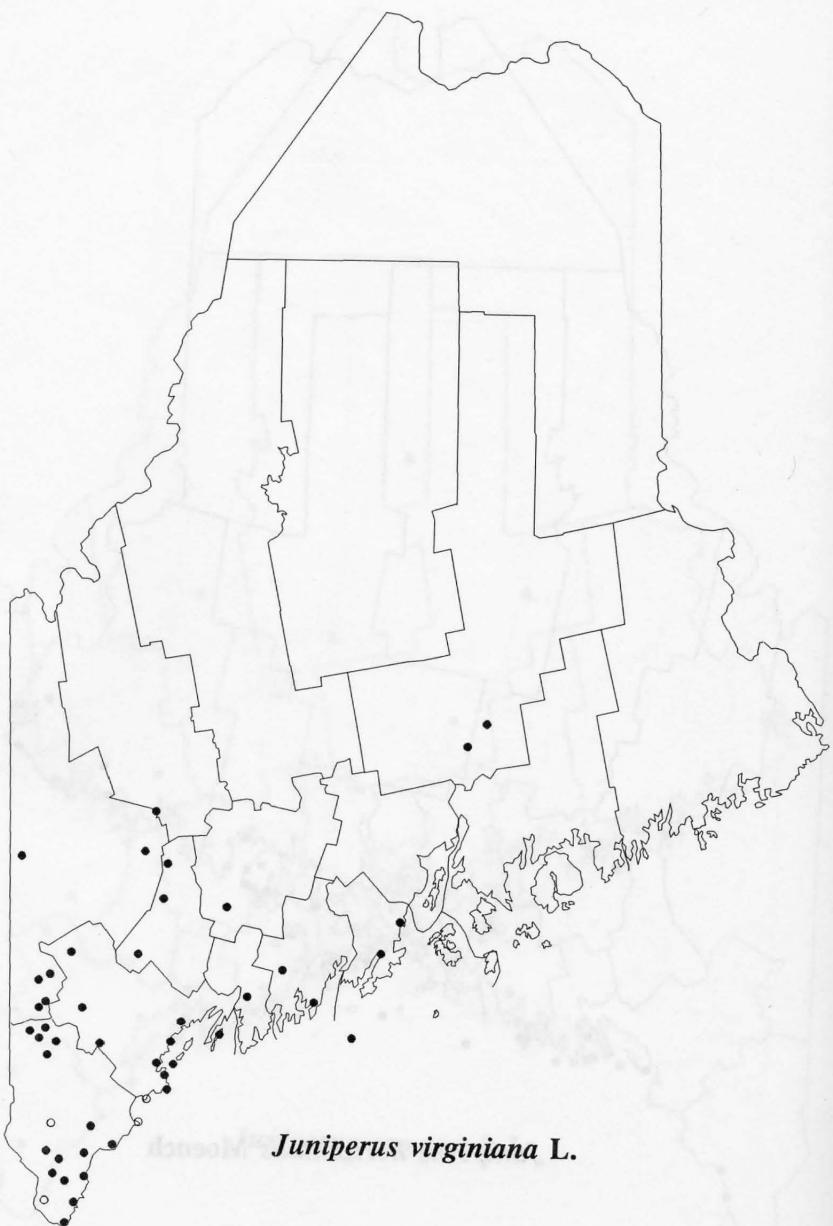


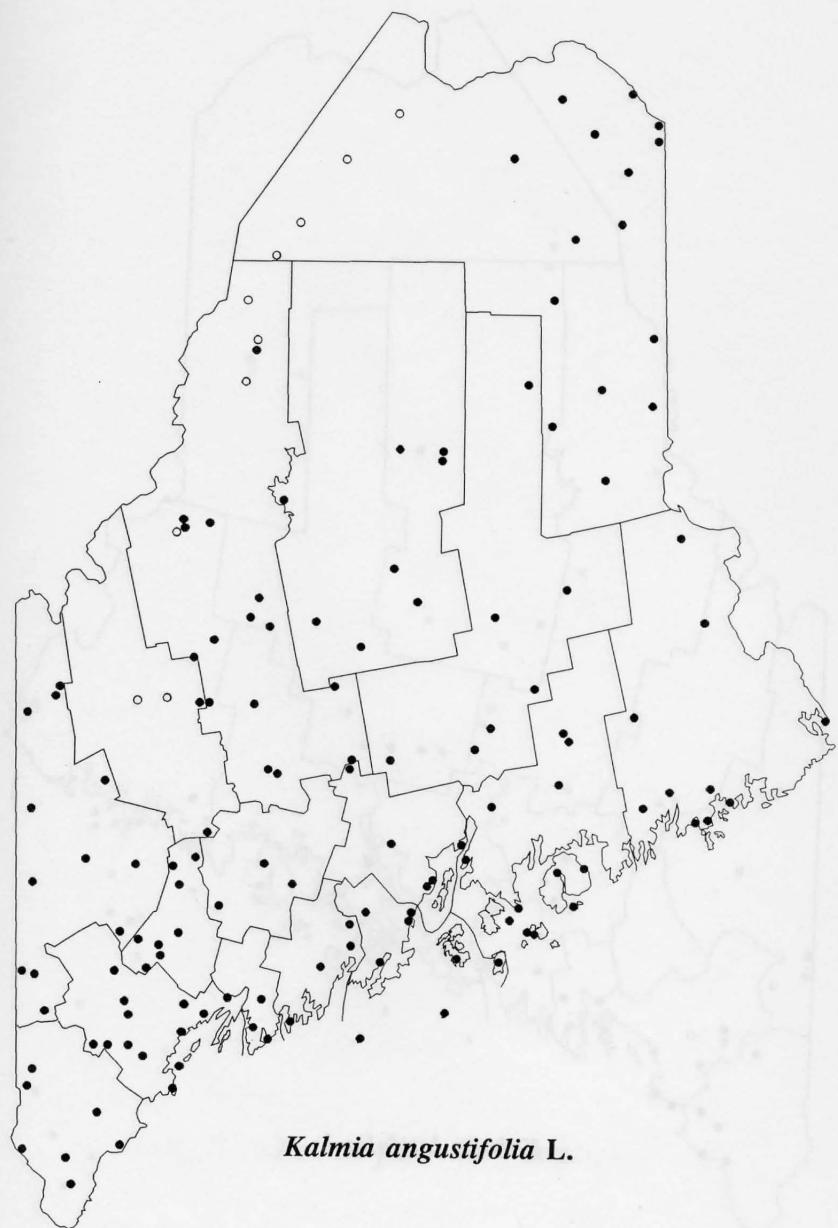


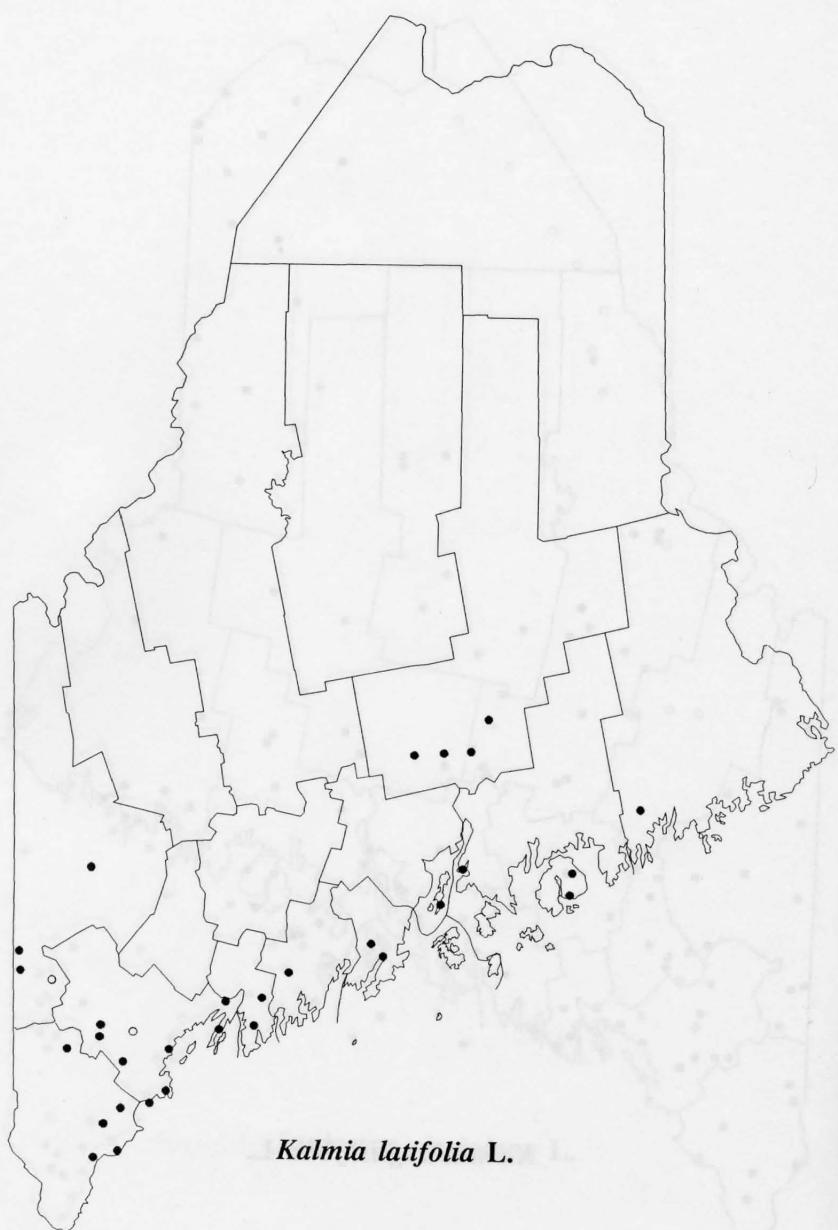


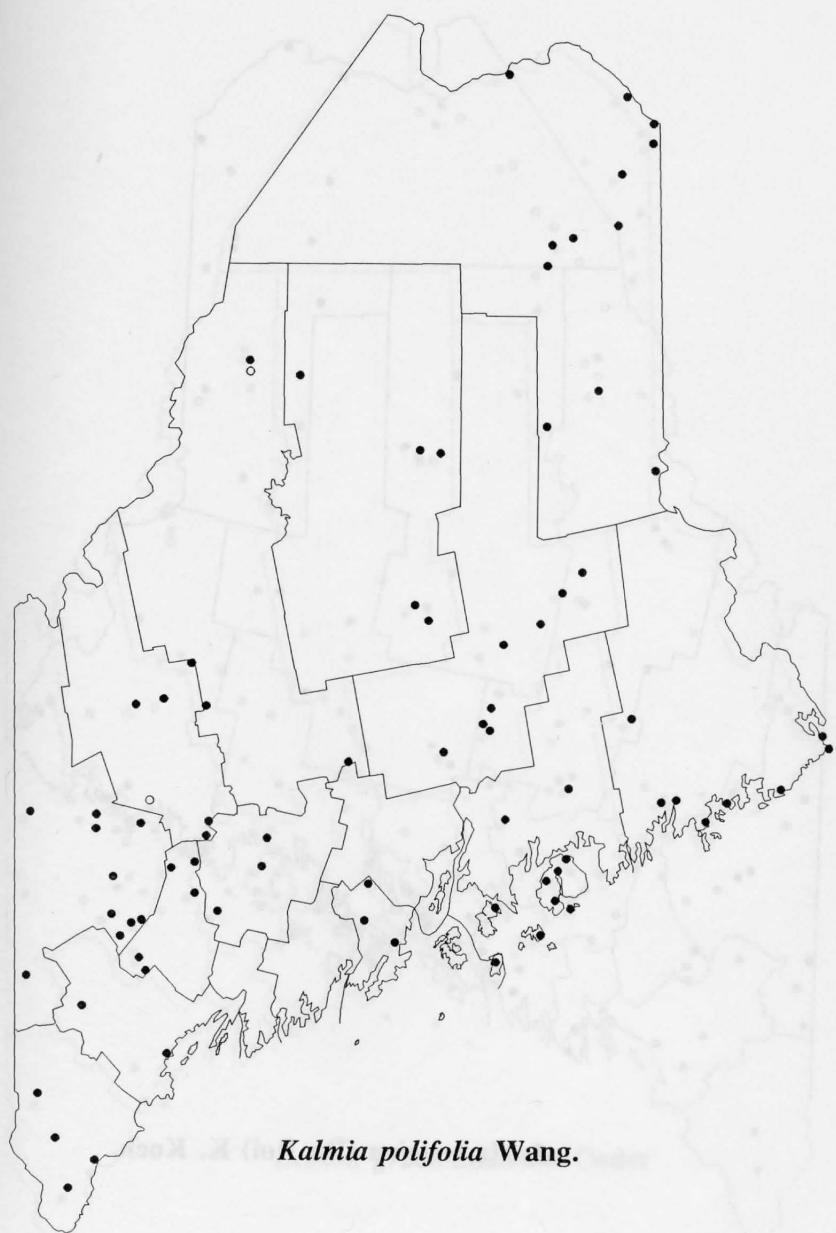


*Juniperus horizontalis* Moench

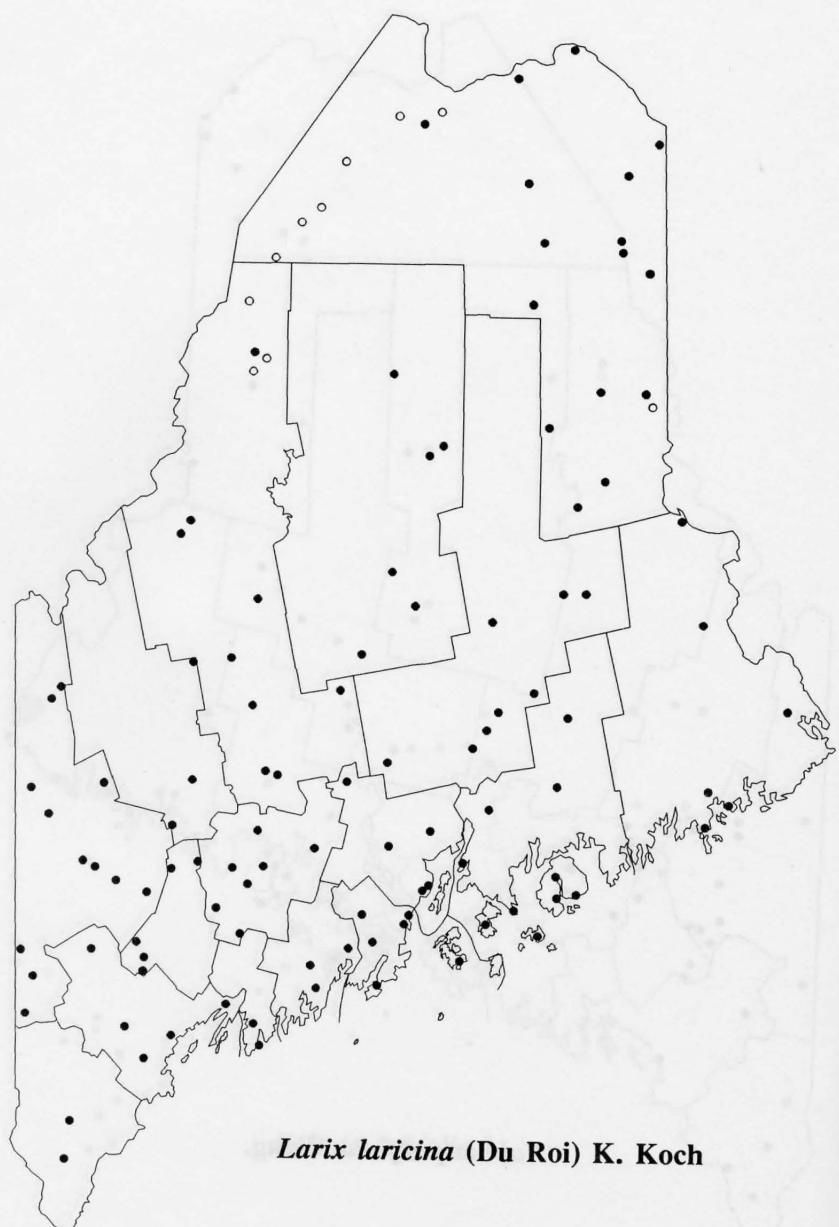


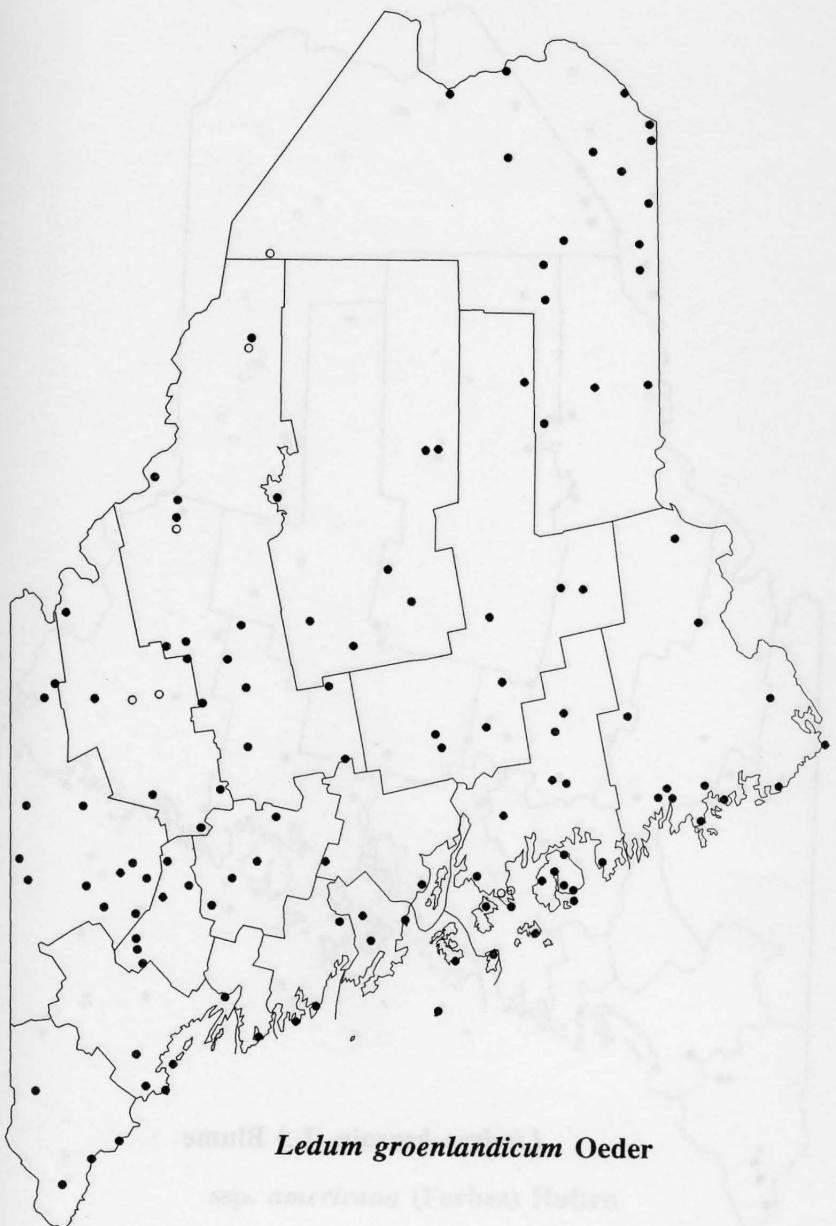




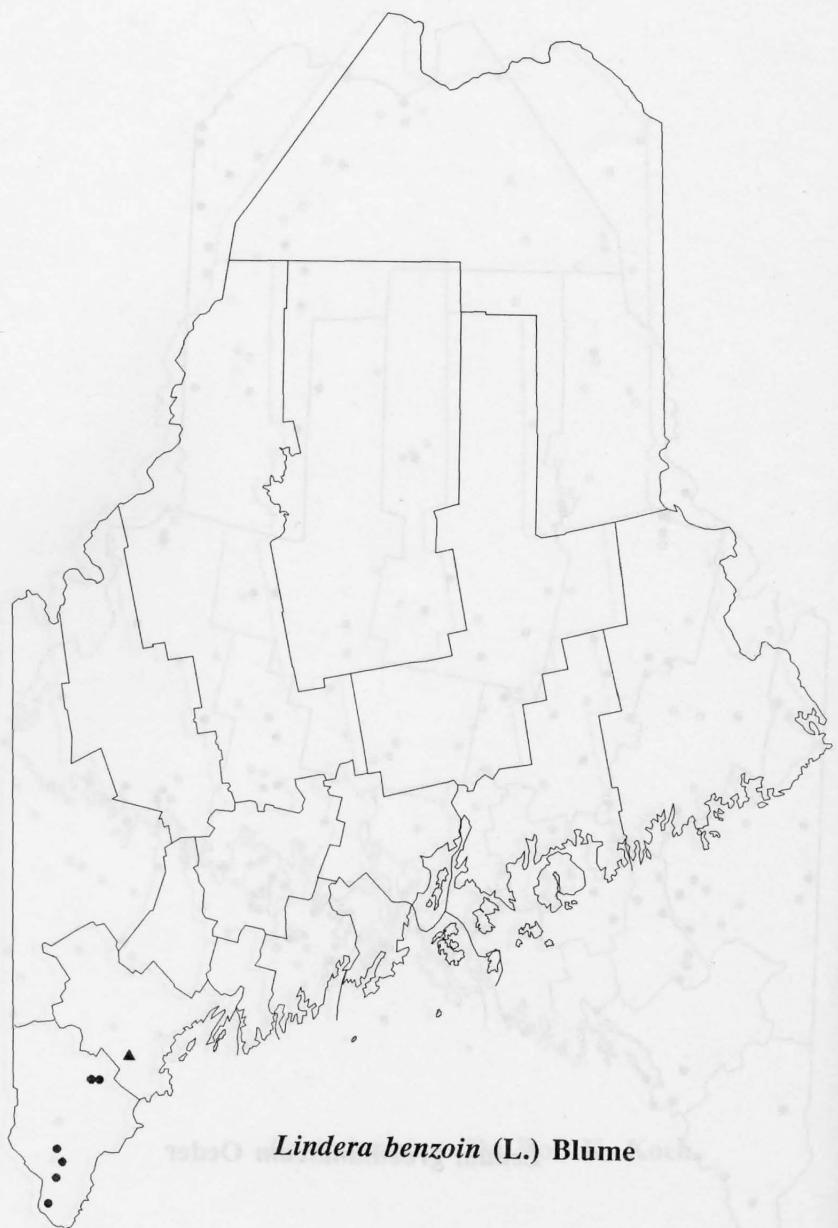


*Kalmia polifolia* Wang.

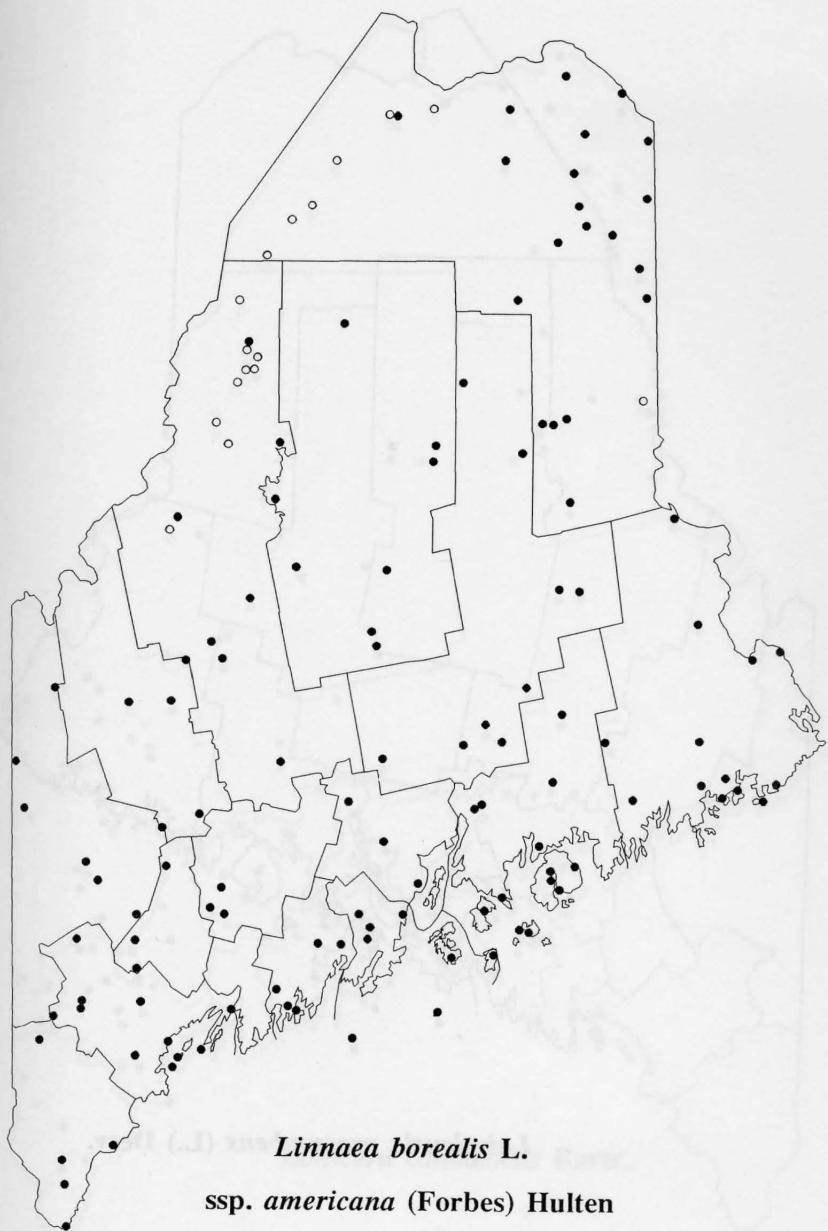


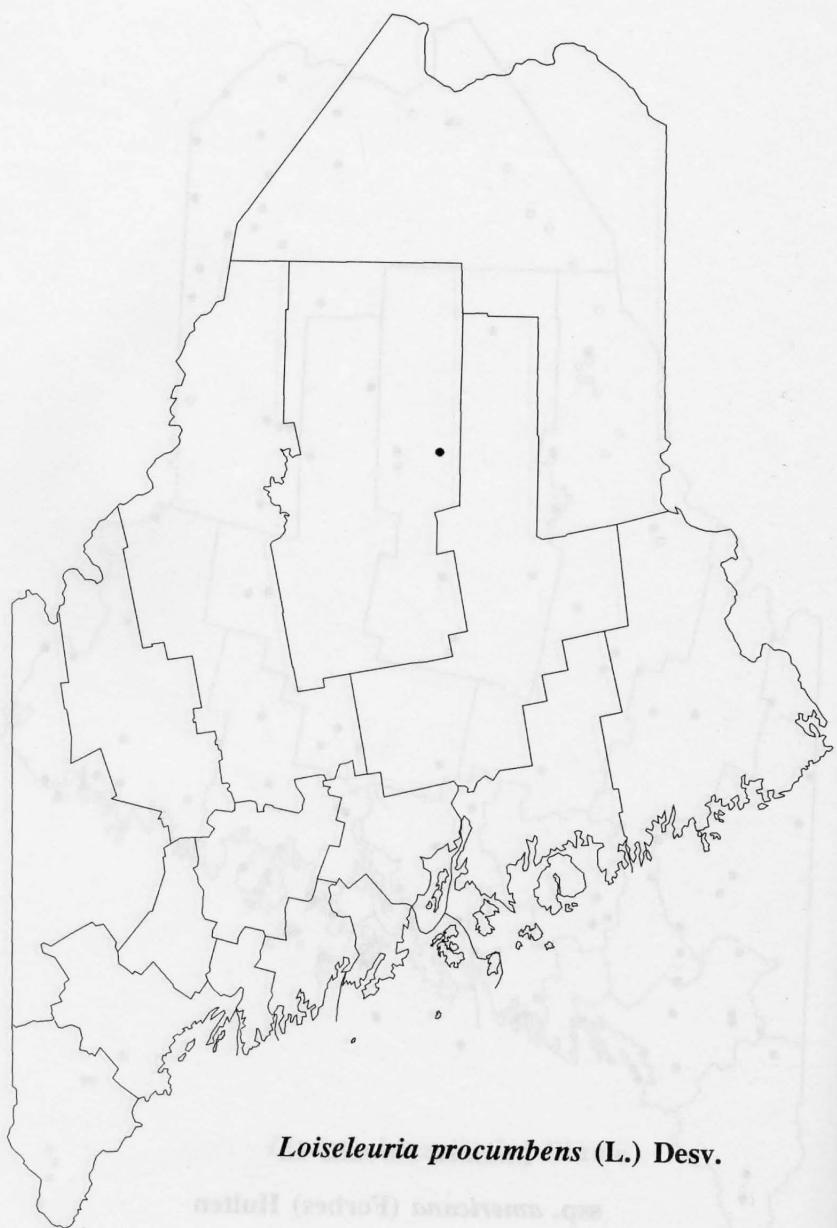


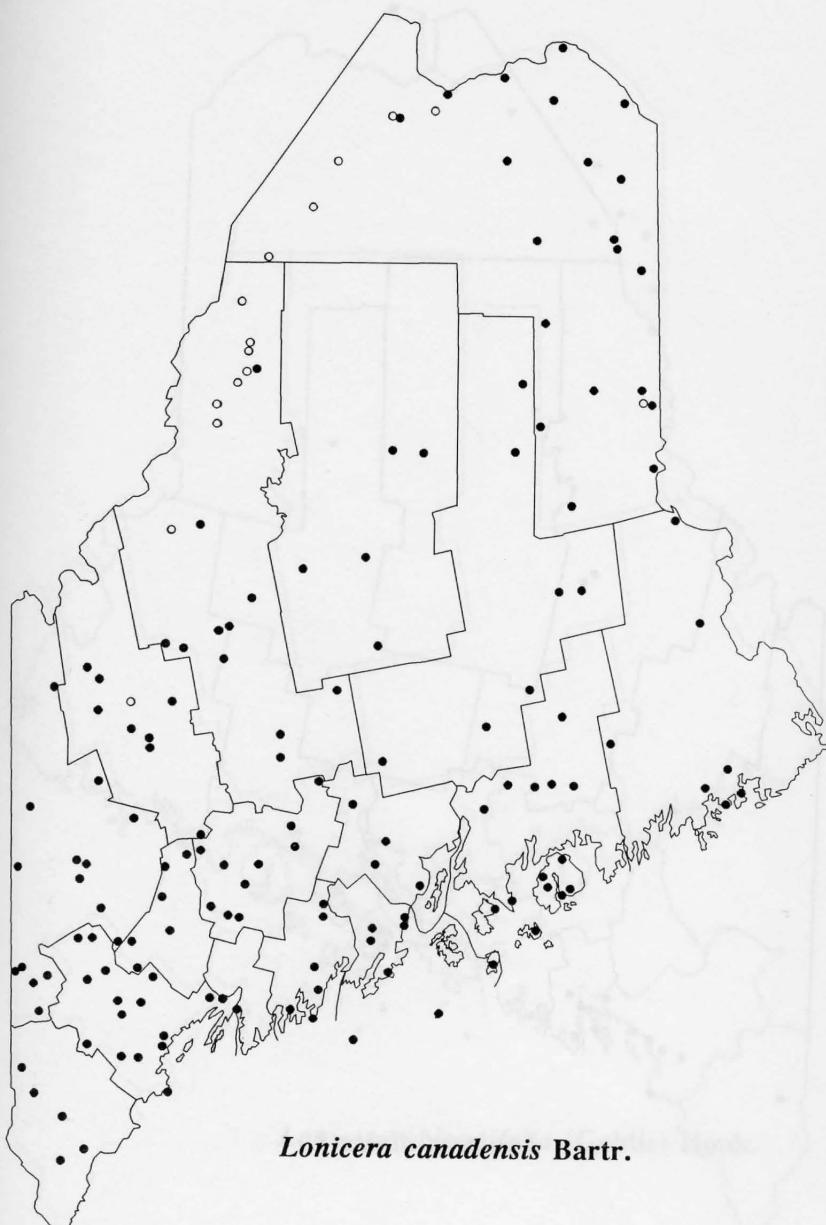
*Ledum groenlandicum* Oeder



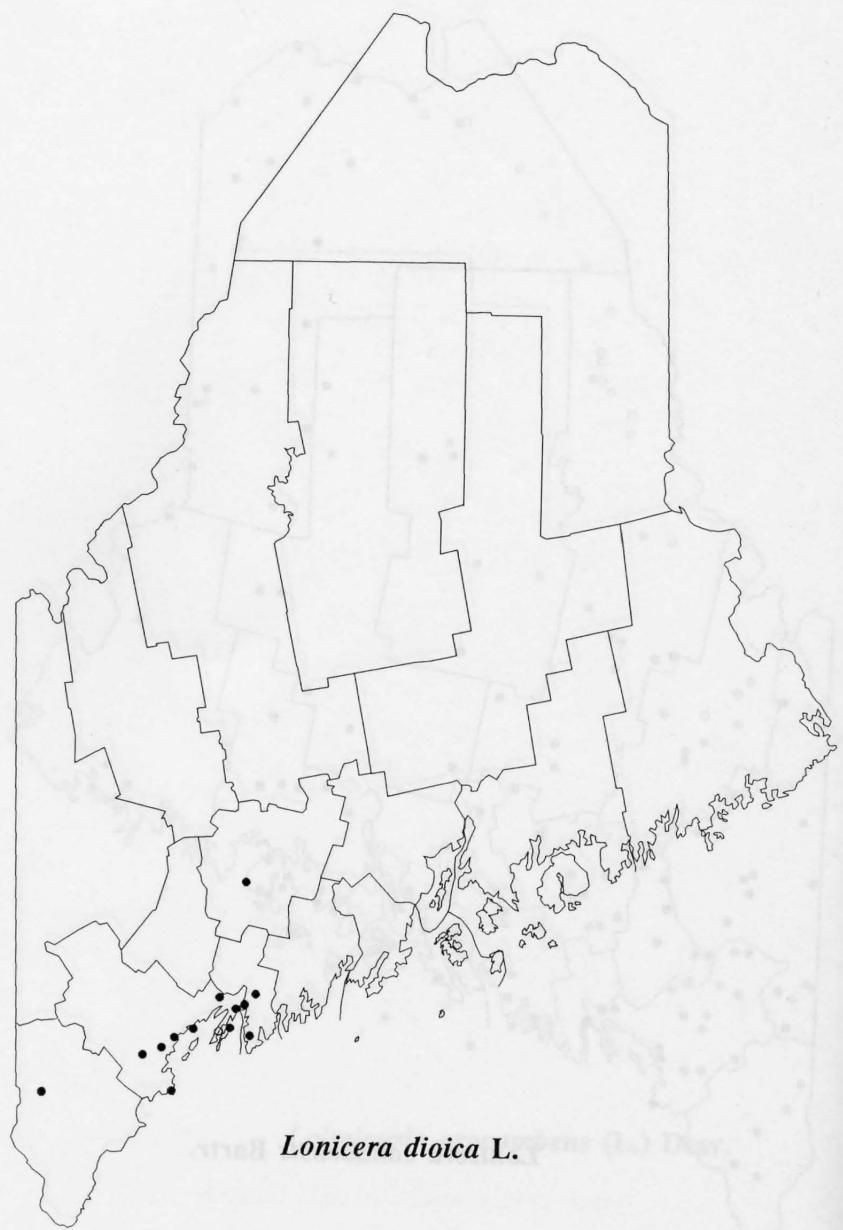
*Lindera benzoin* (L.) Blume

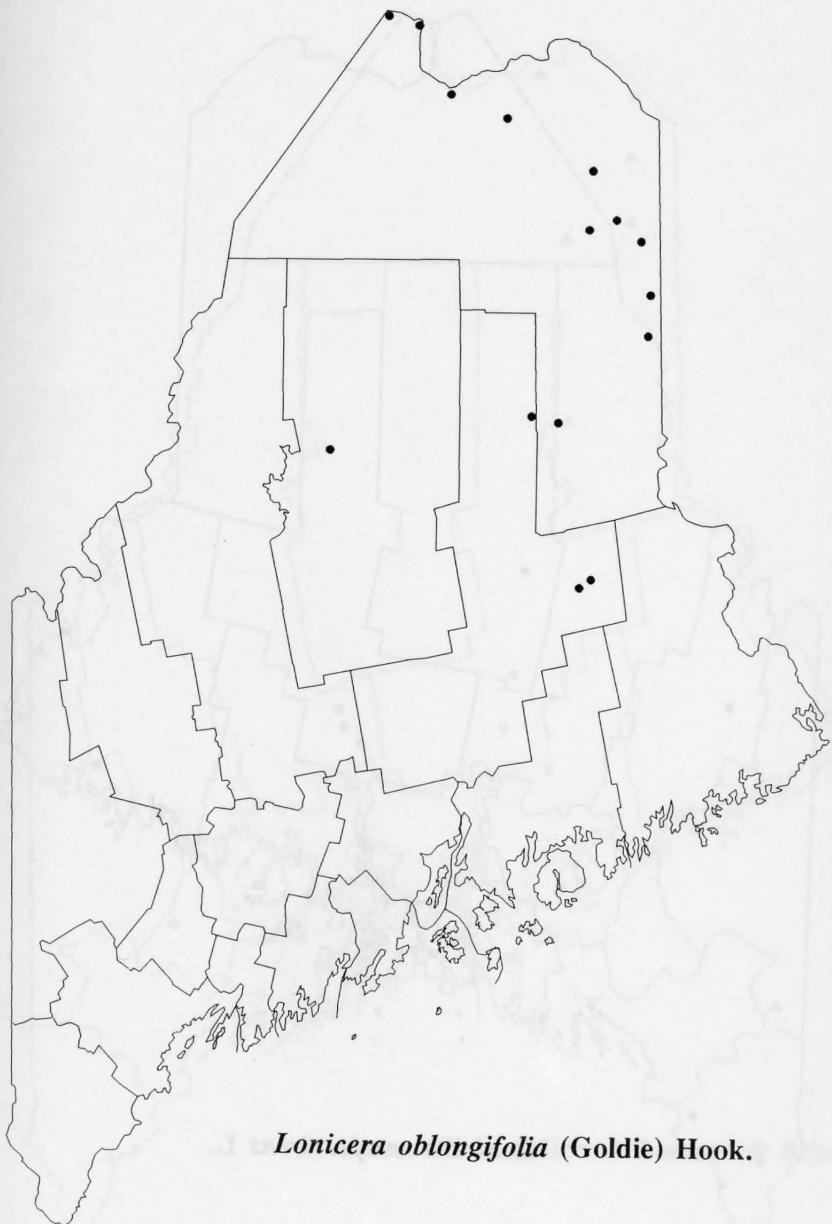




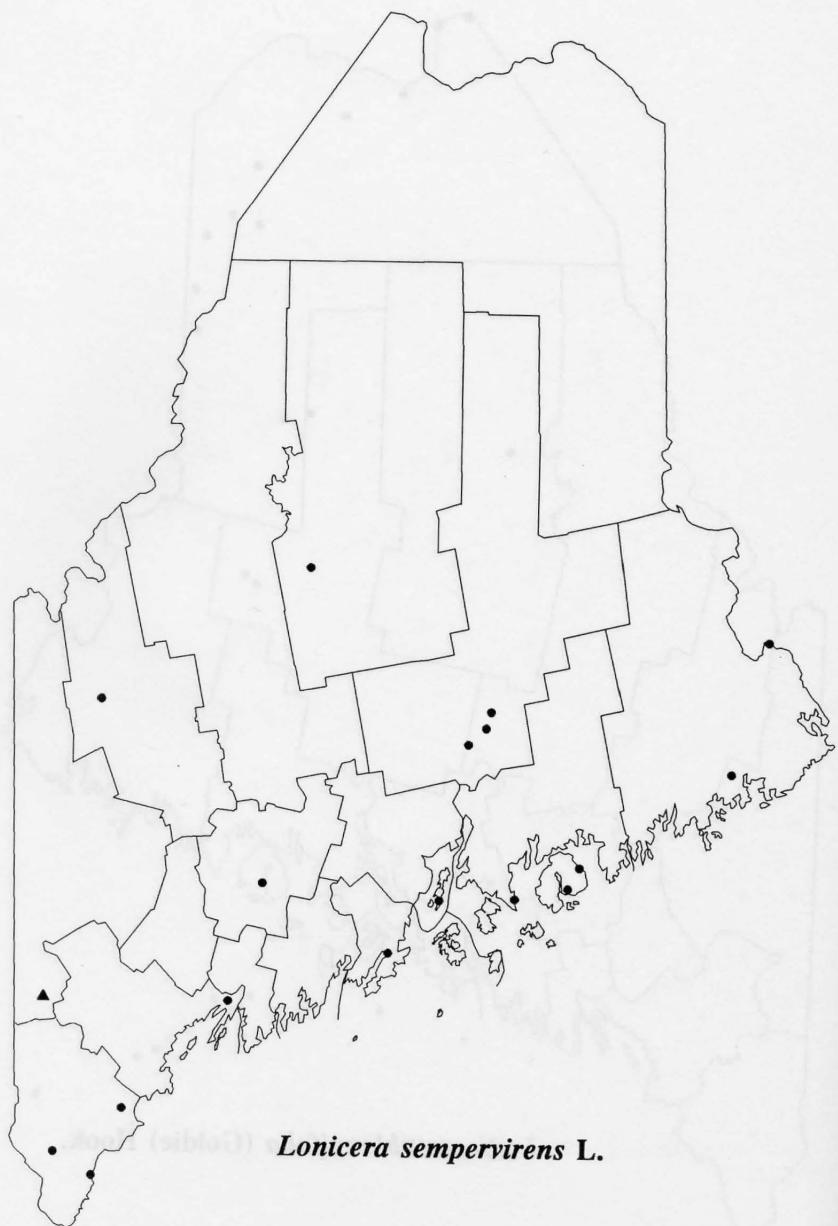


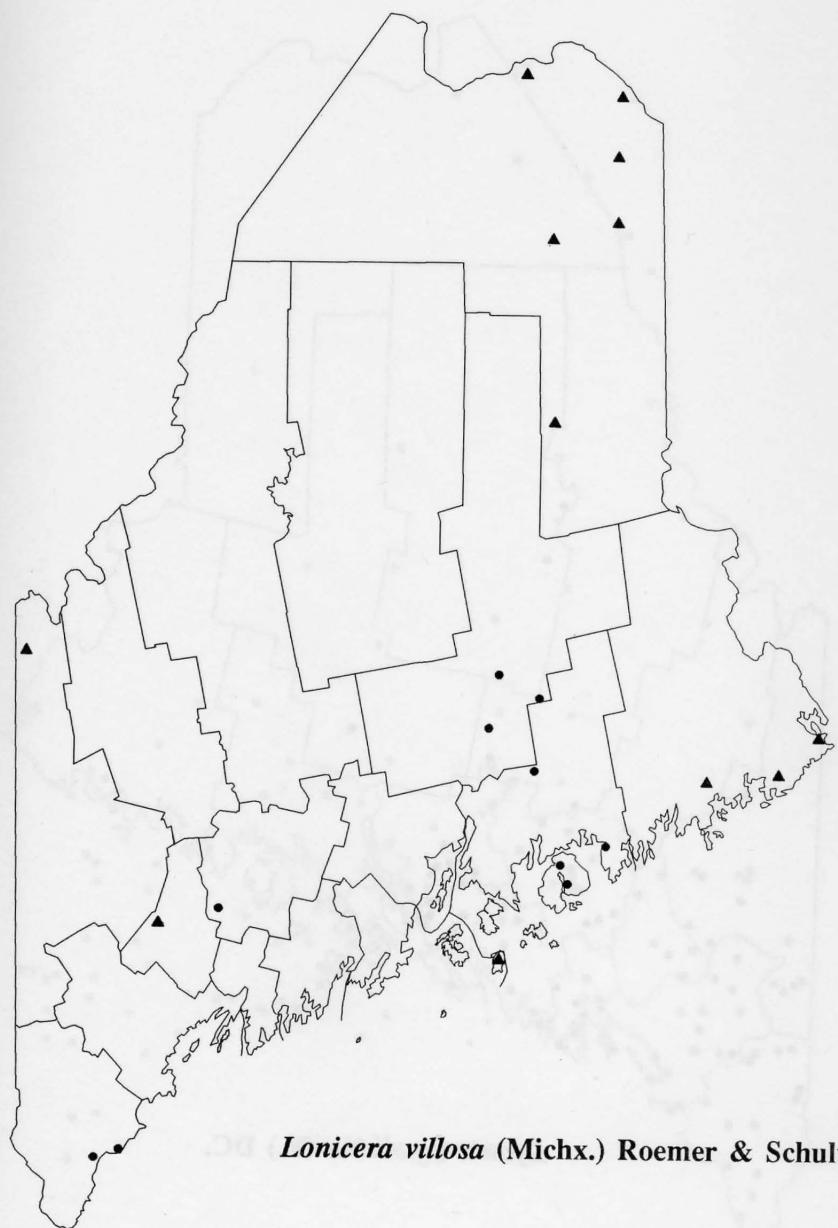
*Lonicera canadensis* Bartr.



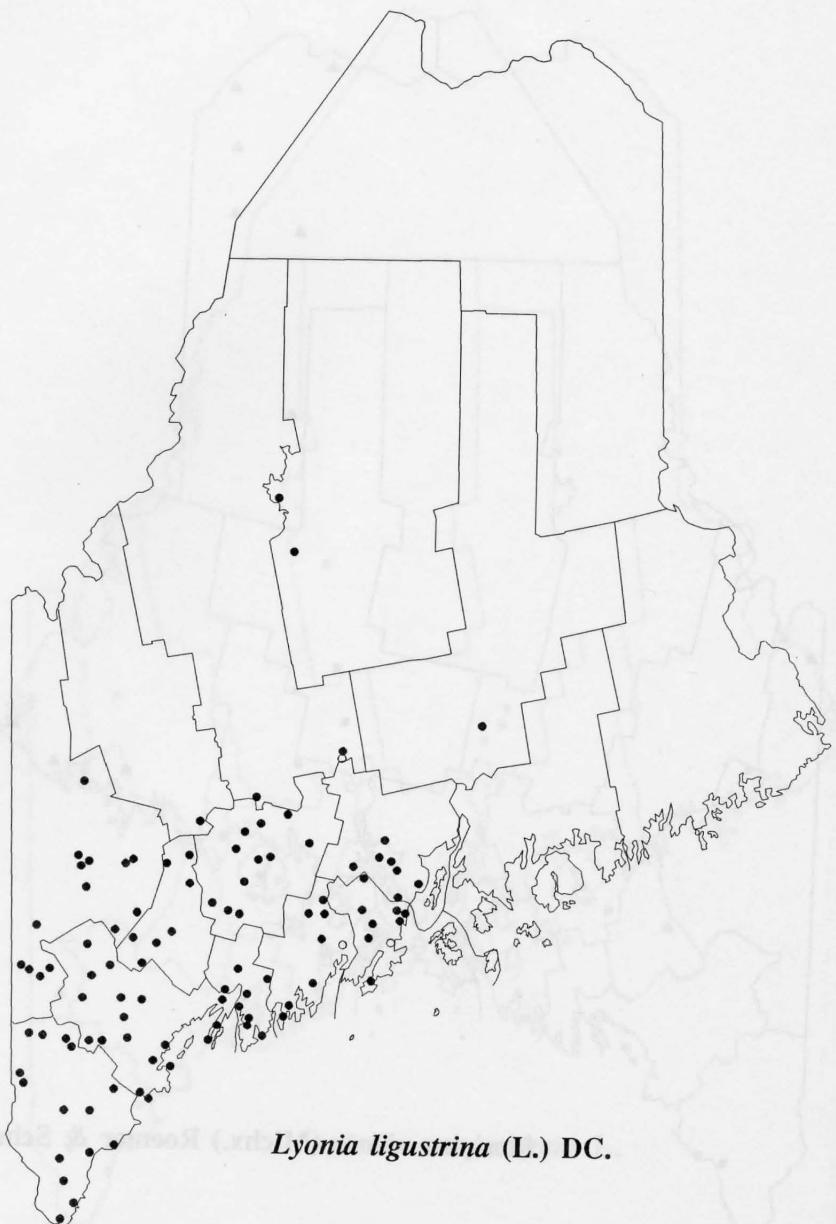


*Lonicera oblongifolia* (Goldie) Hook.

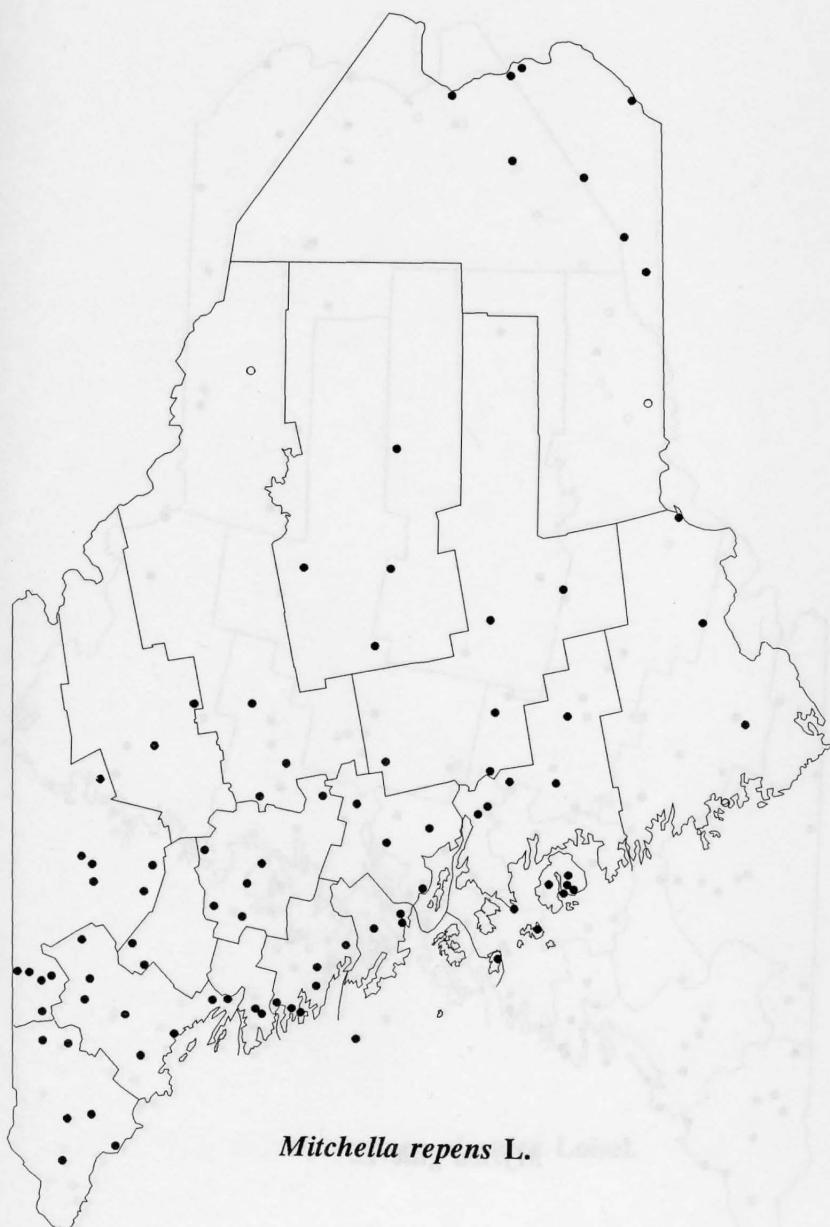


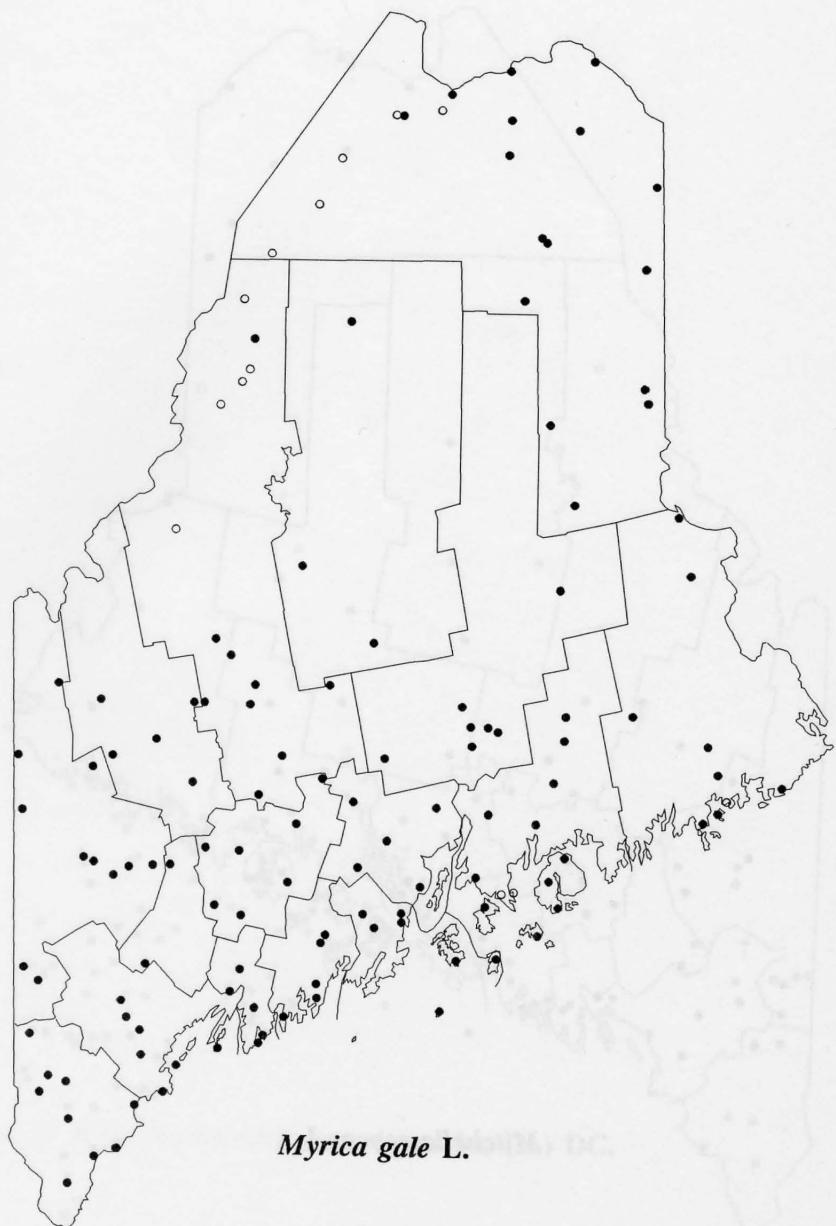


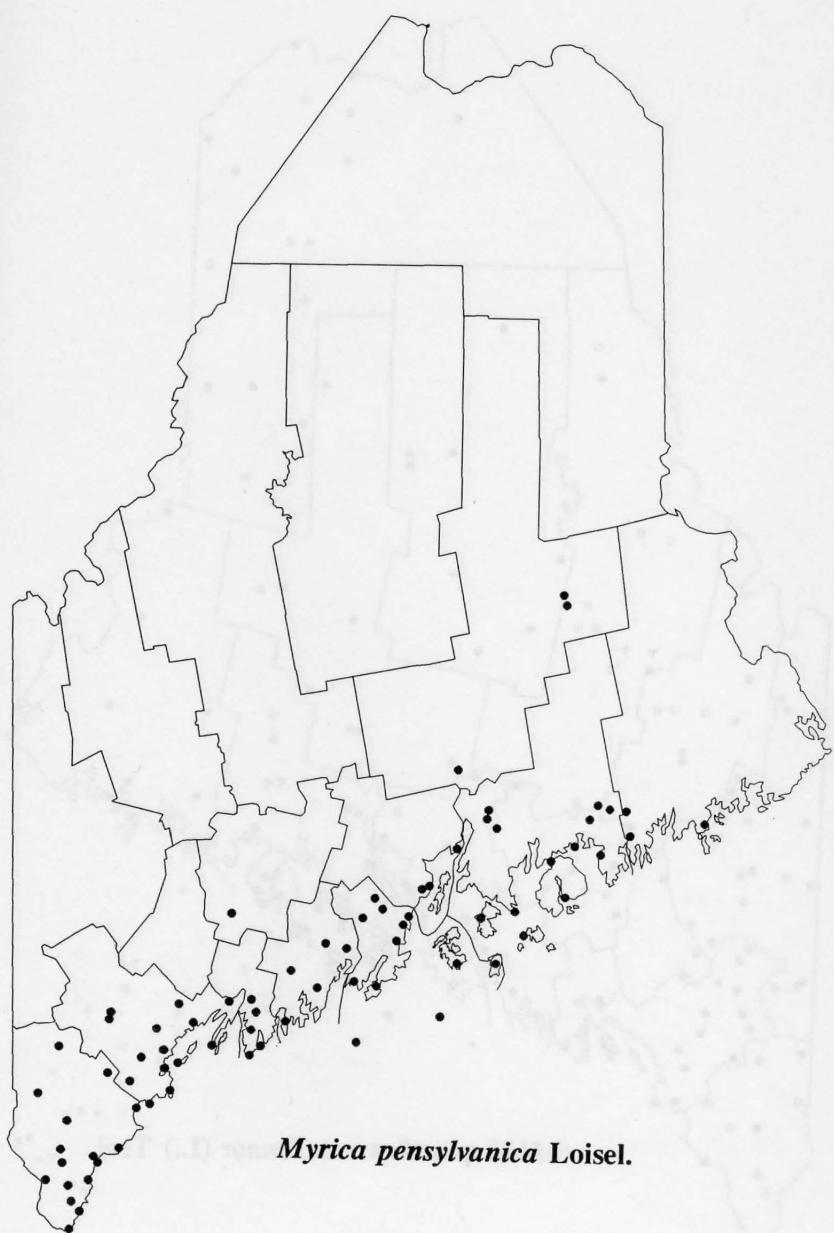
*Lonicera villosa* (Michx.) Roemer & Schultes



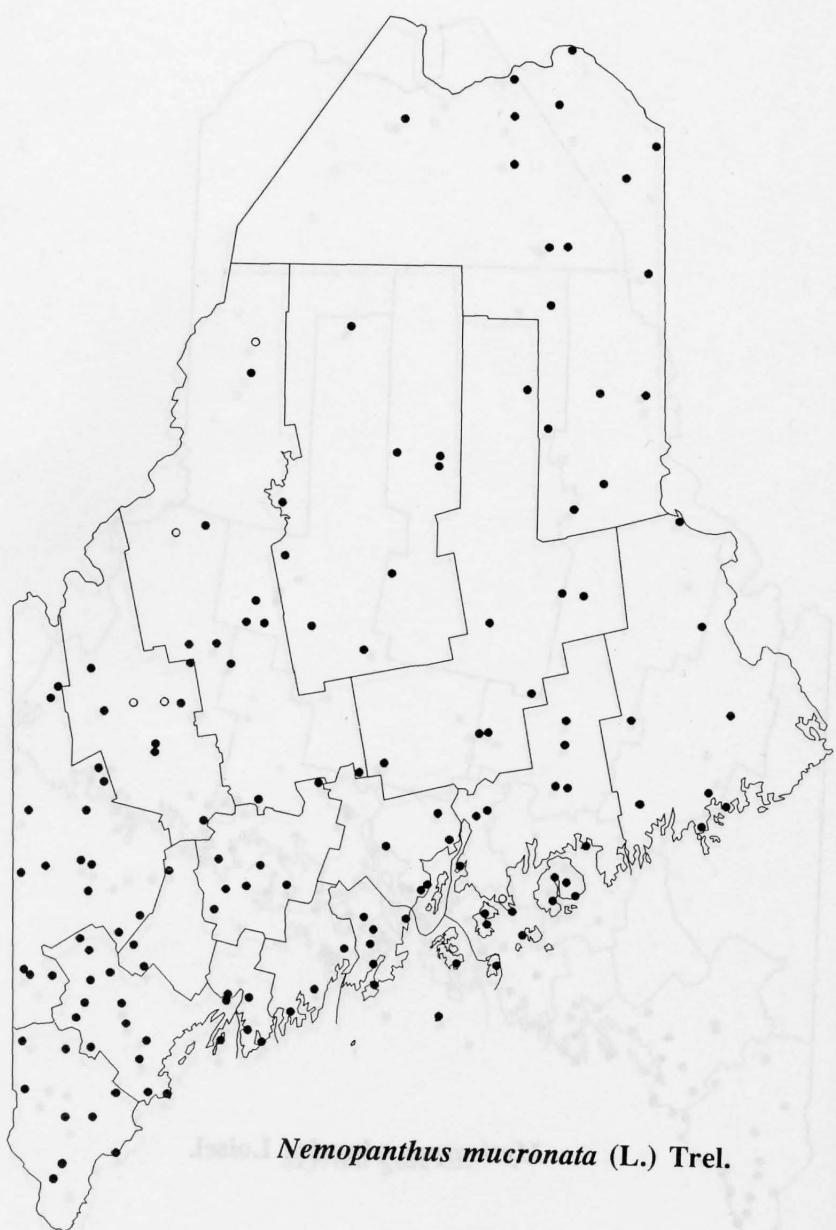
*Lyonia ligustrina* (L.) DC.



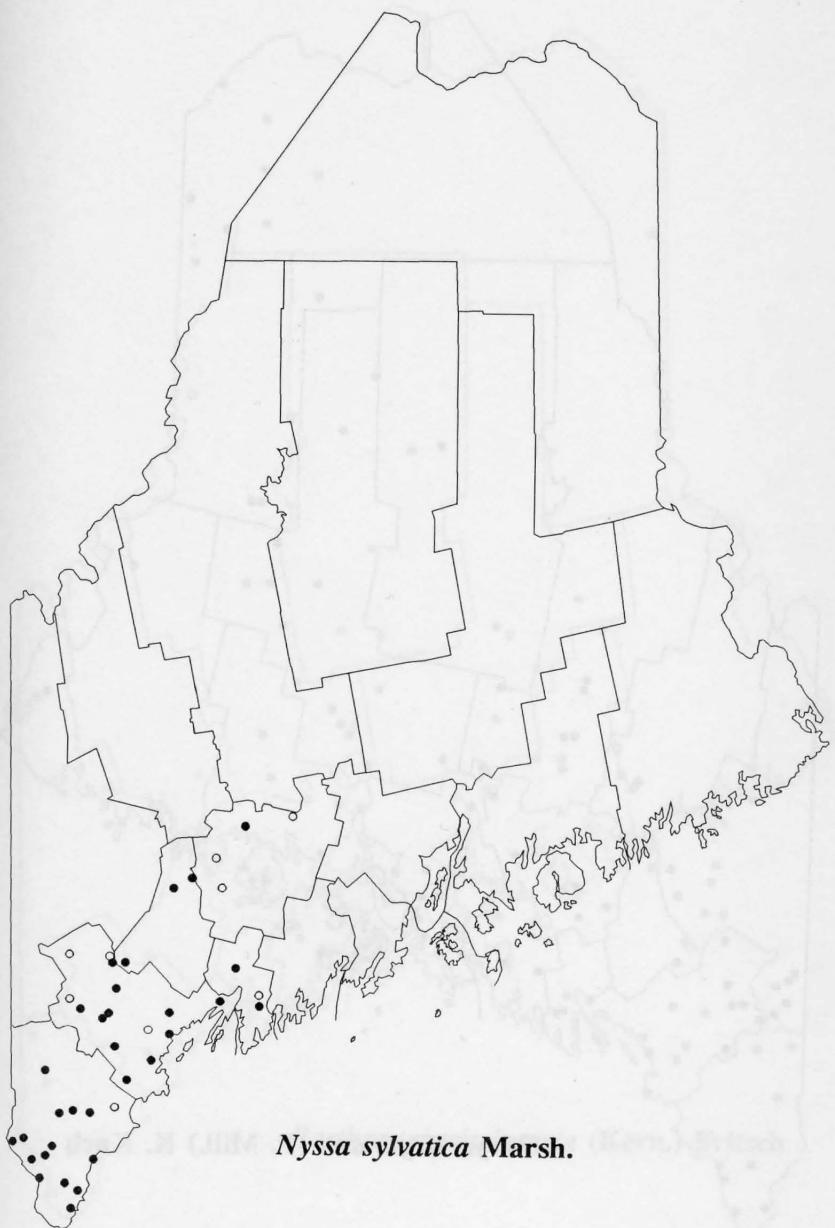


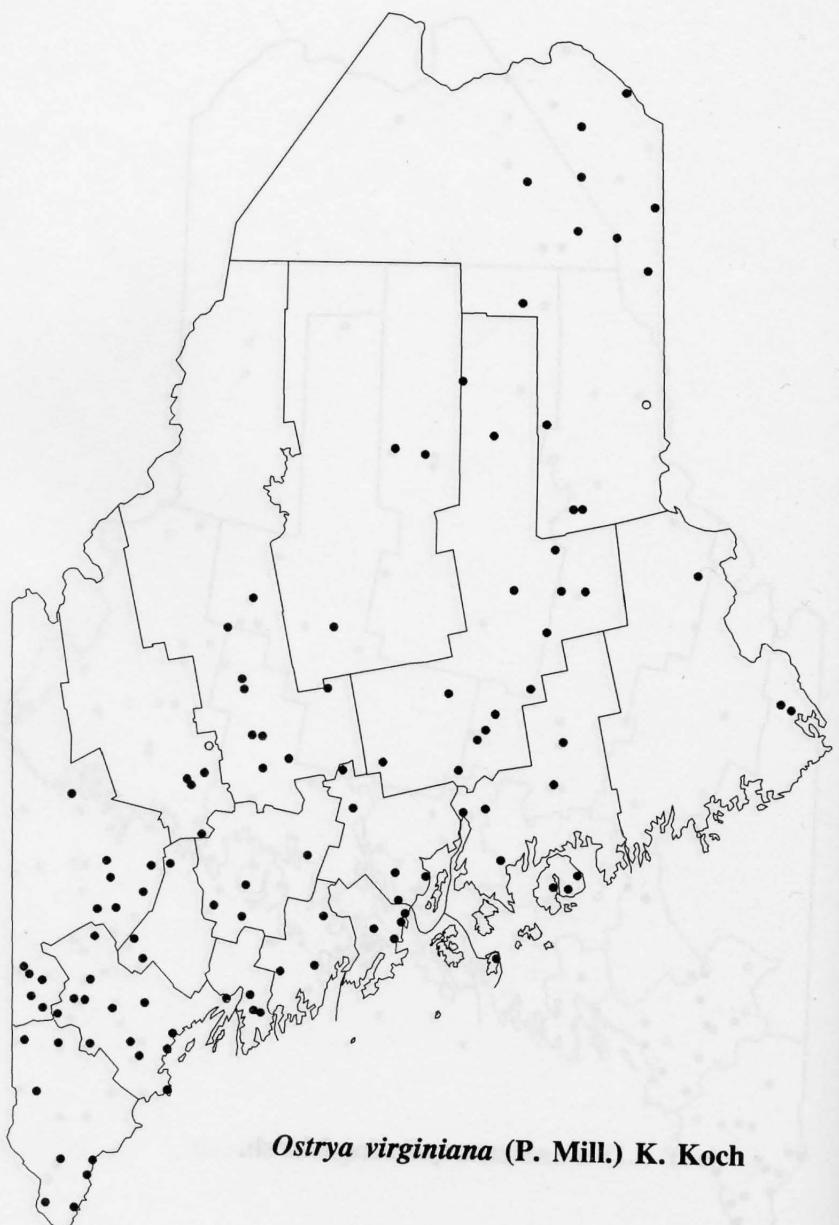


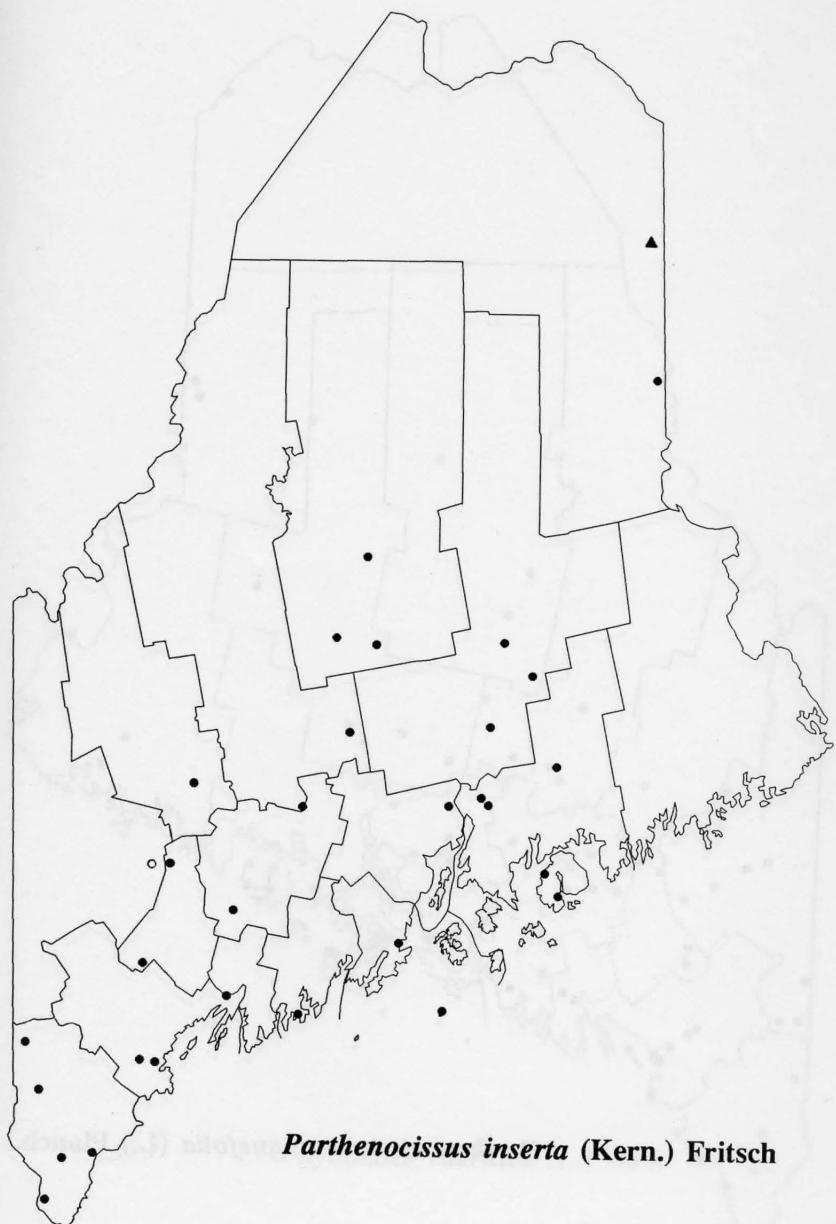
*Myrica pensylvanica* Loisel.

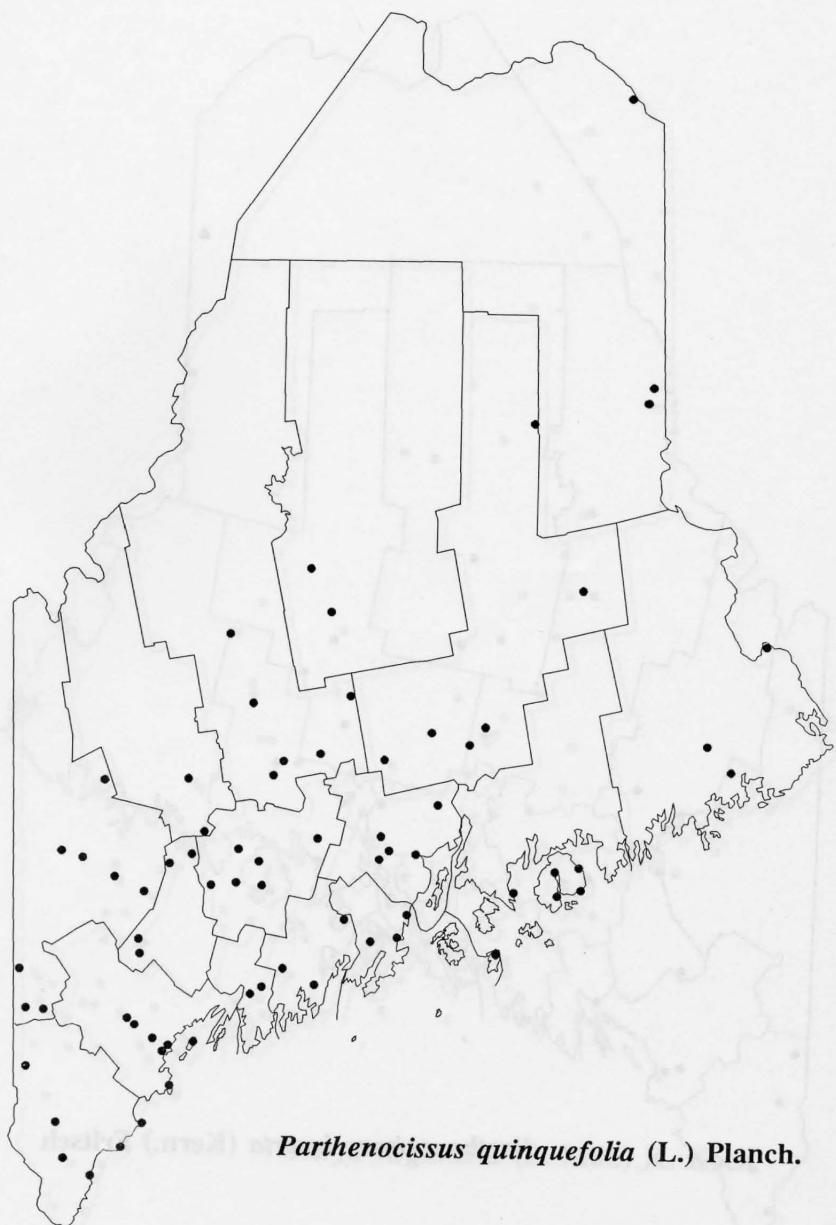


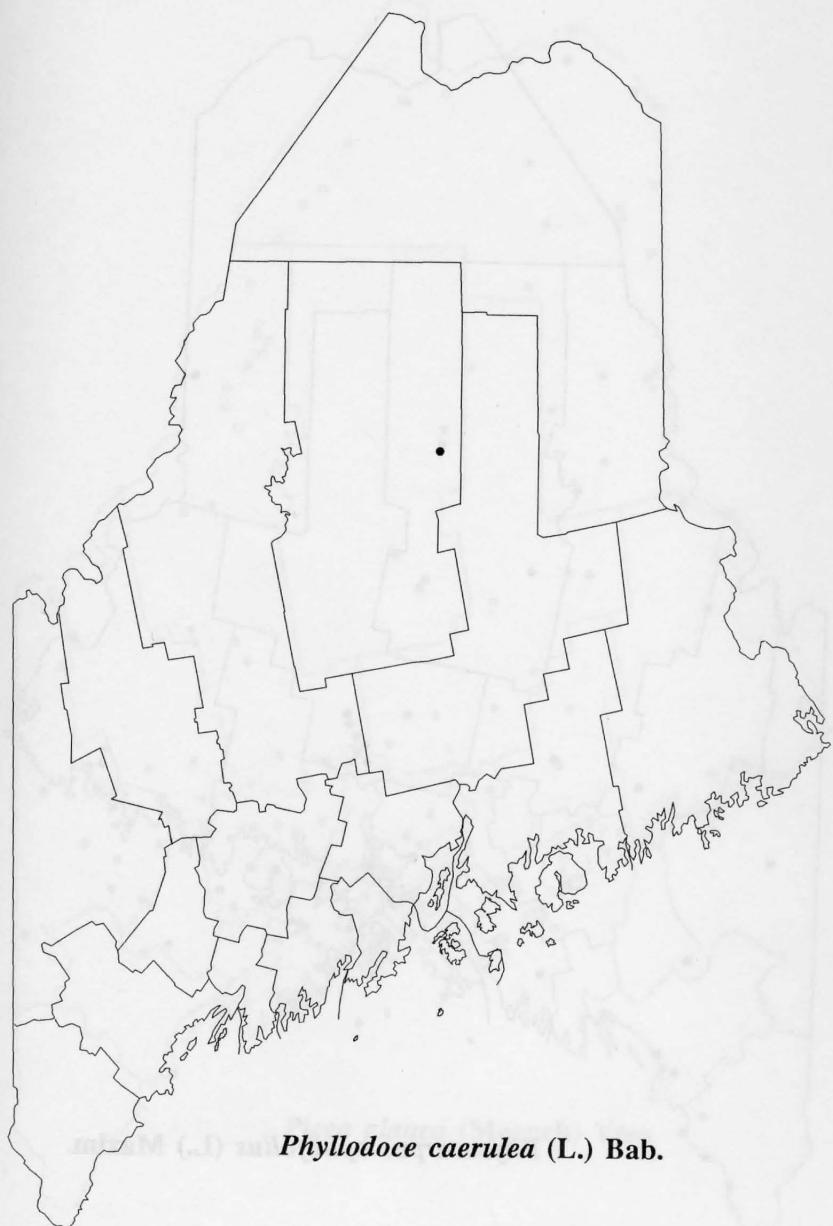
*Nemopanthus mucronata* (L.) Trel.



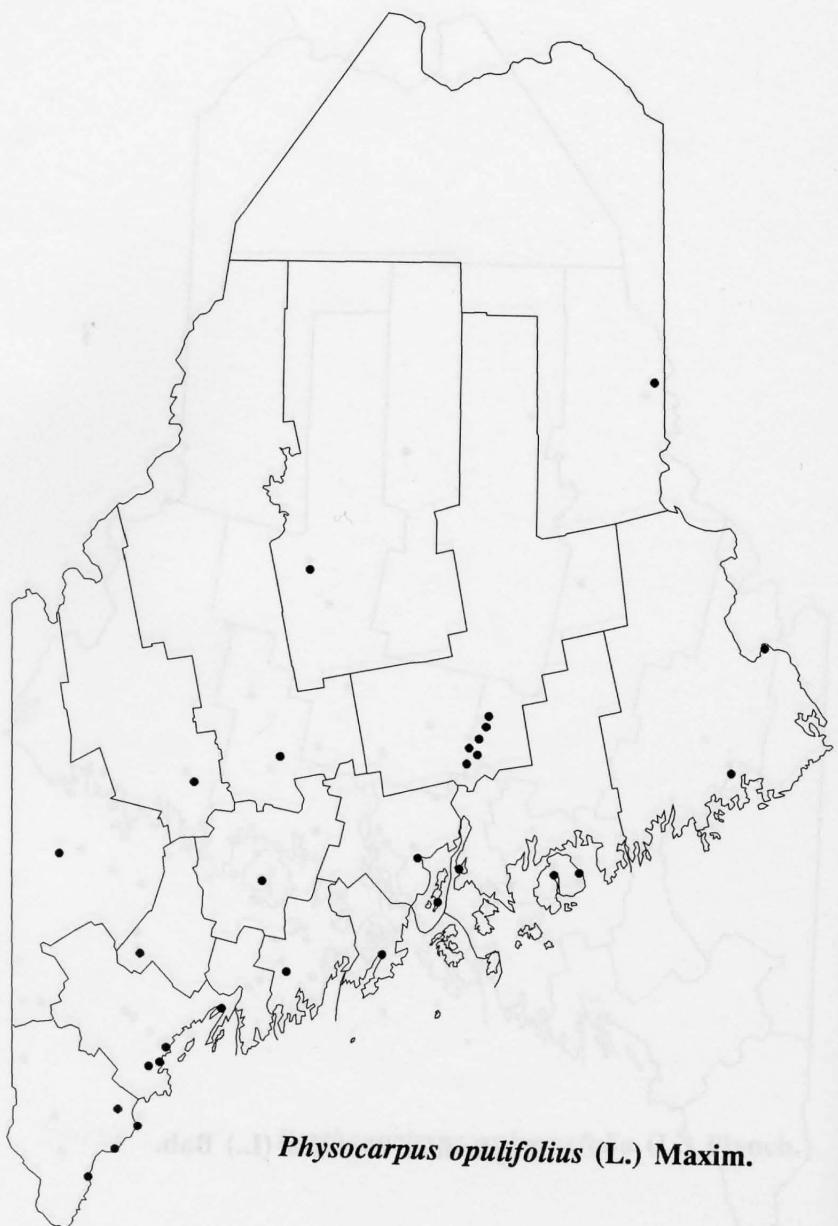




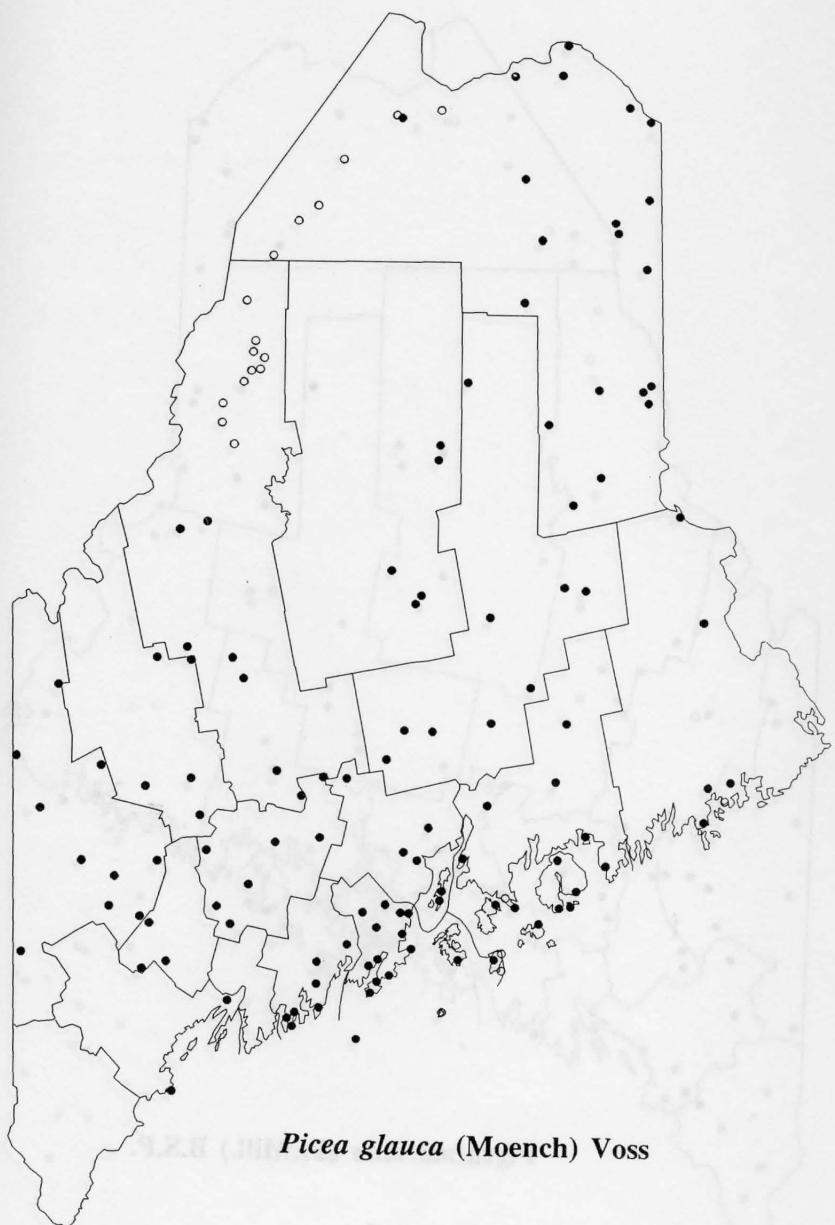




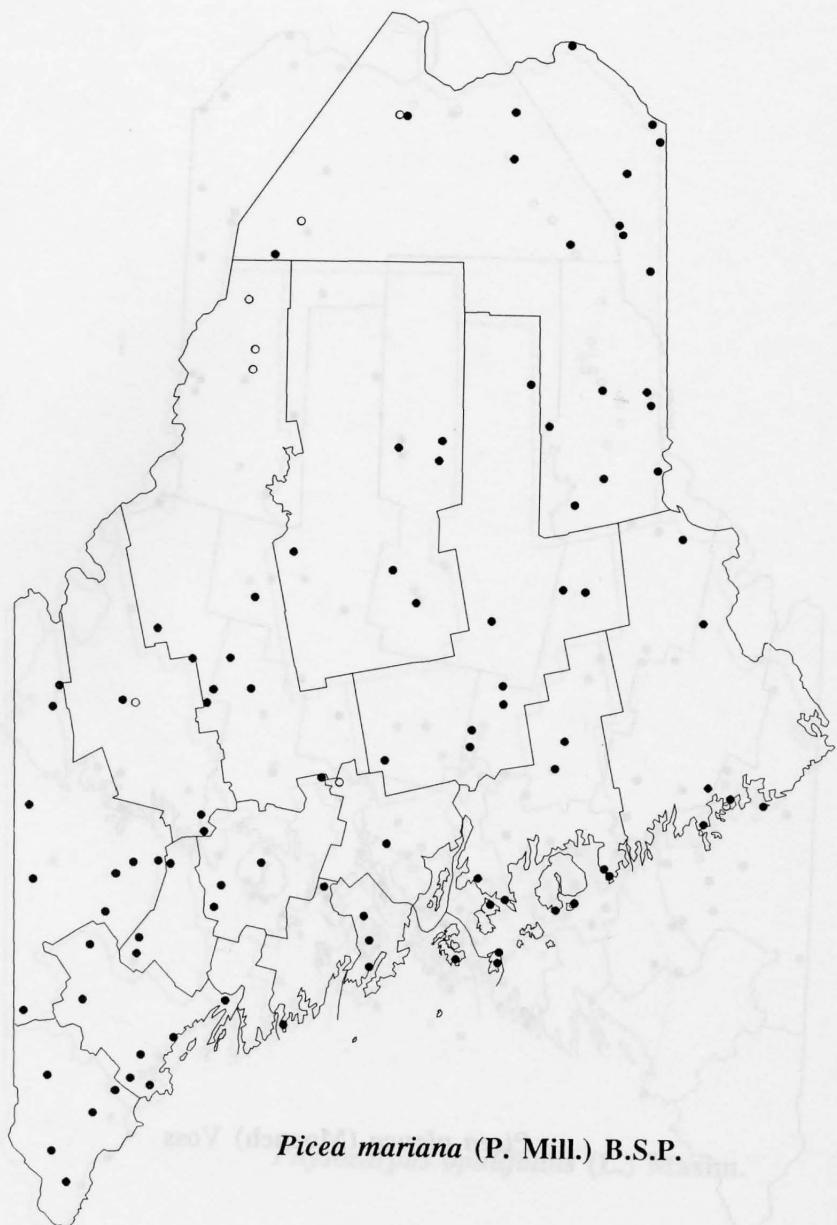
*Phyllodoce caerulea* (L.) Bab.

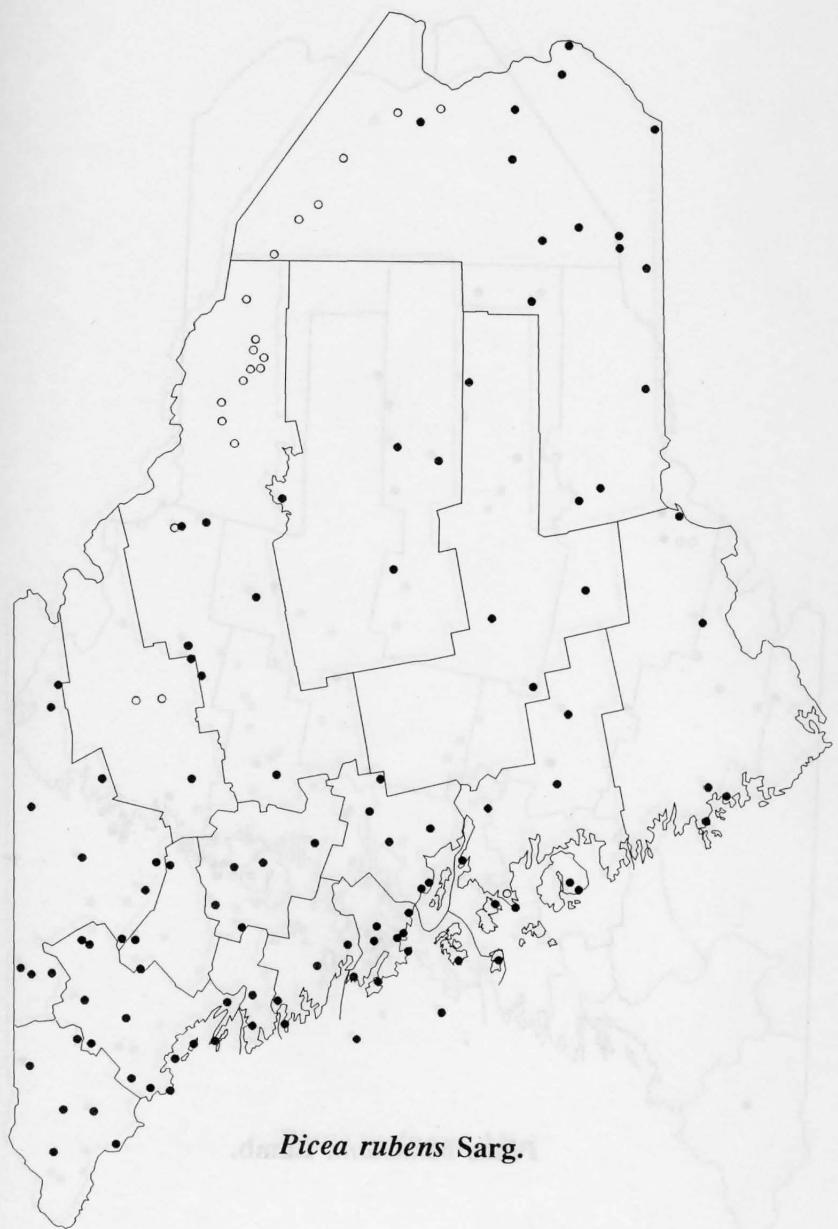


*Physocarpus opulifolius* (L.) Maxim.

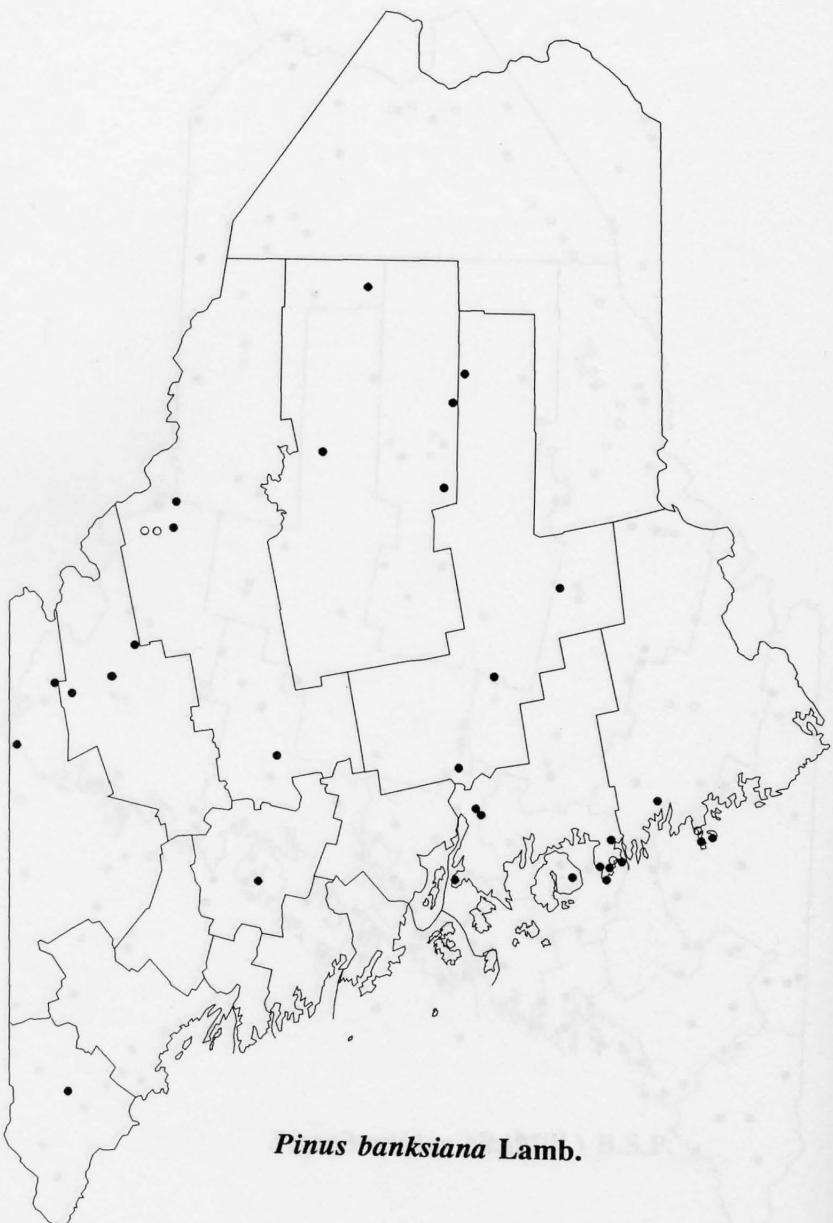


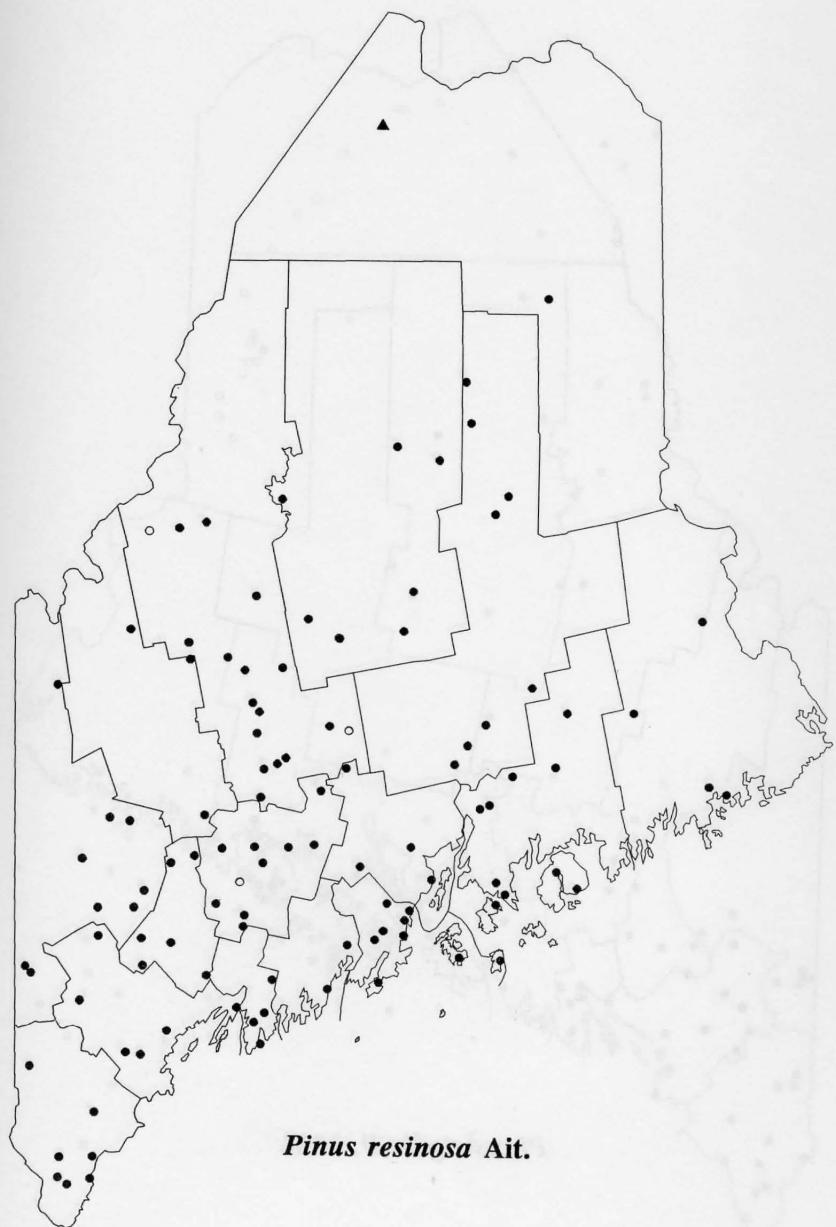
*Picea glauca* (Moench) Voss



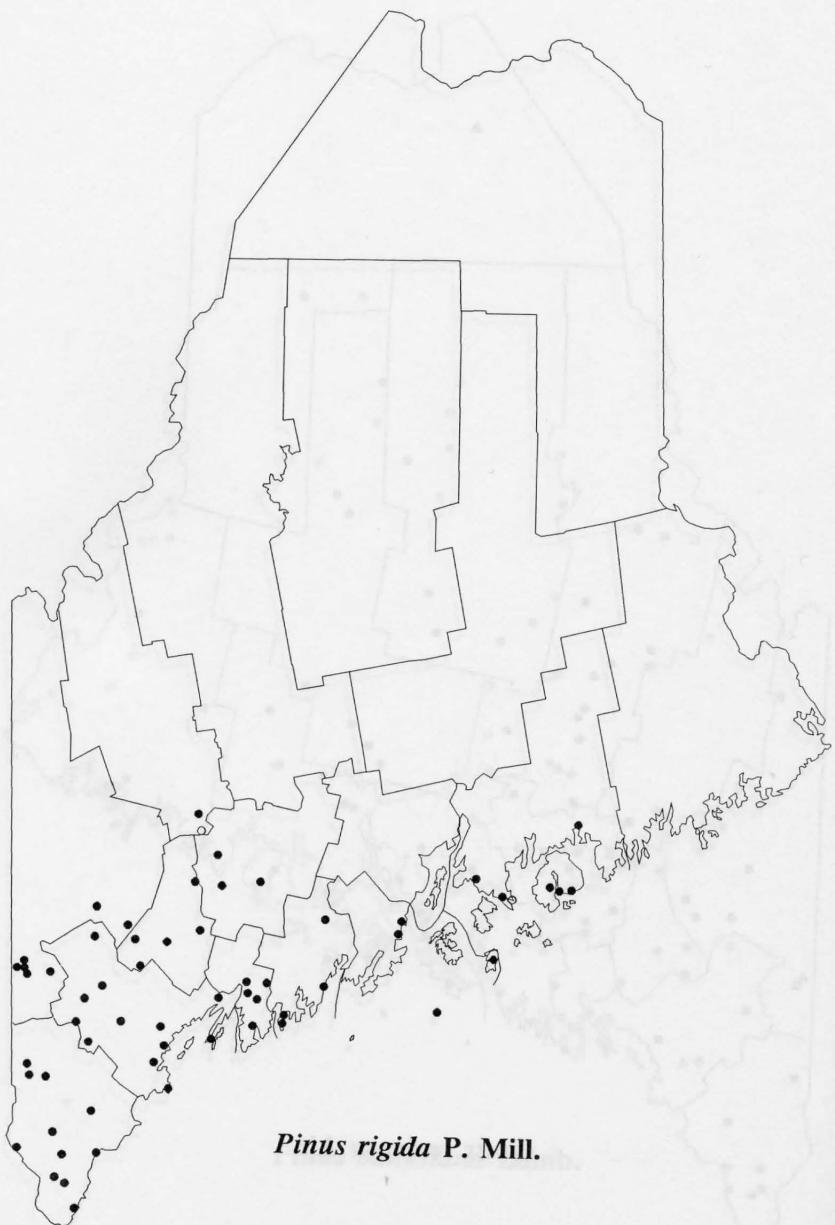


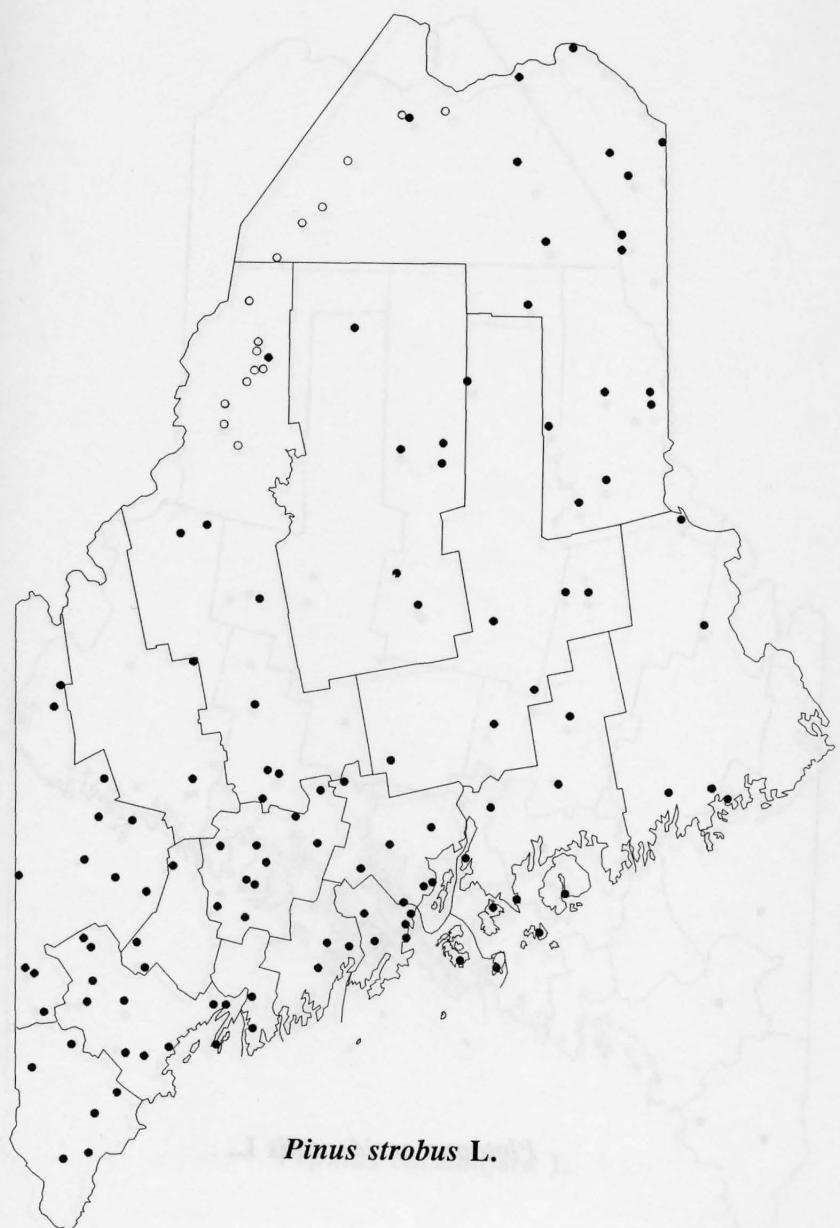
*Picea rubens* Sarg.





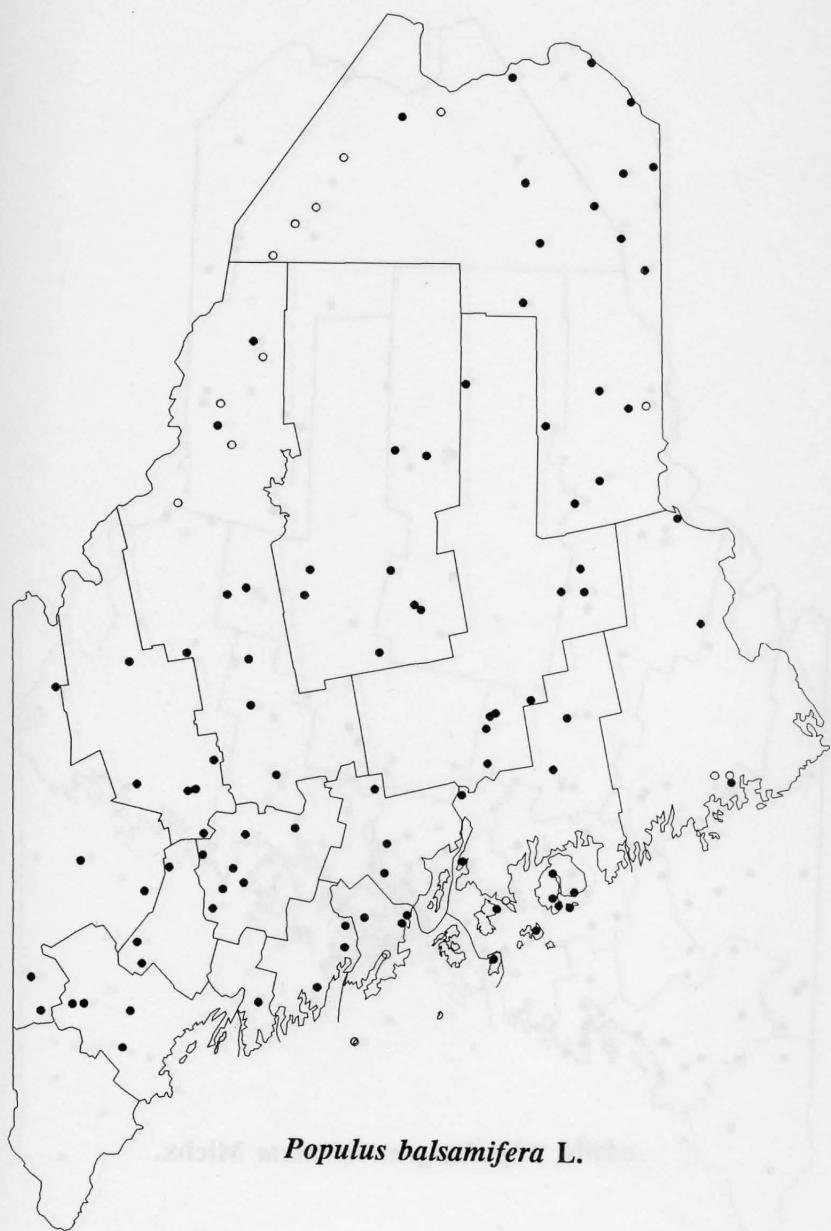
*Pinus resinosa* Ait.



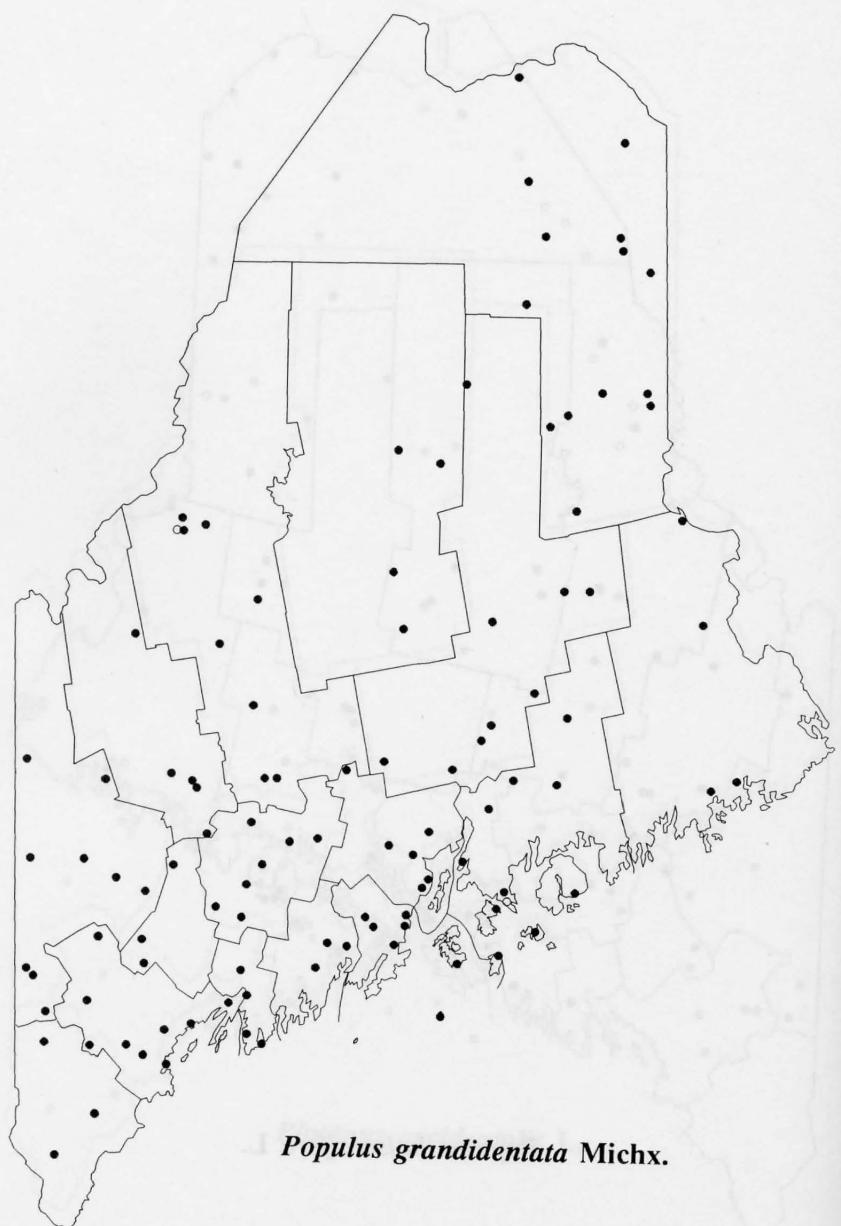


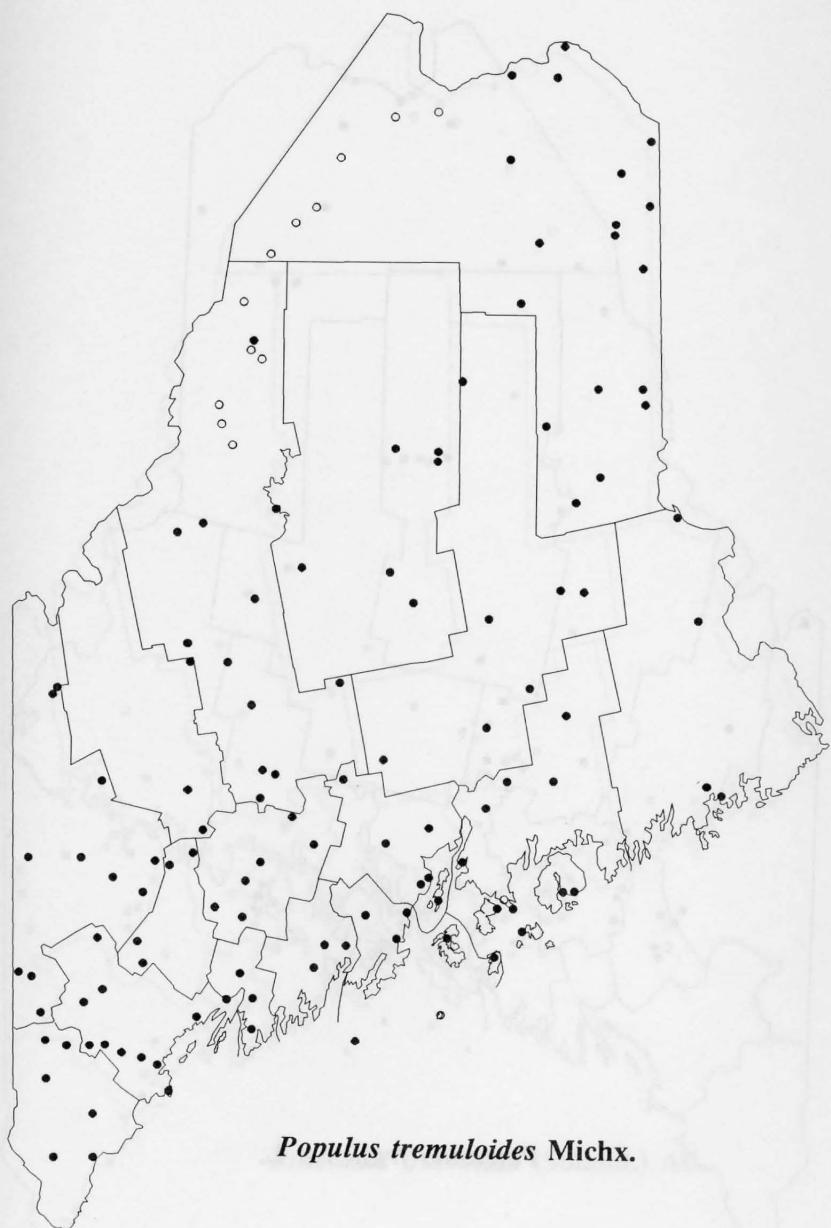
*Pinus strobus* L.



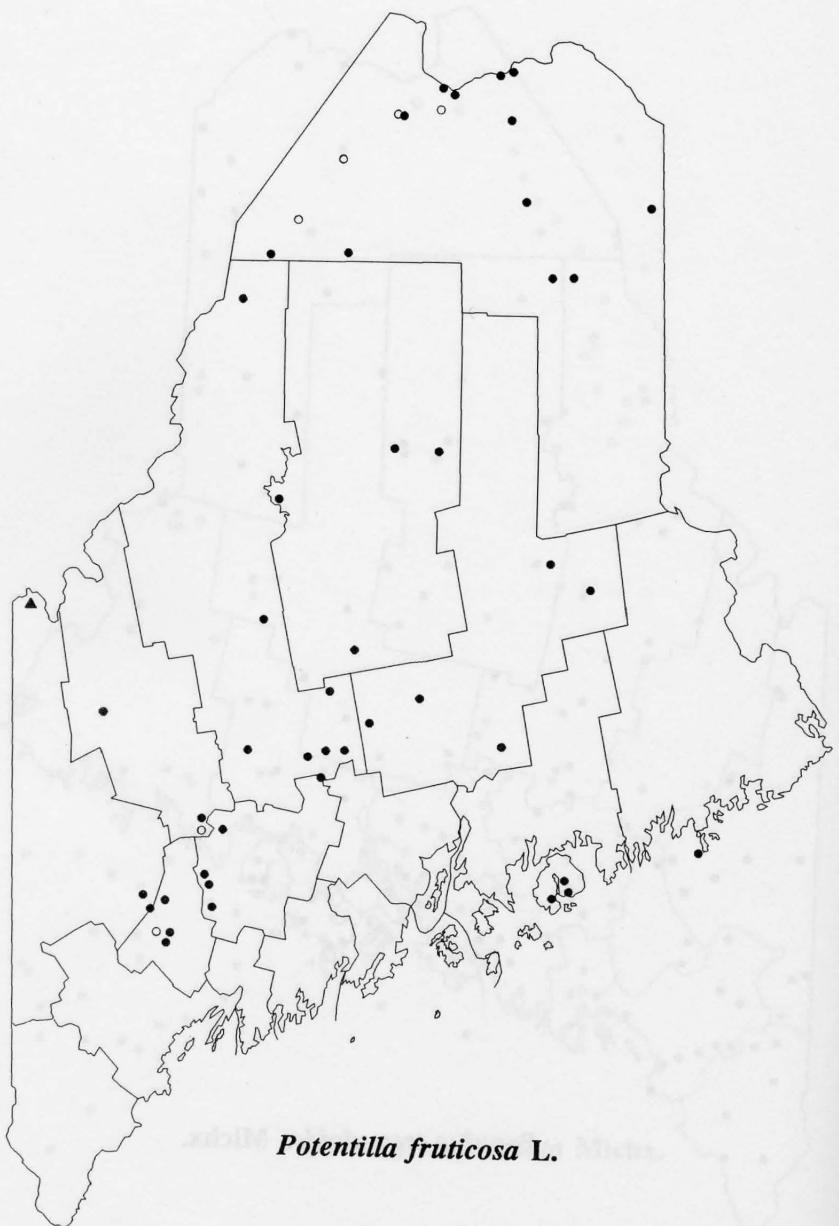


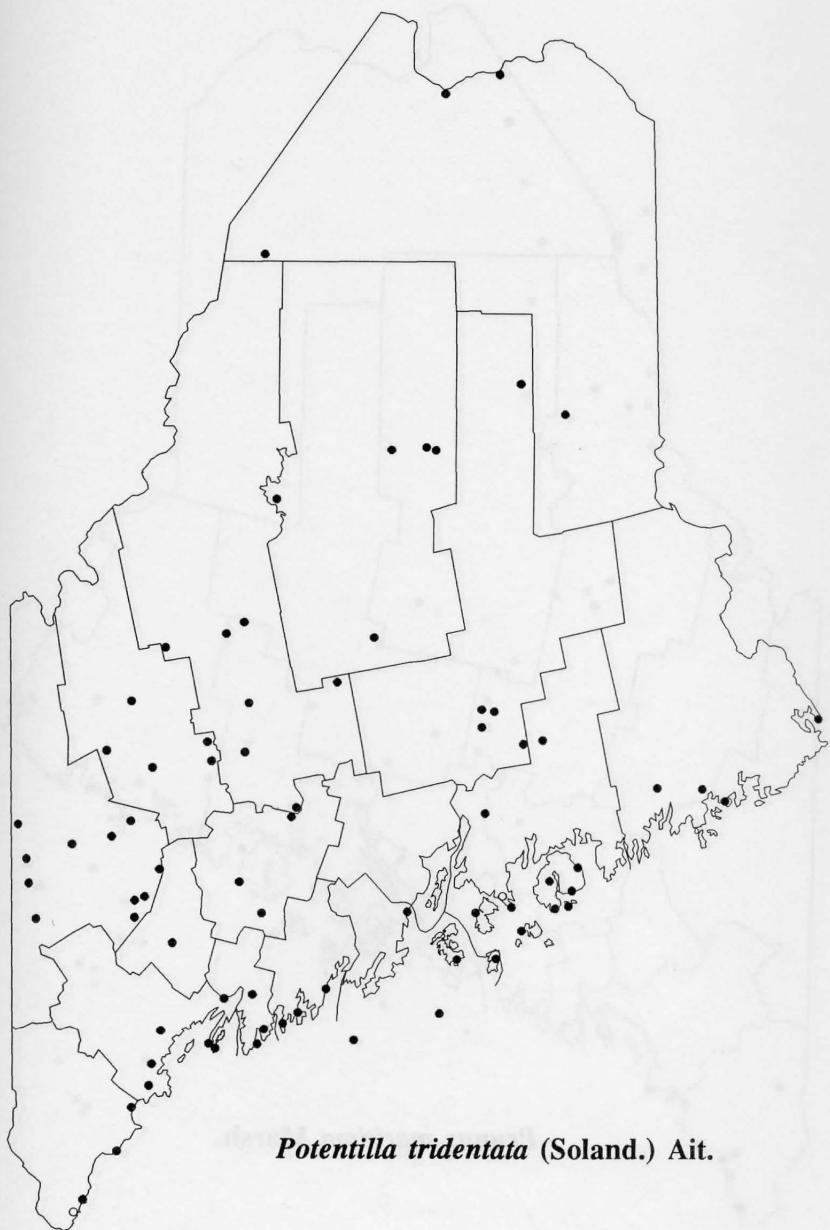
*Populus balsamifera* L.



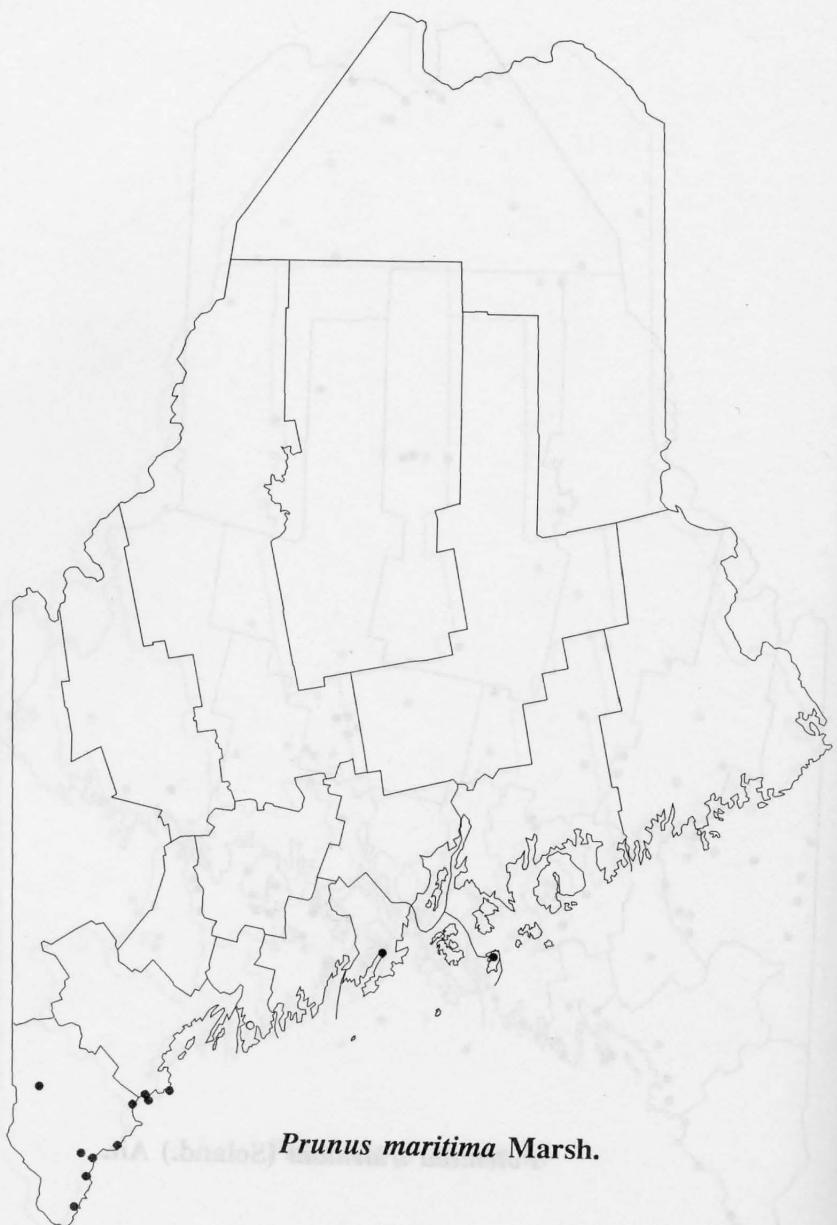


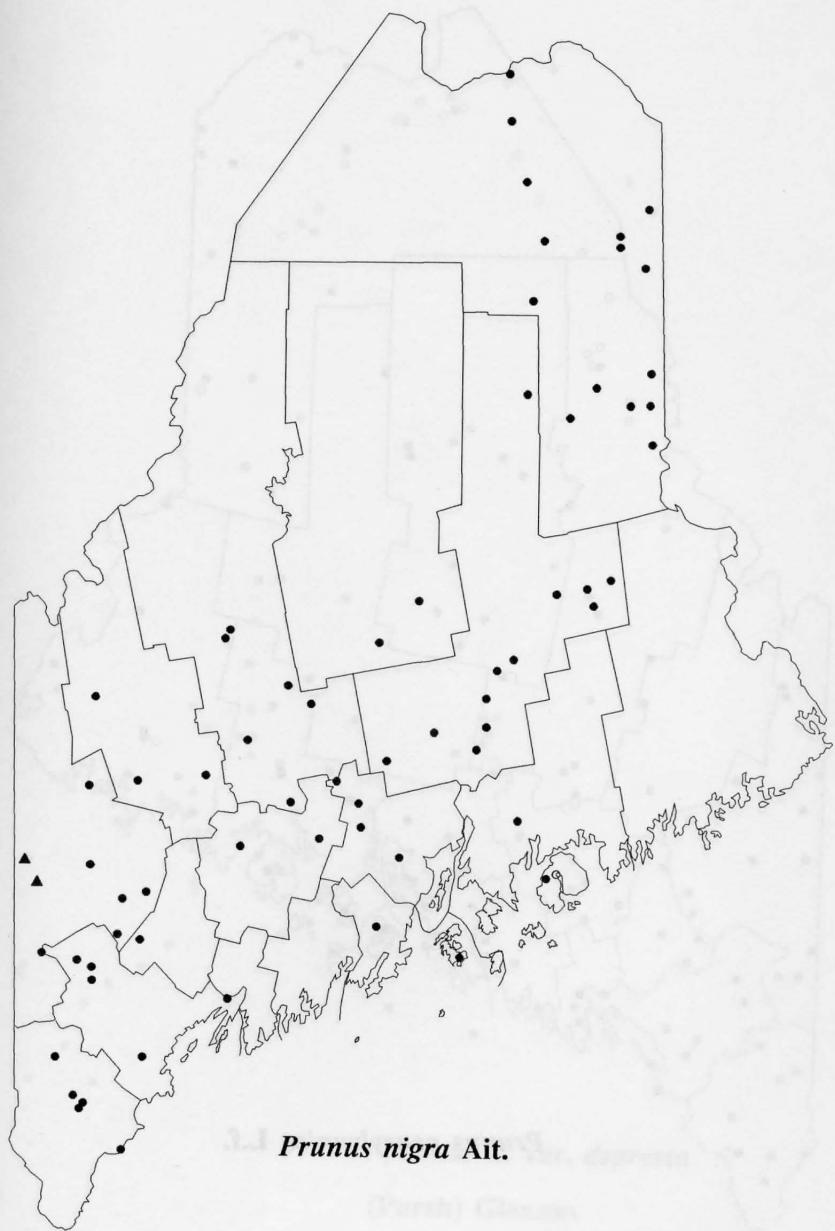
*Populus tremuloides* Michx.



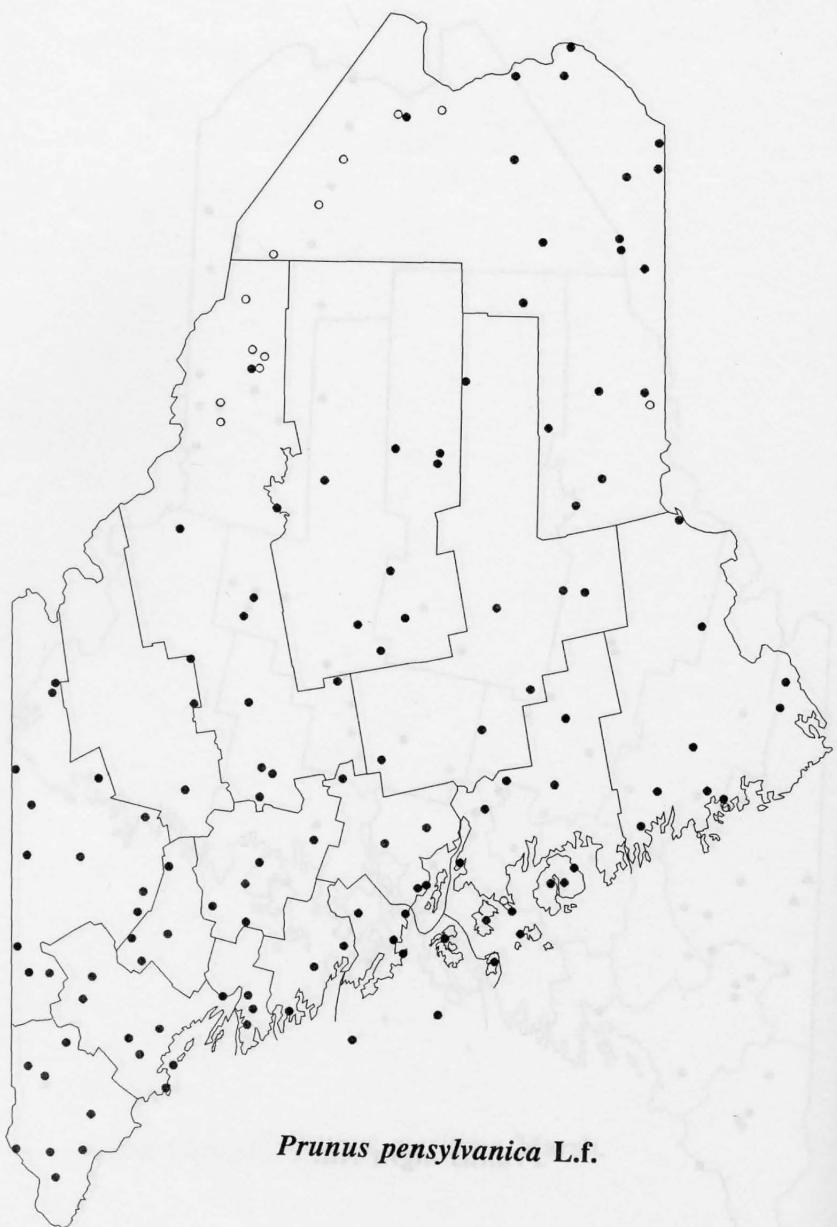


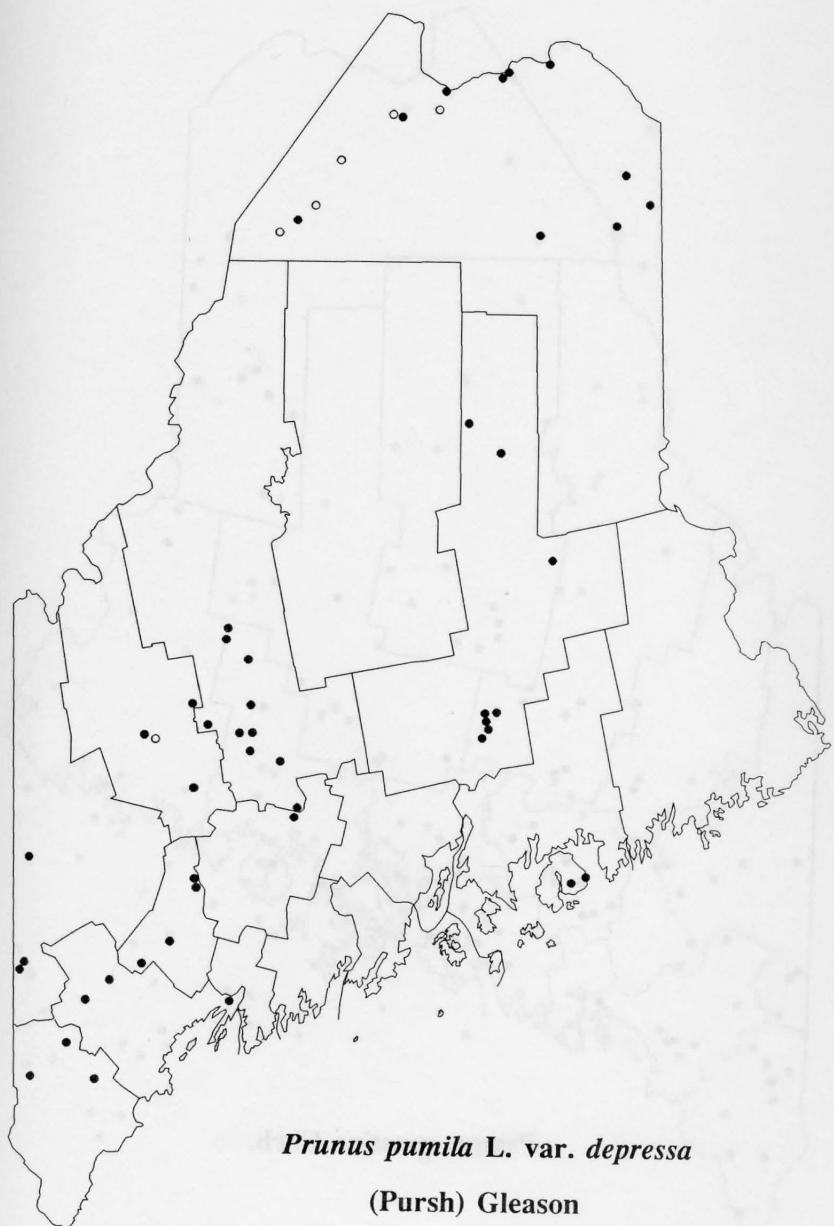
*Potentilla tridentata* (Soland.) Ait.

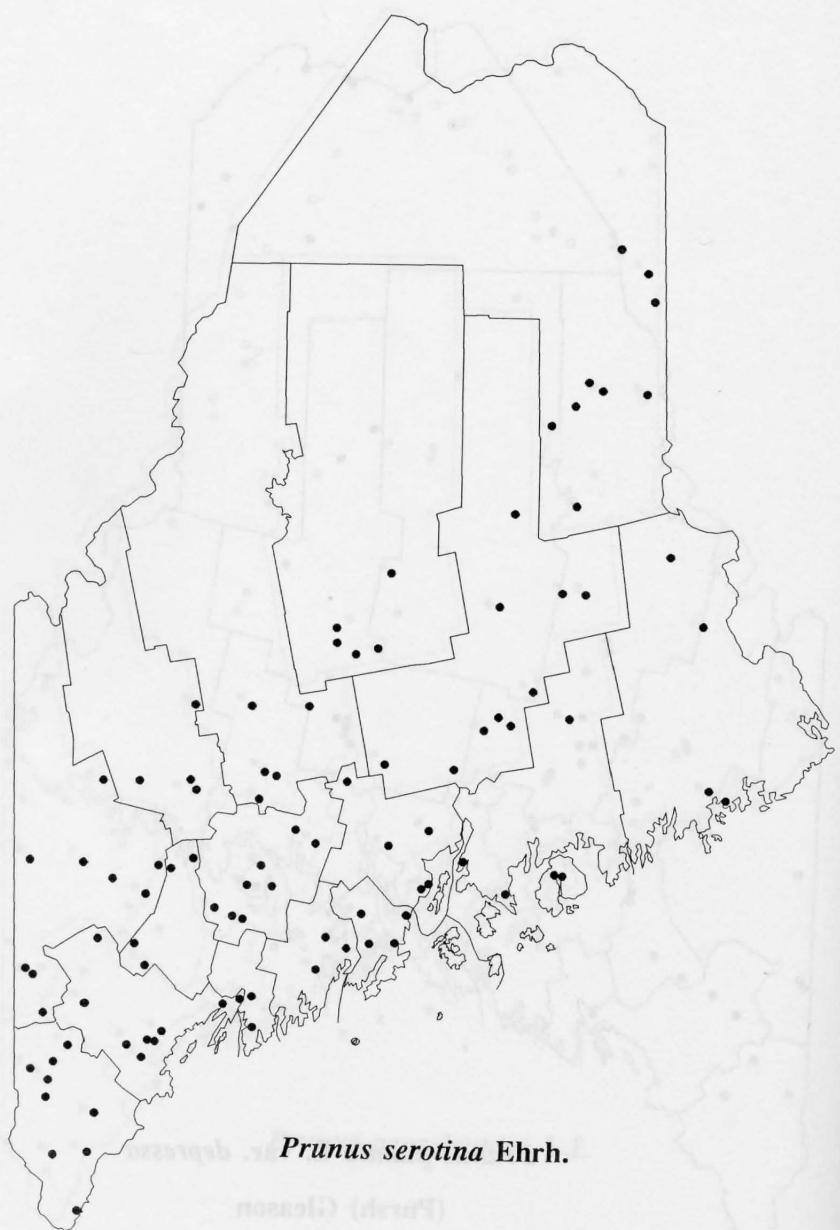


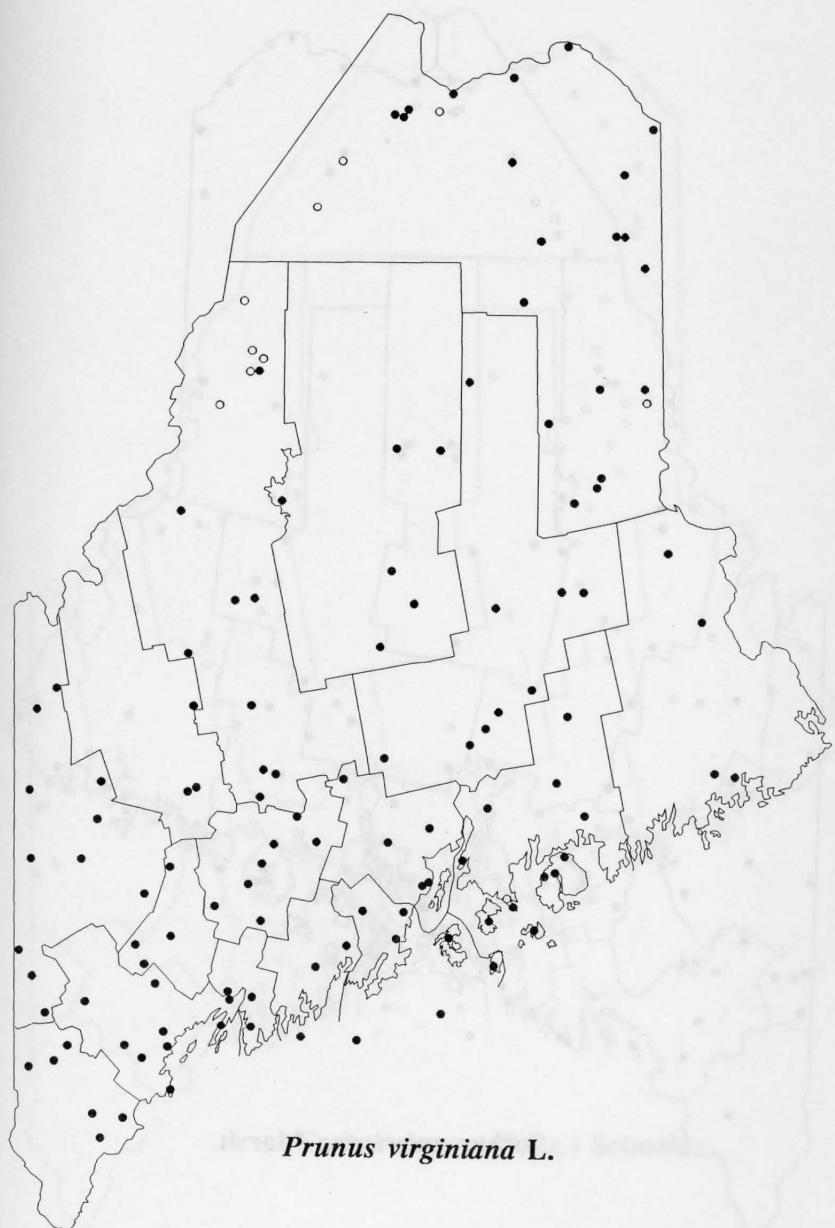


*Prunus nigra* Ait.

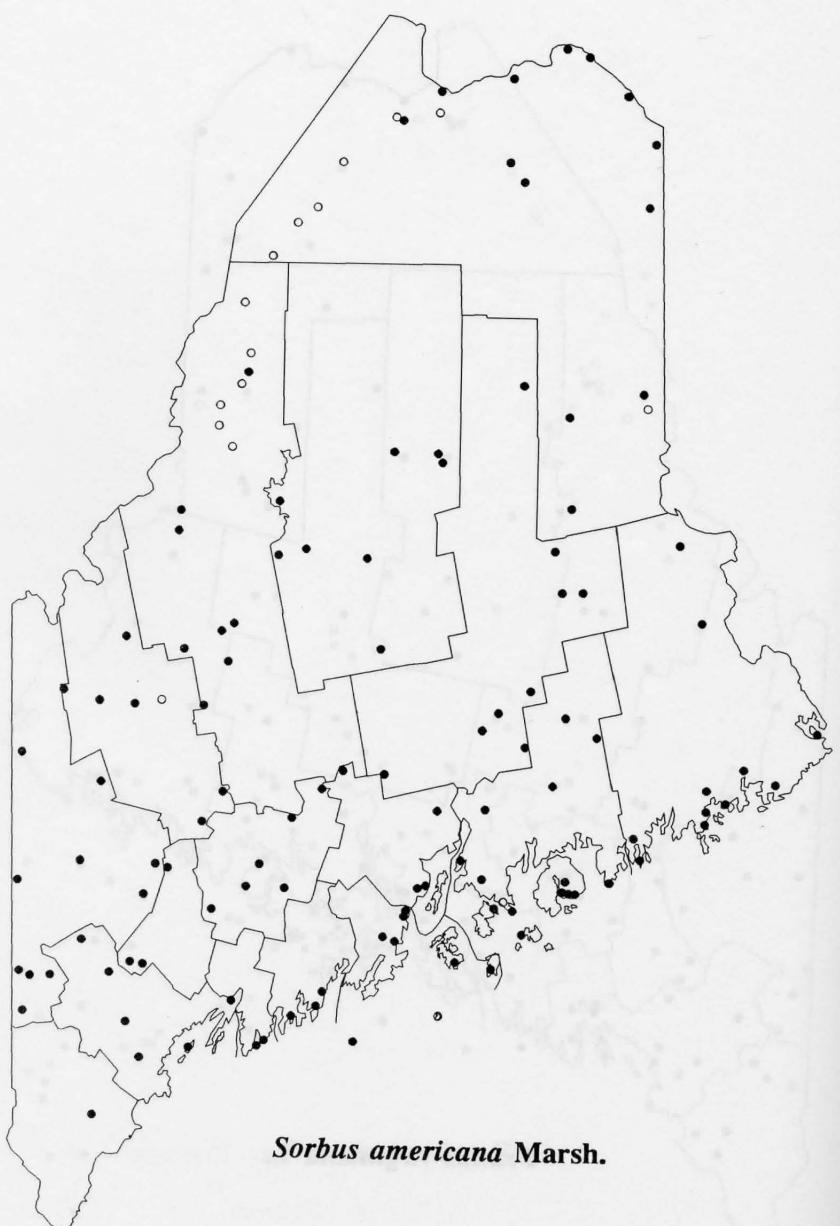


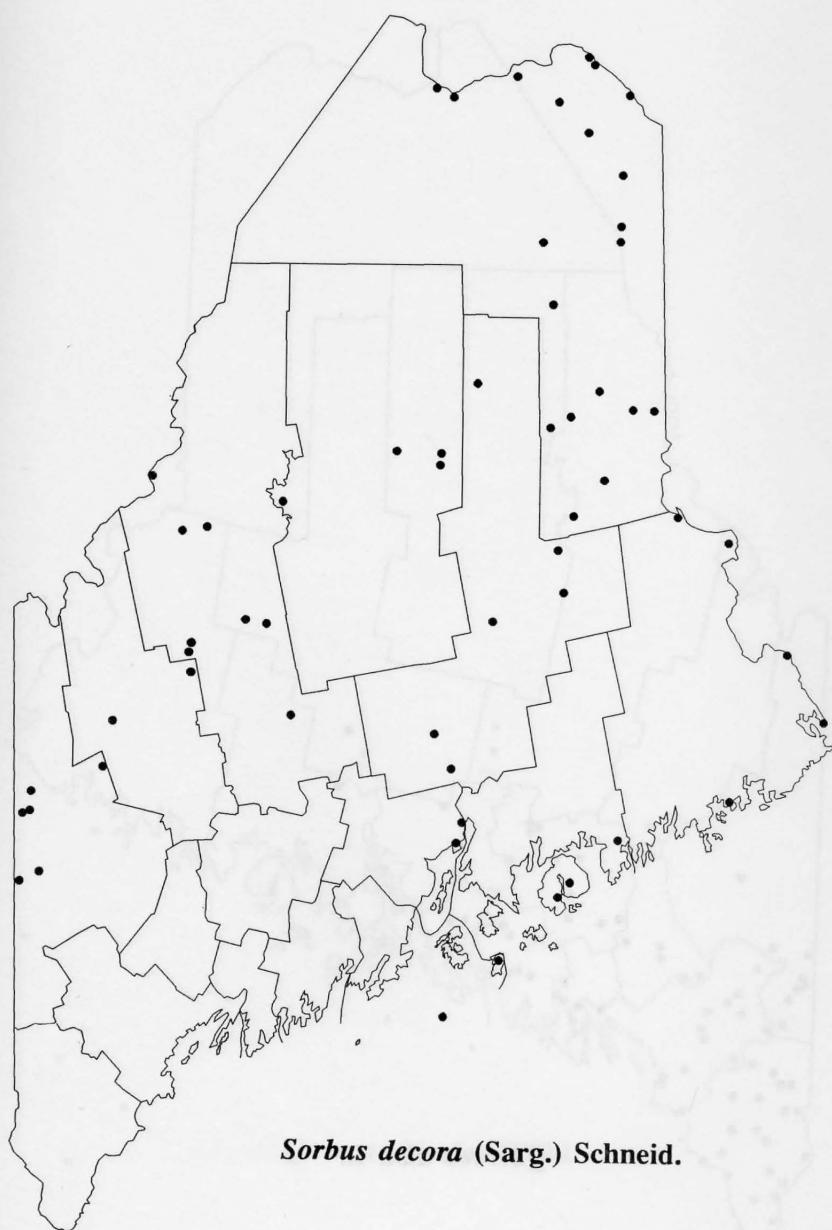




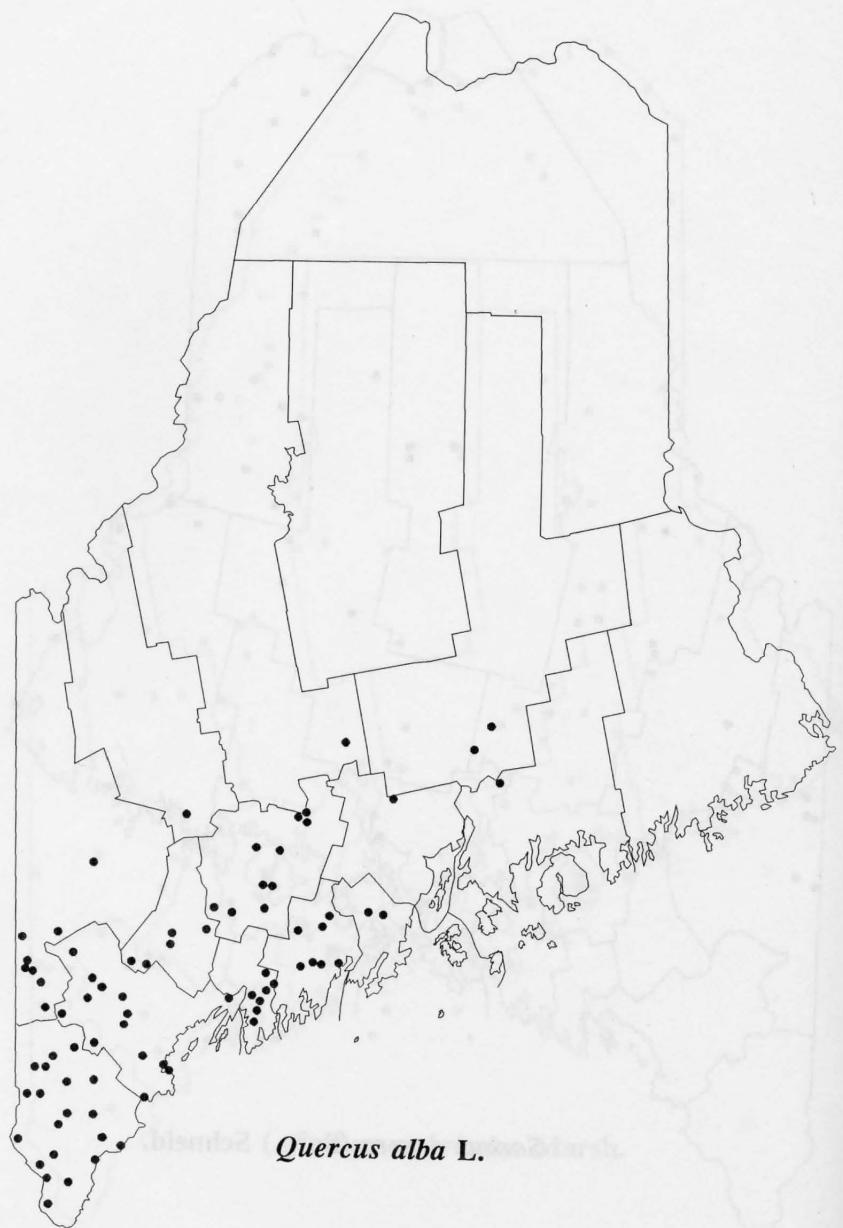


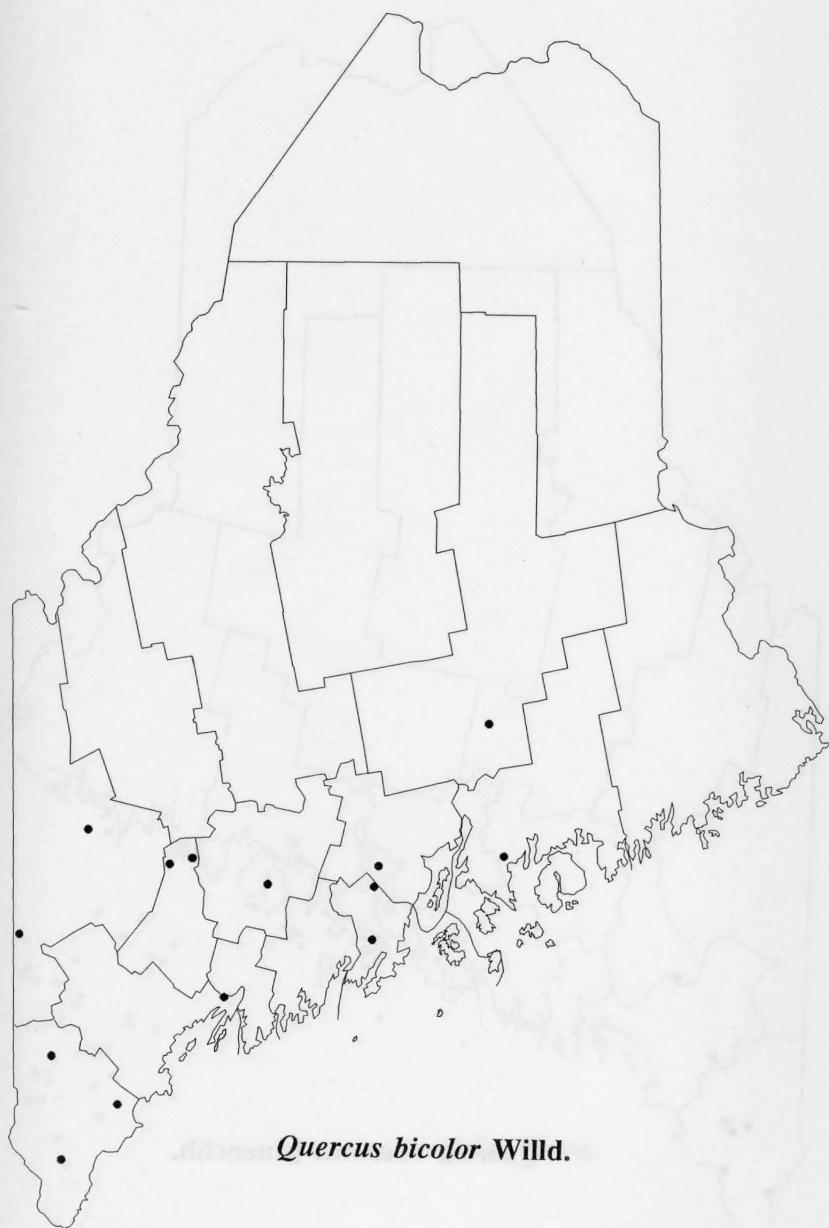
*Prunus virginiana* L.

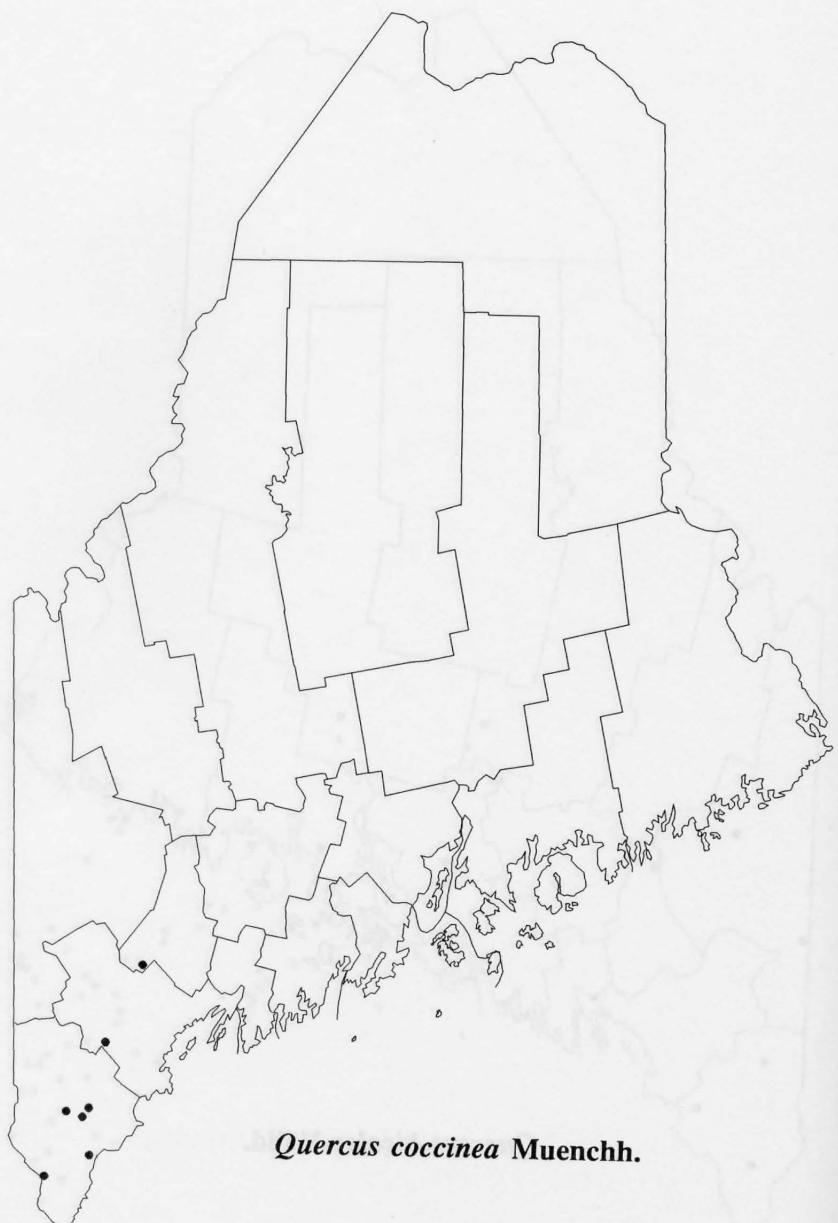


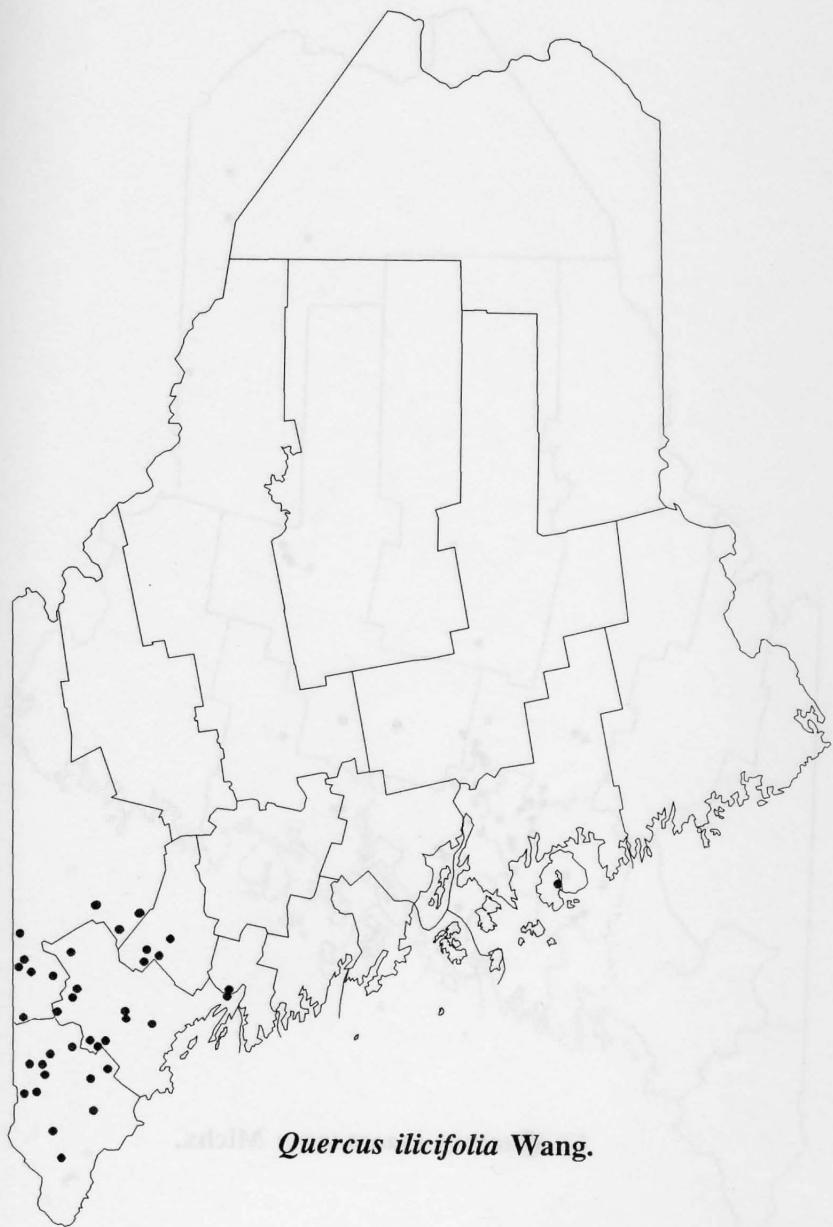


*Sorbus decora* (Sarg.) Schneid.

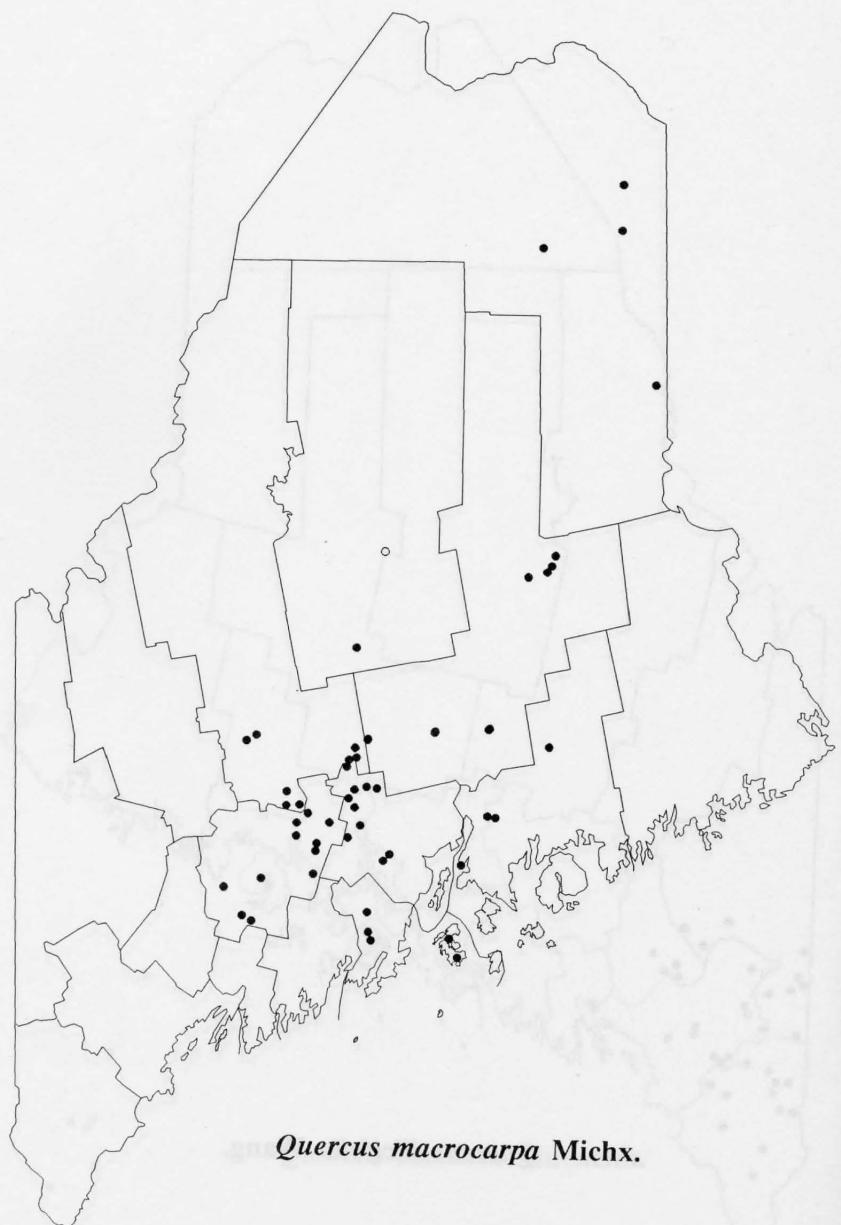




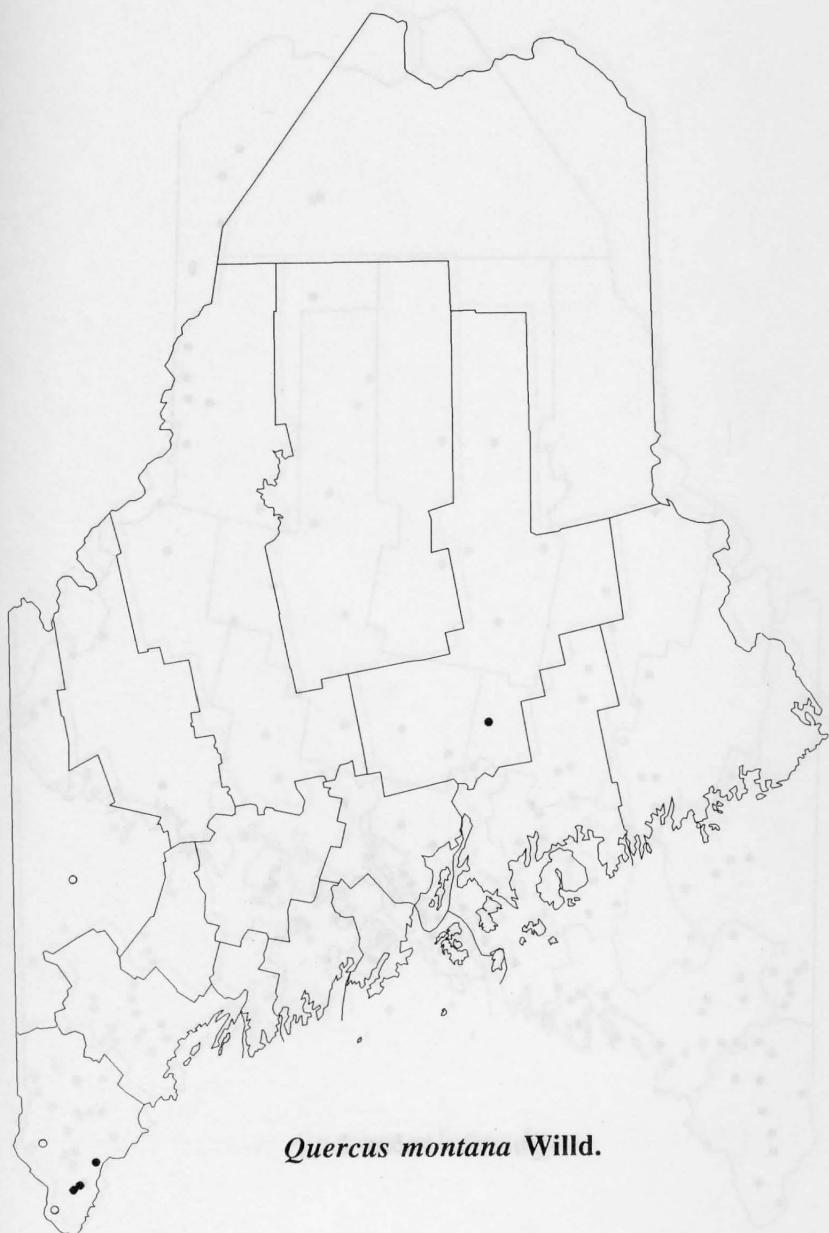




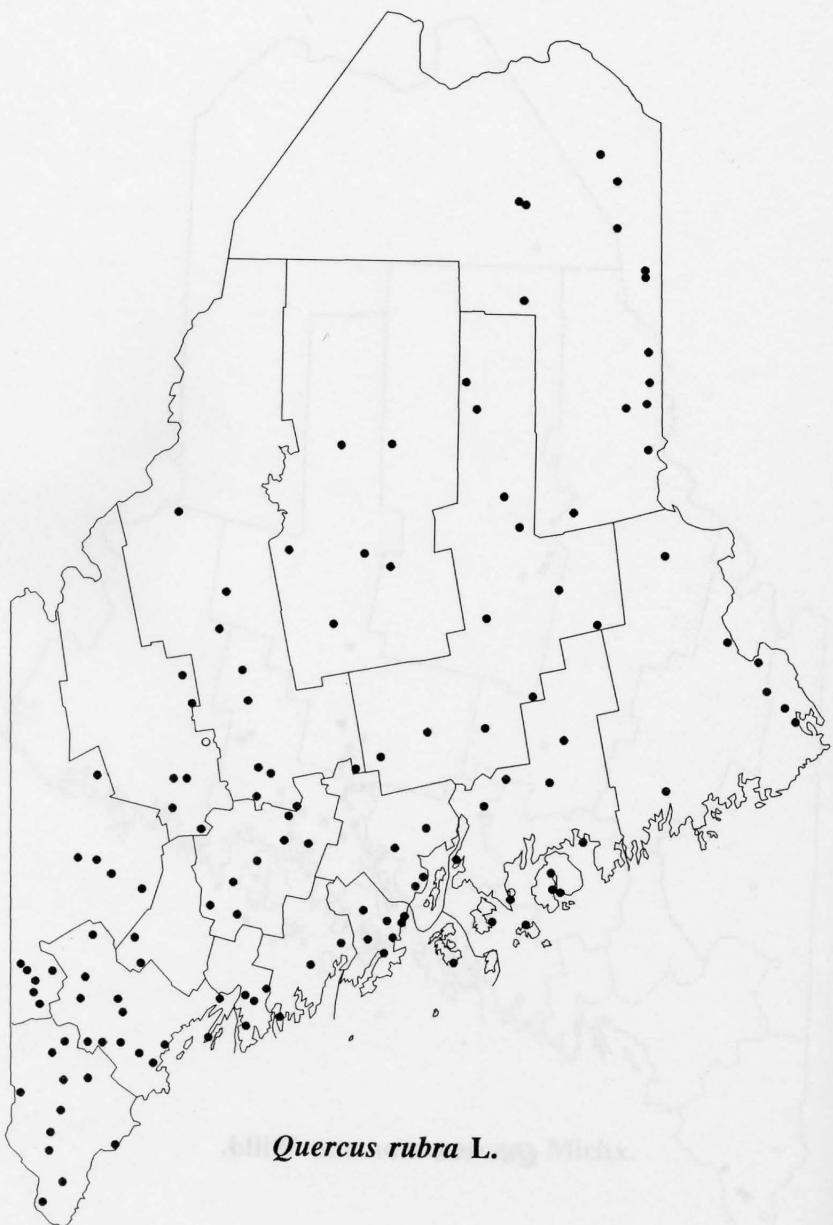
*Quercus ilicifolia* Wang.



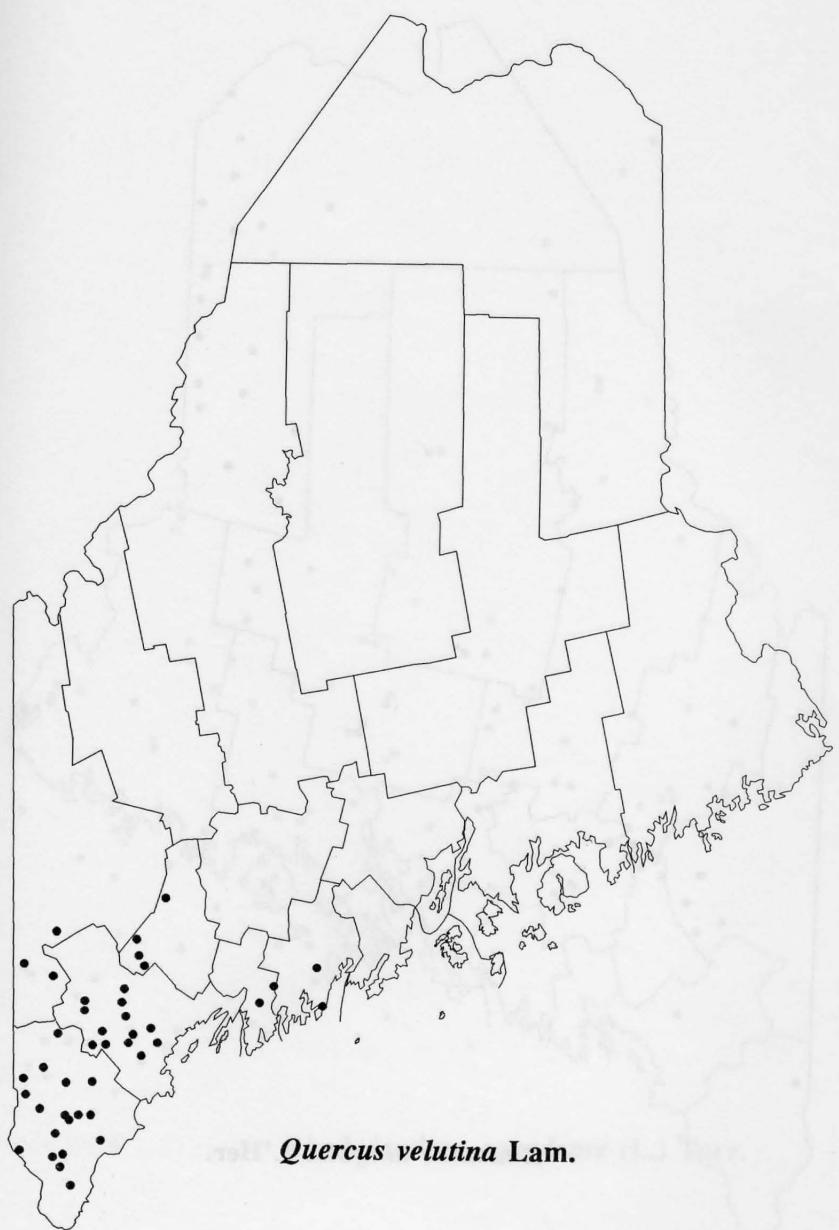
*Quercus macrocarpa* Michx.



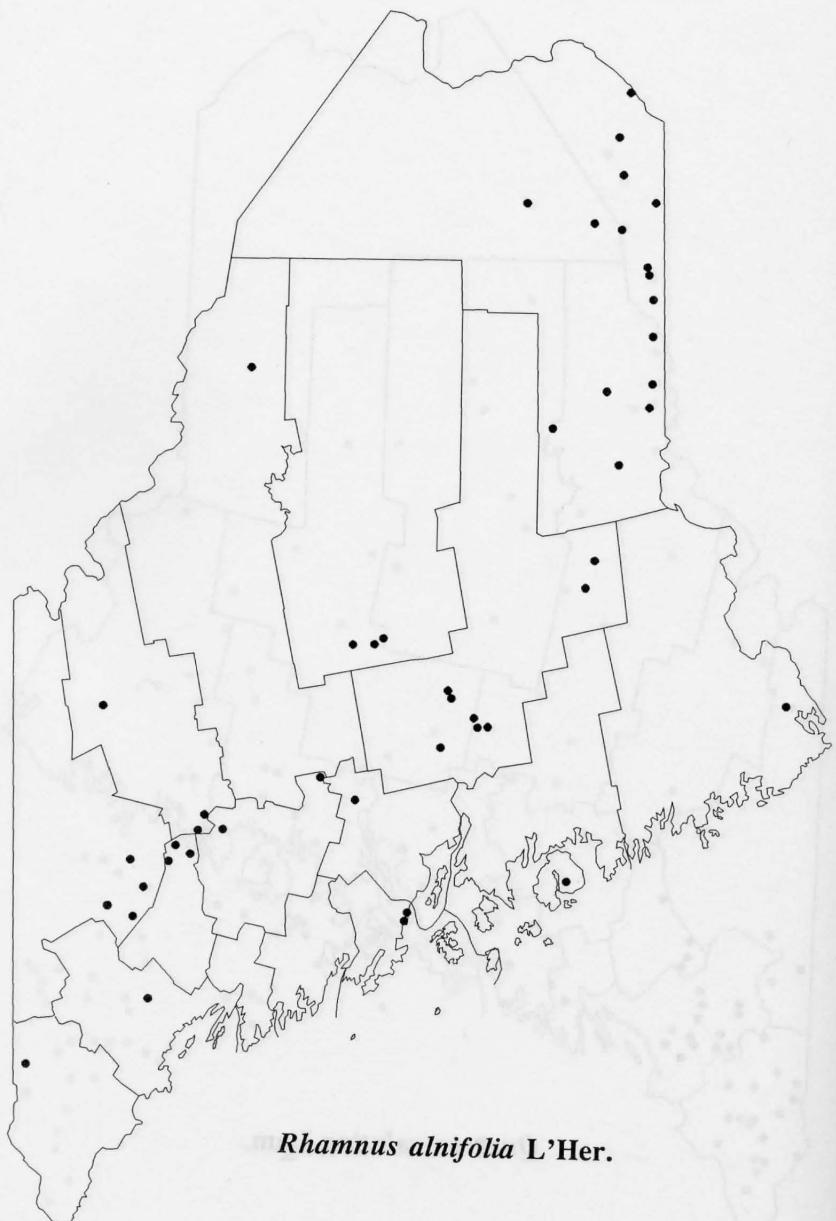
*Quercus montana* Willd.

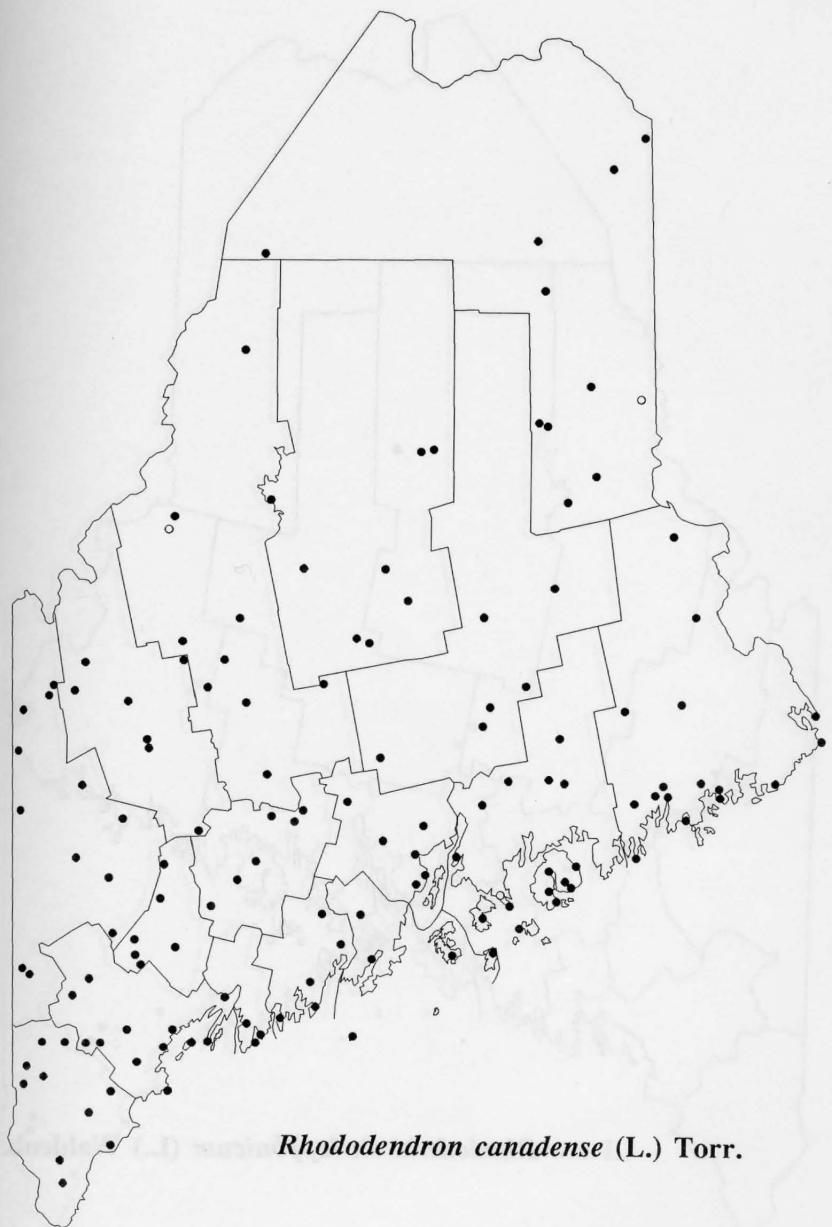


*Quercus rubra* L.

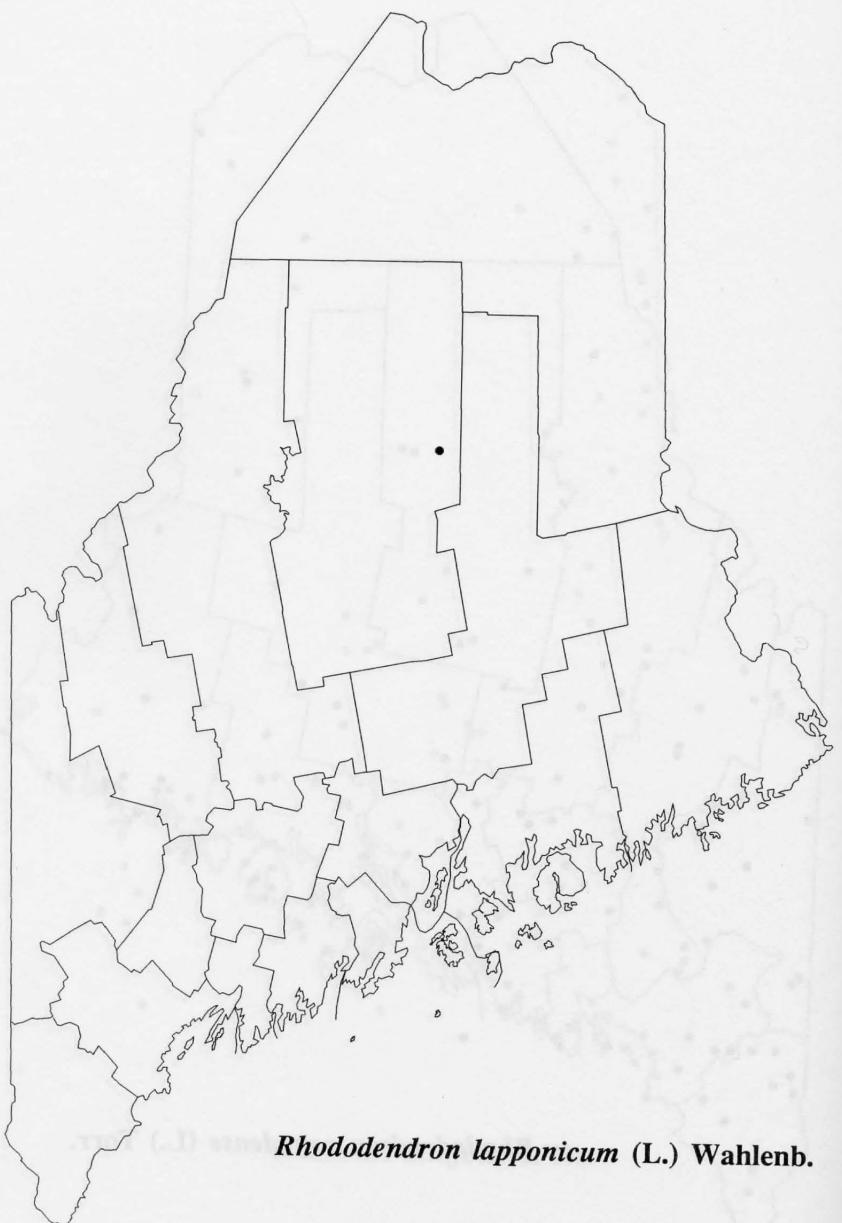


*Quercus velutina* Lam.

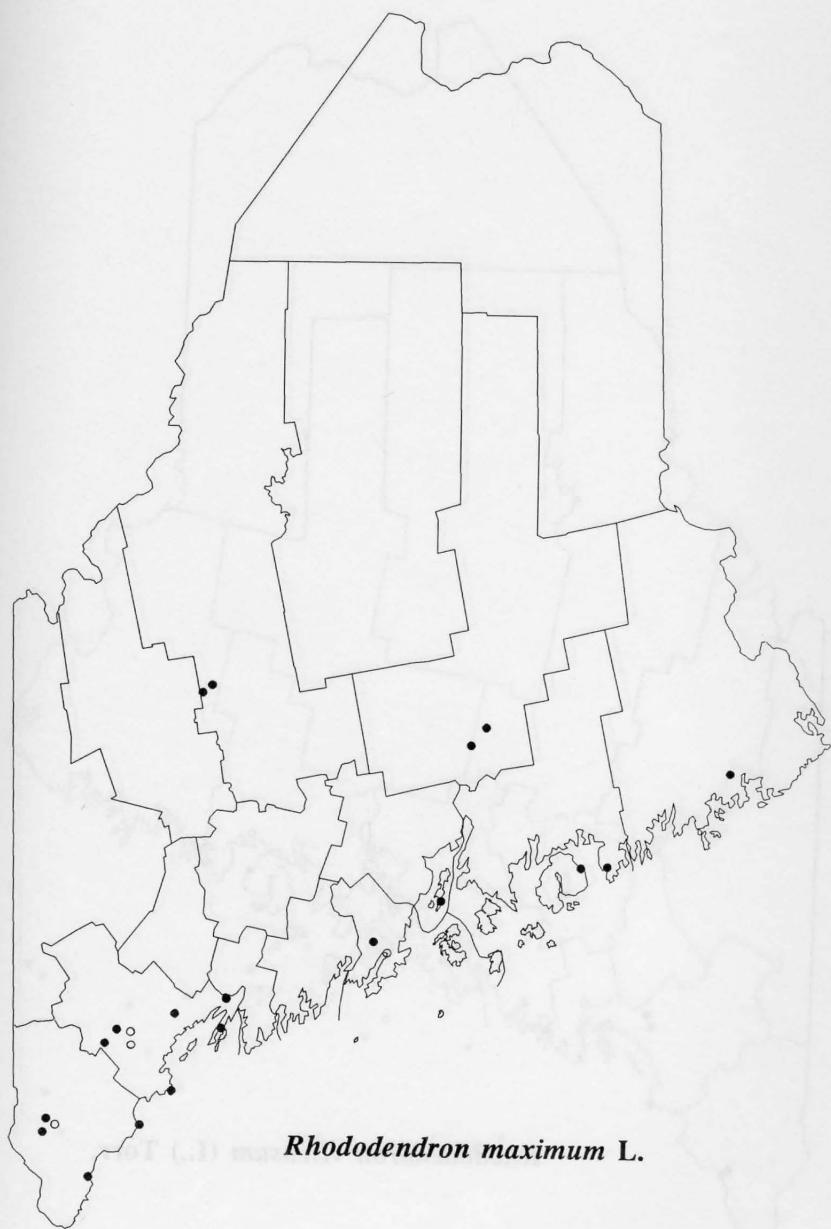




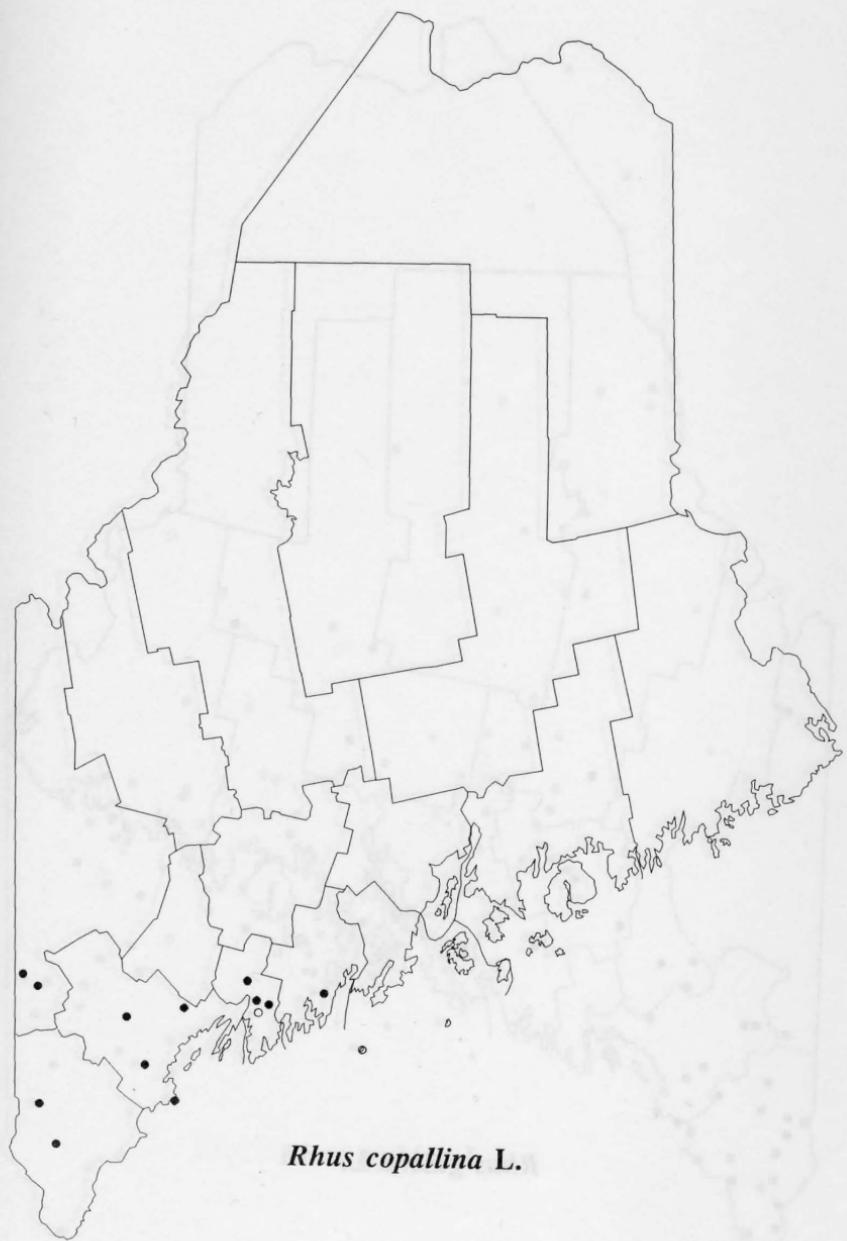
*Rhododendron canadense* (L.) Torr.

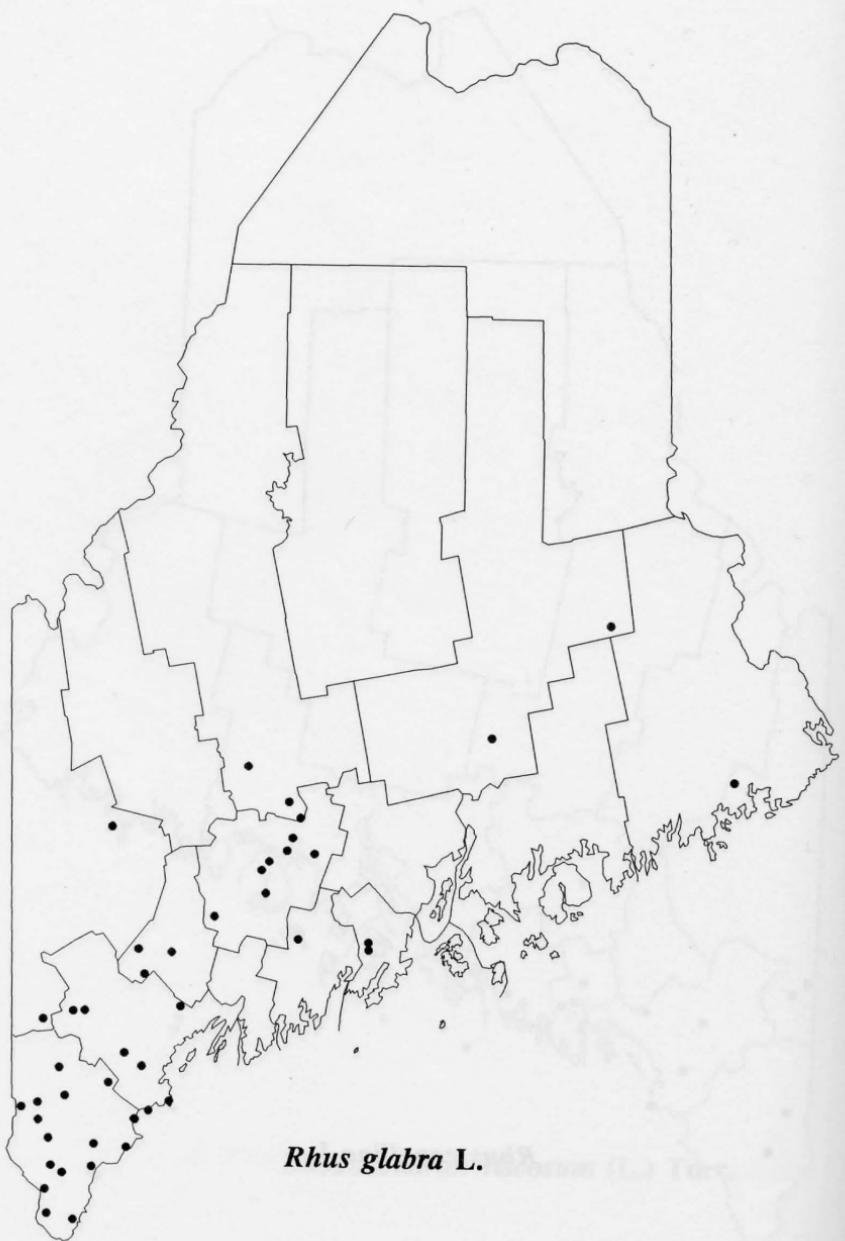


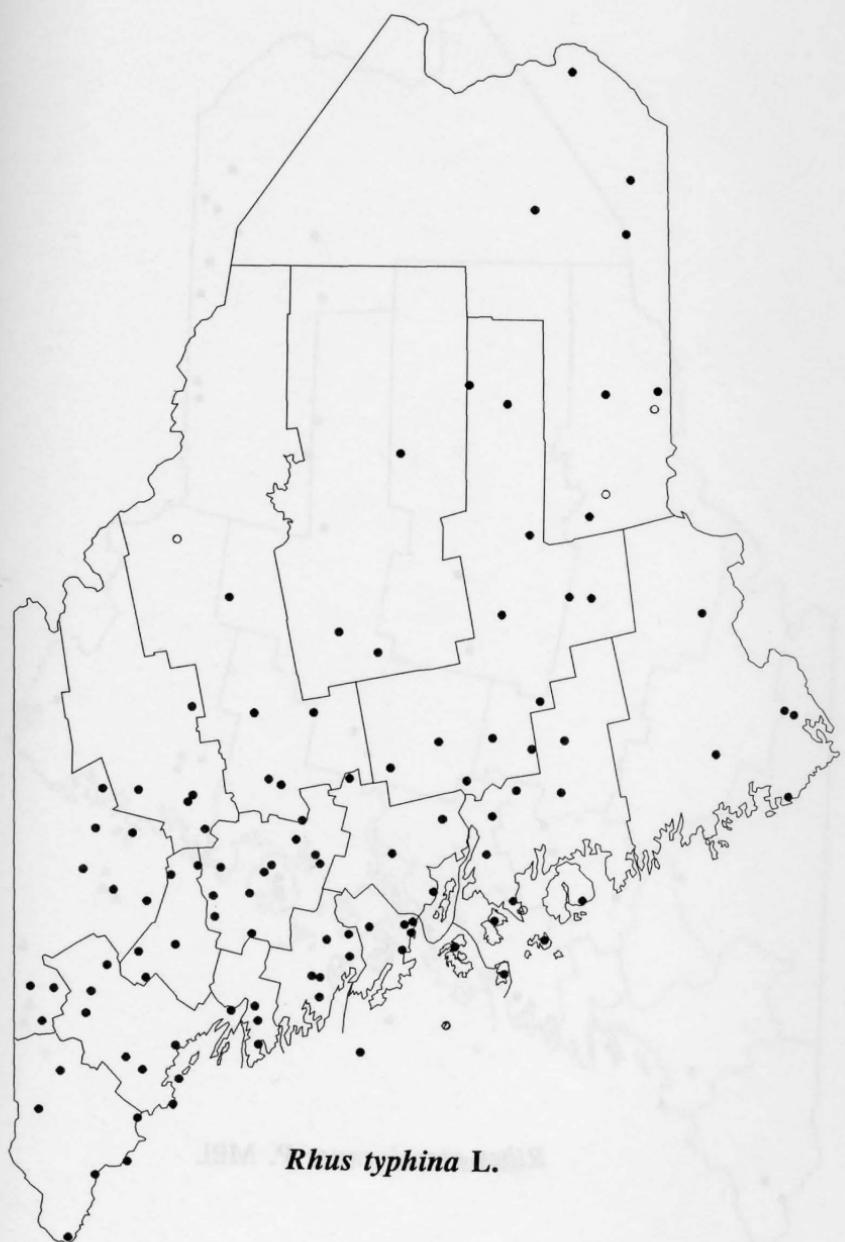
*Rhododendron lapponicum* (L.) Wahlenb.



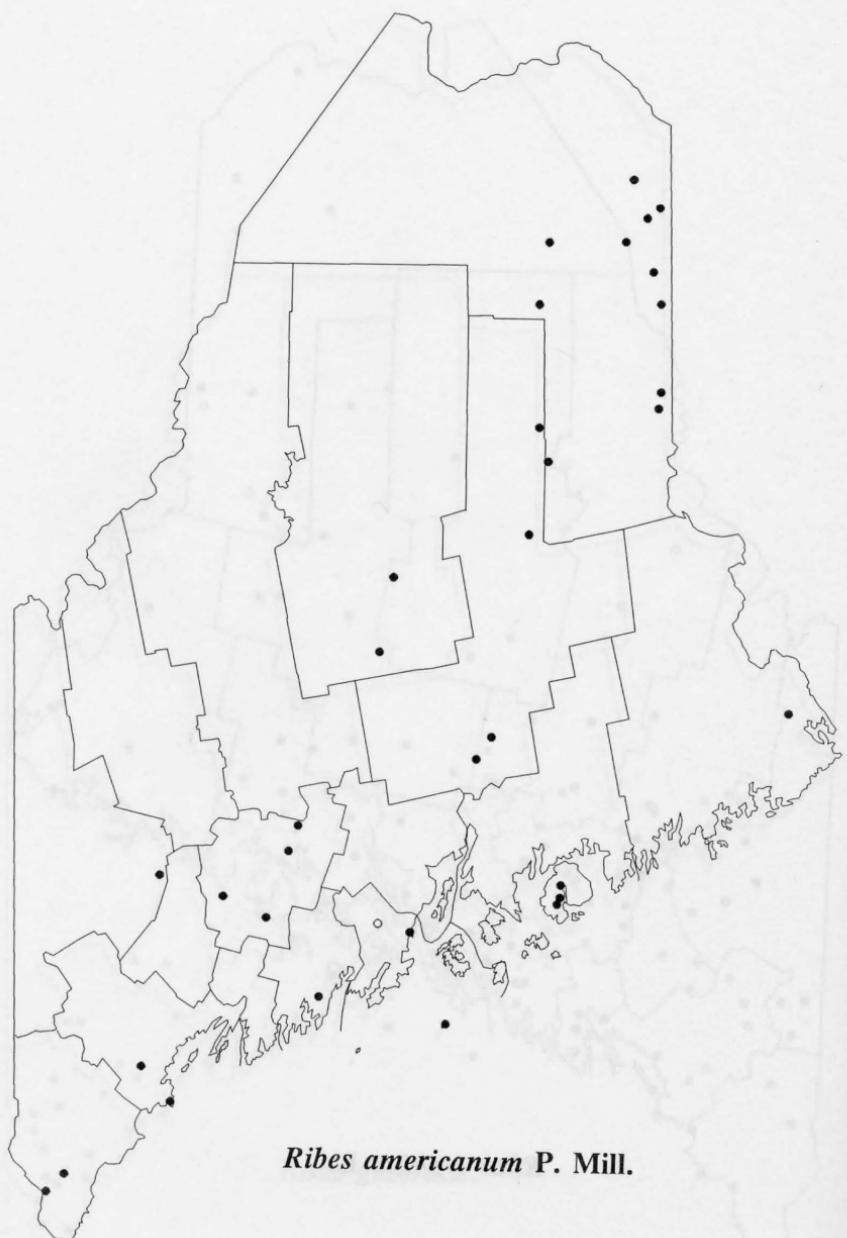


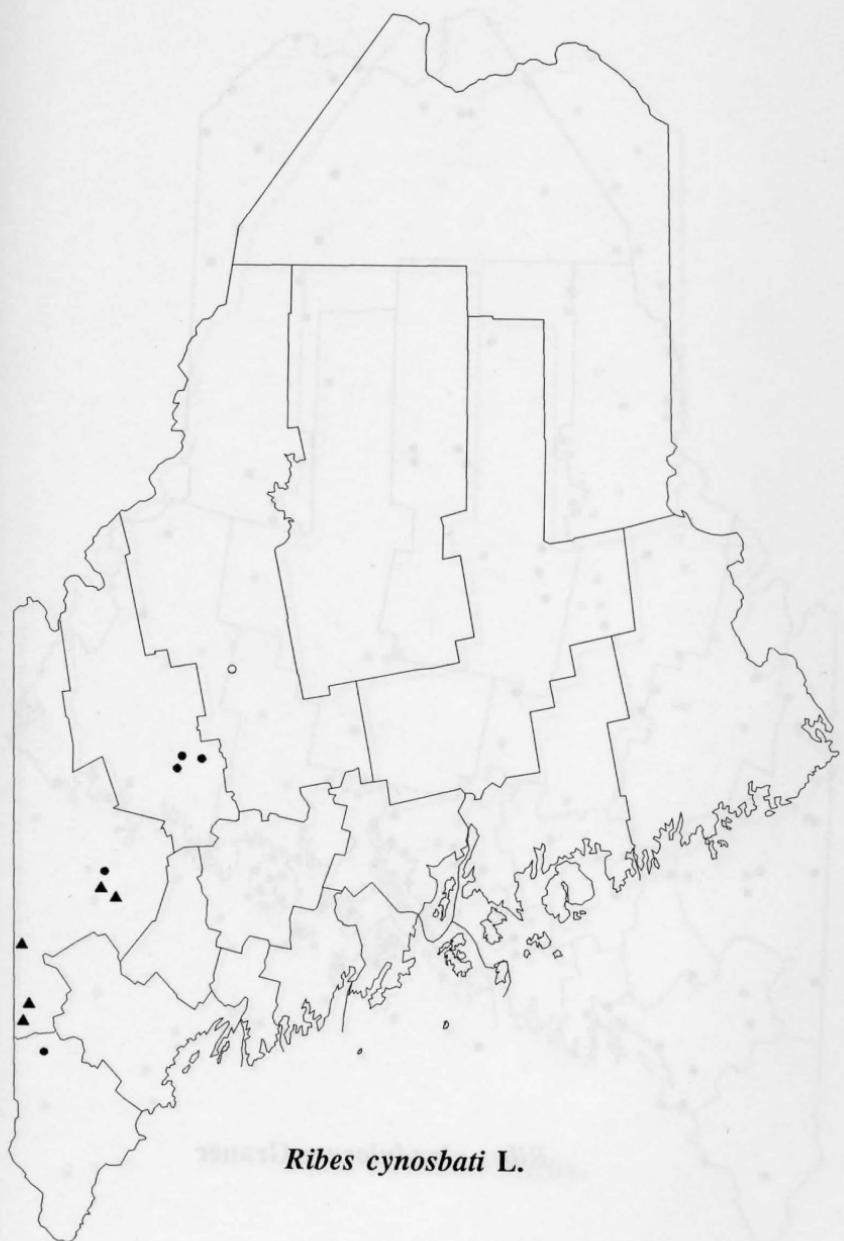




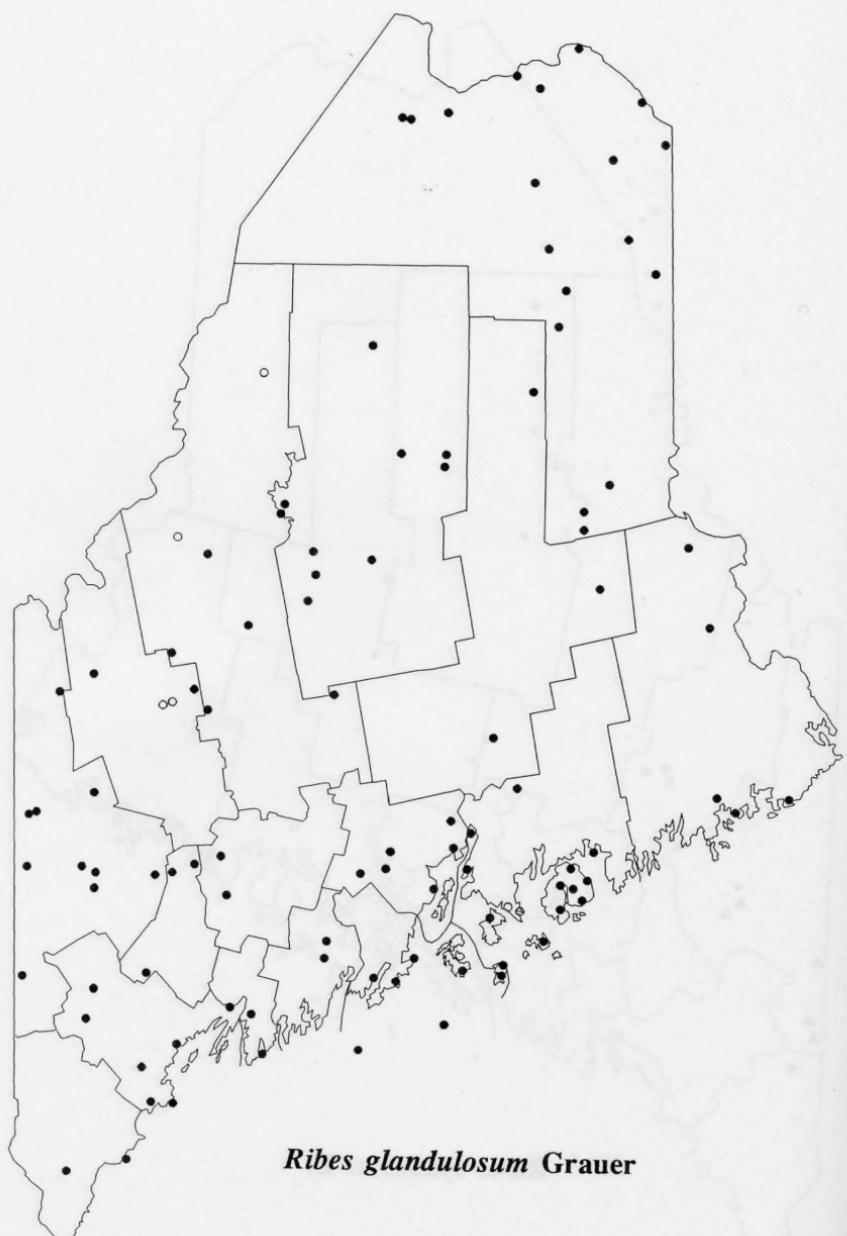


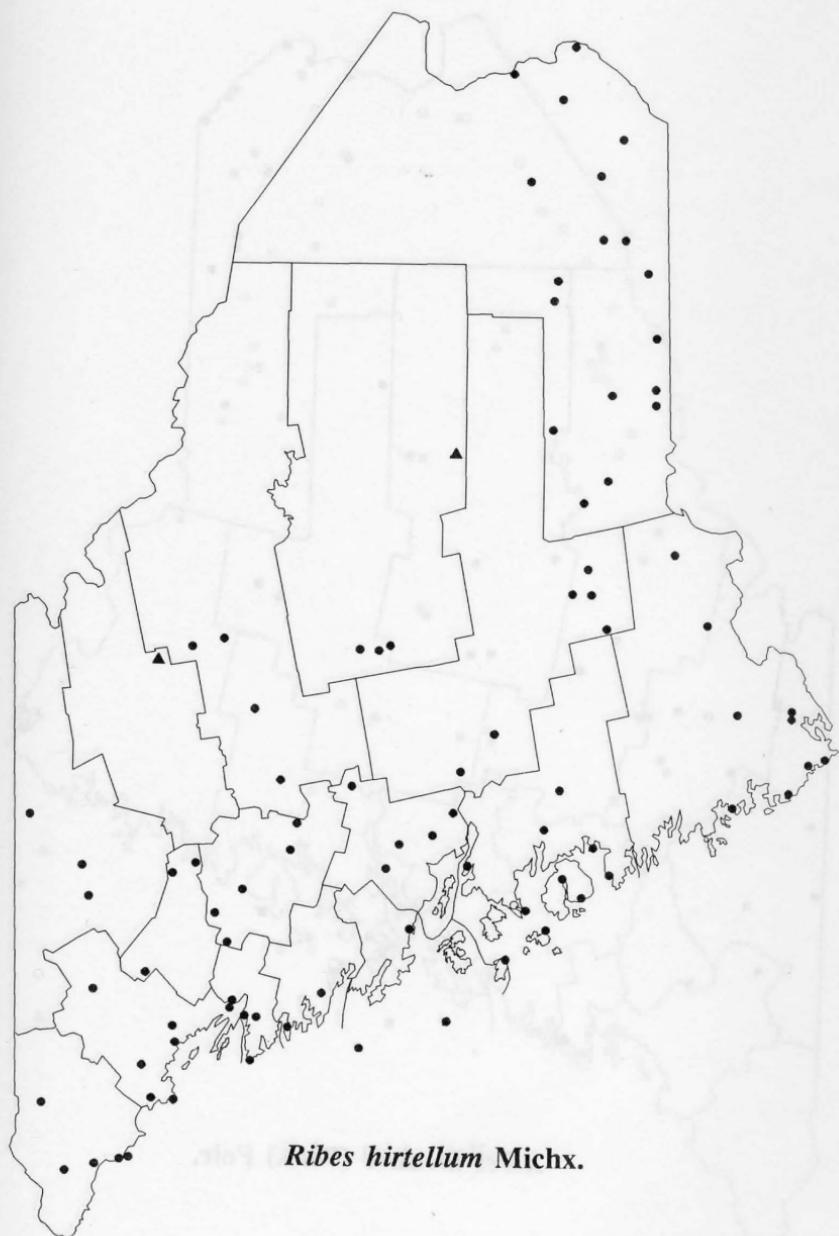
*Rhus typhina* L.

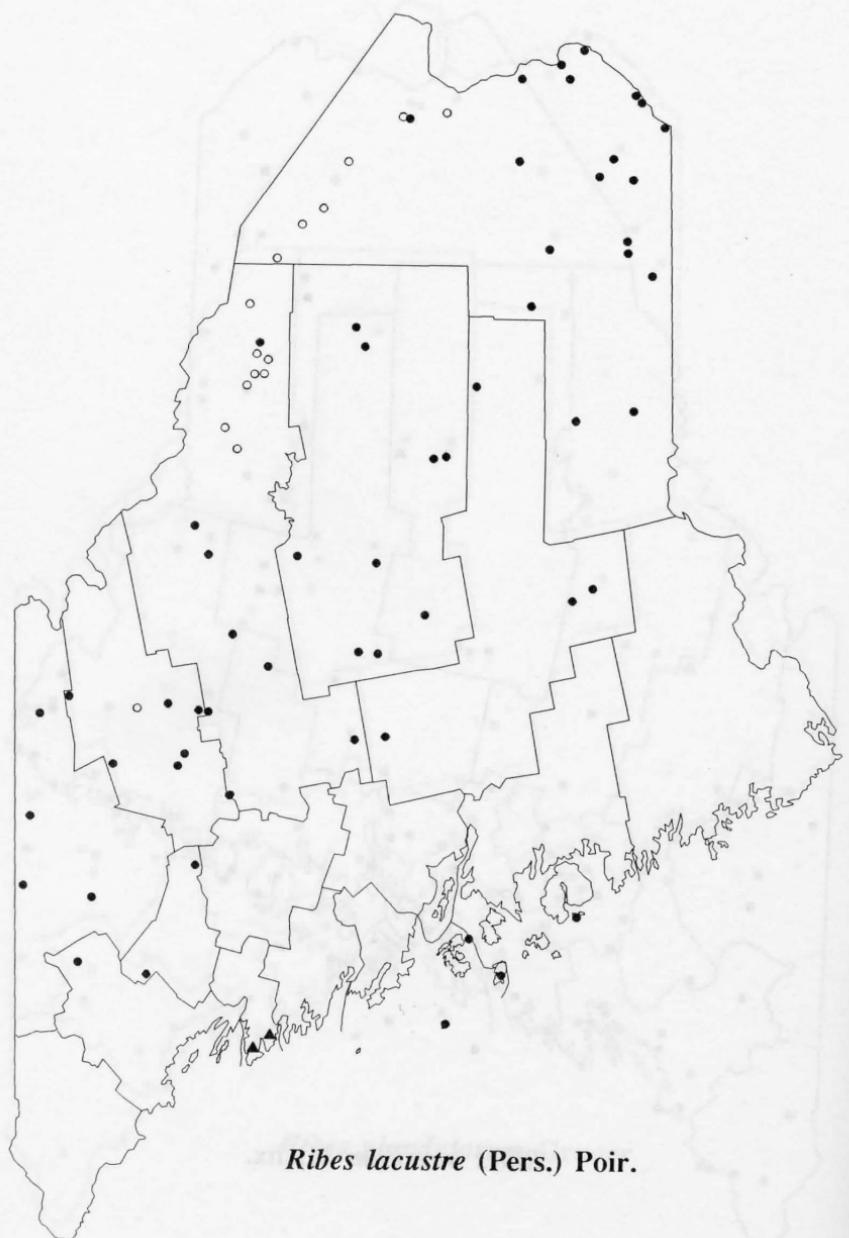




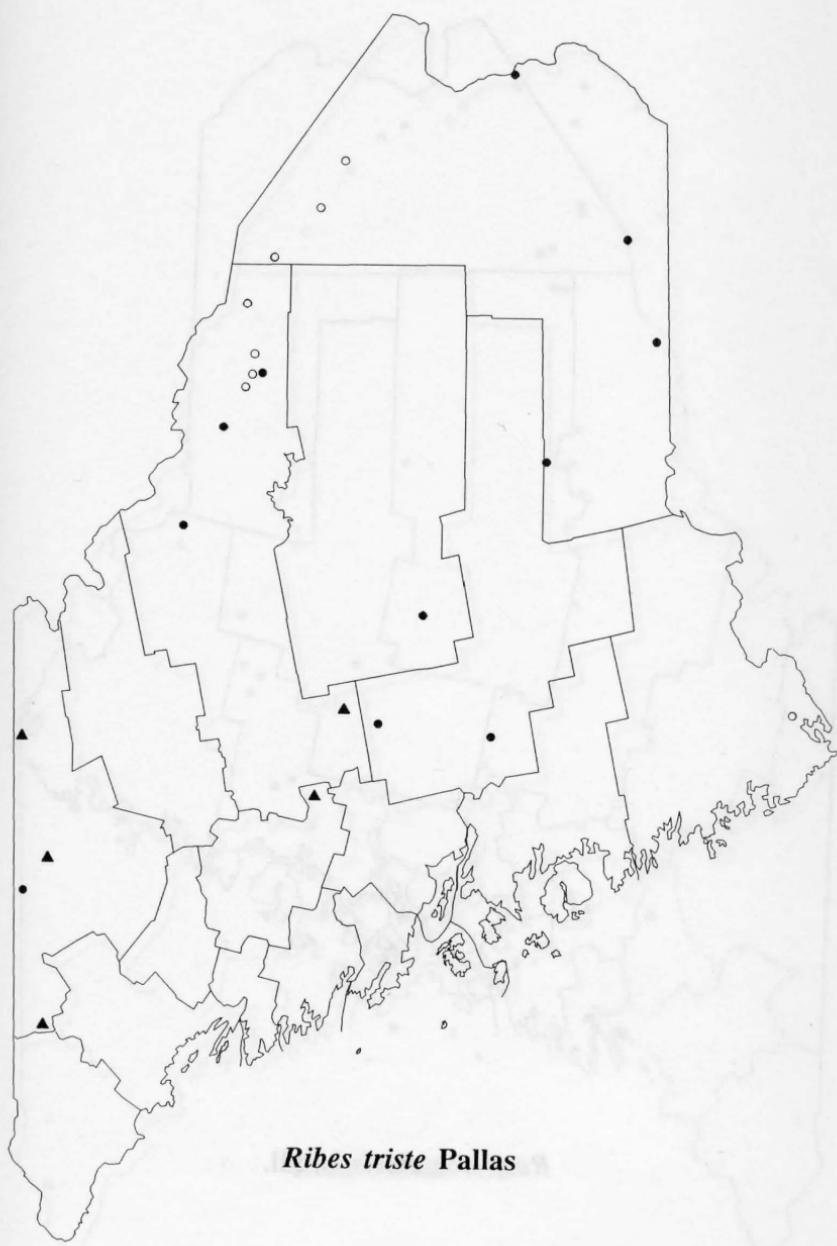
*Ribes cynosbati* L.



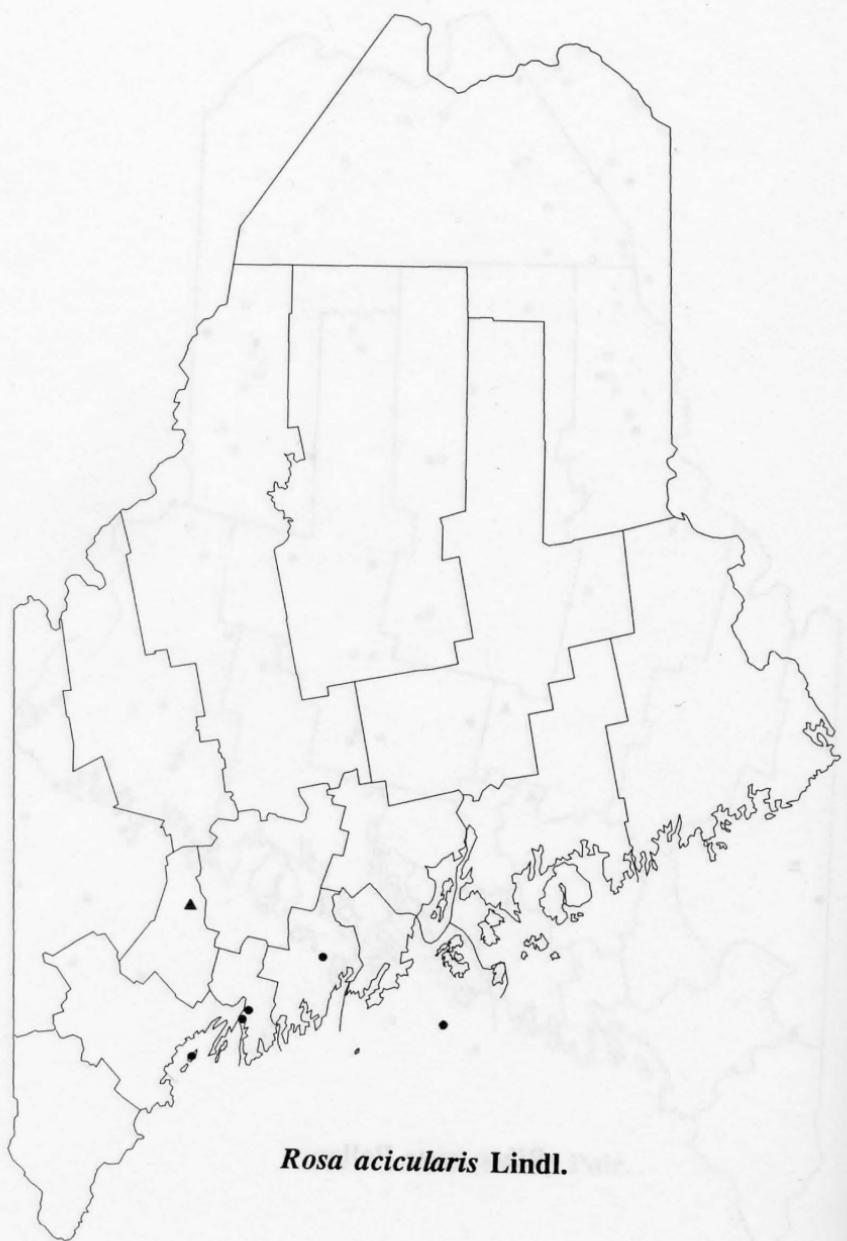


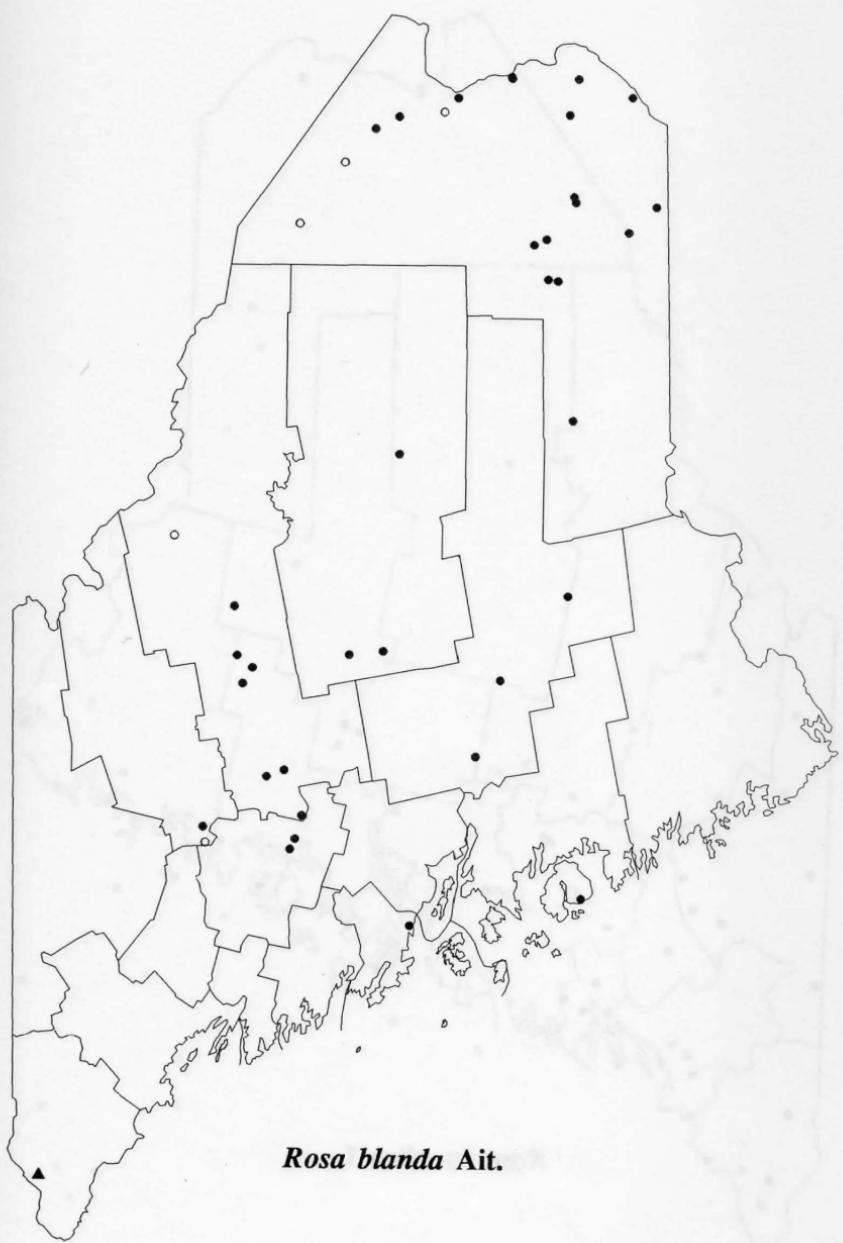


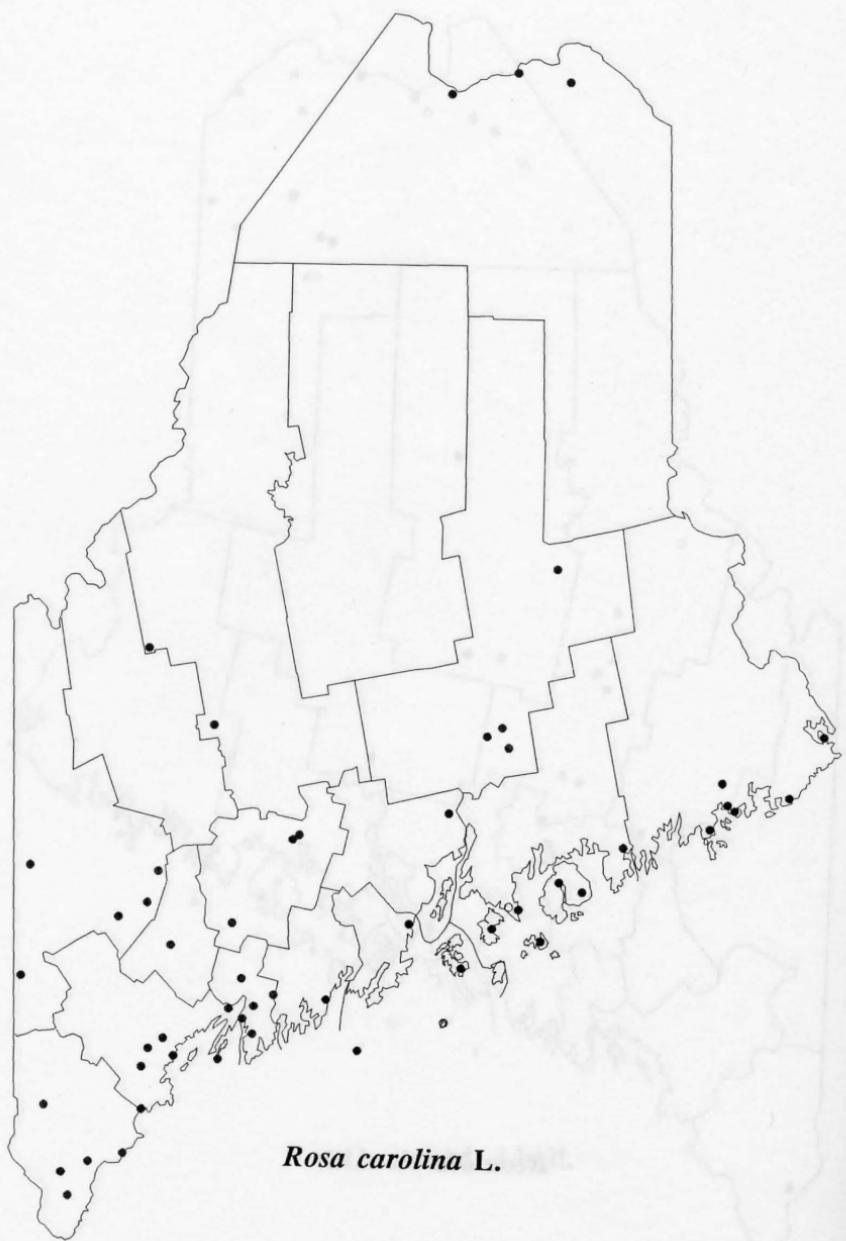
*Ribes lacustre* (Pers.) Poir.



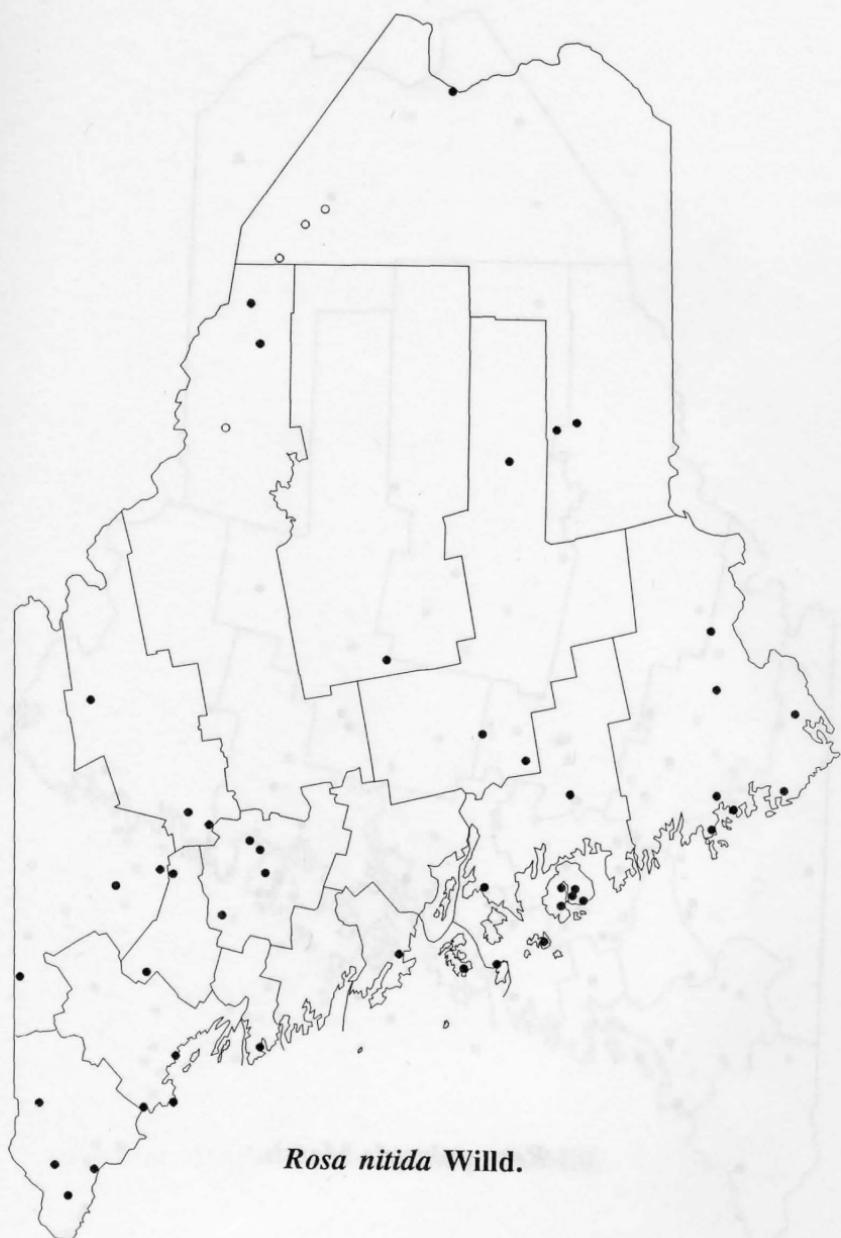
*Ribes triste* Pallas

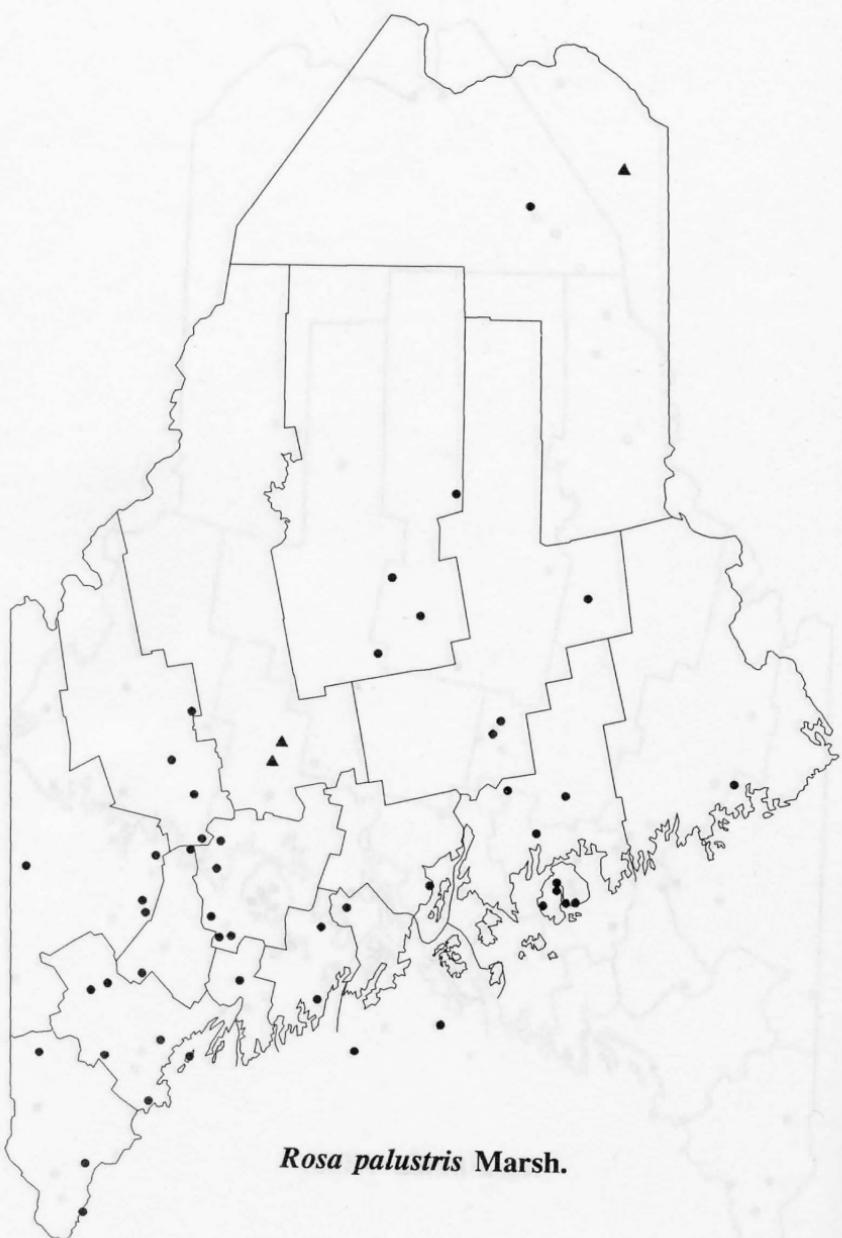


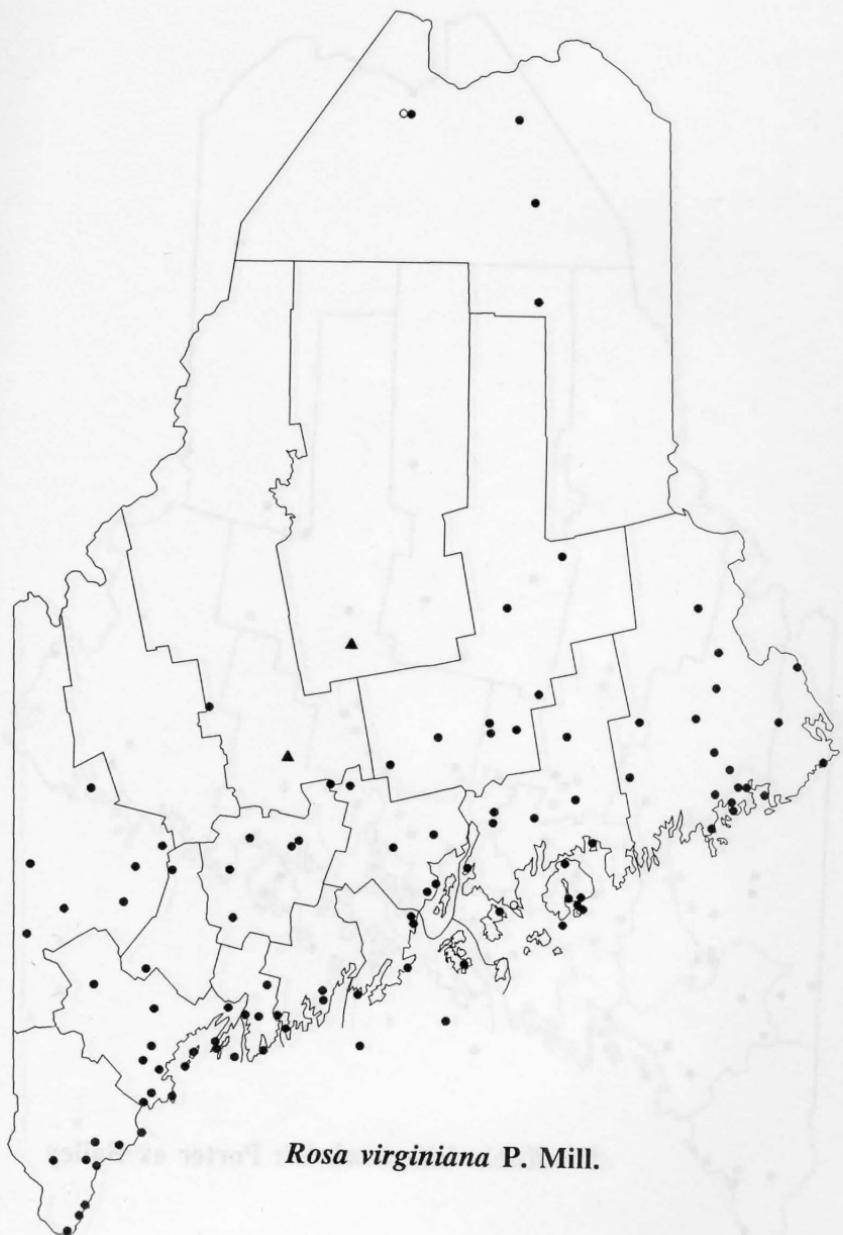


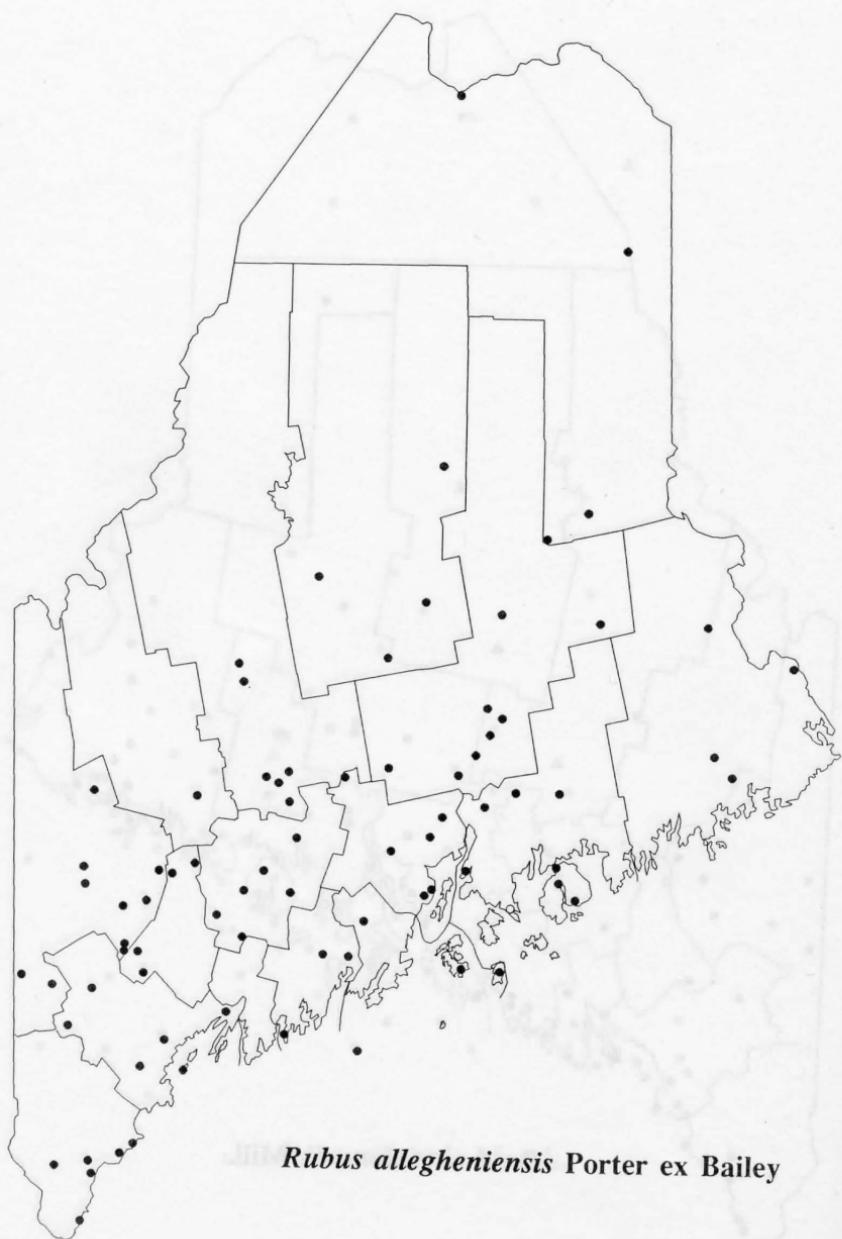


*Rosa carolina* L.

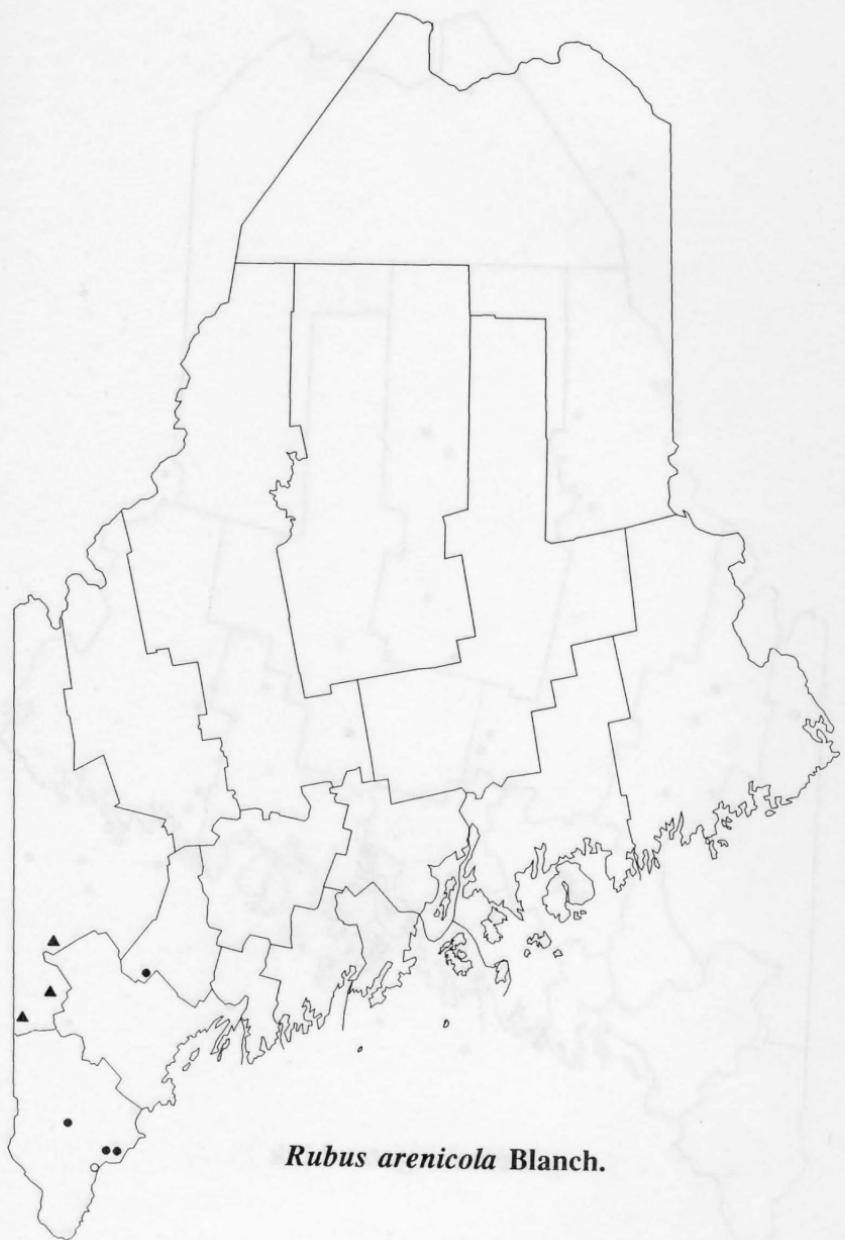






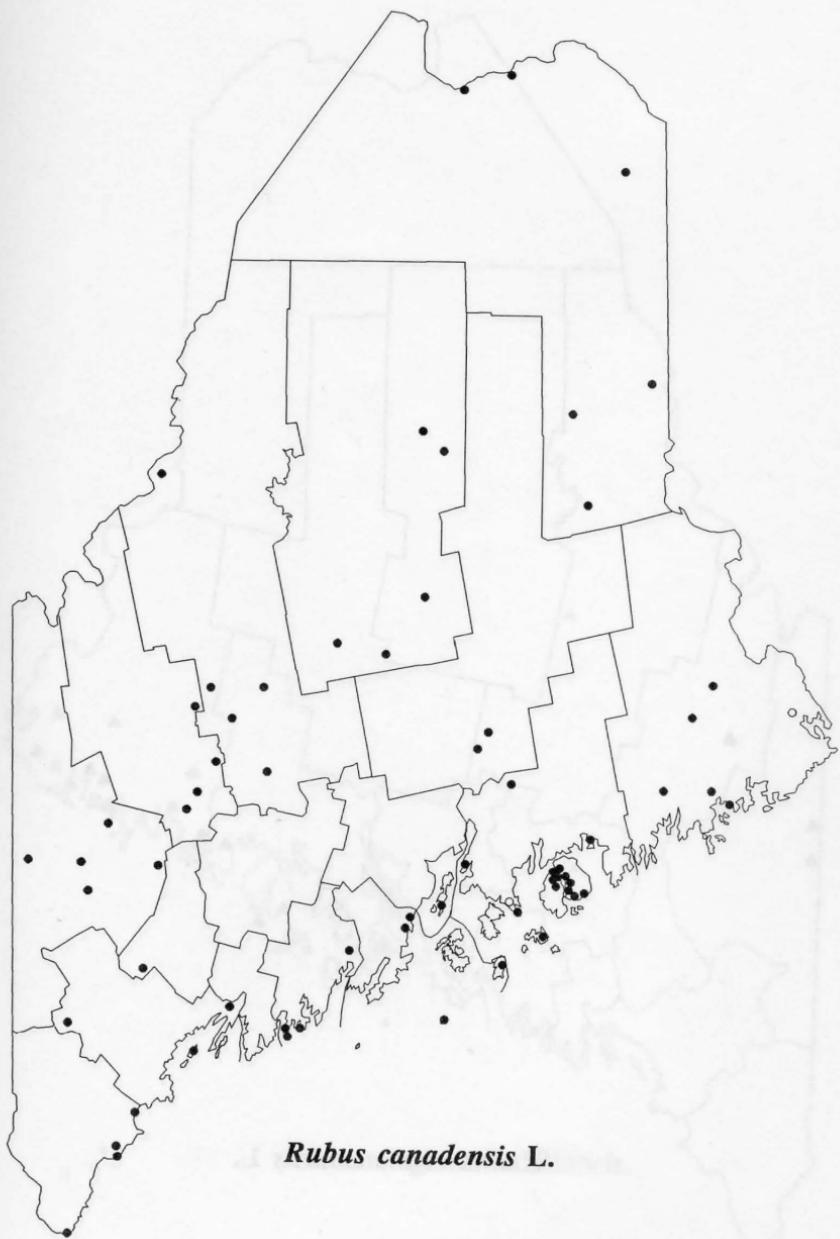


*Rubus allegheniensis* Porter ex Bailey

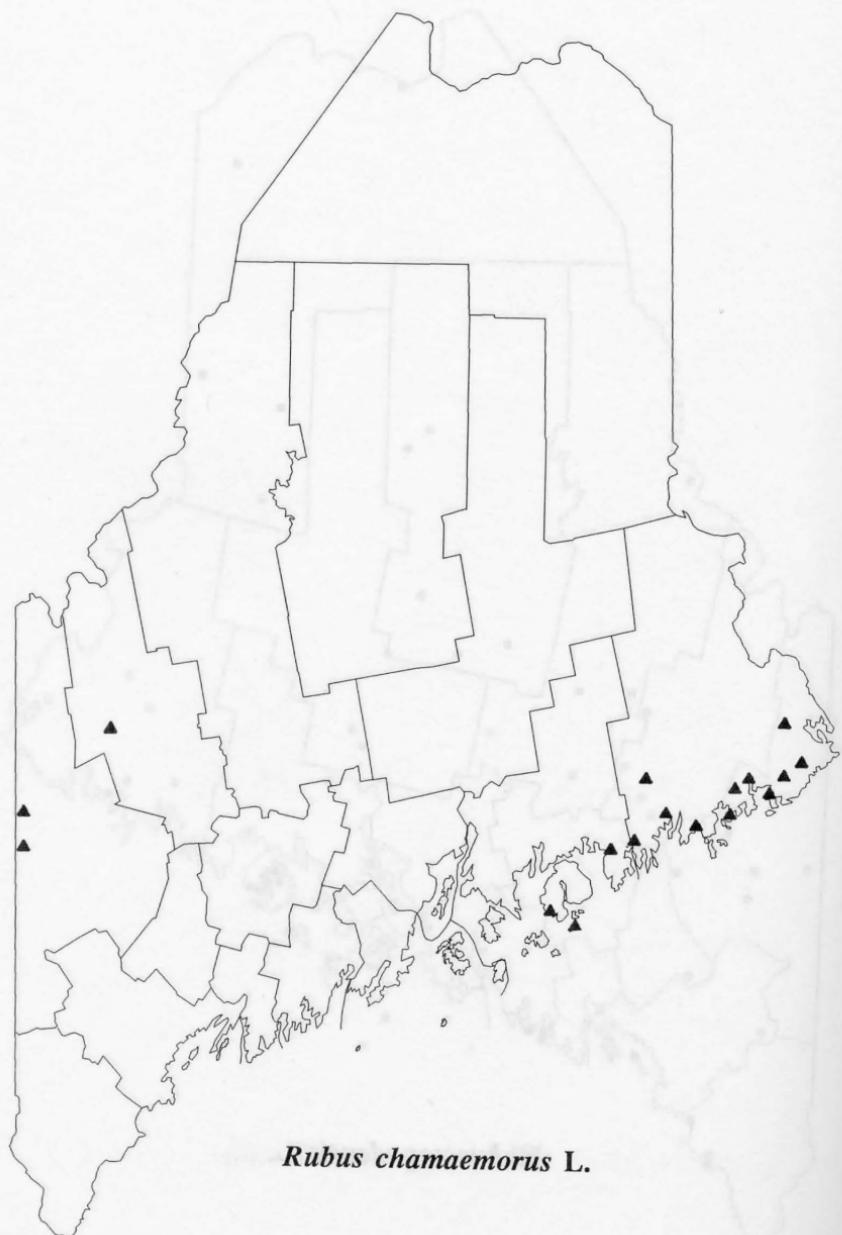


*Rubus arenicola* Blanch.

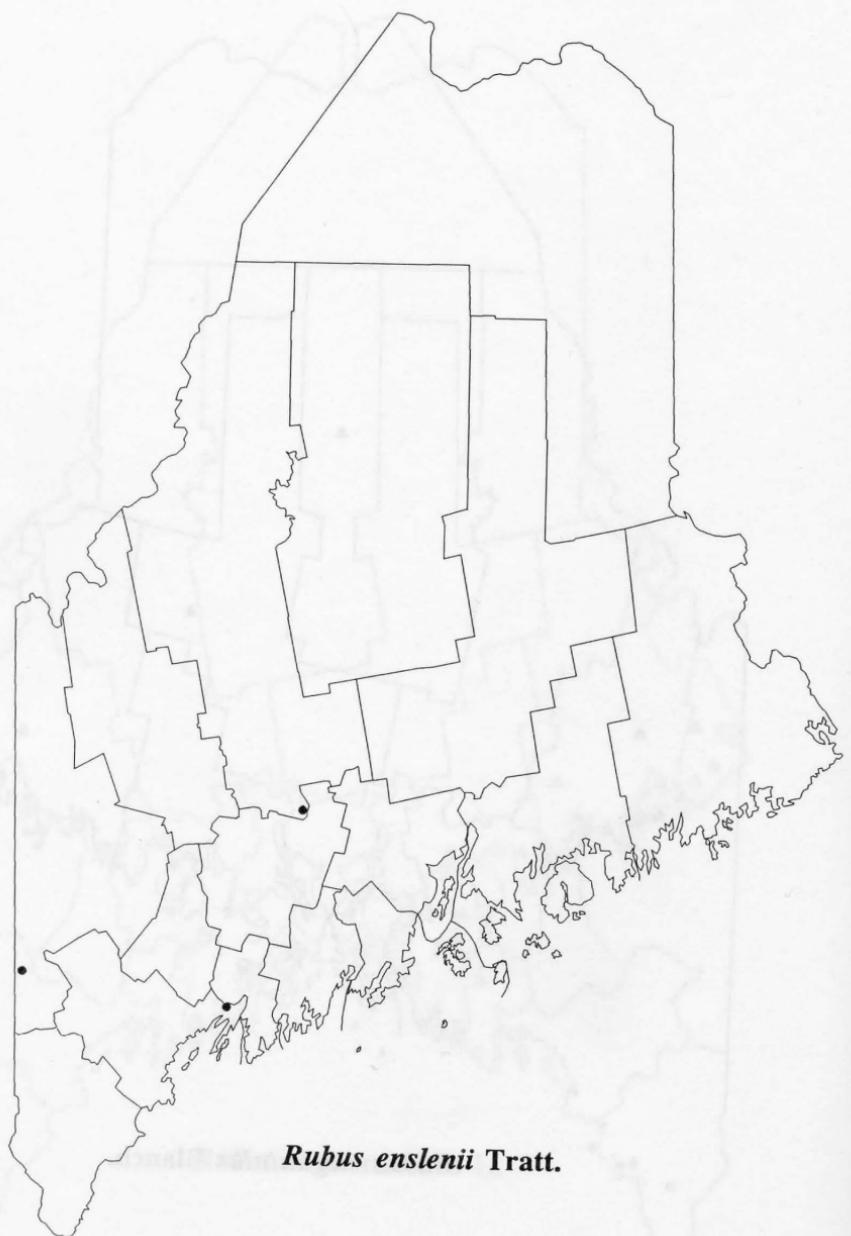




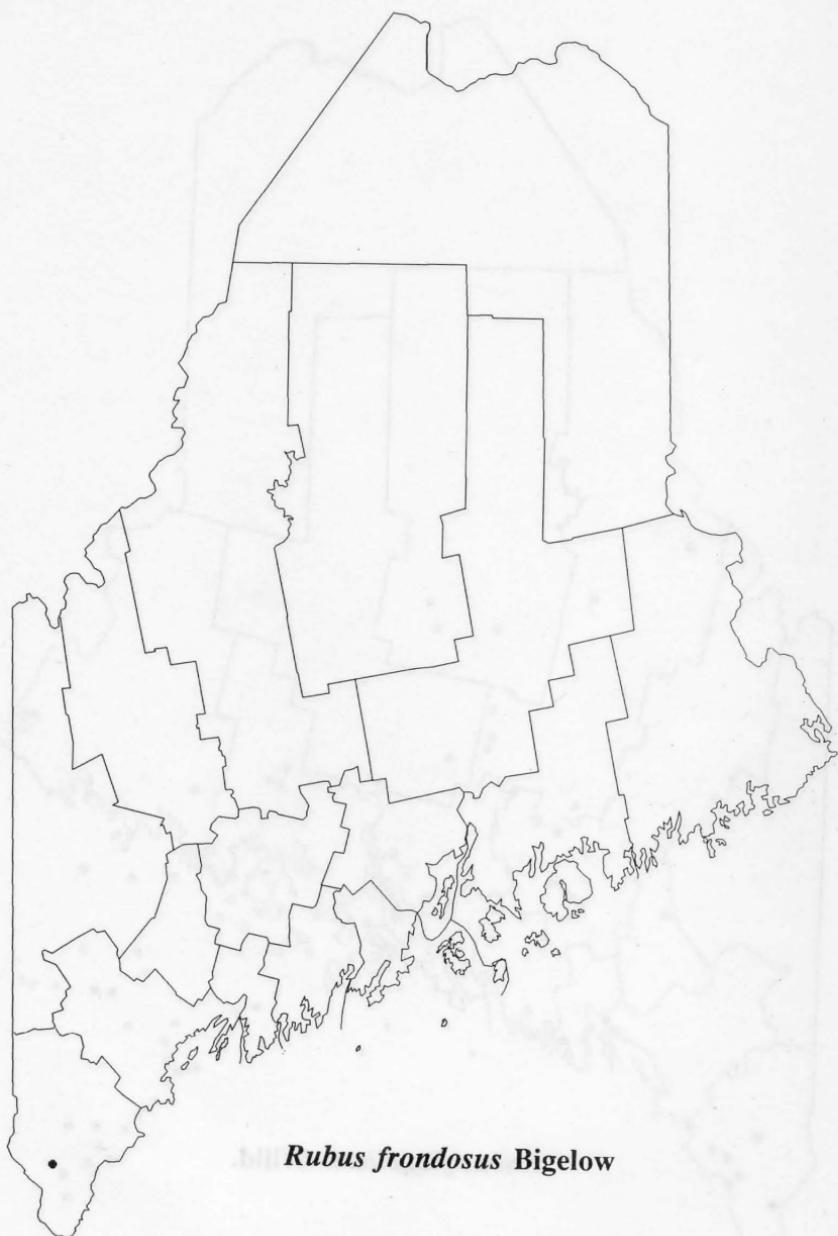
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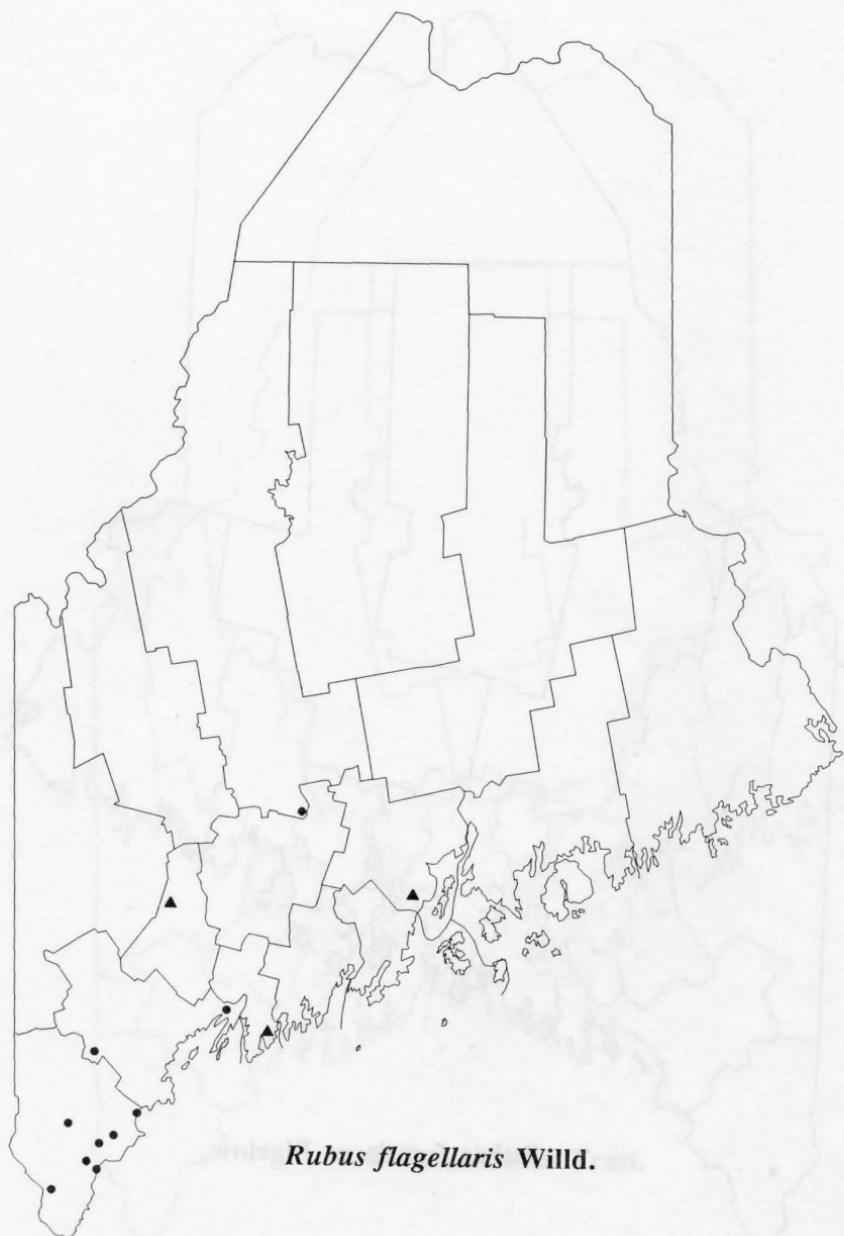


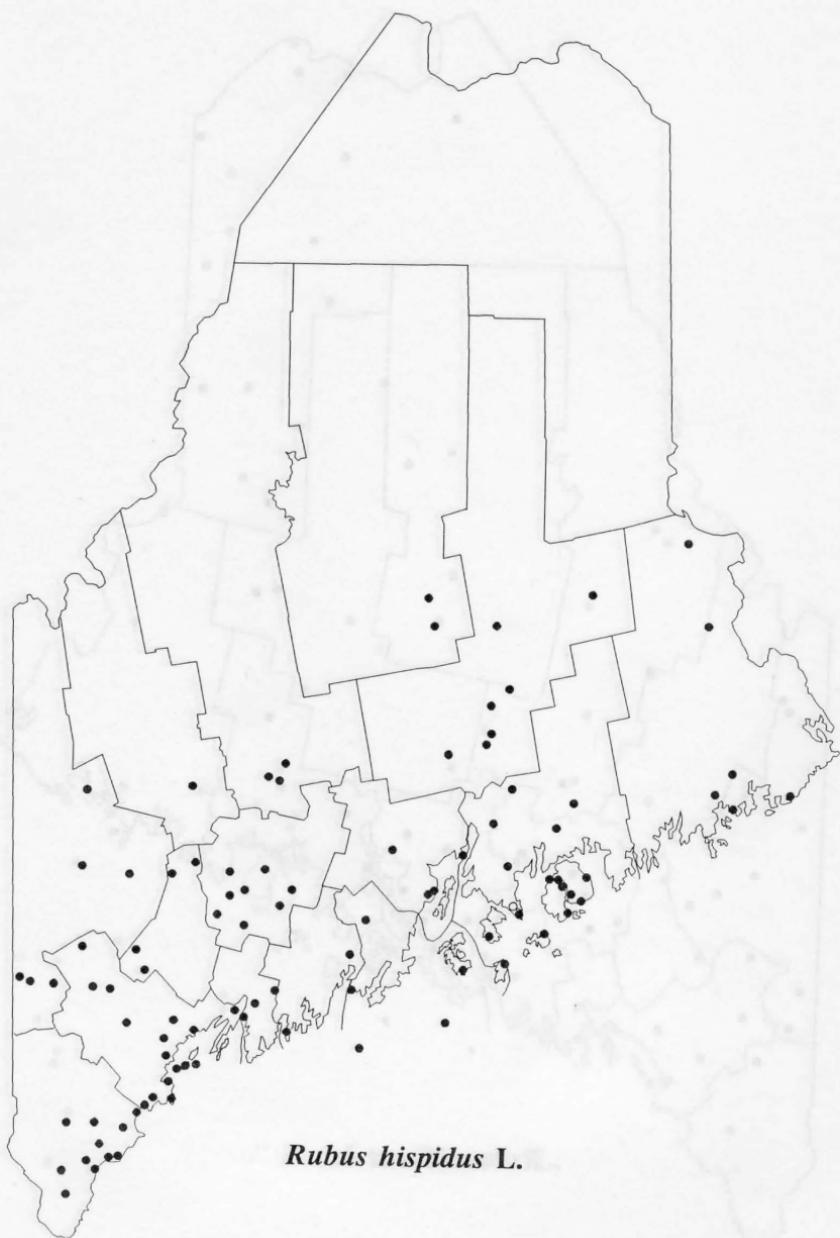


*Rubus enslenii* Tratt.

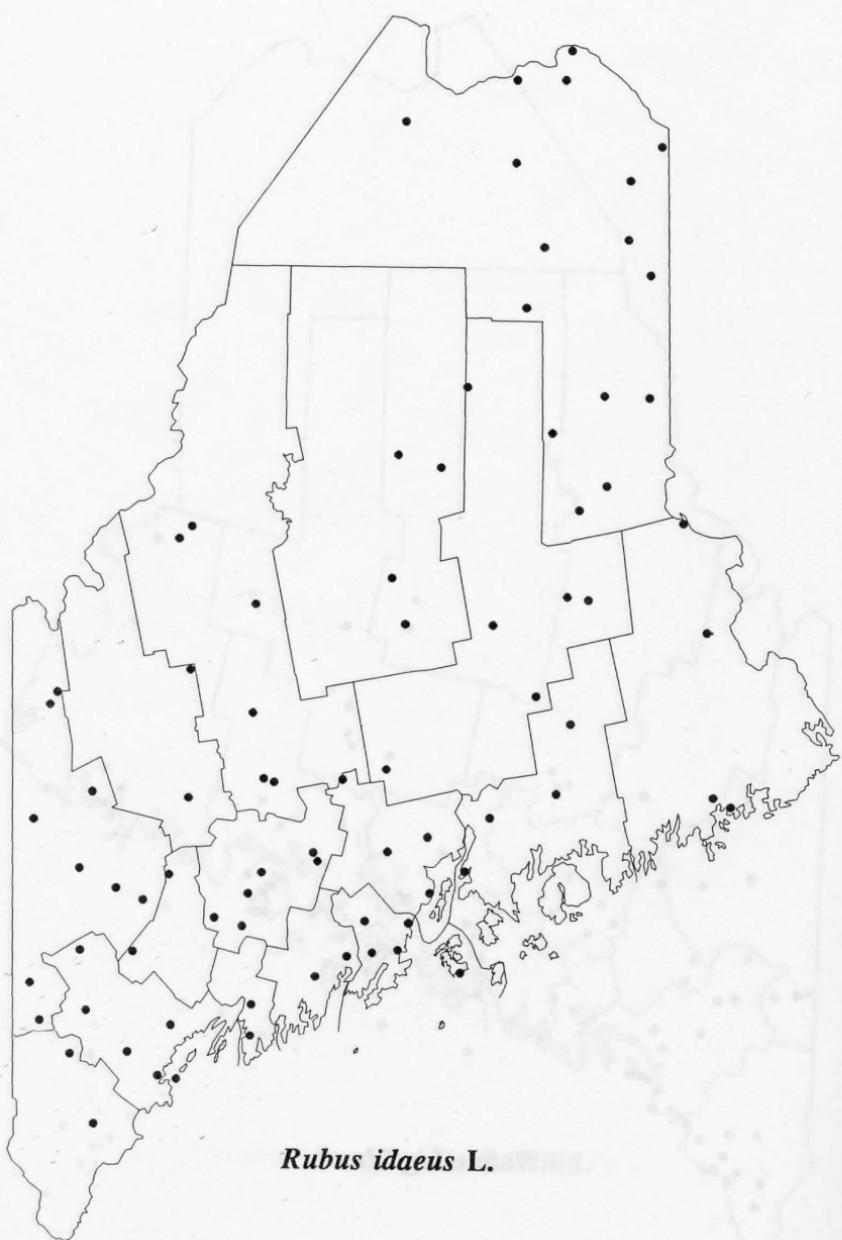


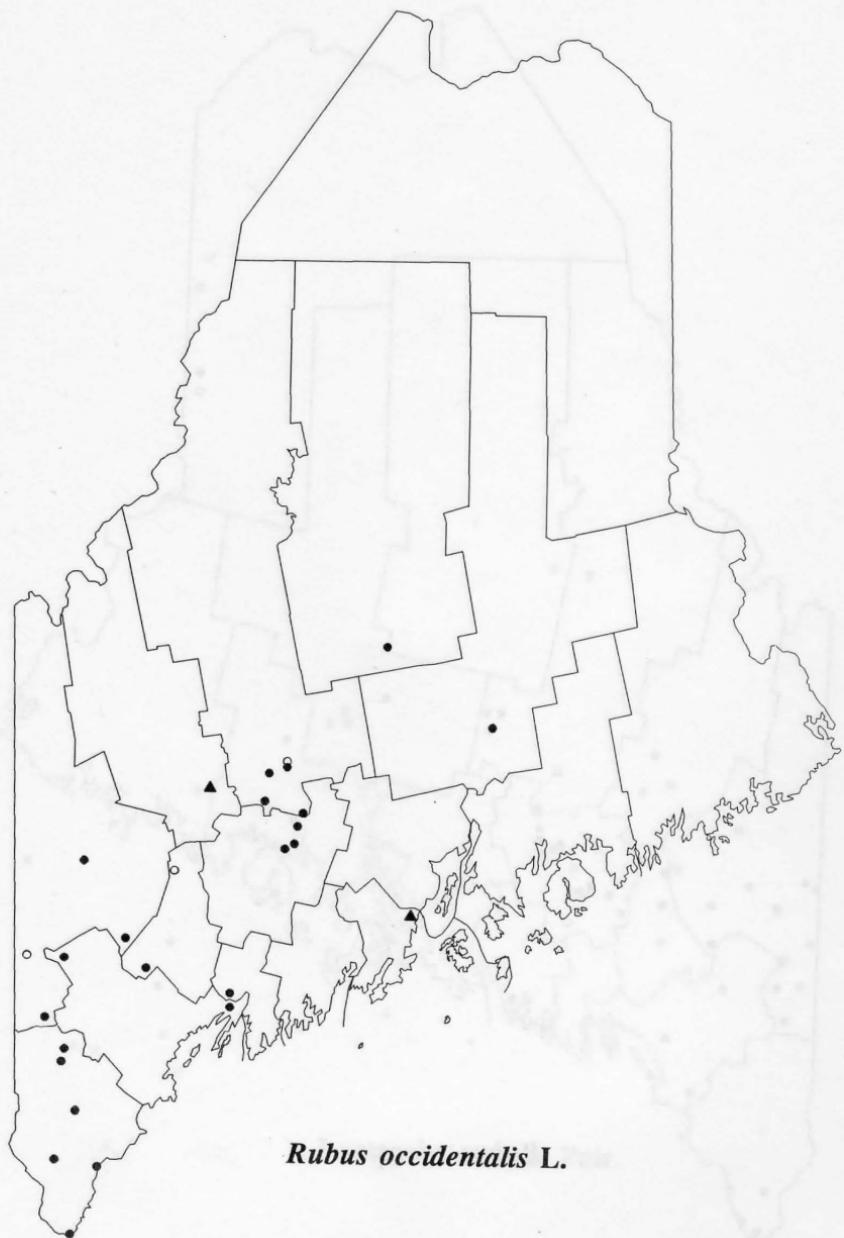
*Rubus frondosus* Bigelow

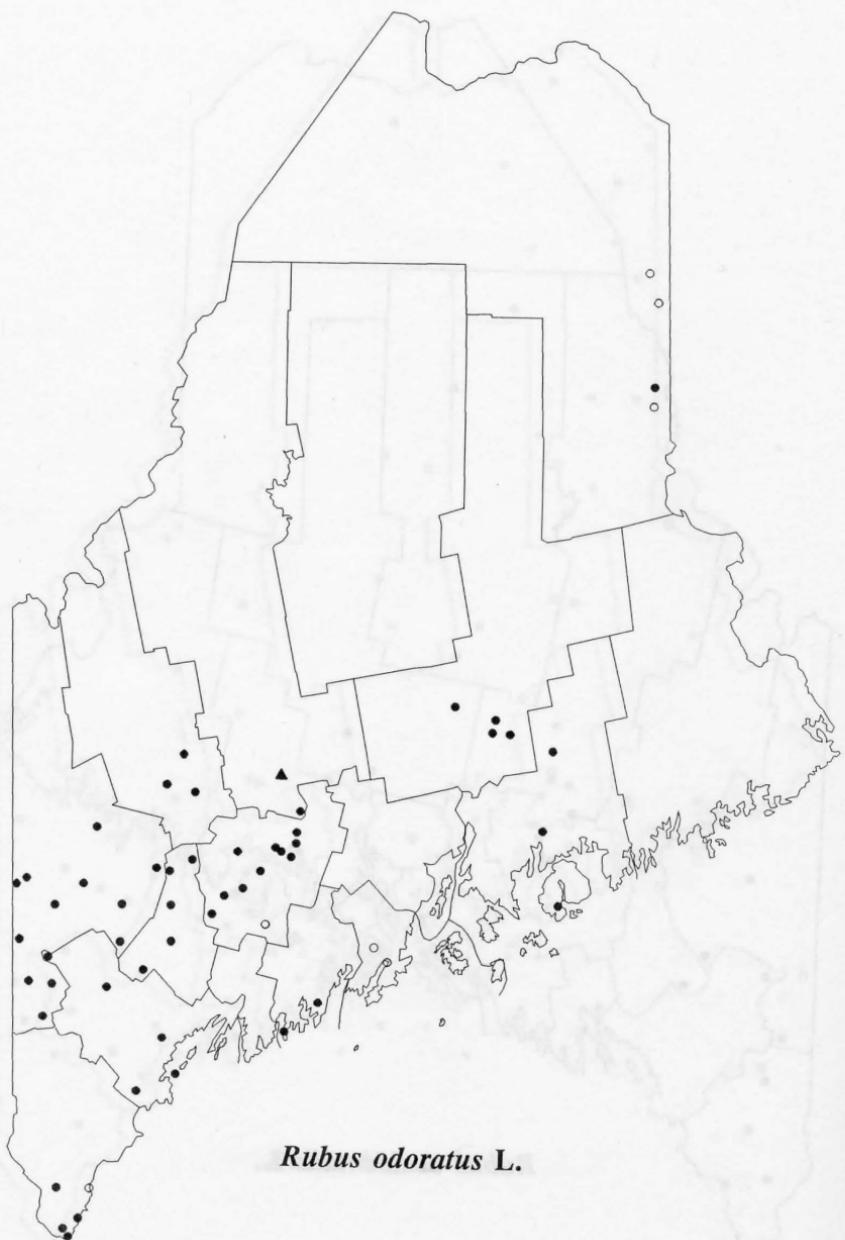




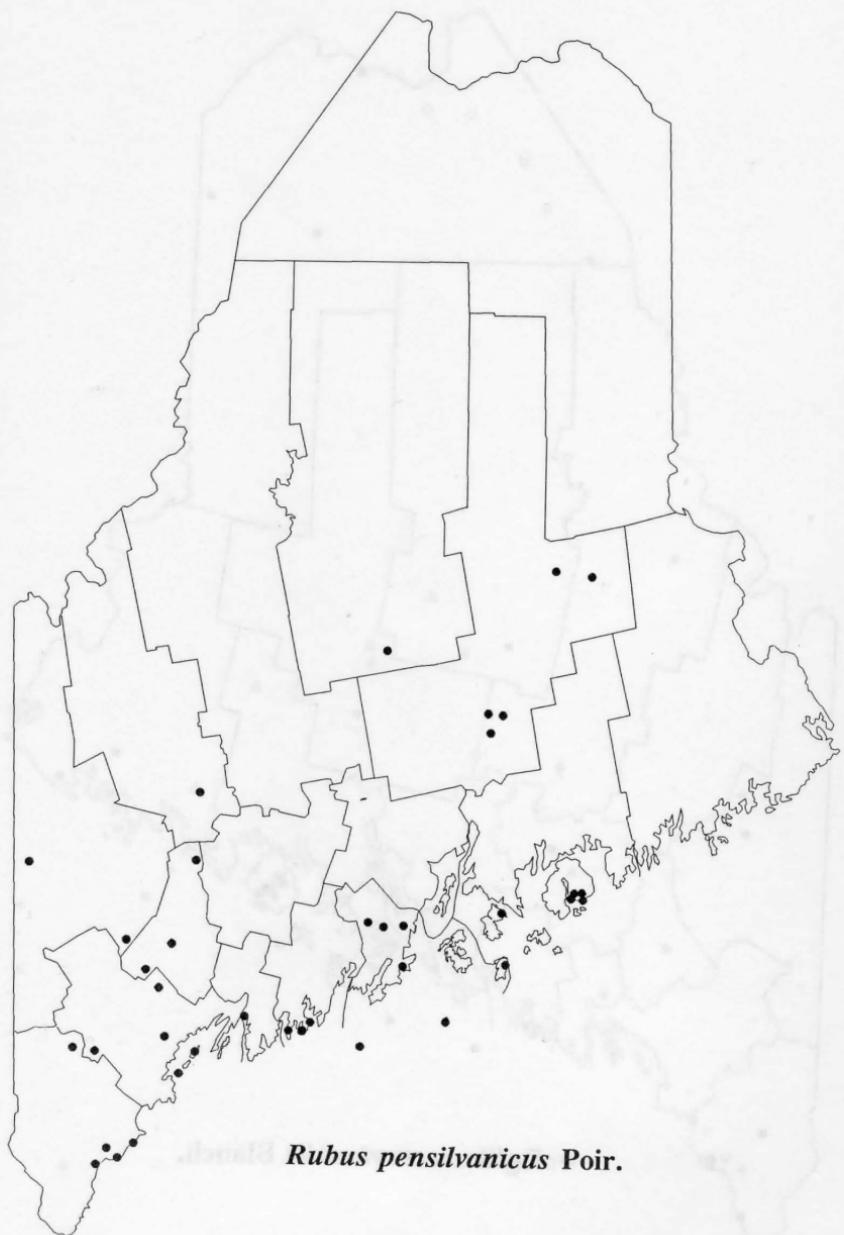
*Rubus hispida* L.

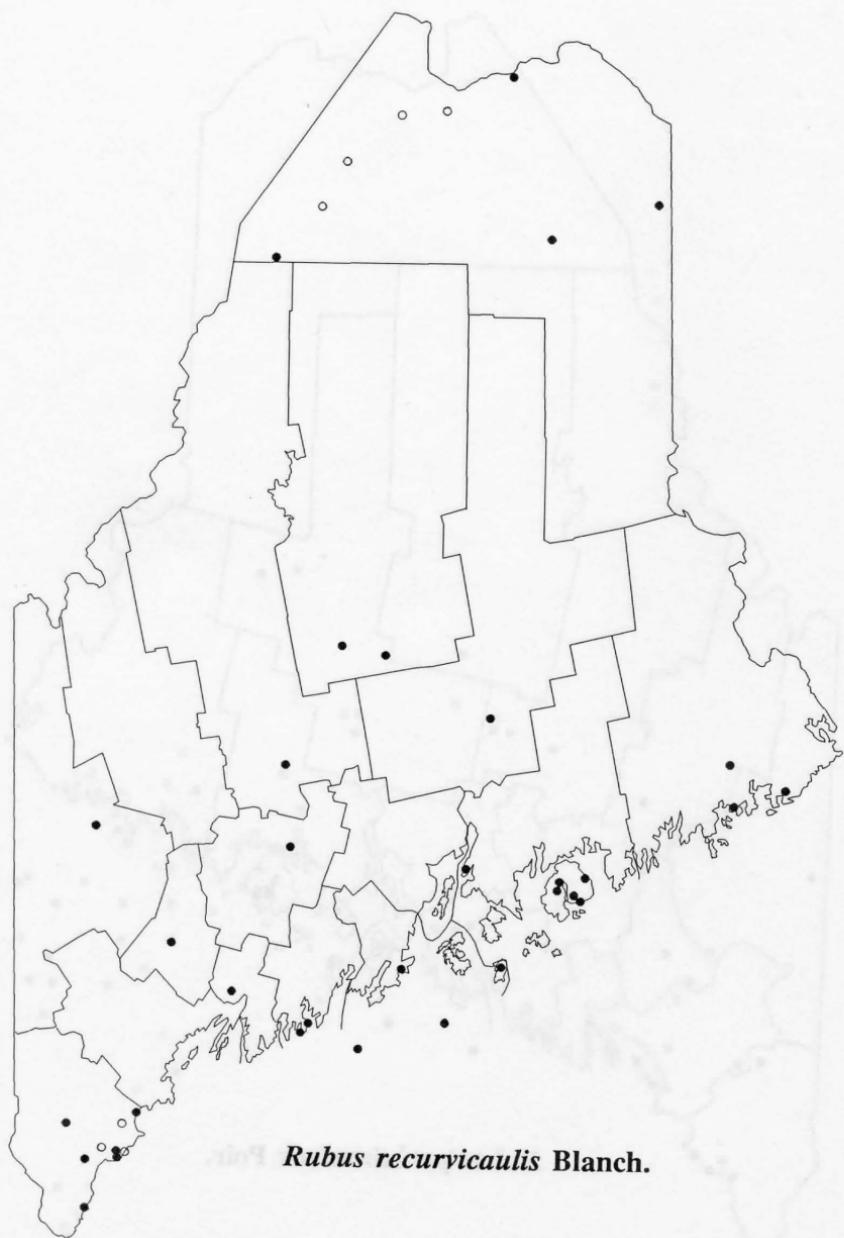


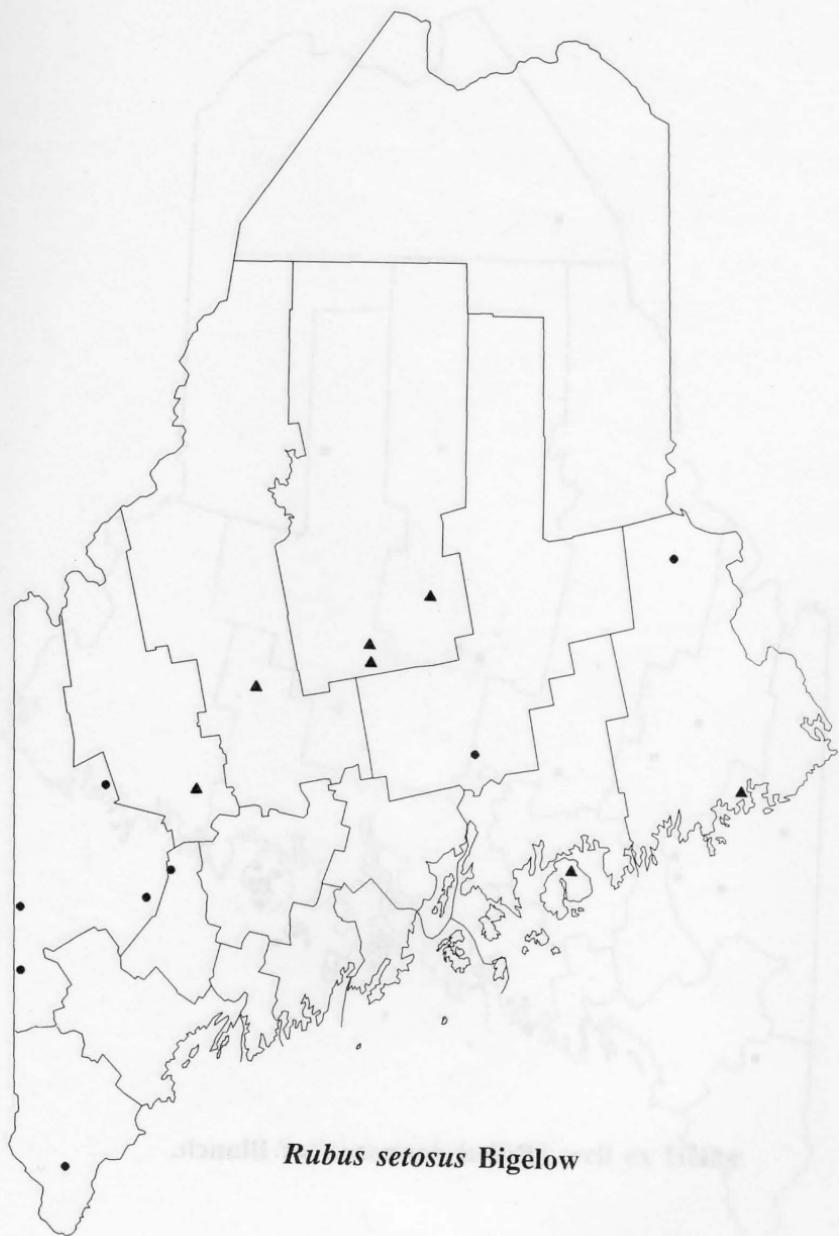


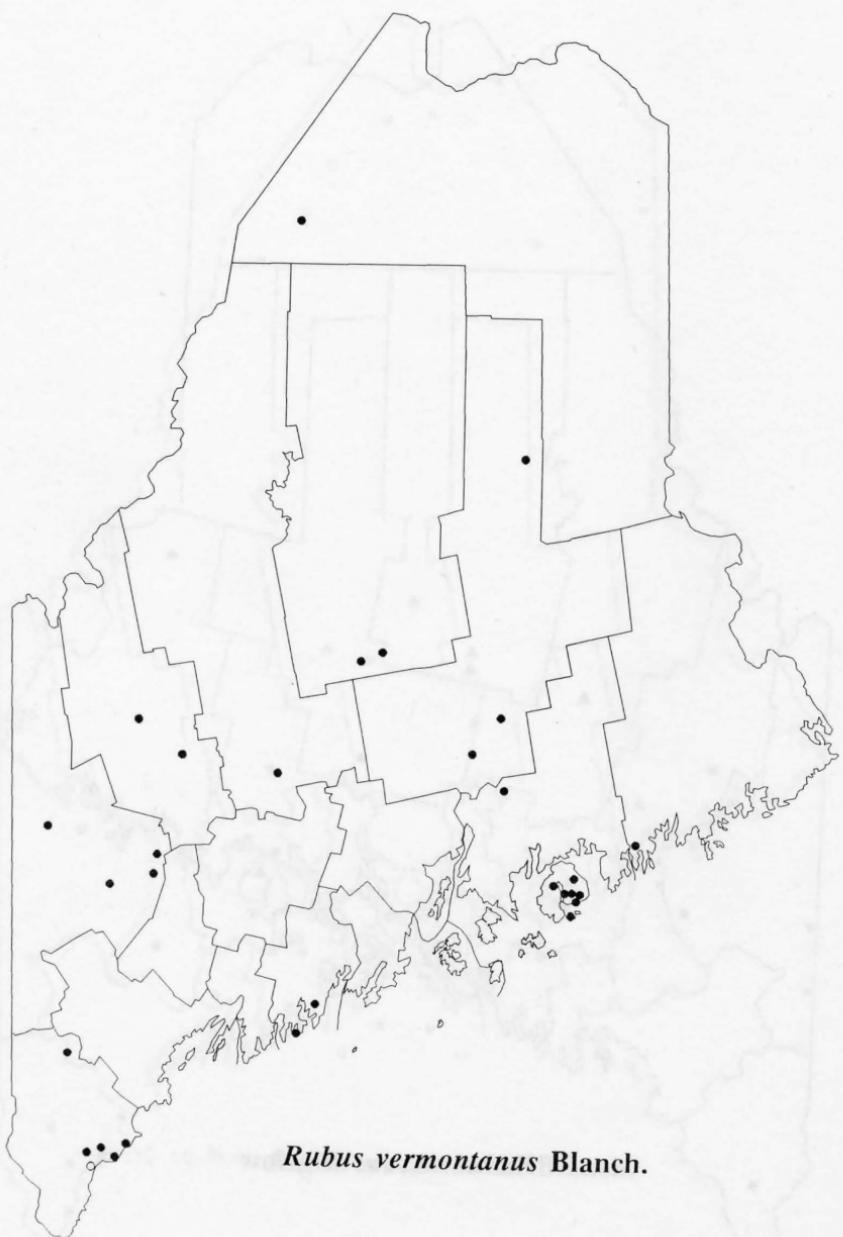


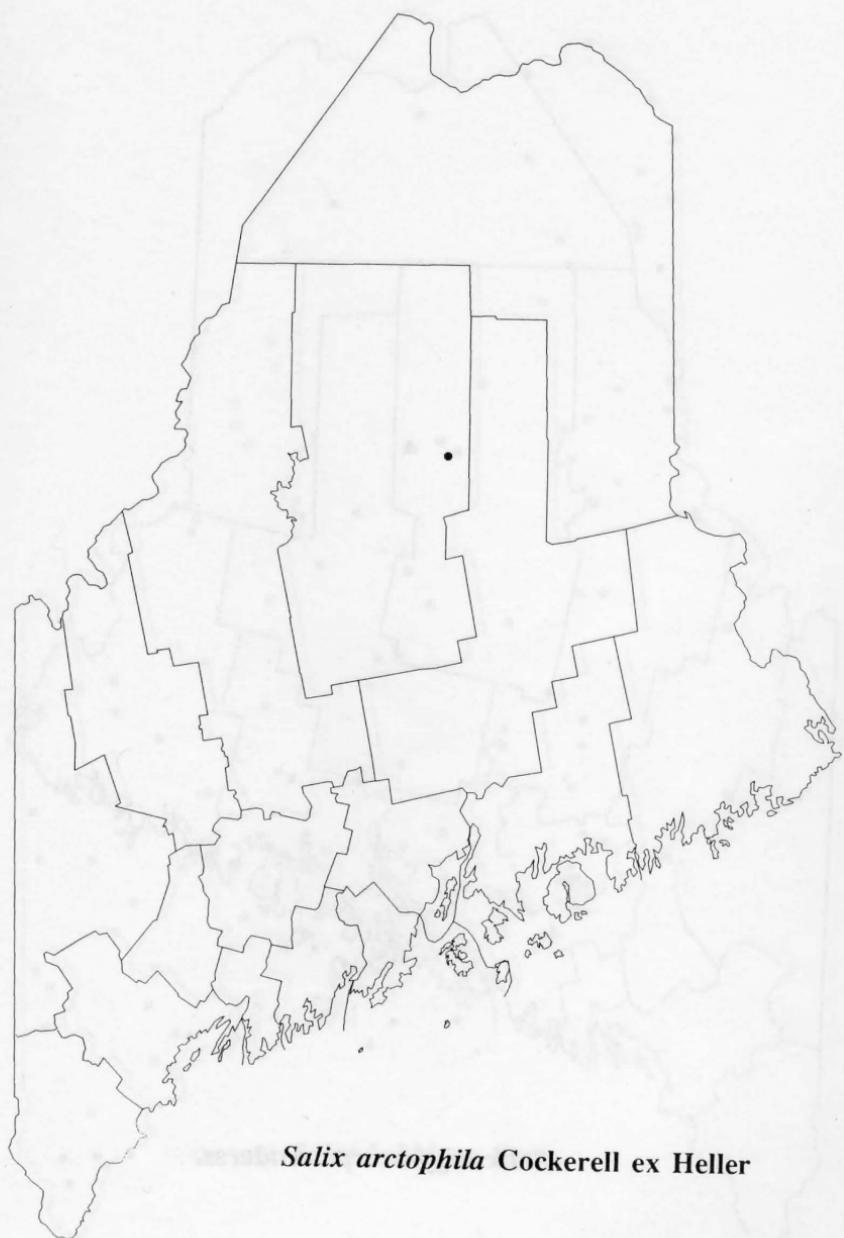
*Rubus odoratus* L.



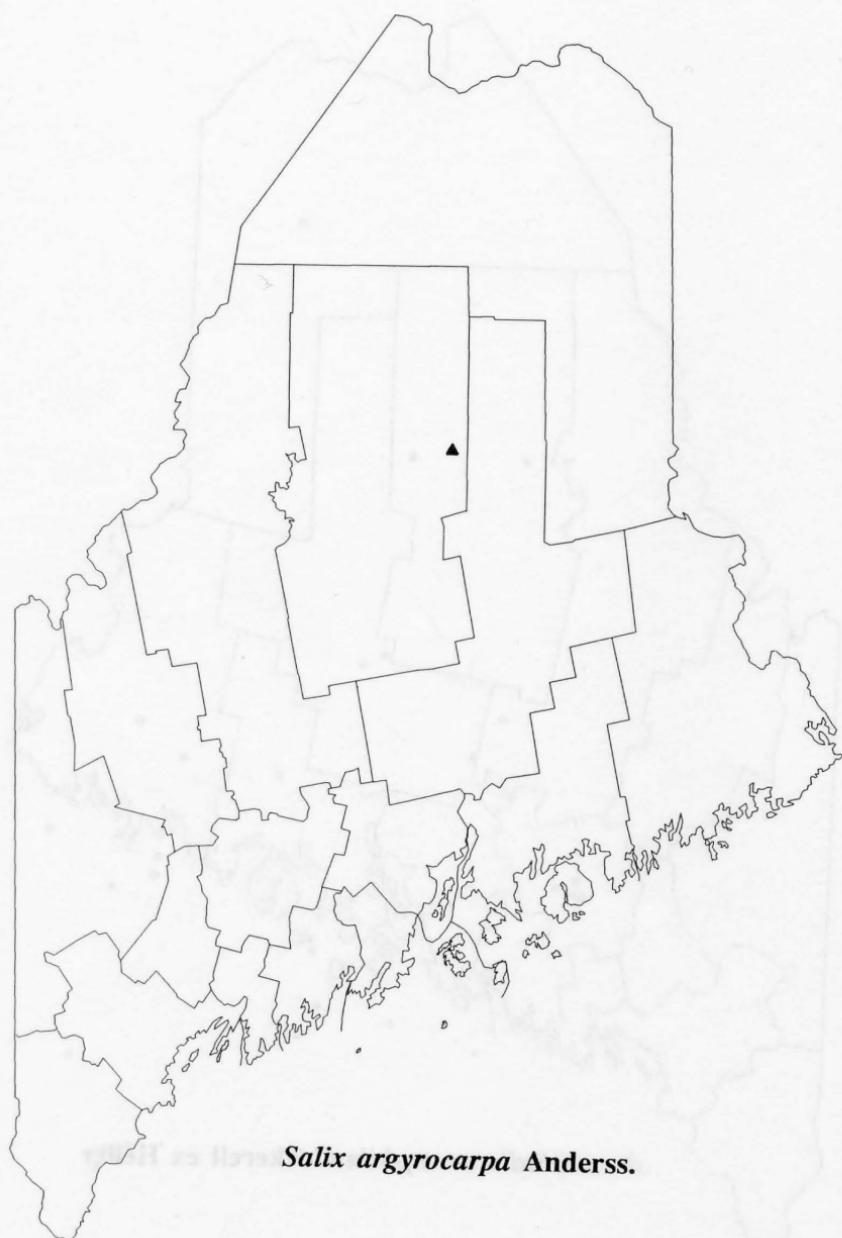




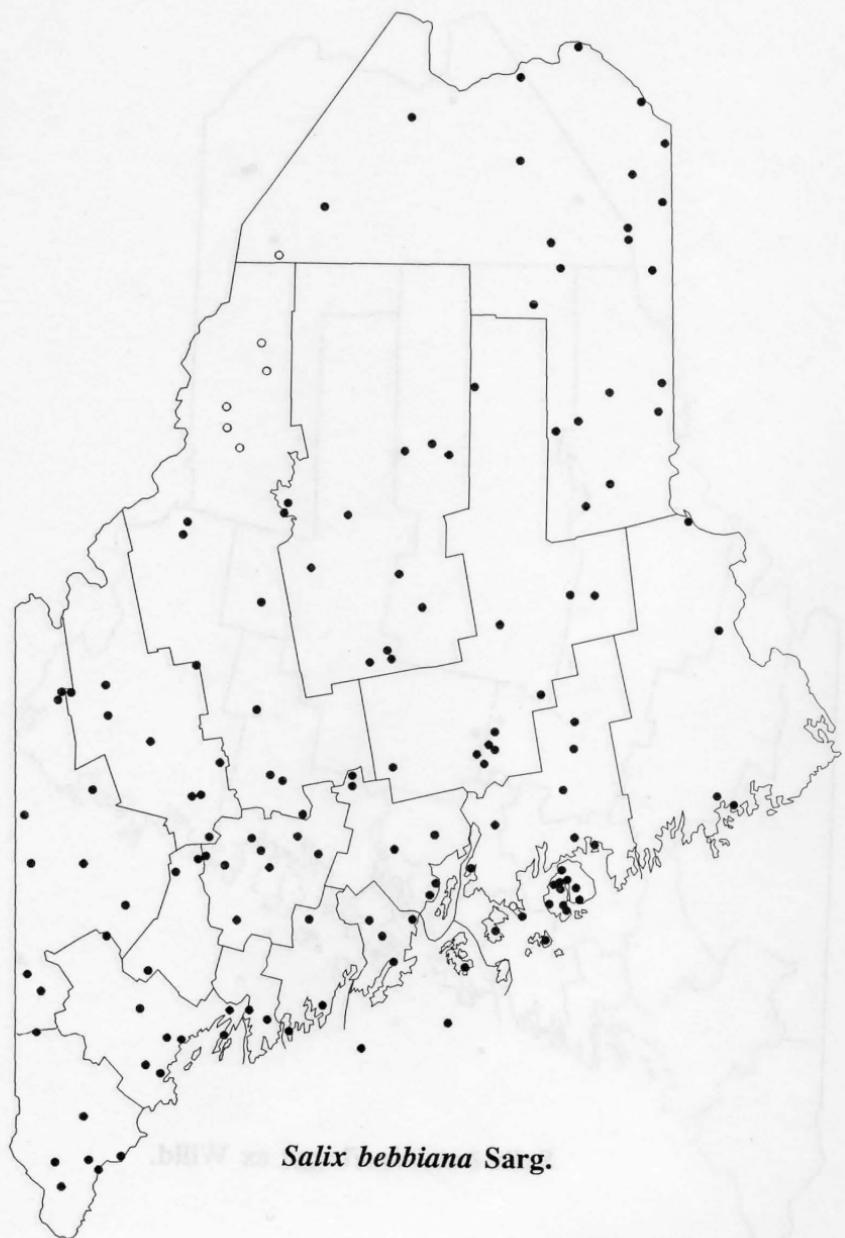


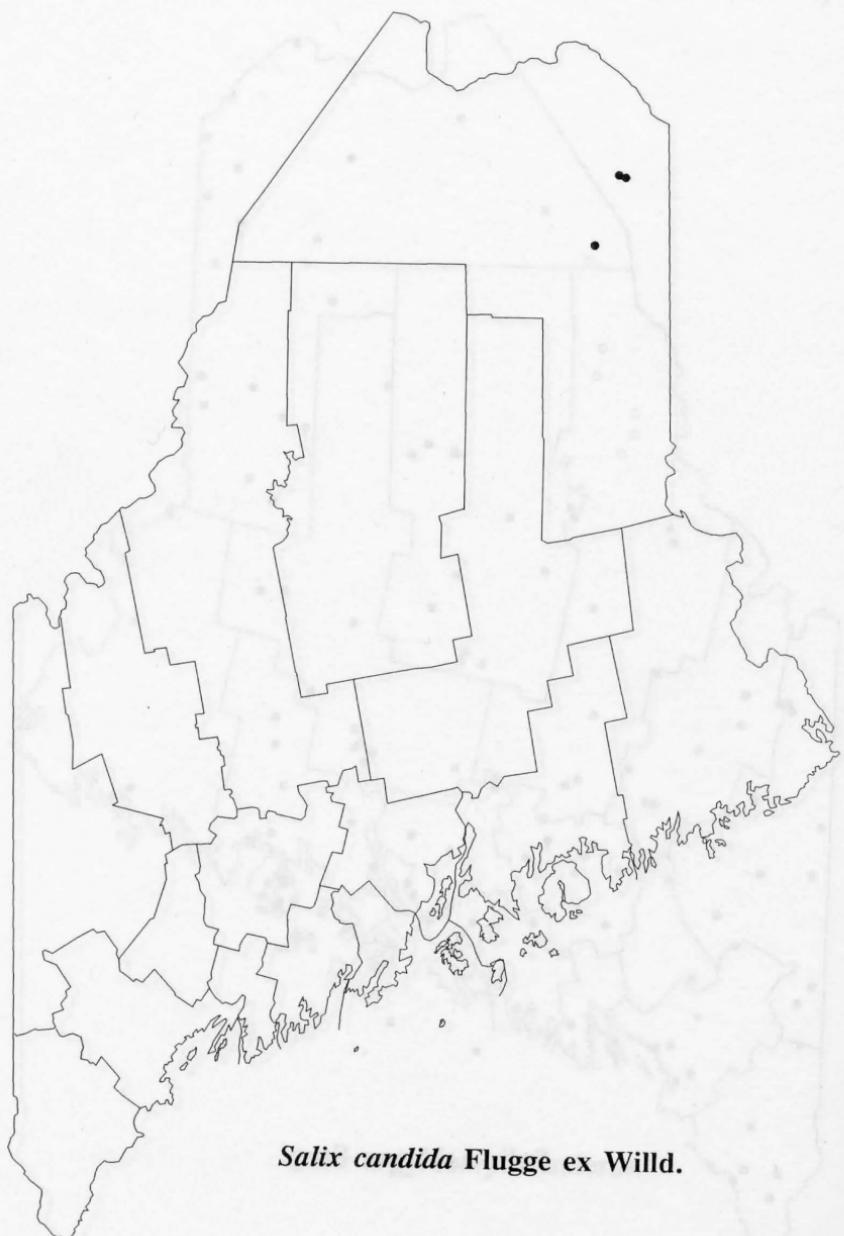


*Salix arctophila* Cockerell ex Heller

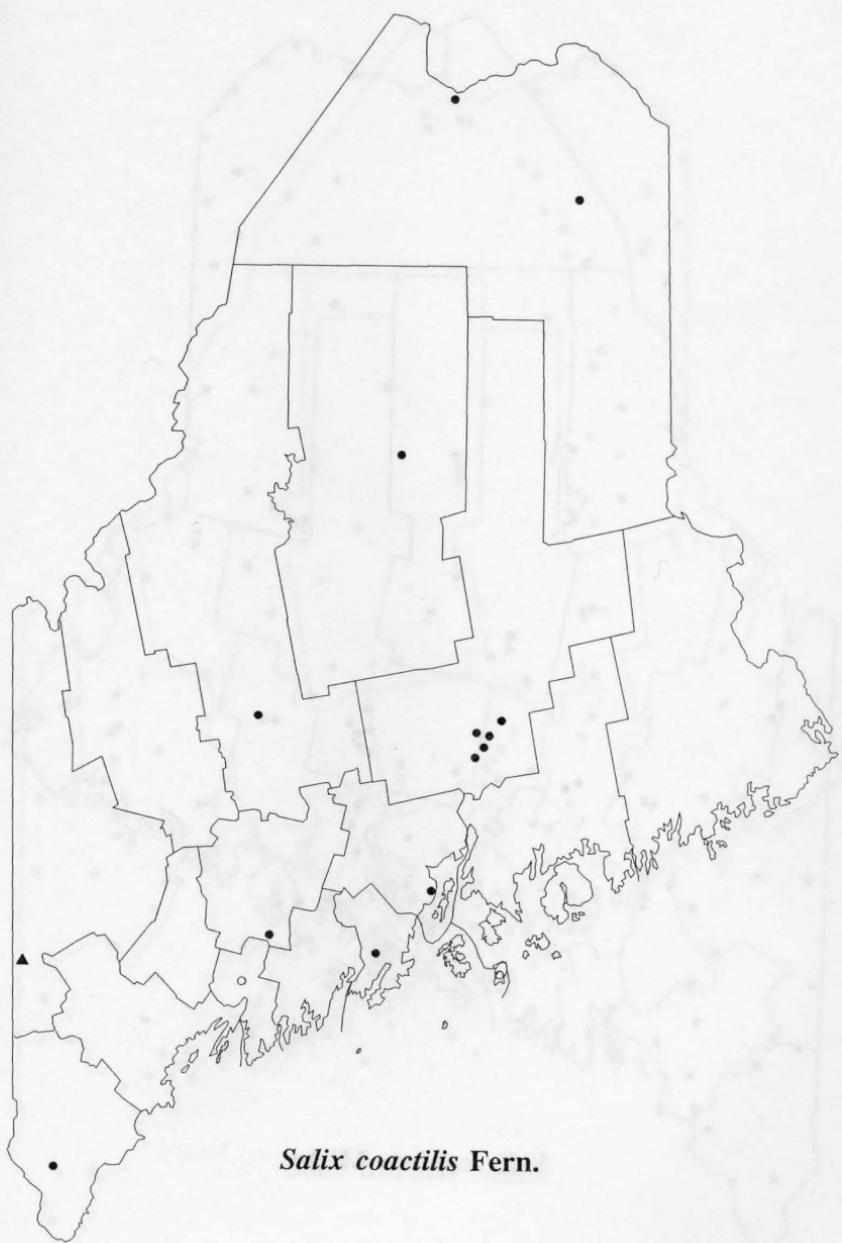


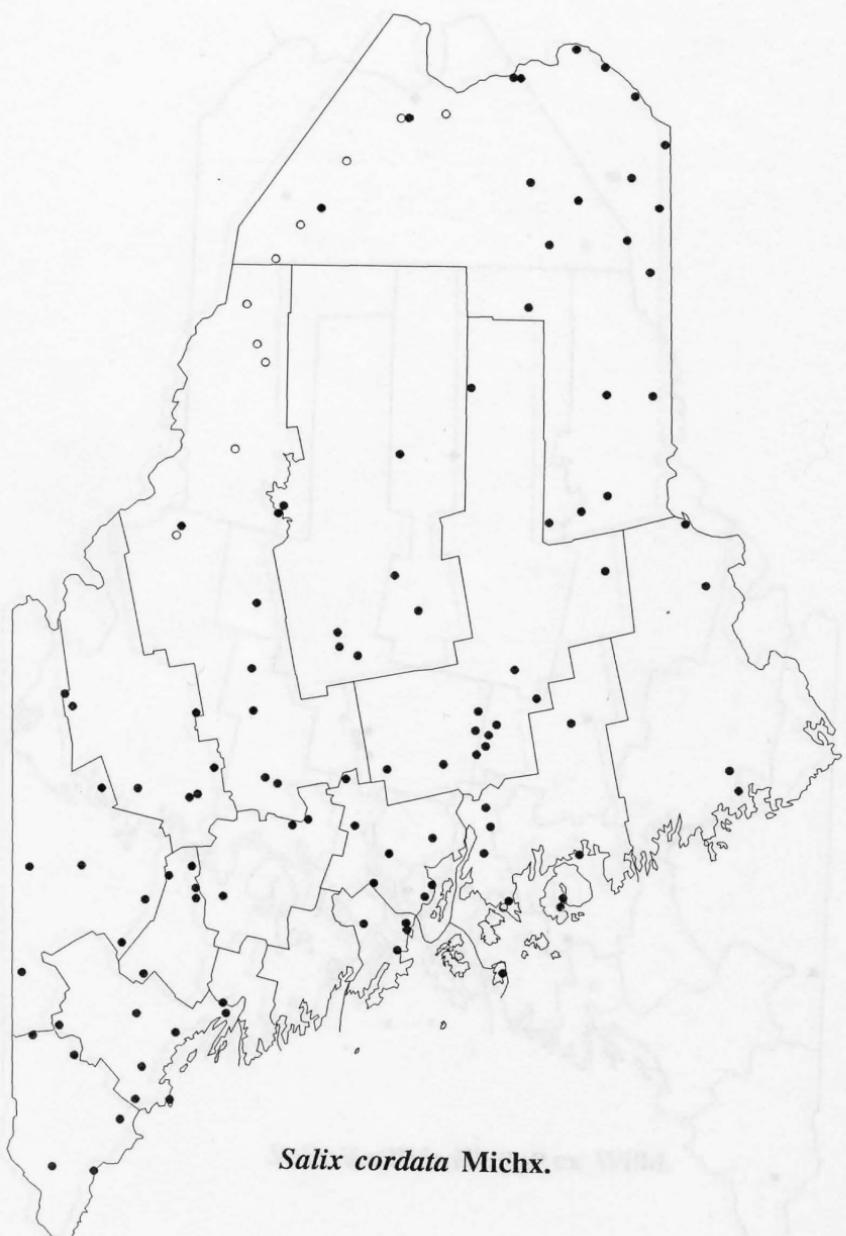
*Salix argyrocarpa* Anderss.

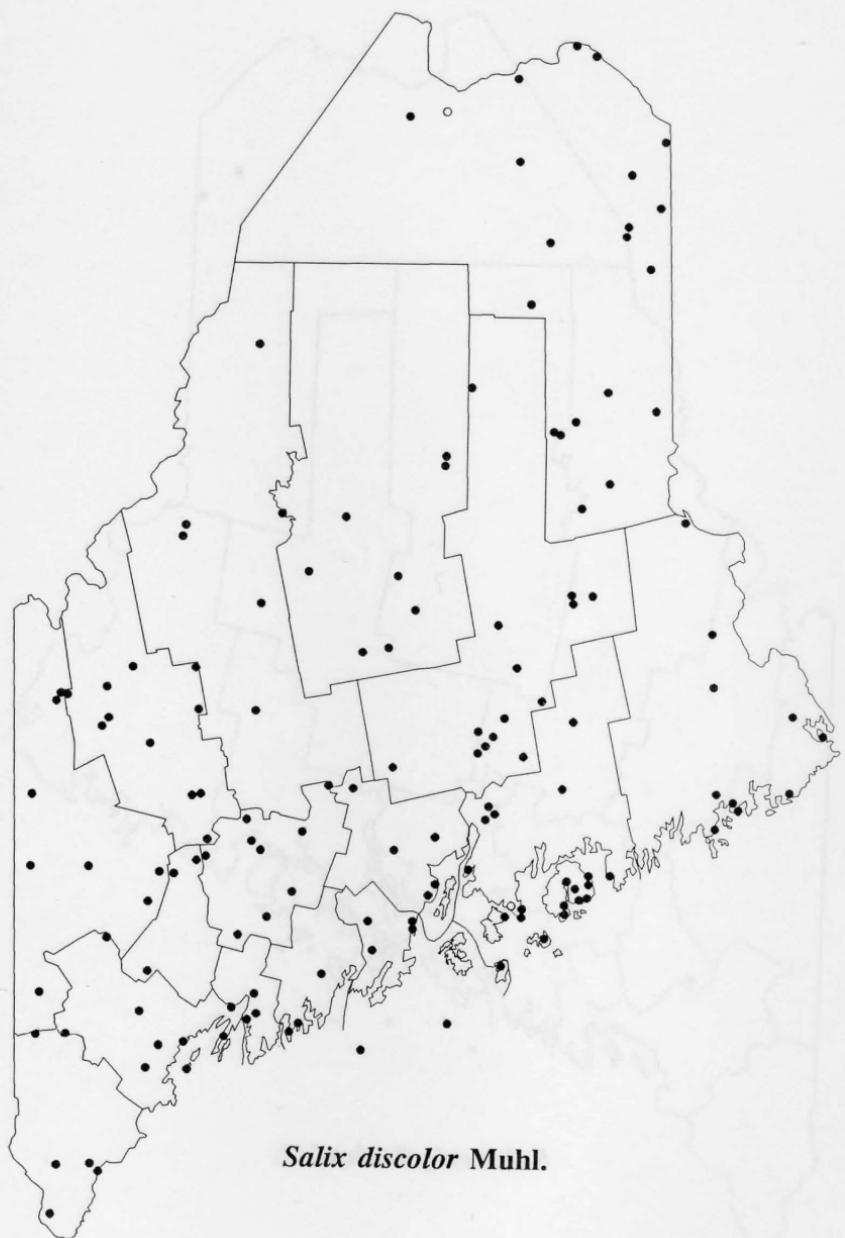


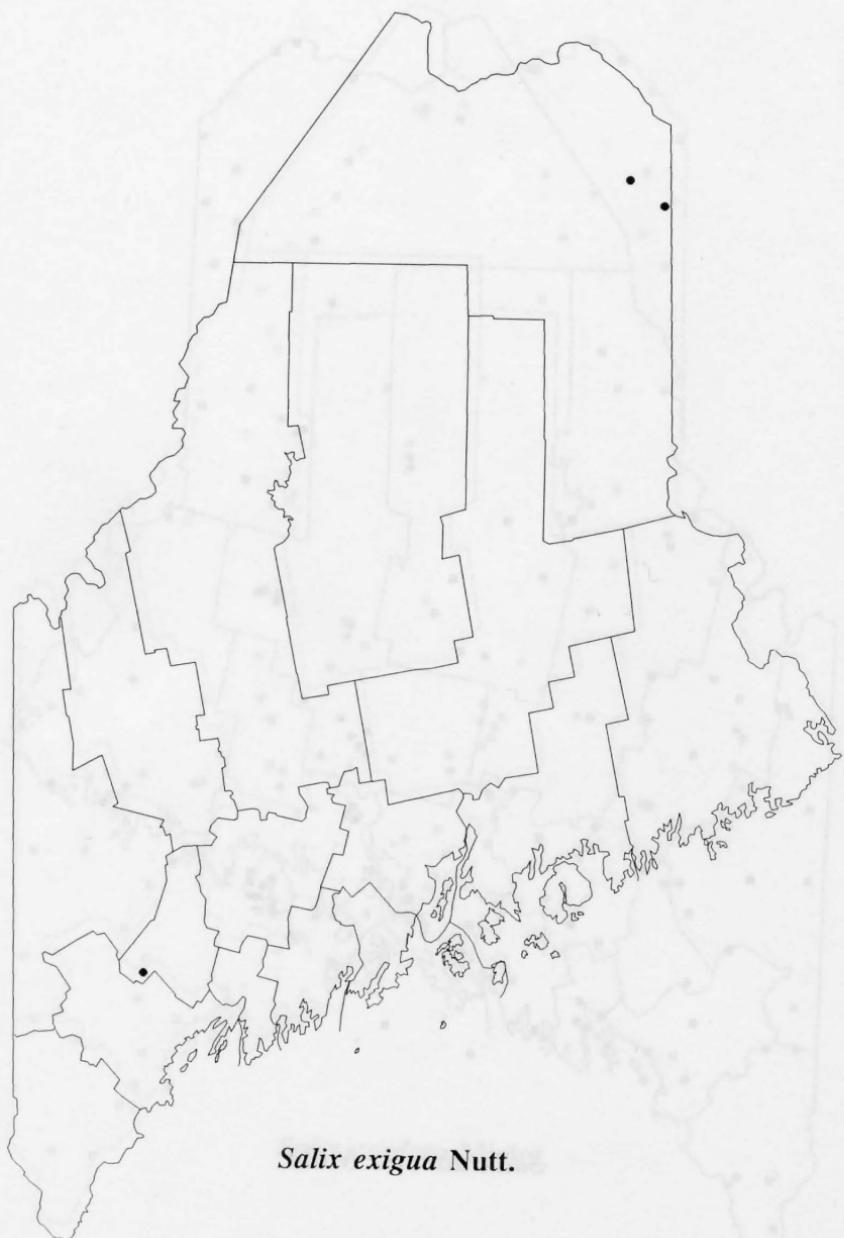


*Salix candida* Flugge ex Willd.

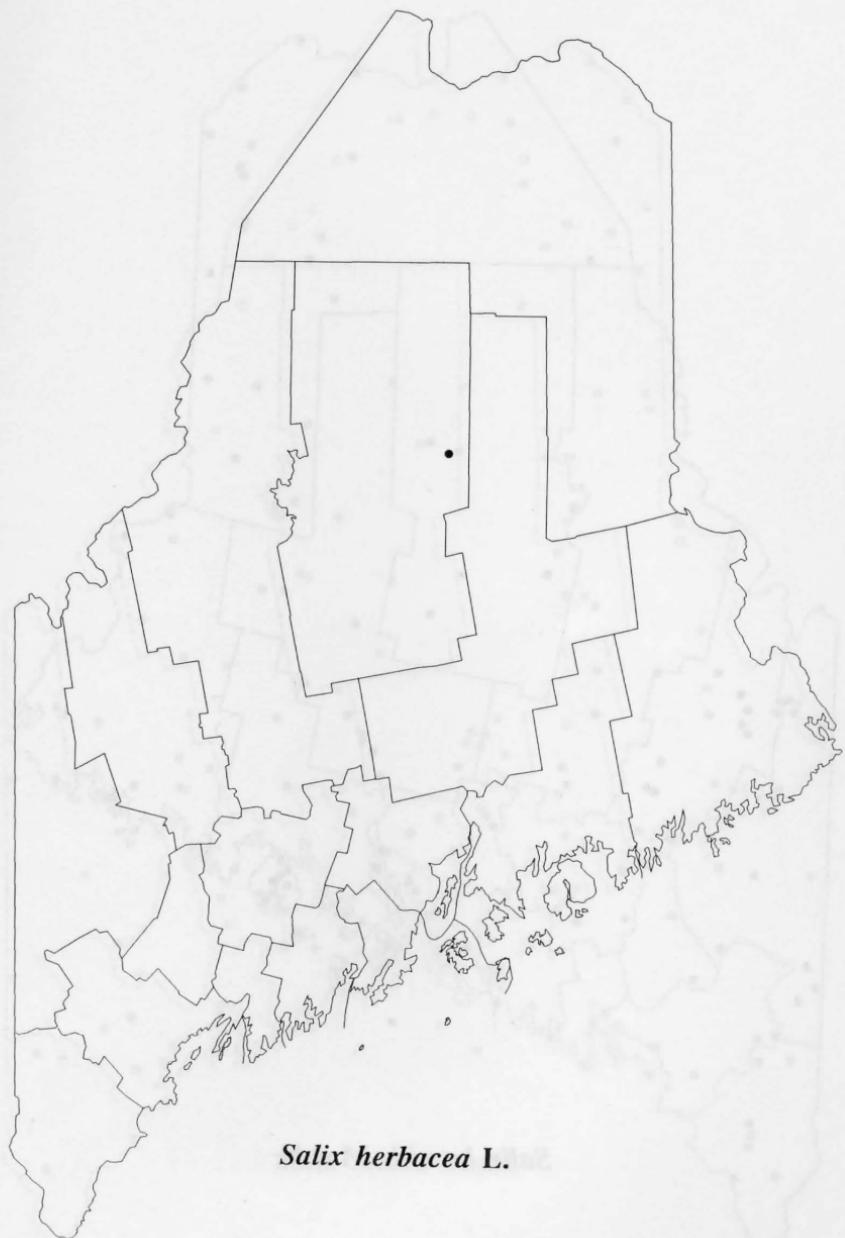




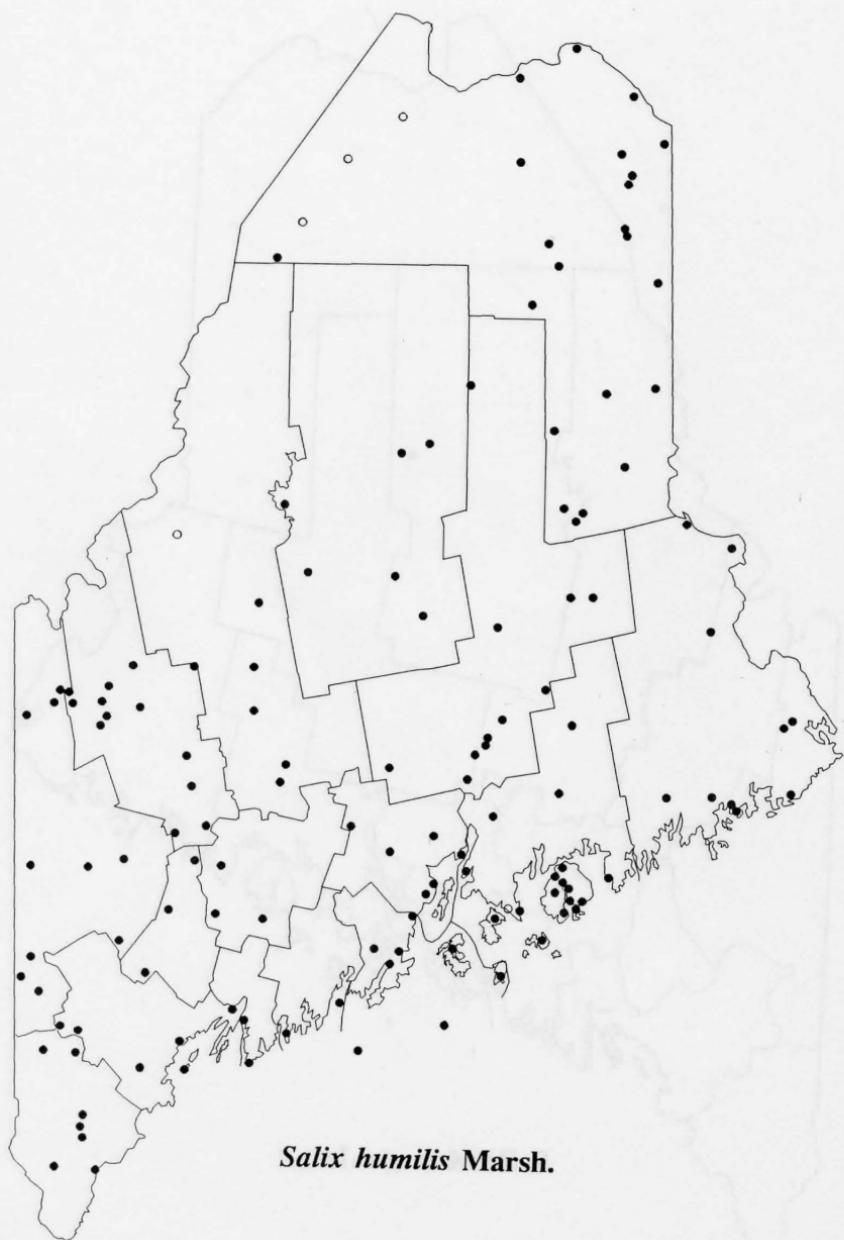


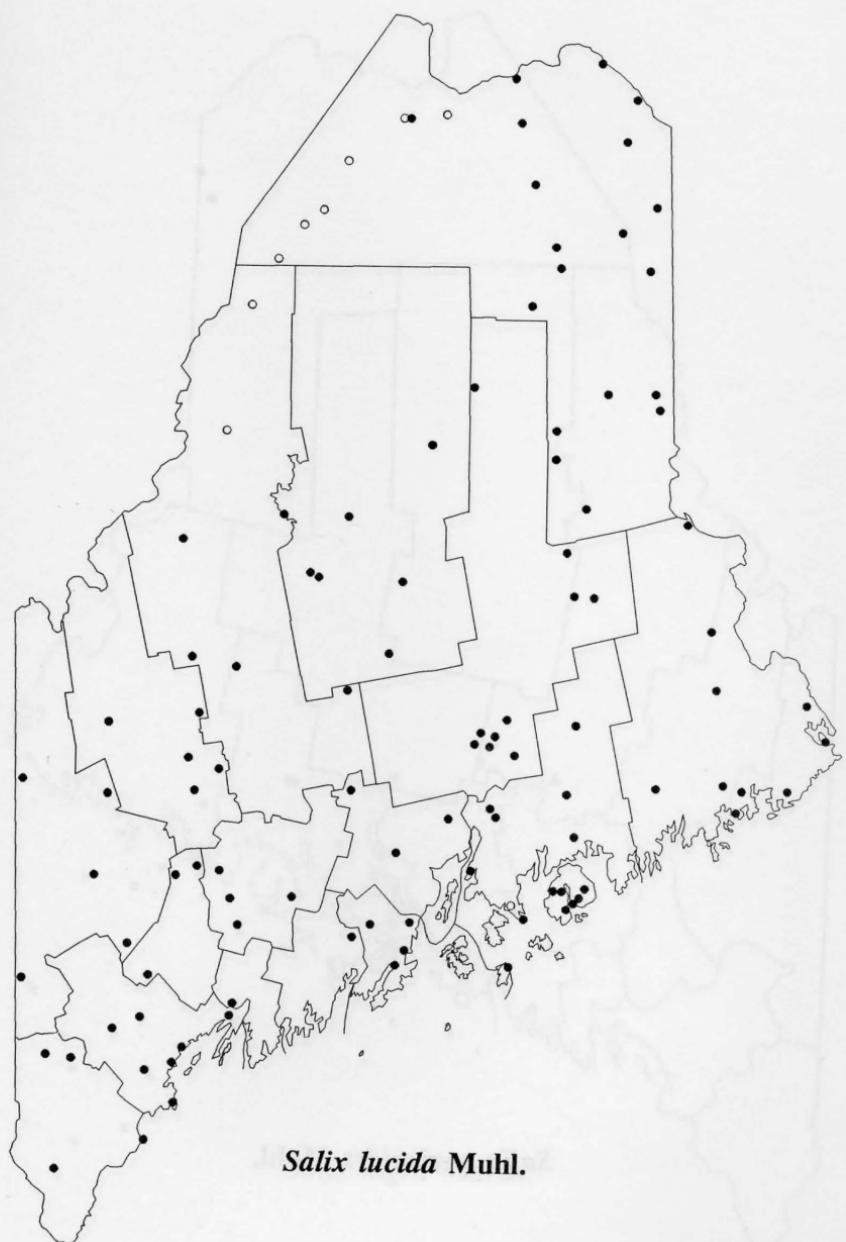


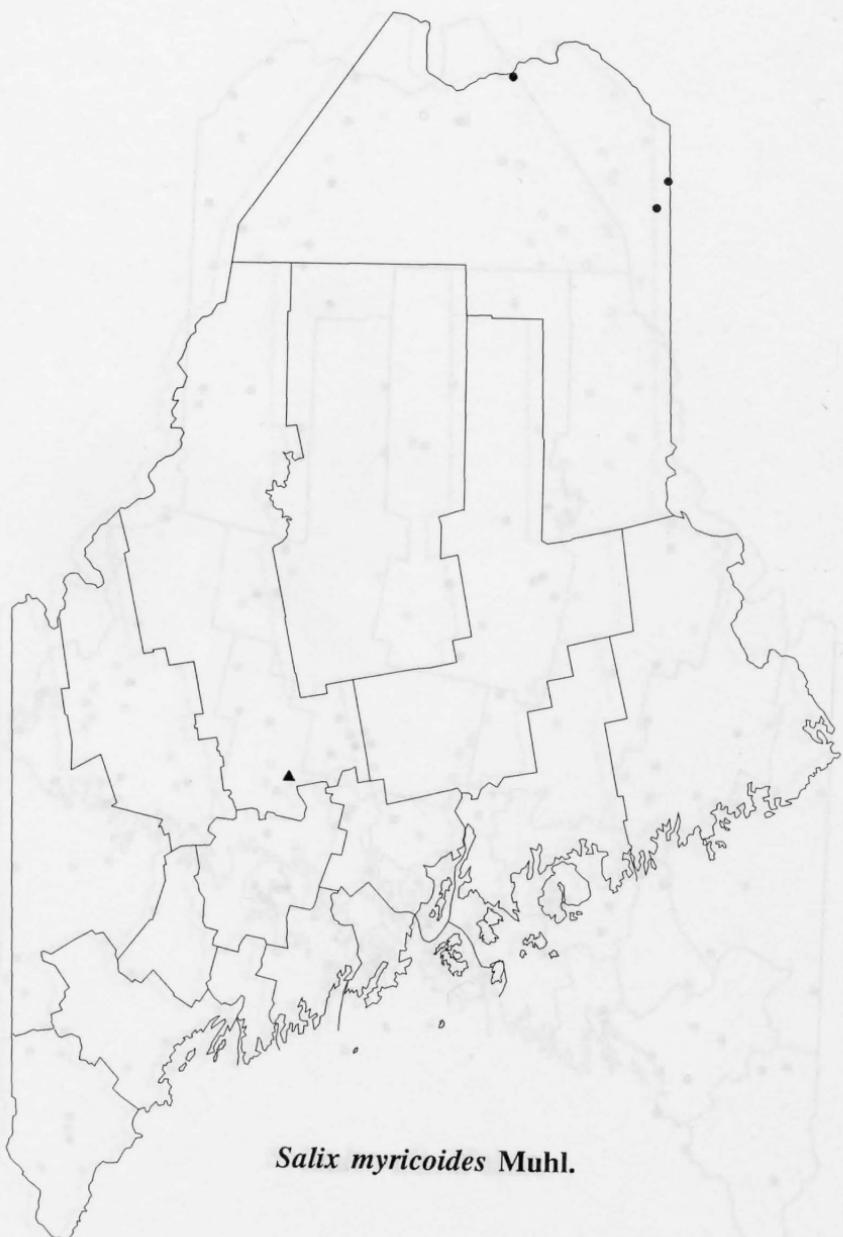
*Salix exigua* Nutt.

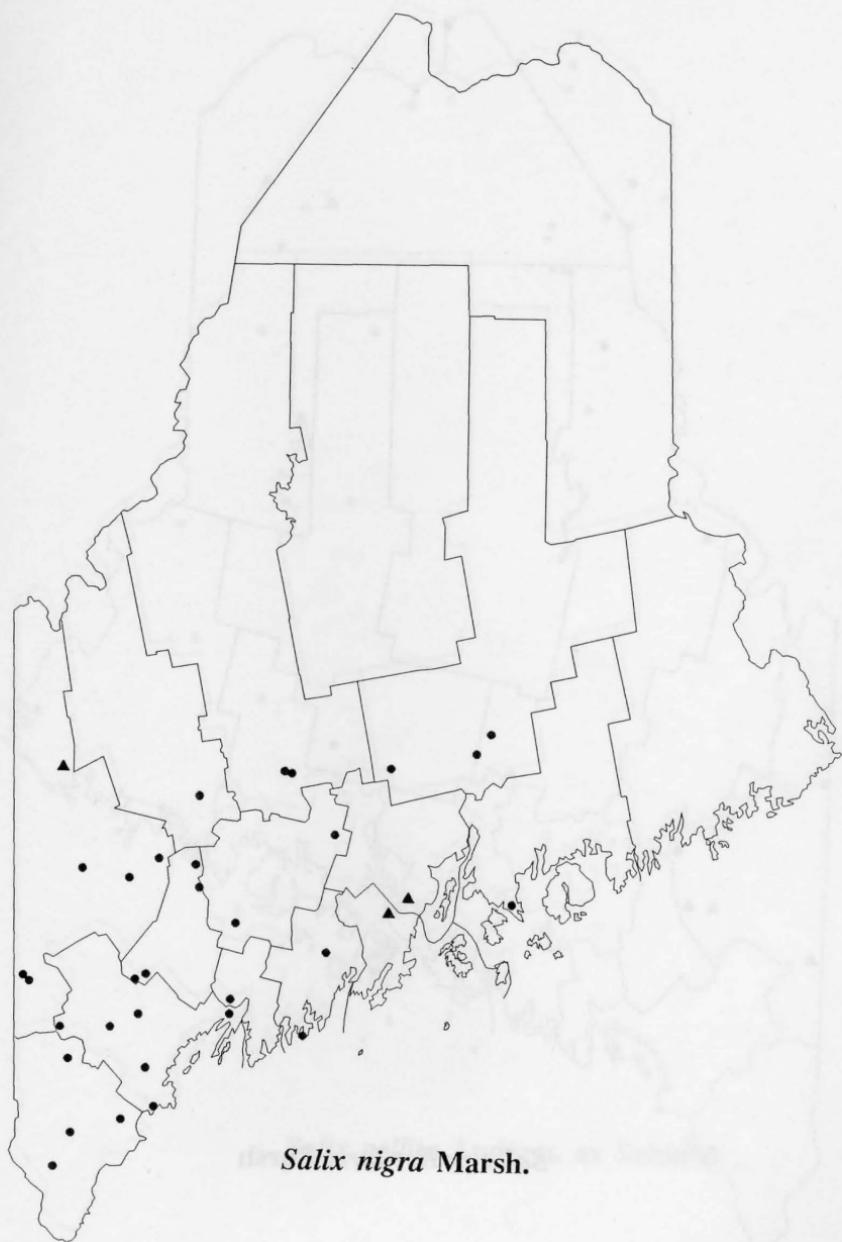


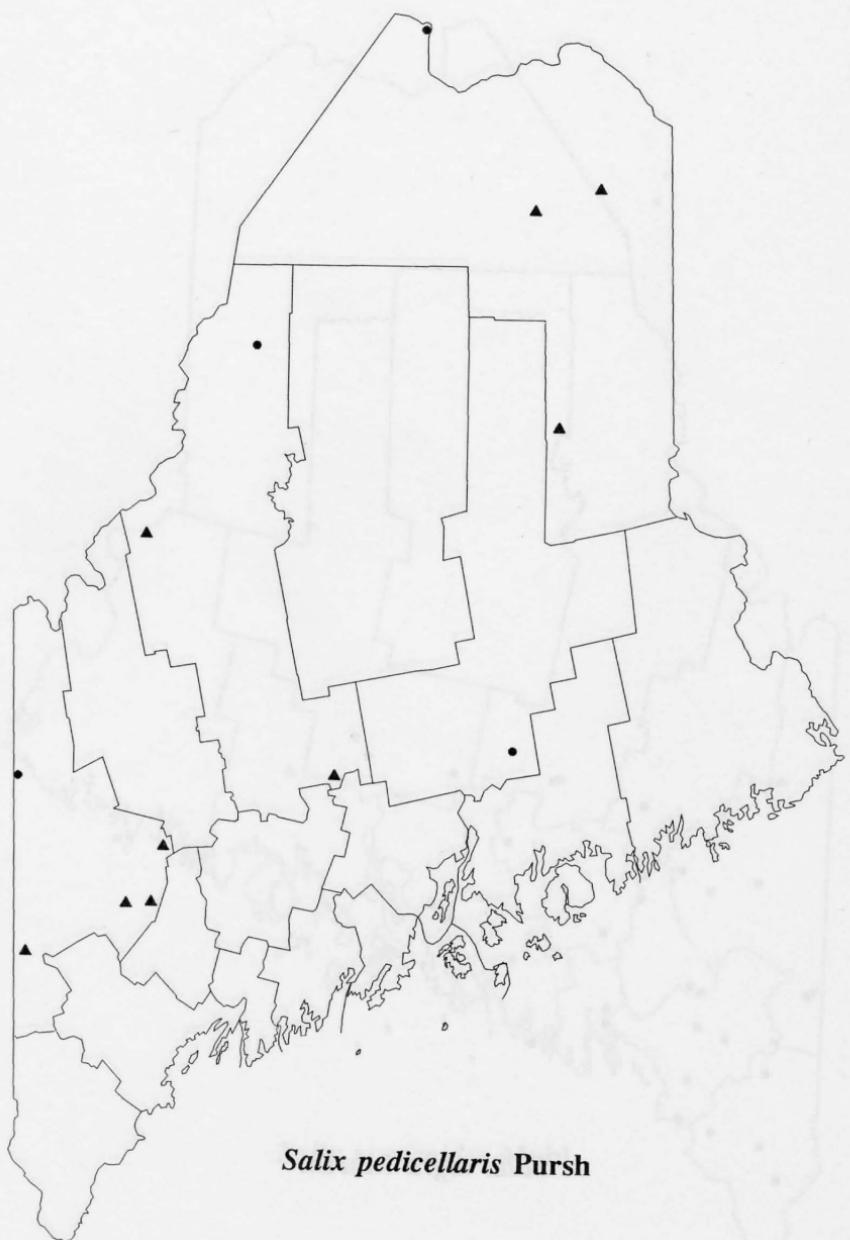
*Salix herbacea* L.

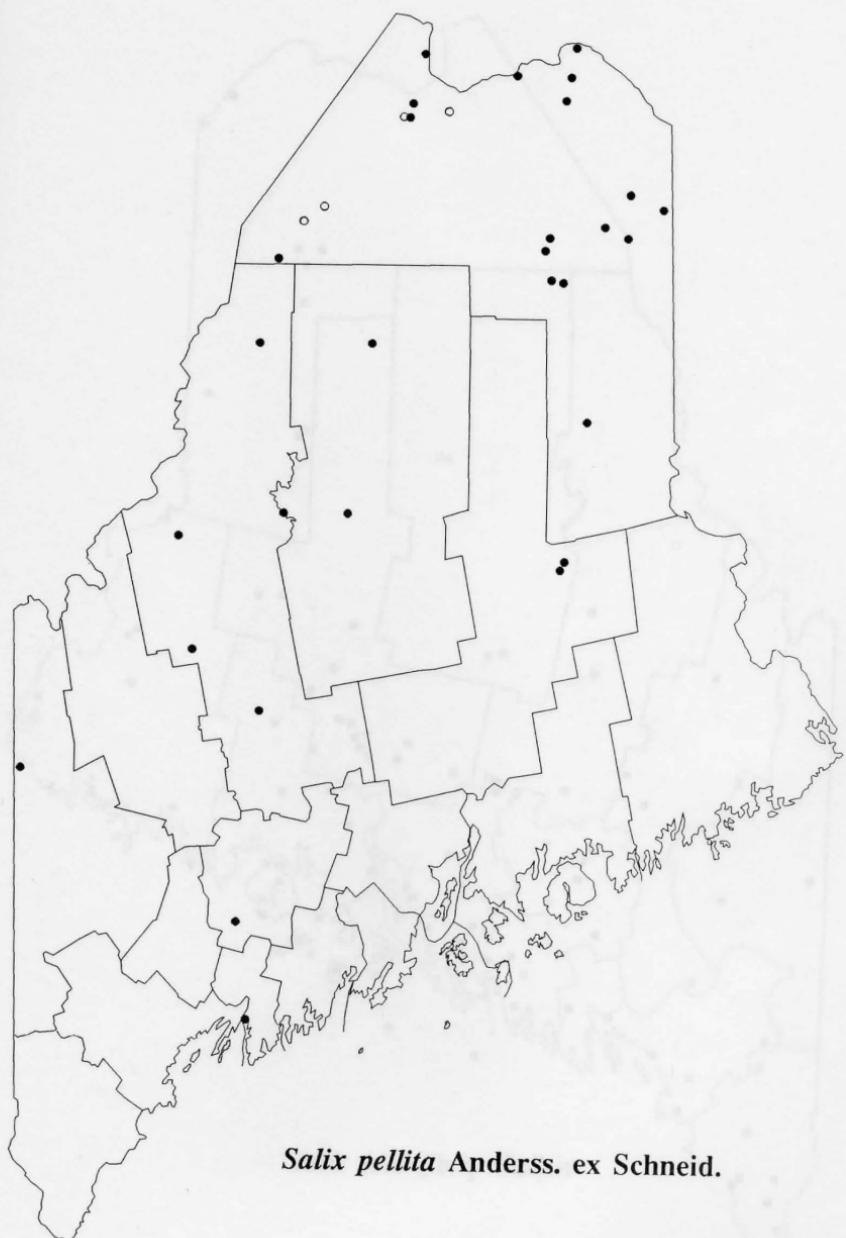




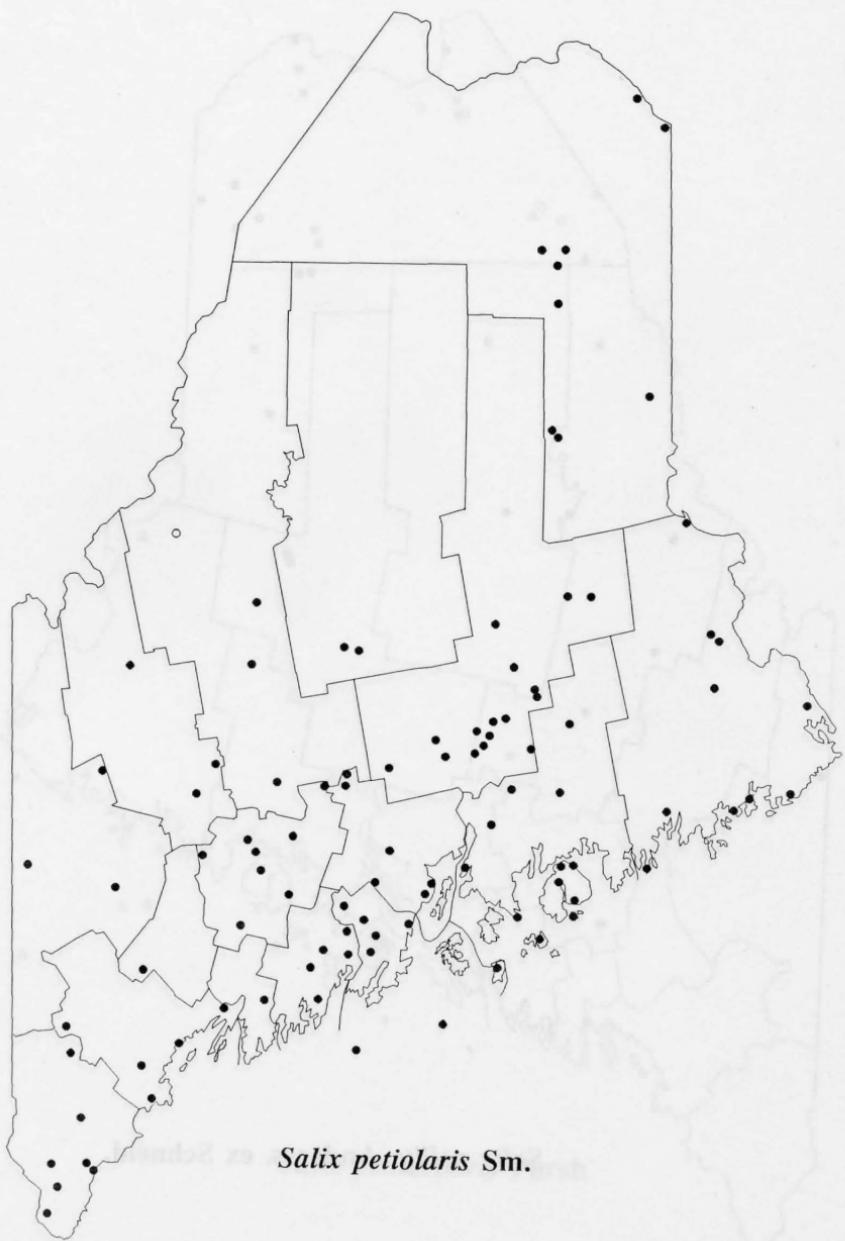






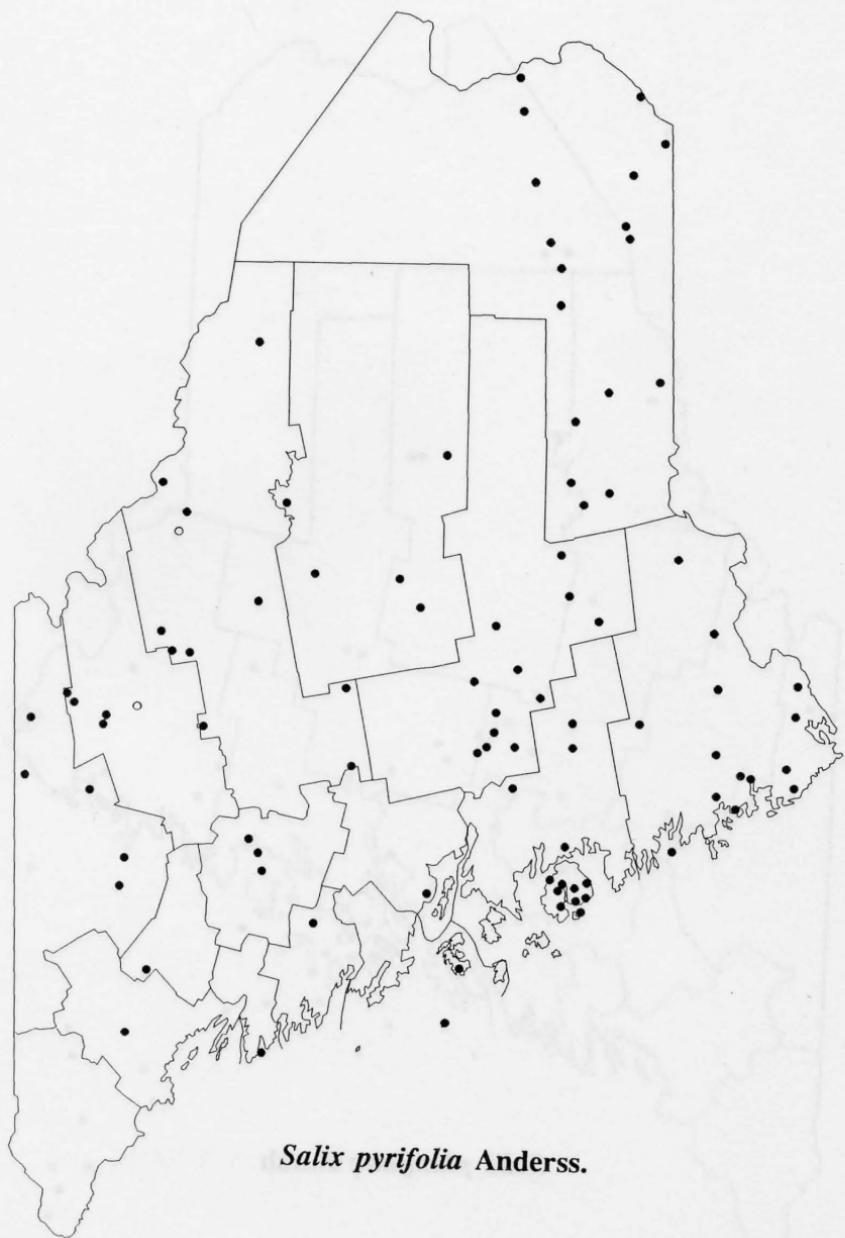


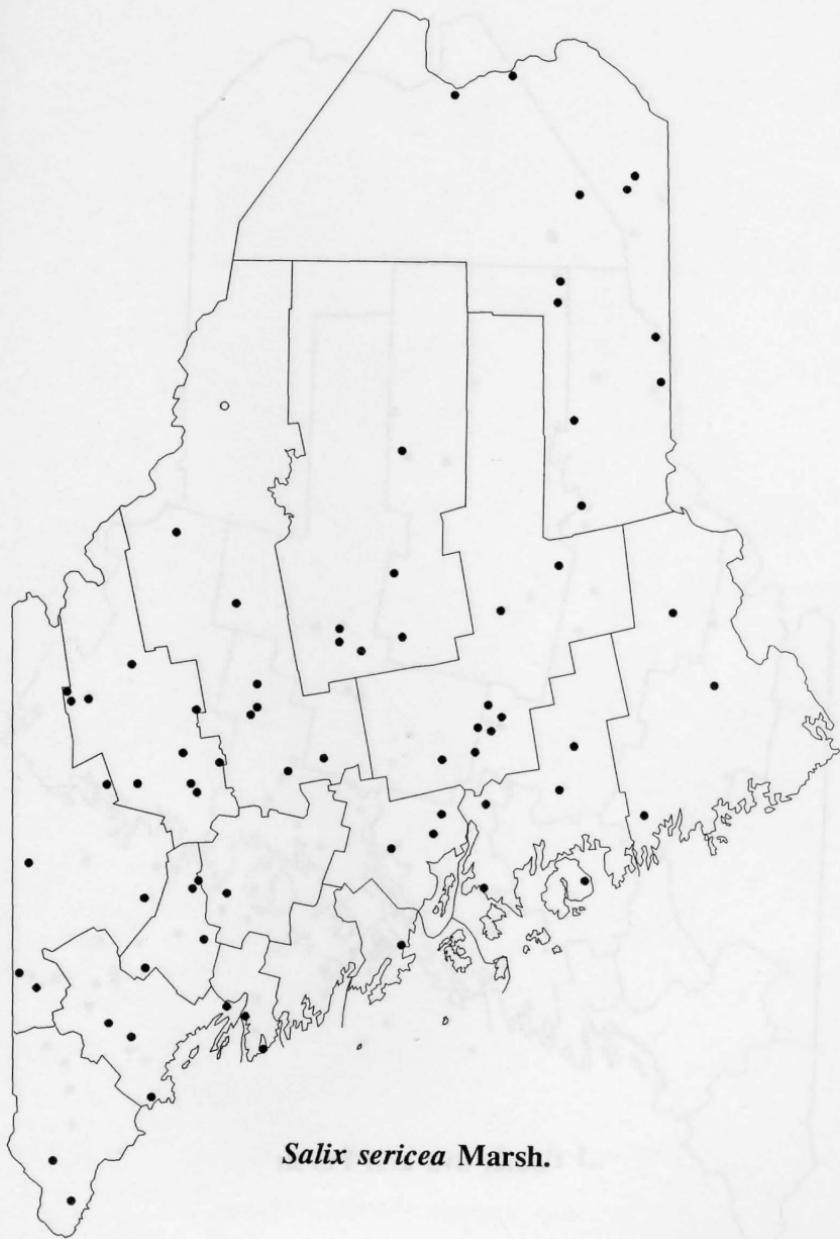
*Salix pellita* Andersss. ex Schneid.



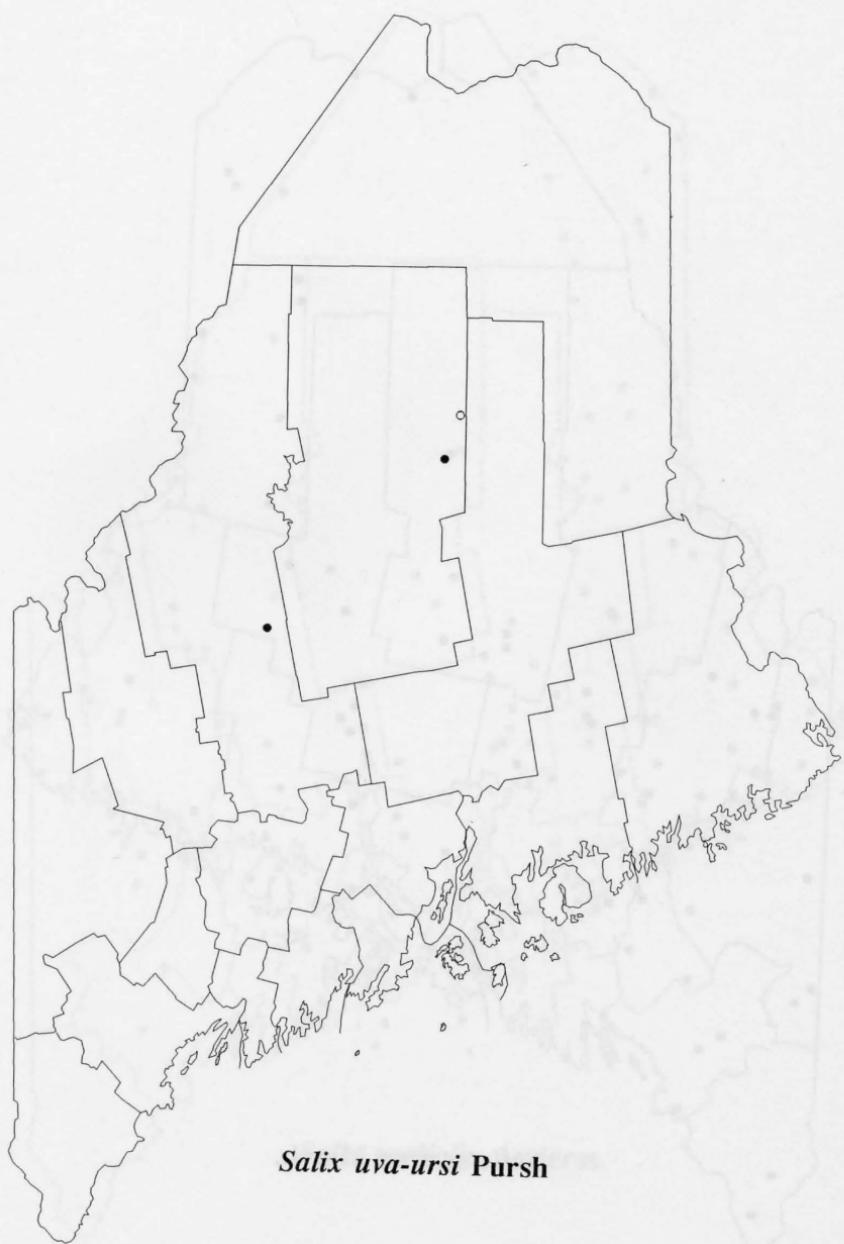


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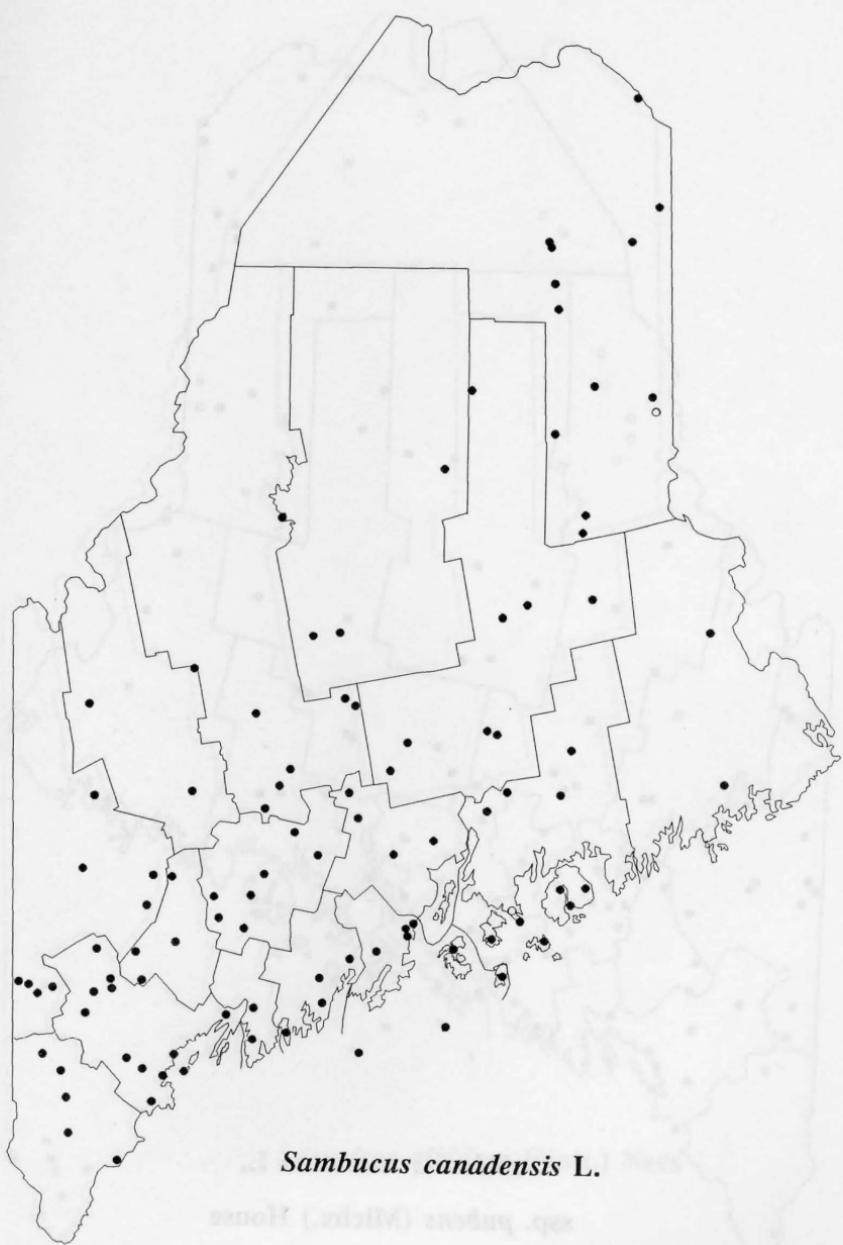




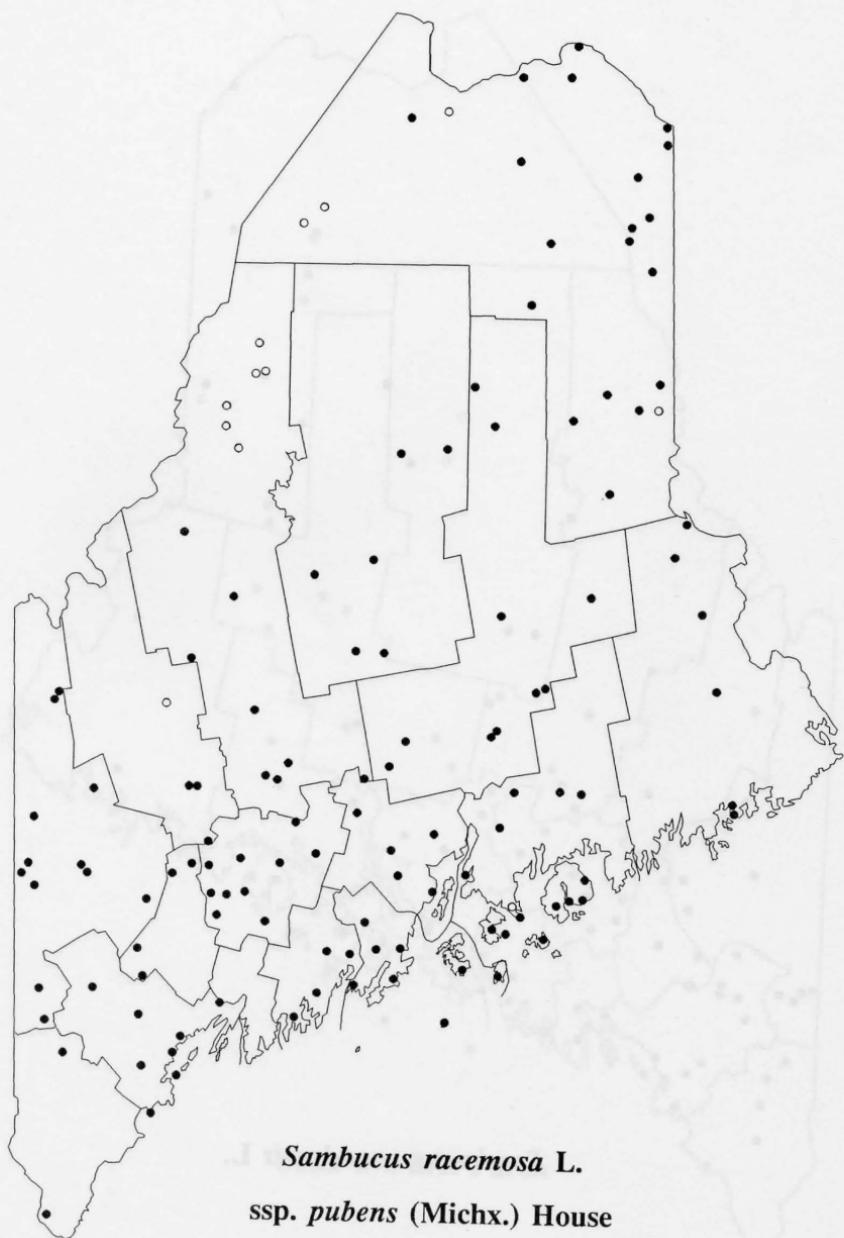
*Salix sericea* Marsh.

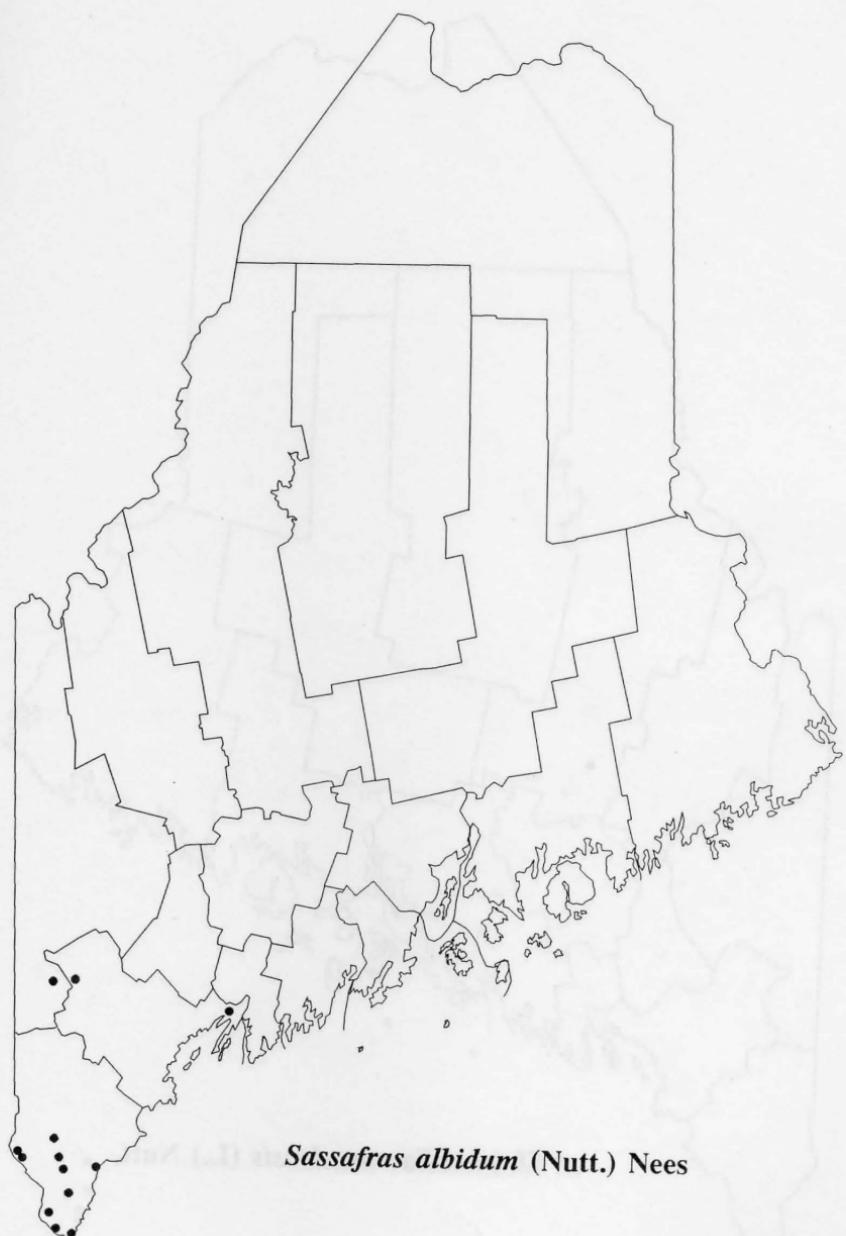


*Salix uva-ursi* Pursh



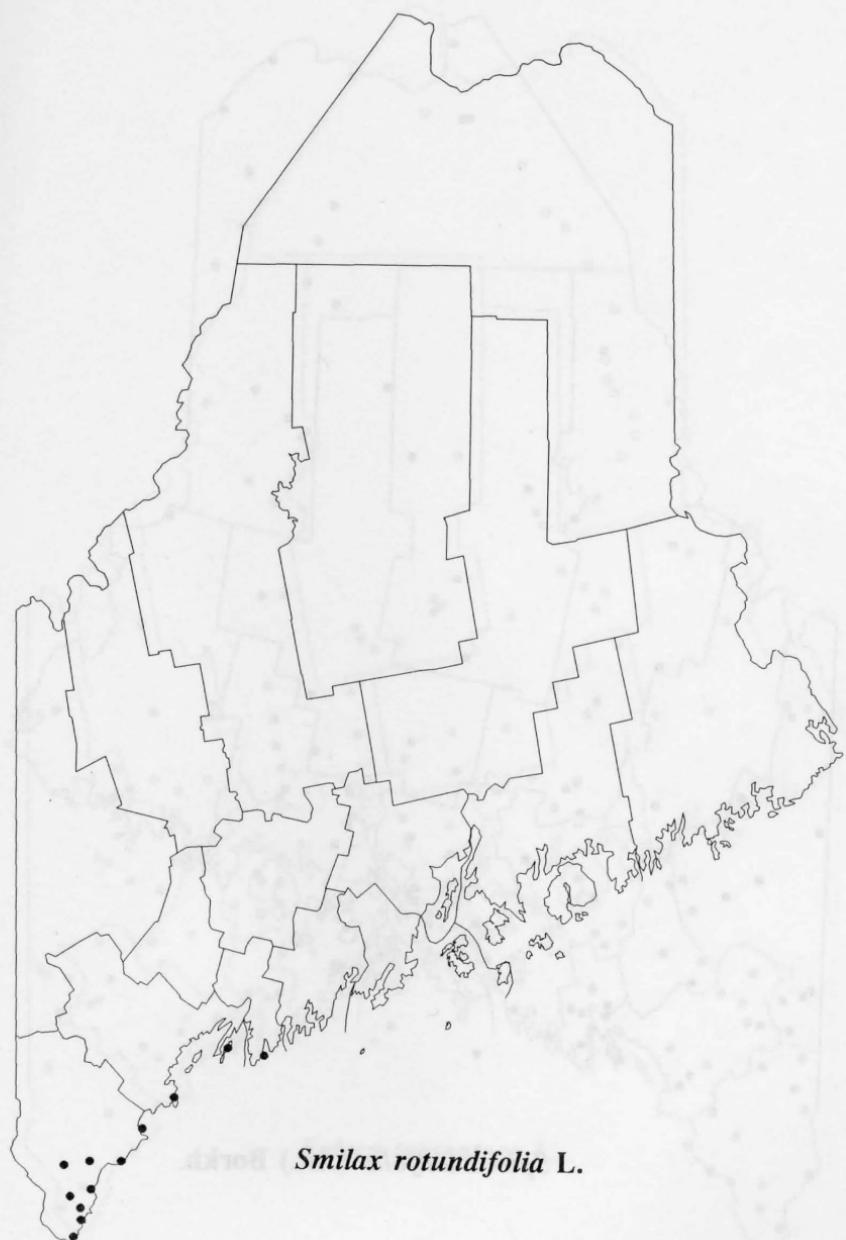
*Sambucus canadensis* L.



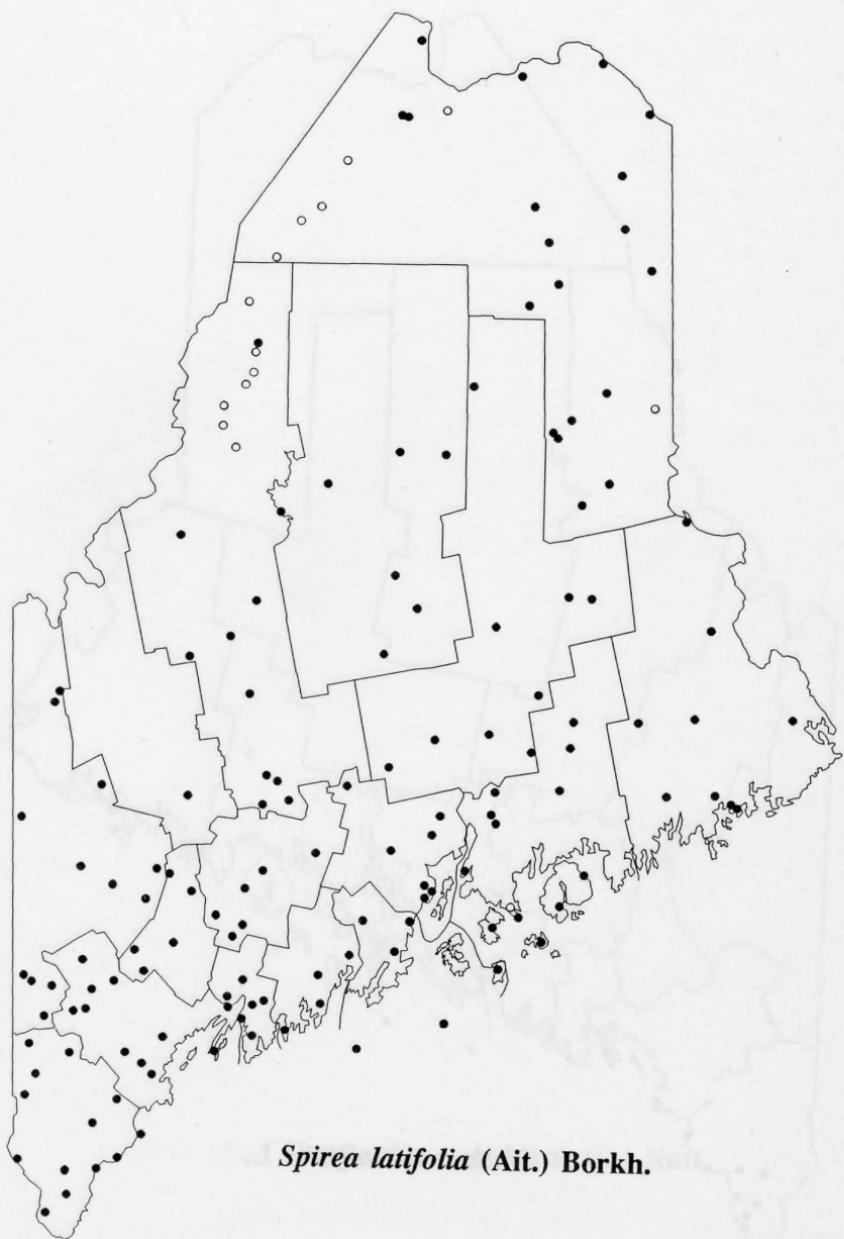


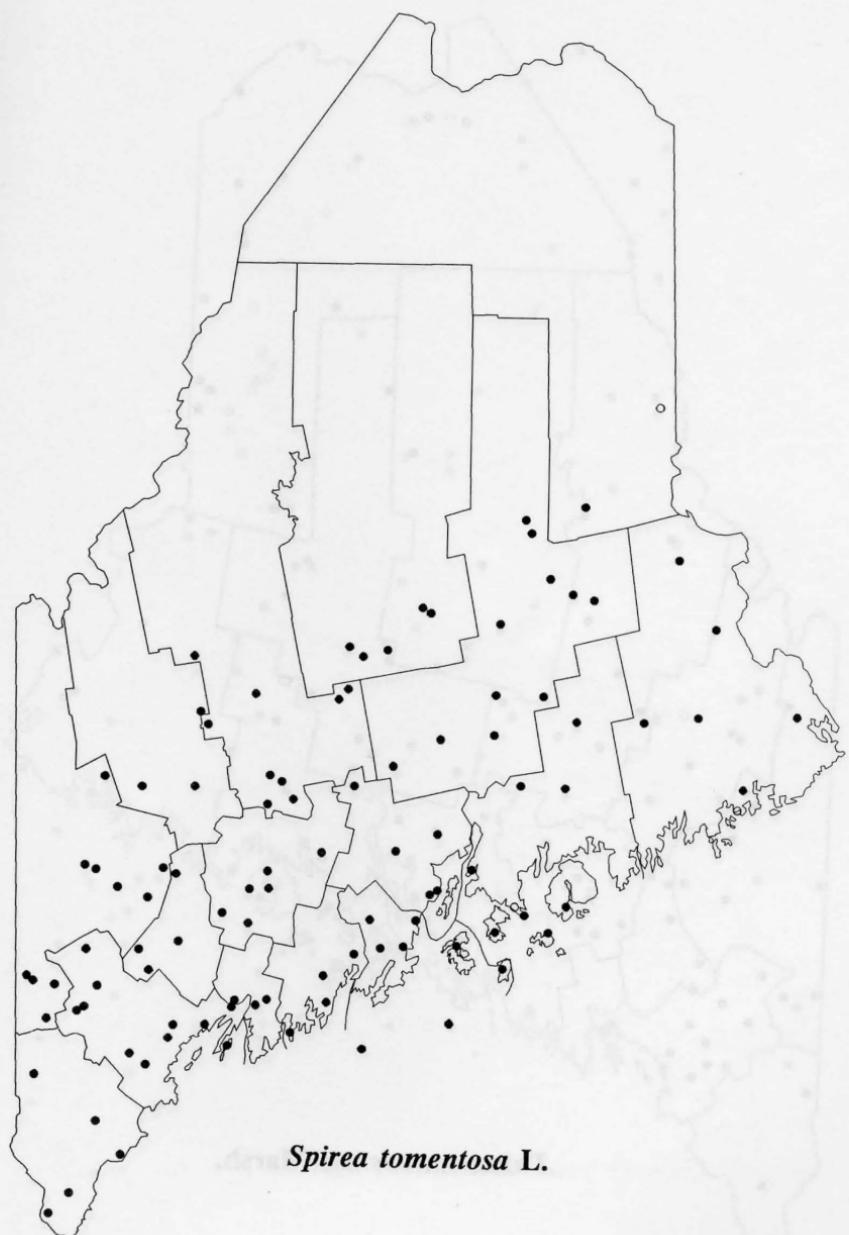


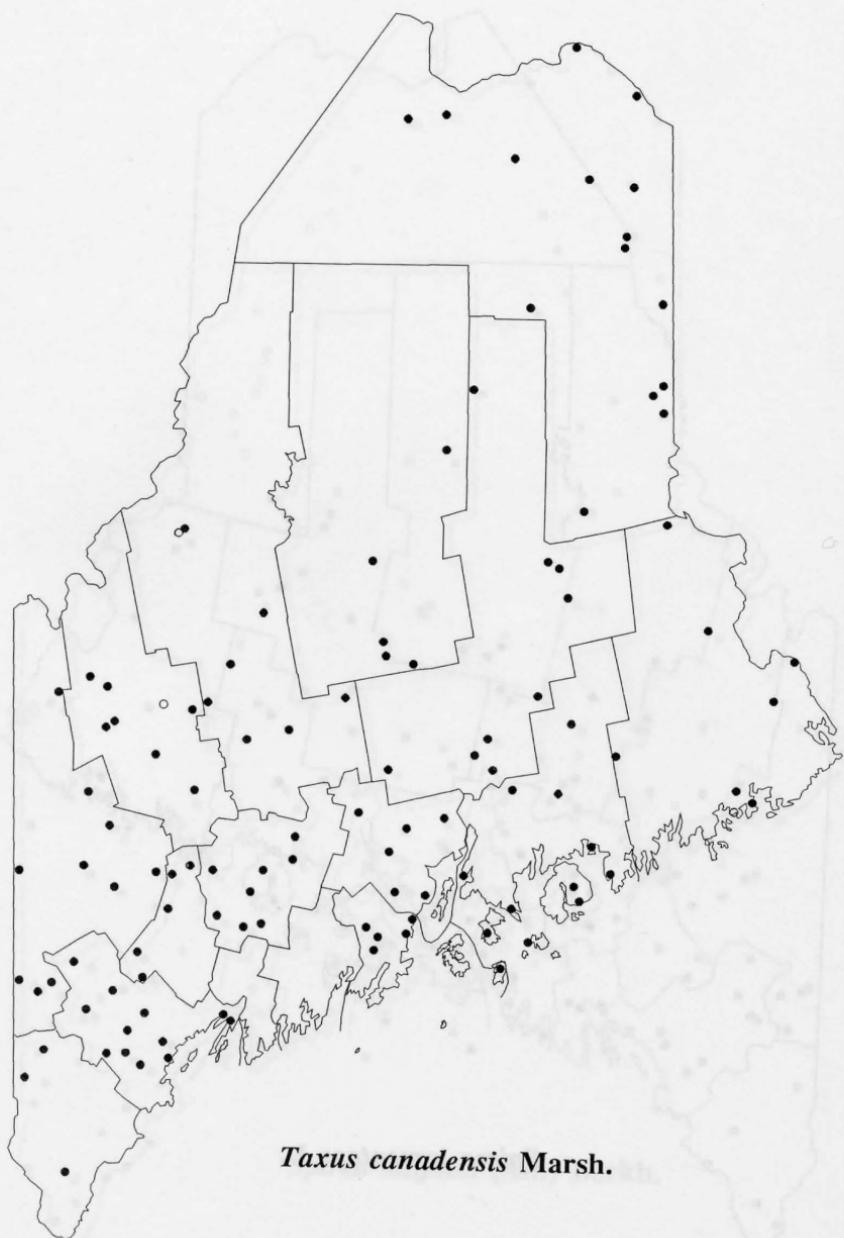
*Shepherdia canadensis* (L.) Nutt.



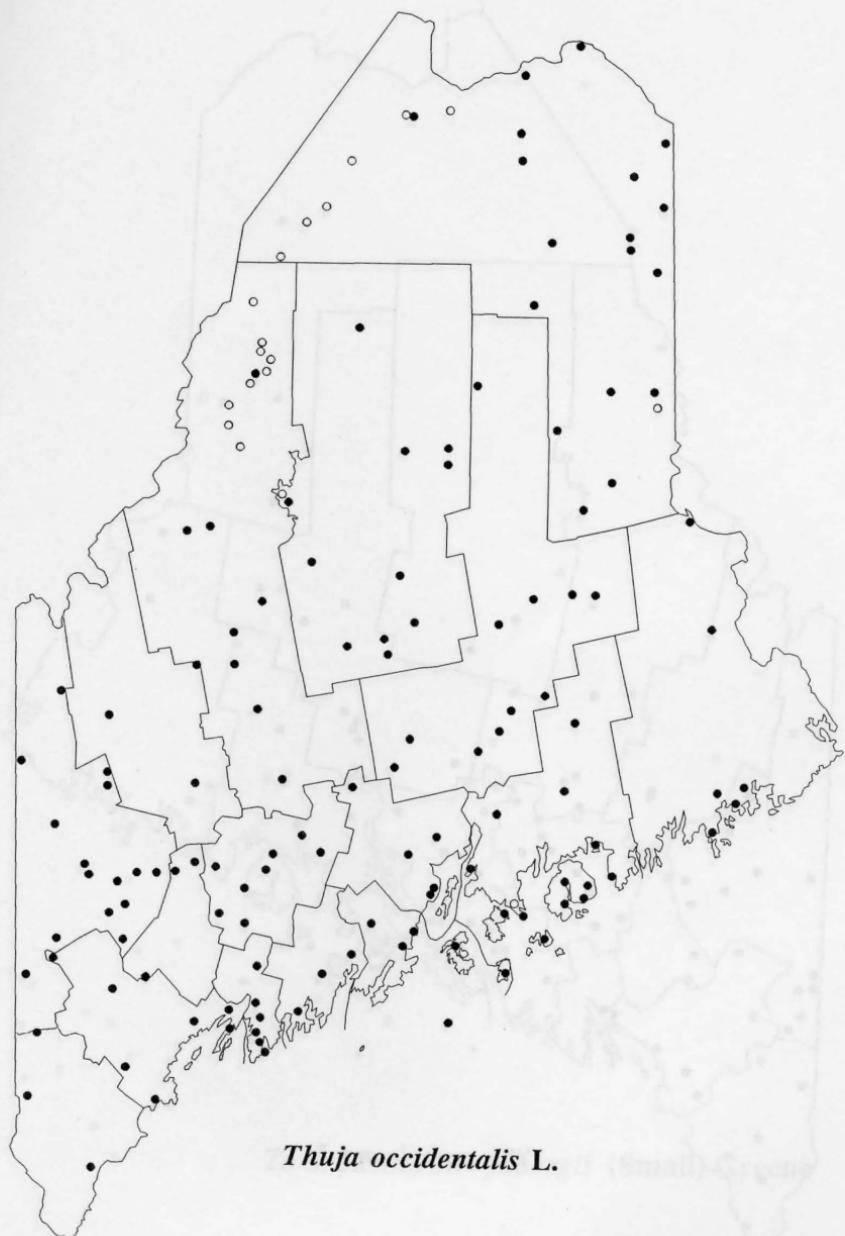
*Smilax rotundifolia* L.



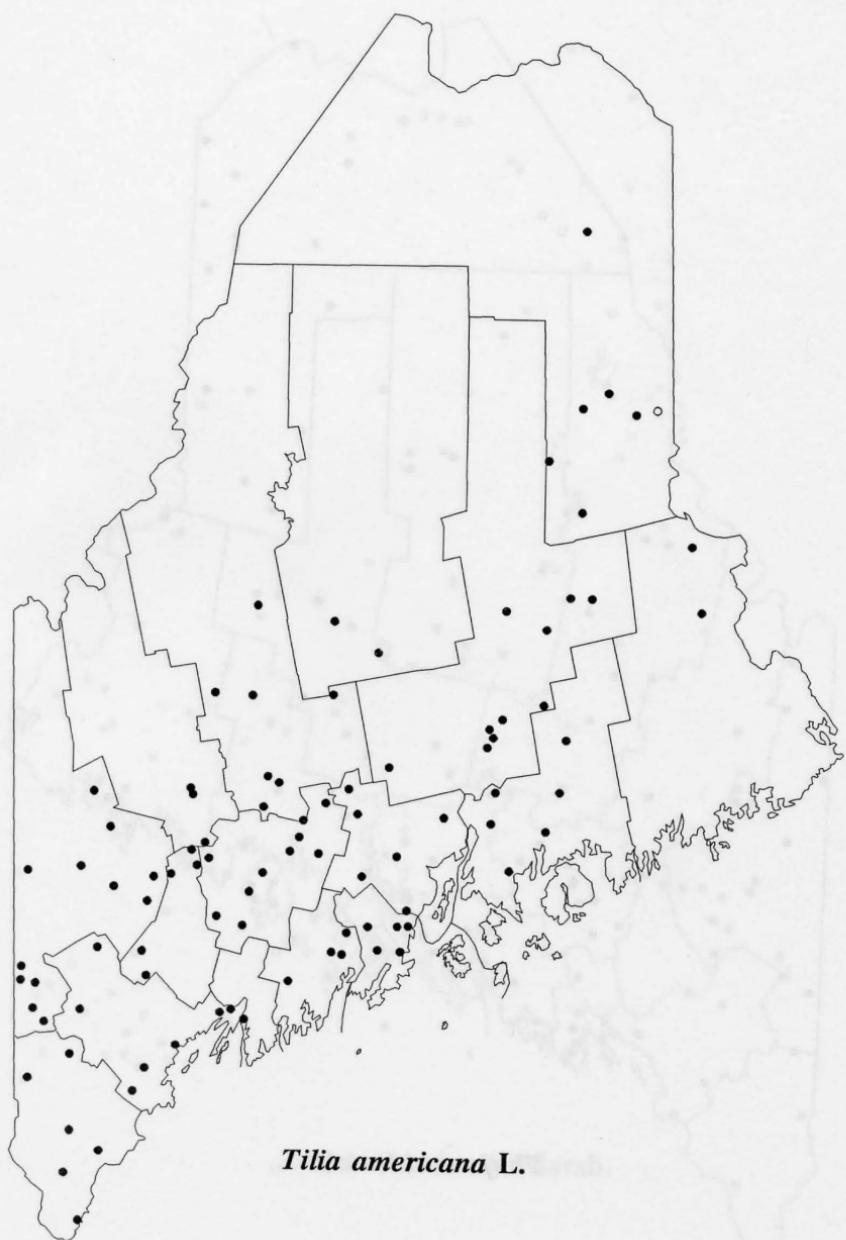


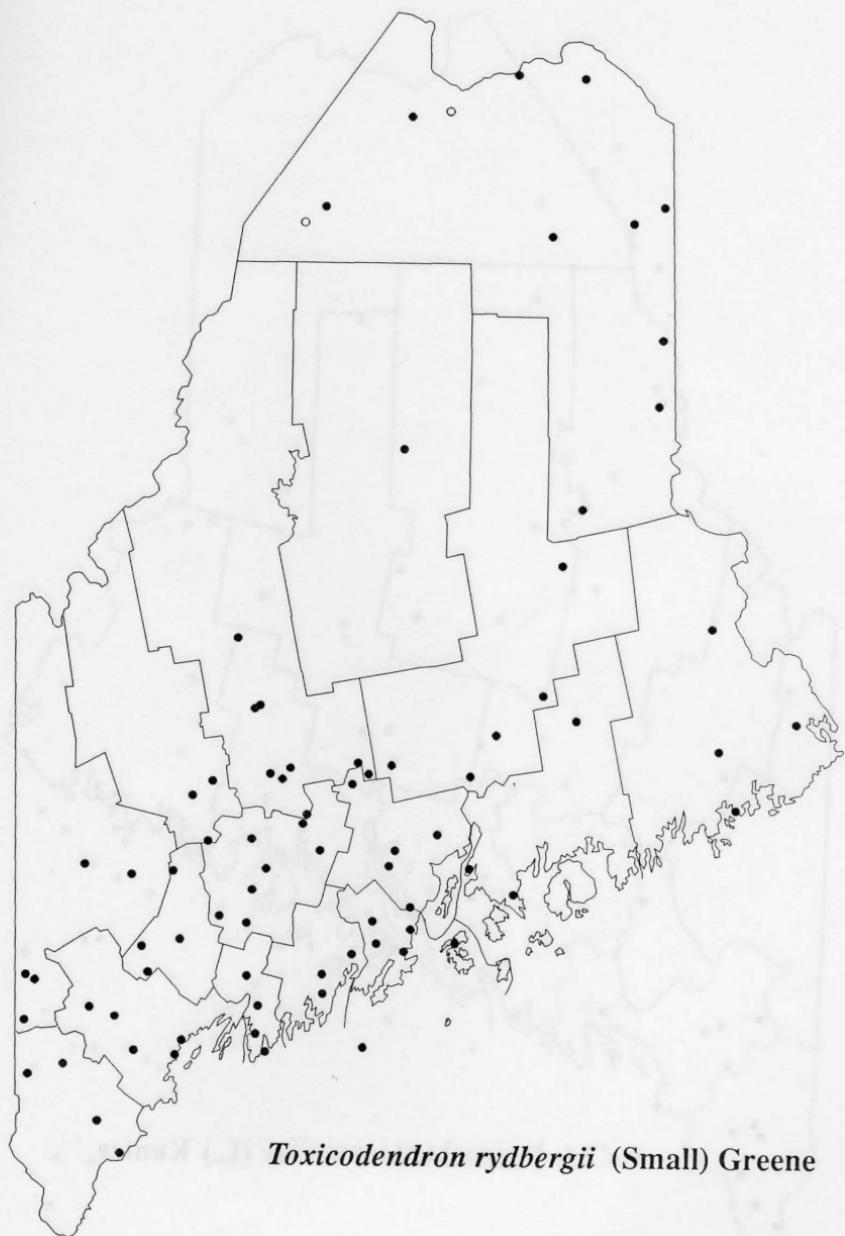


*Taxus canadensis* Marsh.

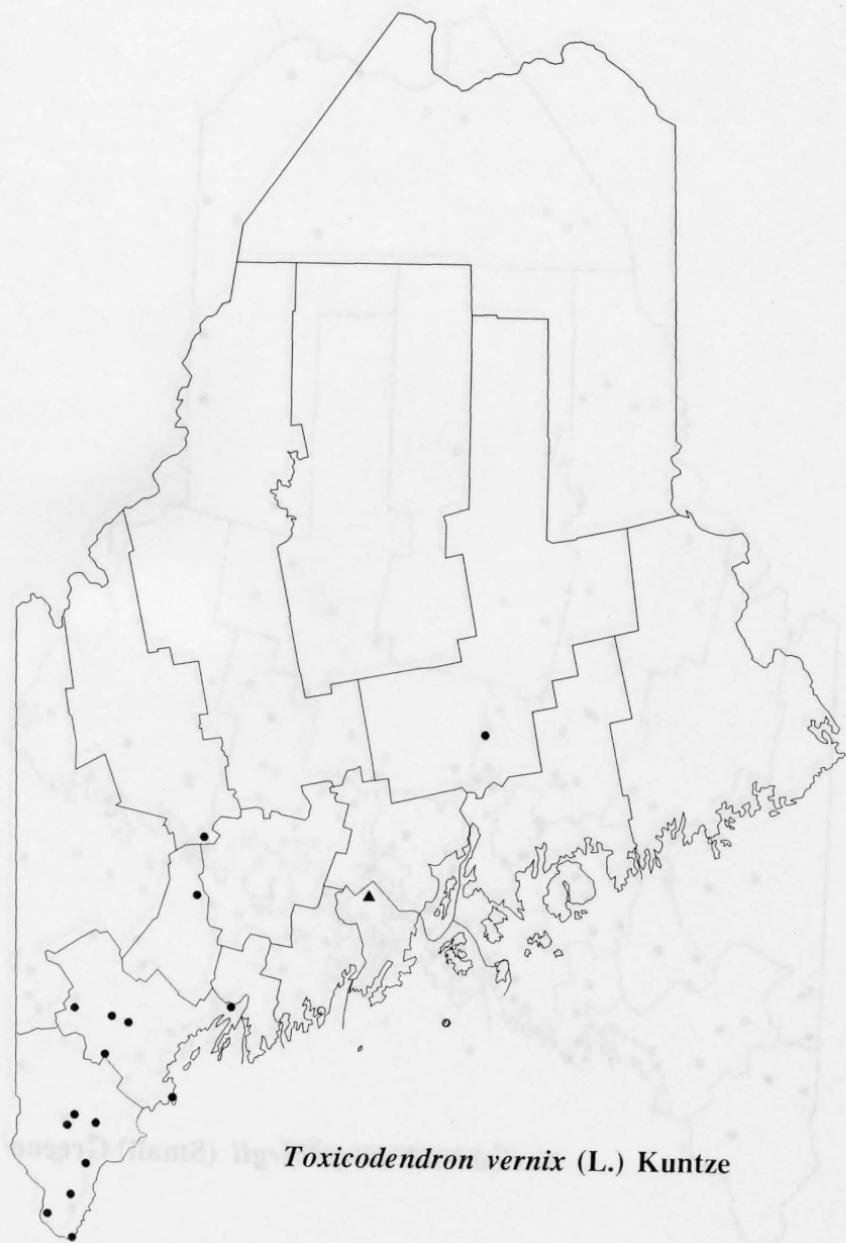


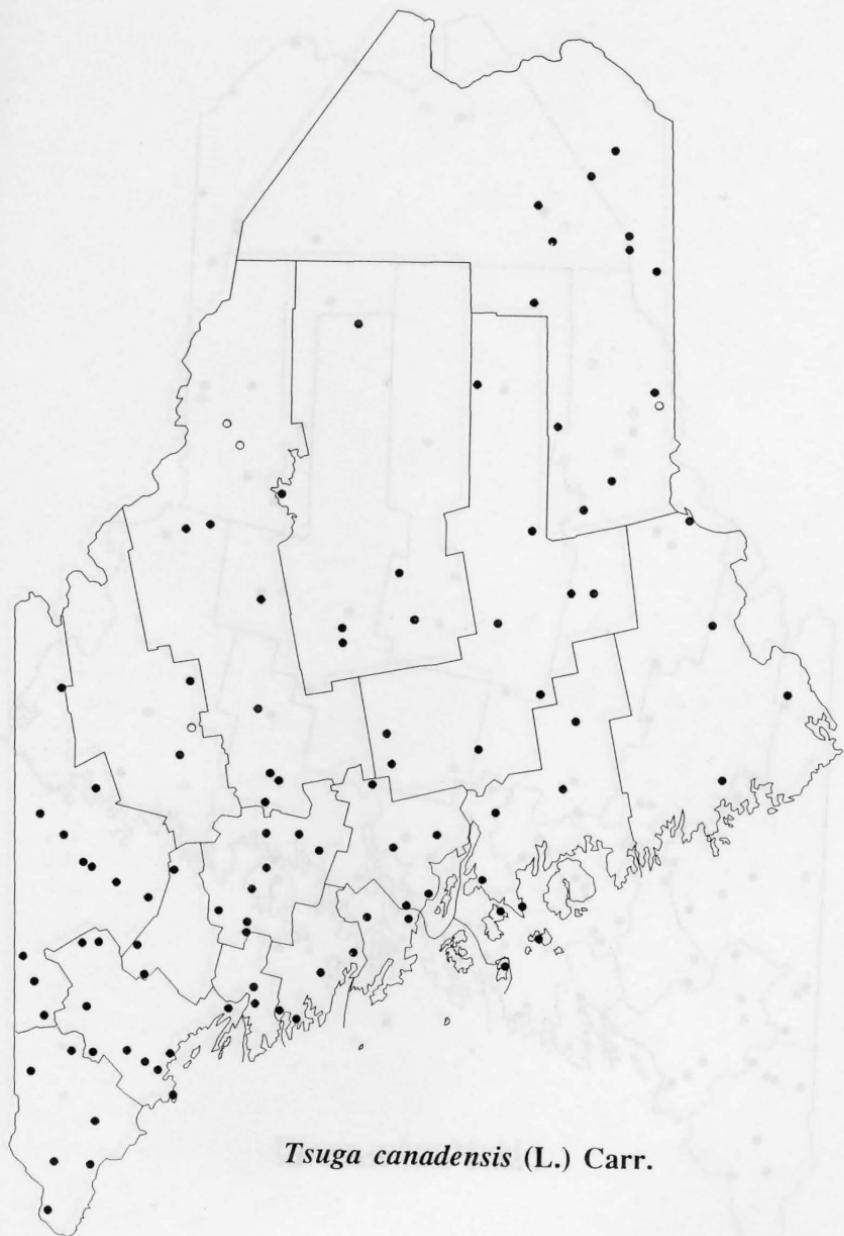
*Thuja occidentalis* L.



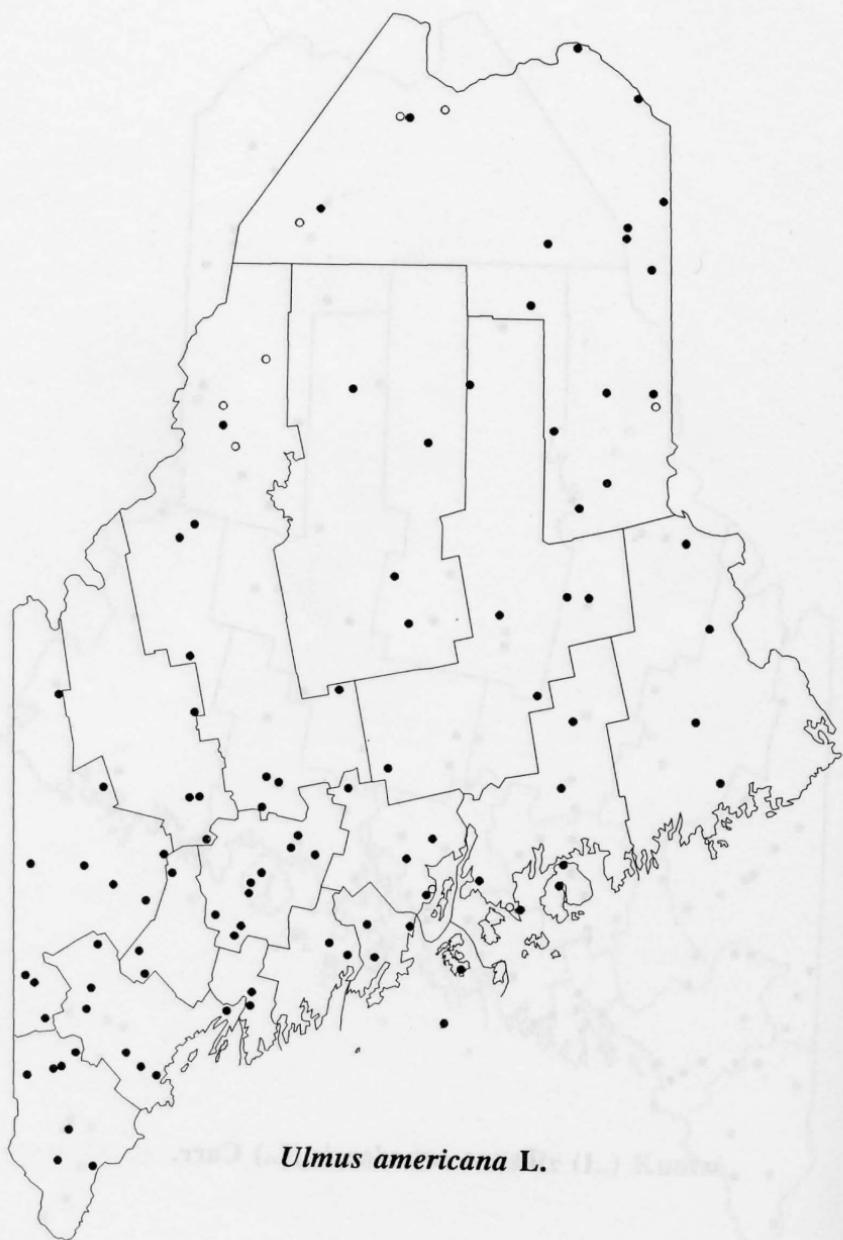


*Toxicodendron rydbergii* (Small) Greene

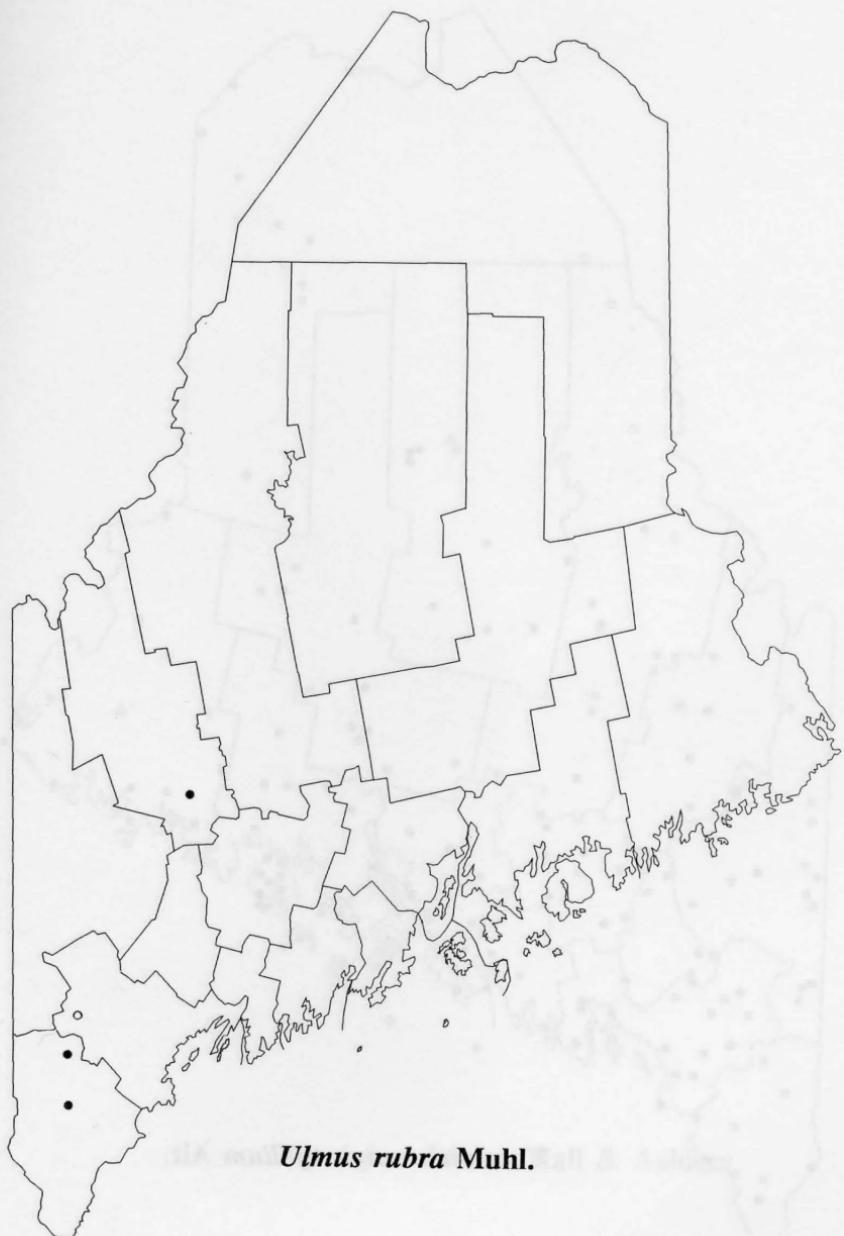




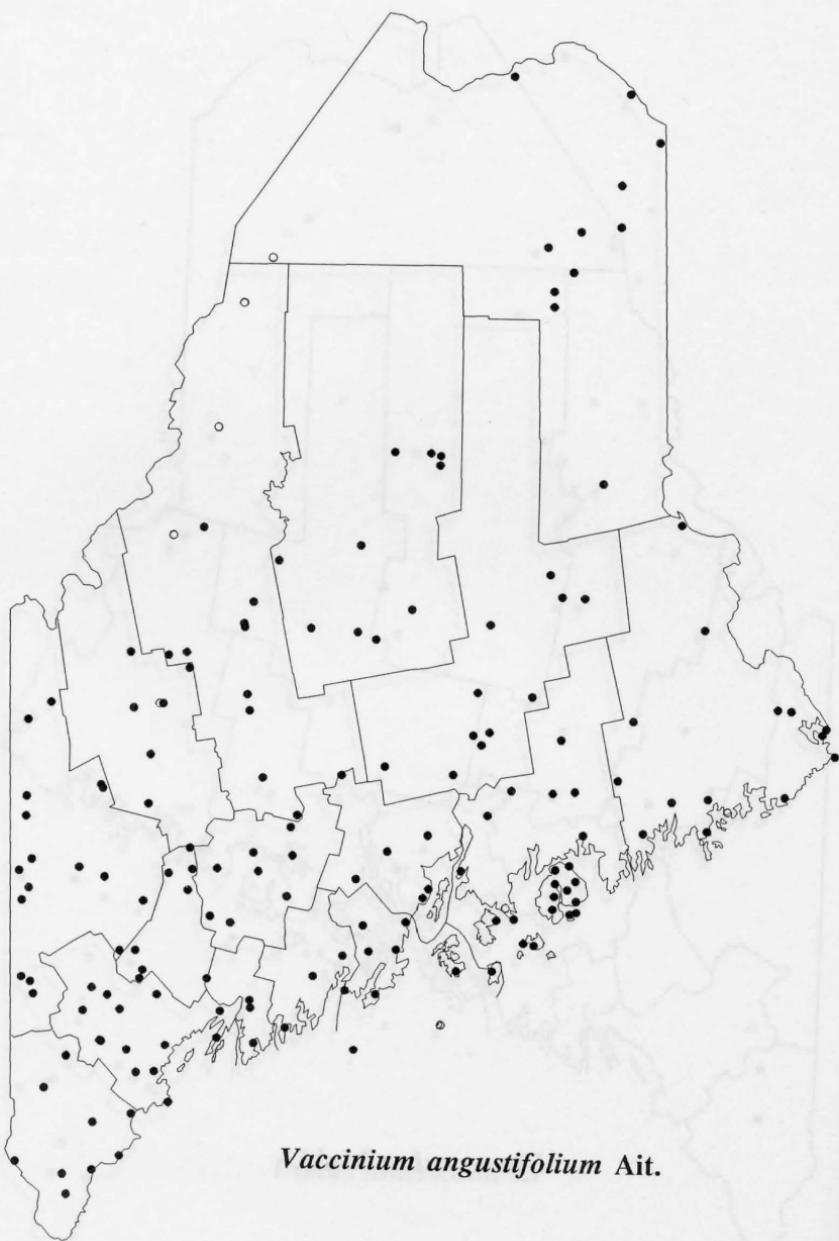
*Tsuga canadensis* (L.) Carr.

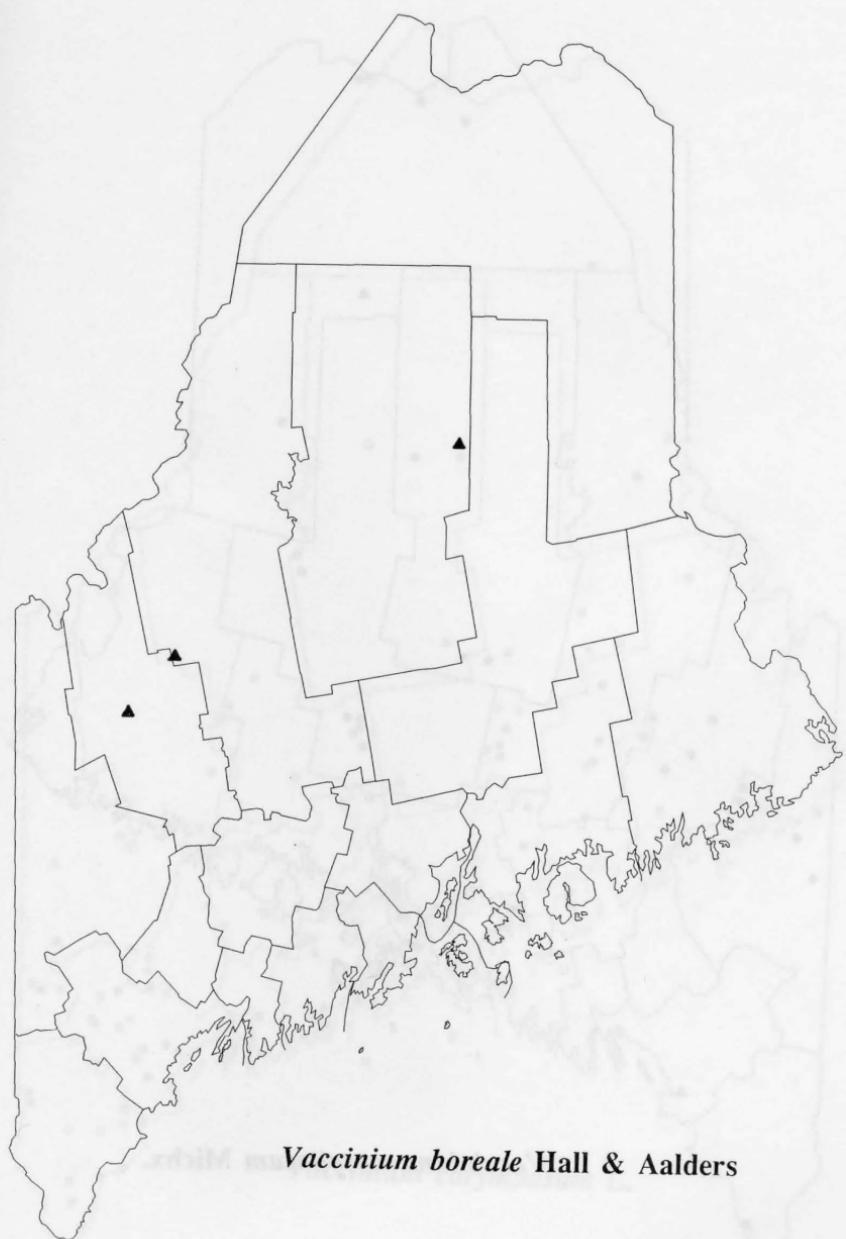


*Ulmus americana* L.

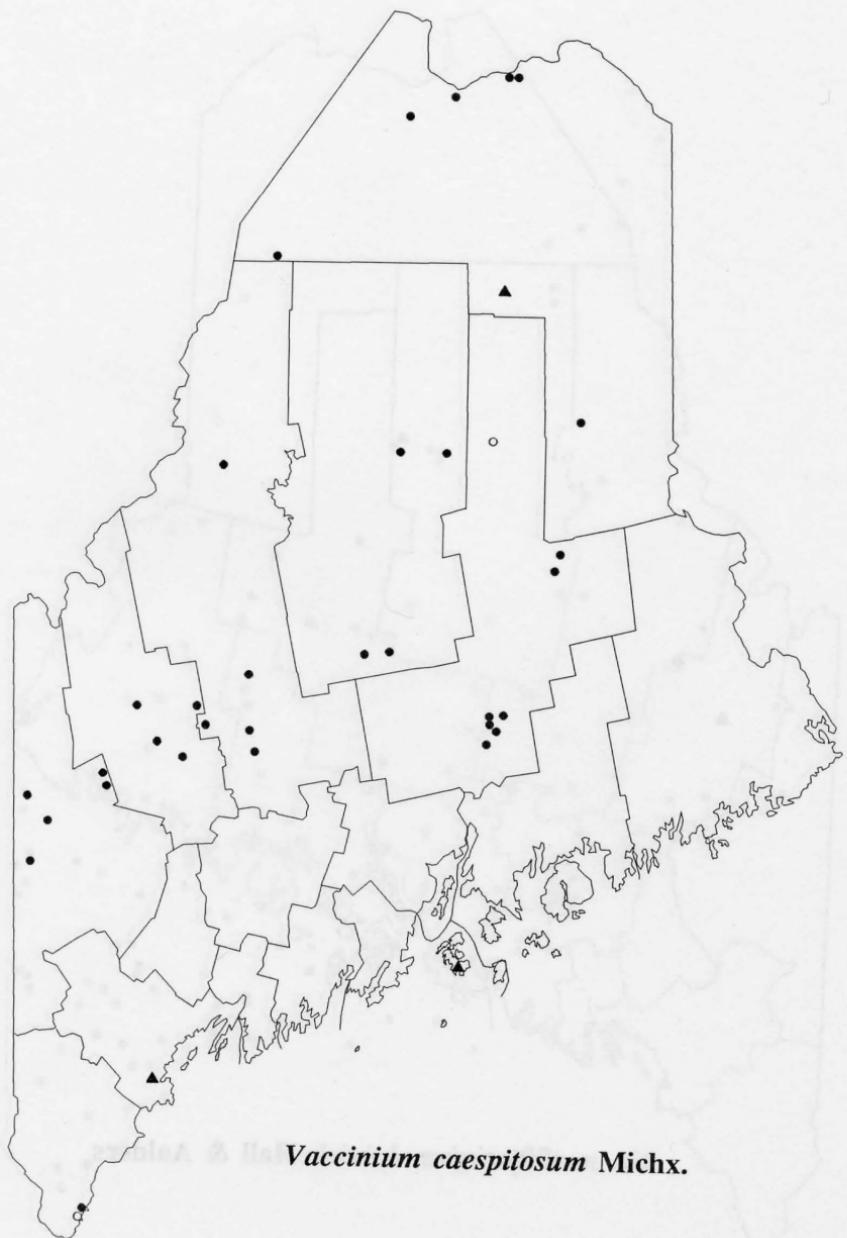


*Ulmus rubra* Muhl.

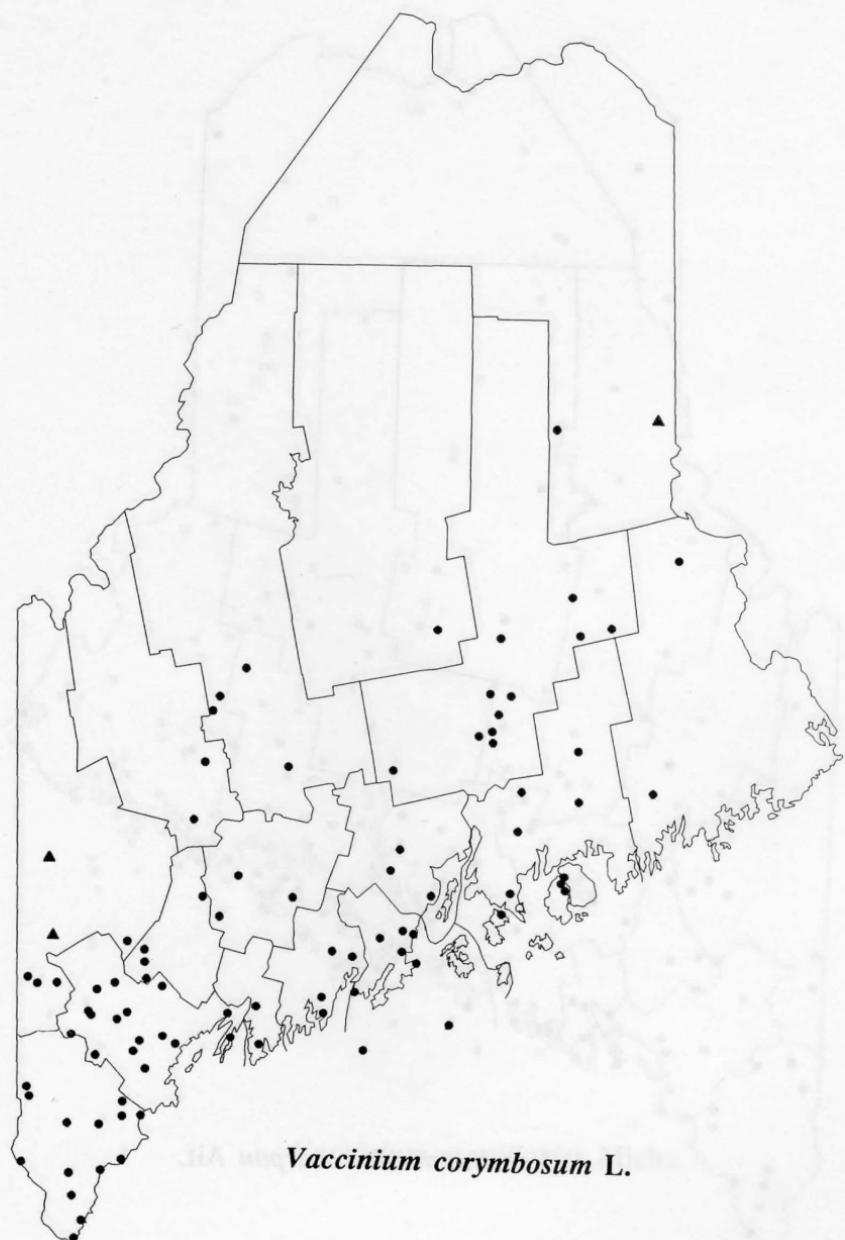




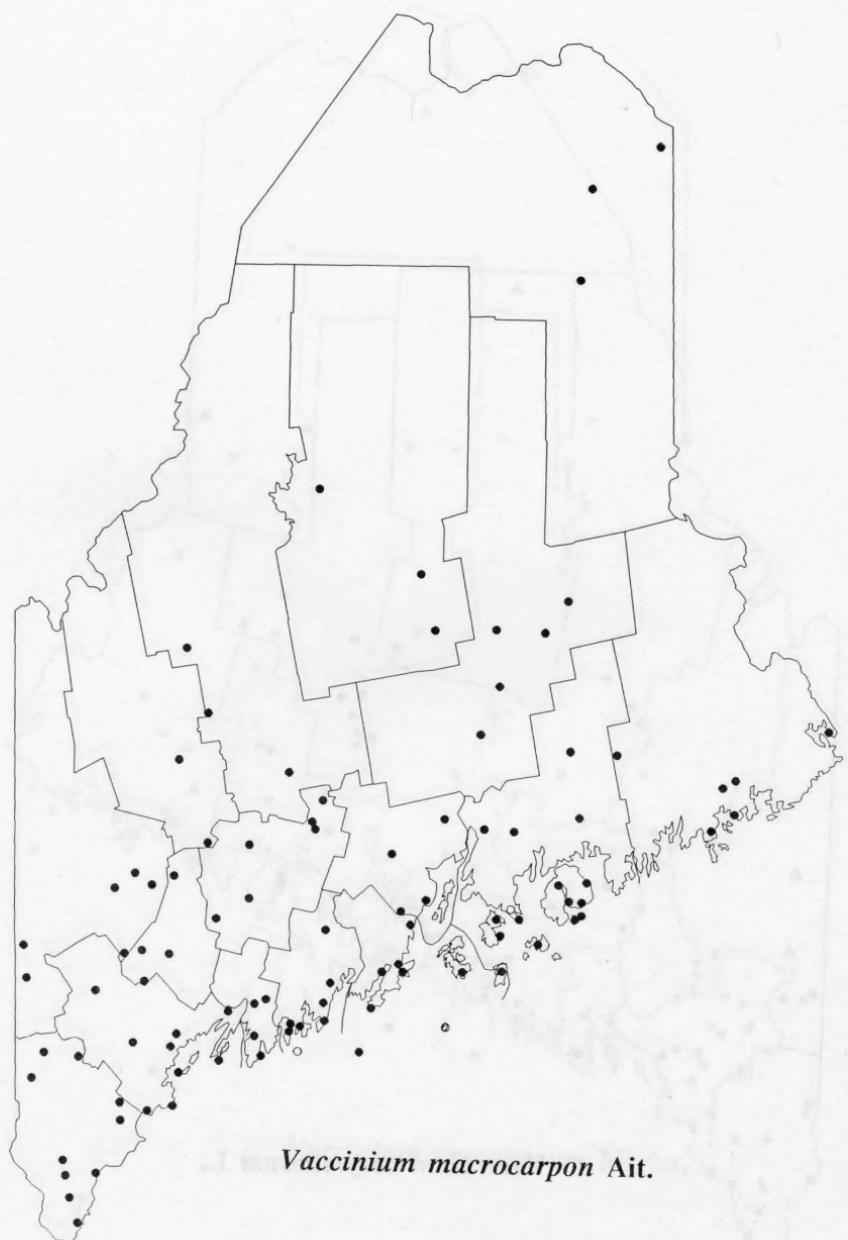
***Vaccinium boreale* Hall & Aalders**

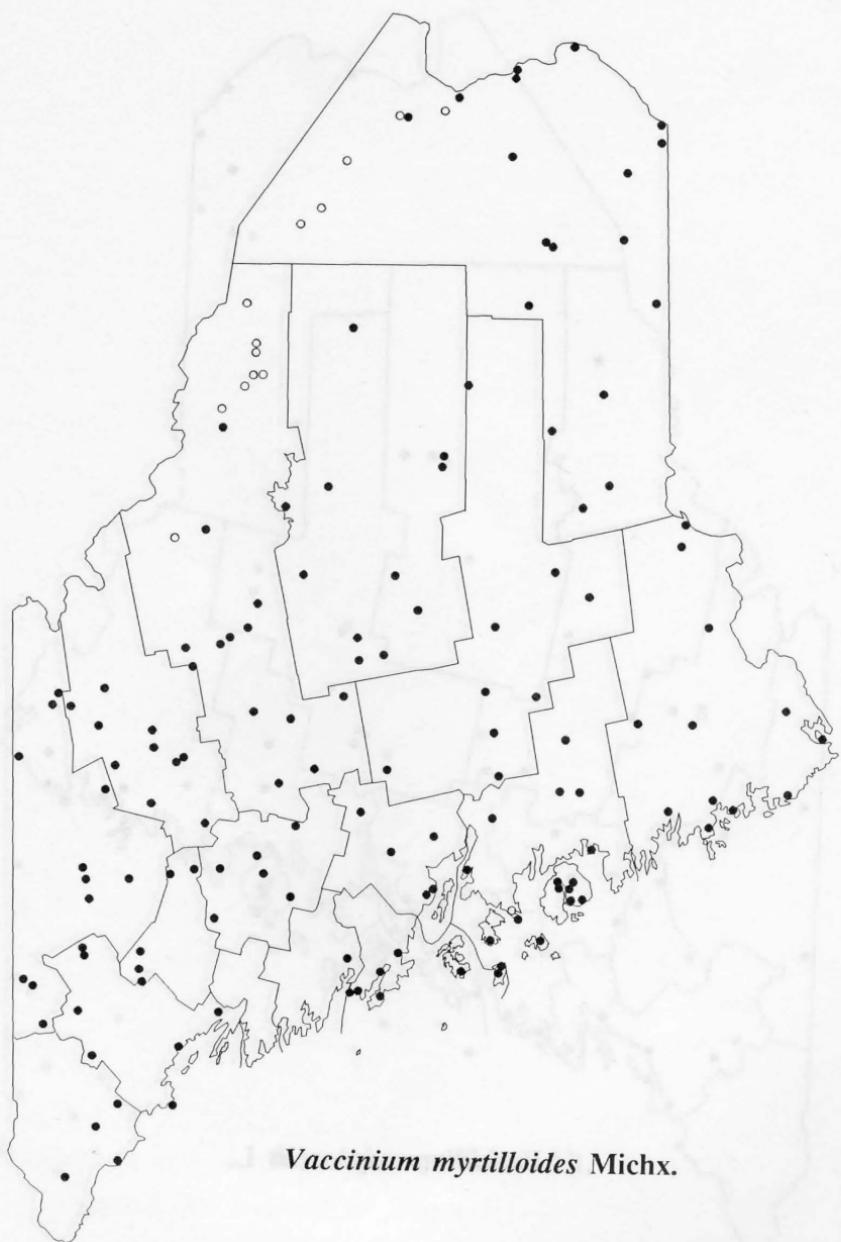


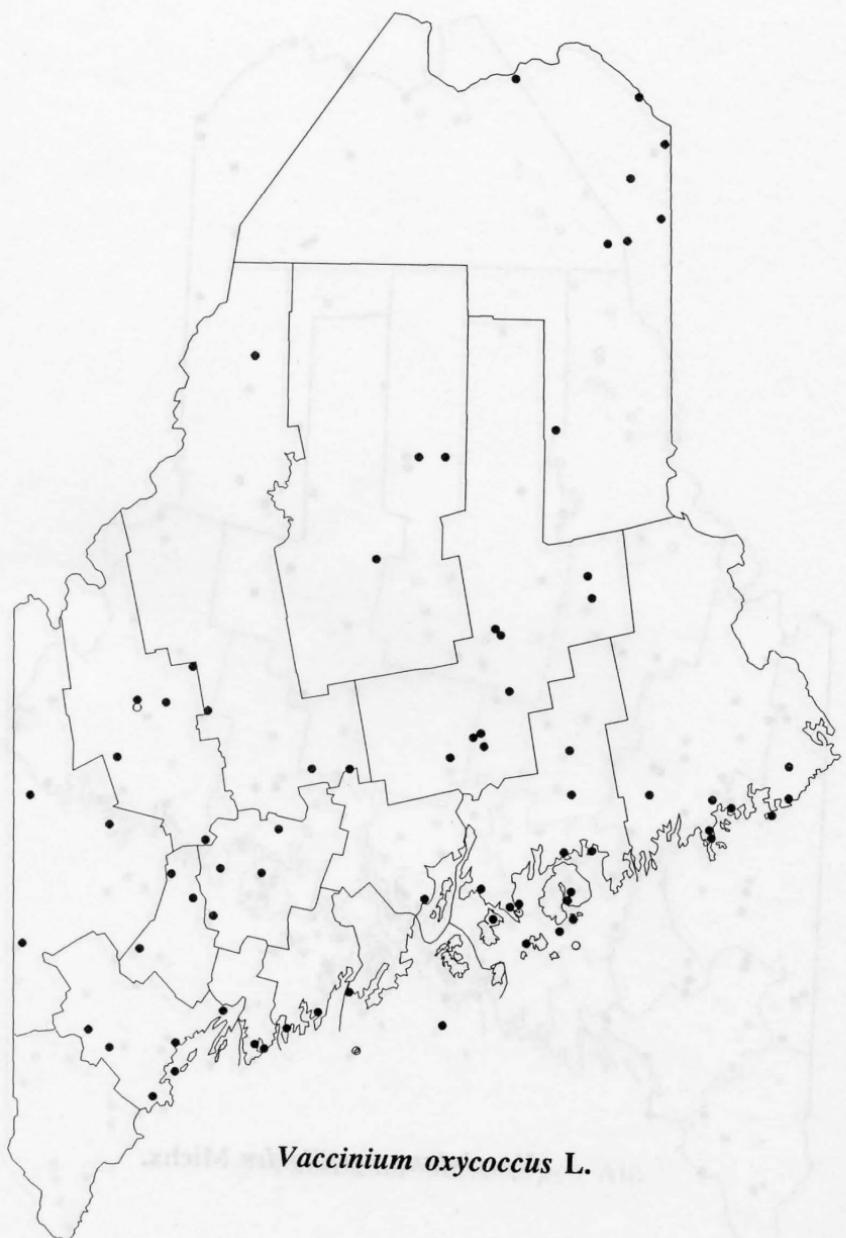
*Vaccinium caespitosum* Michx.

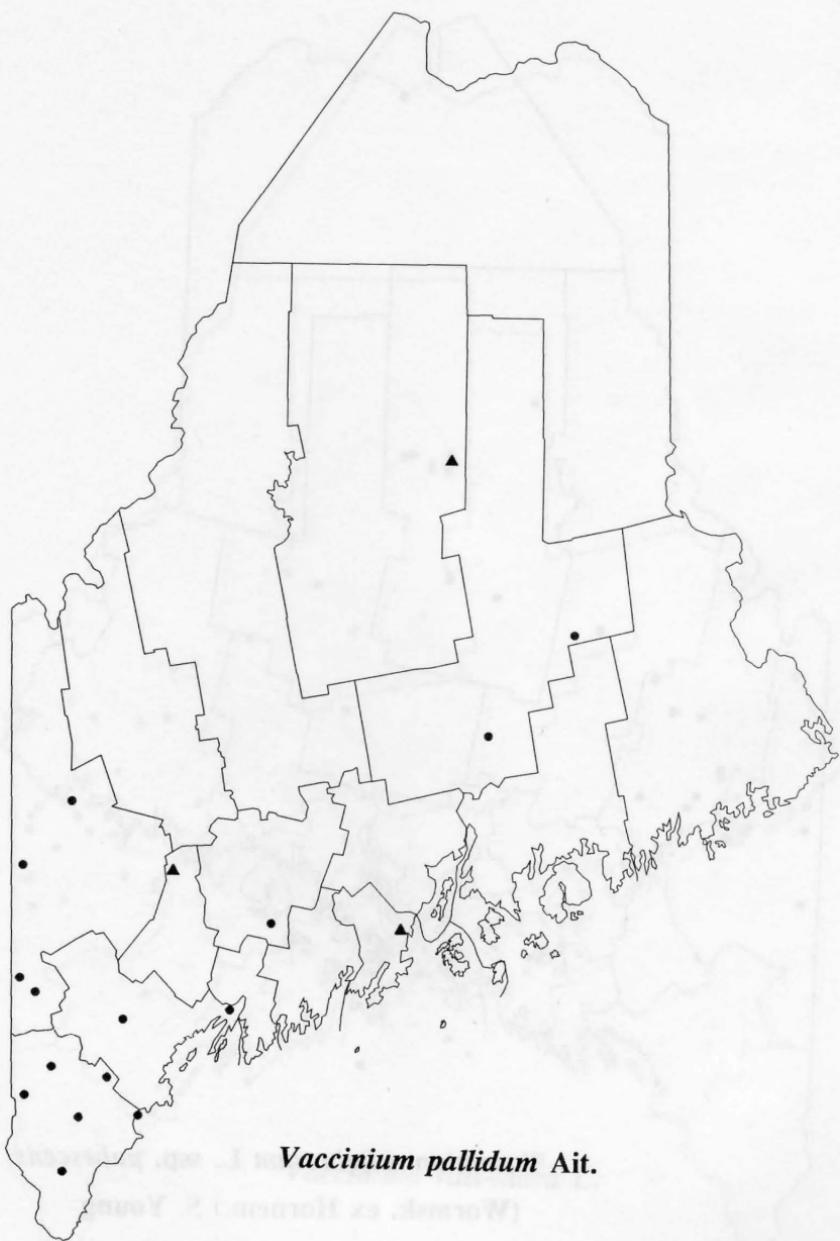


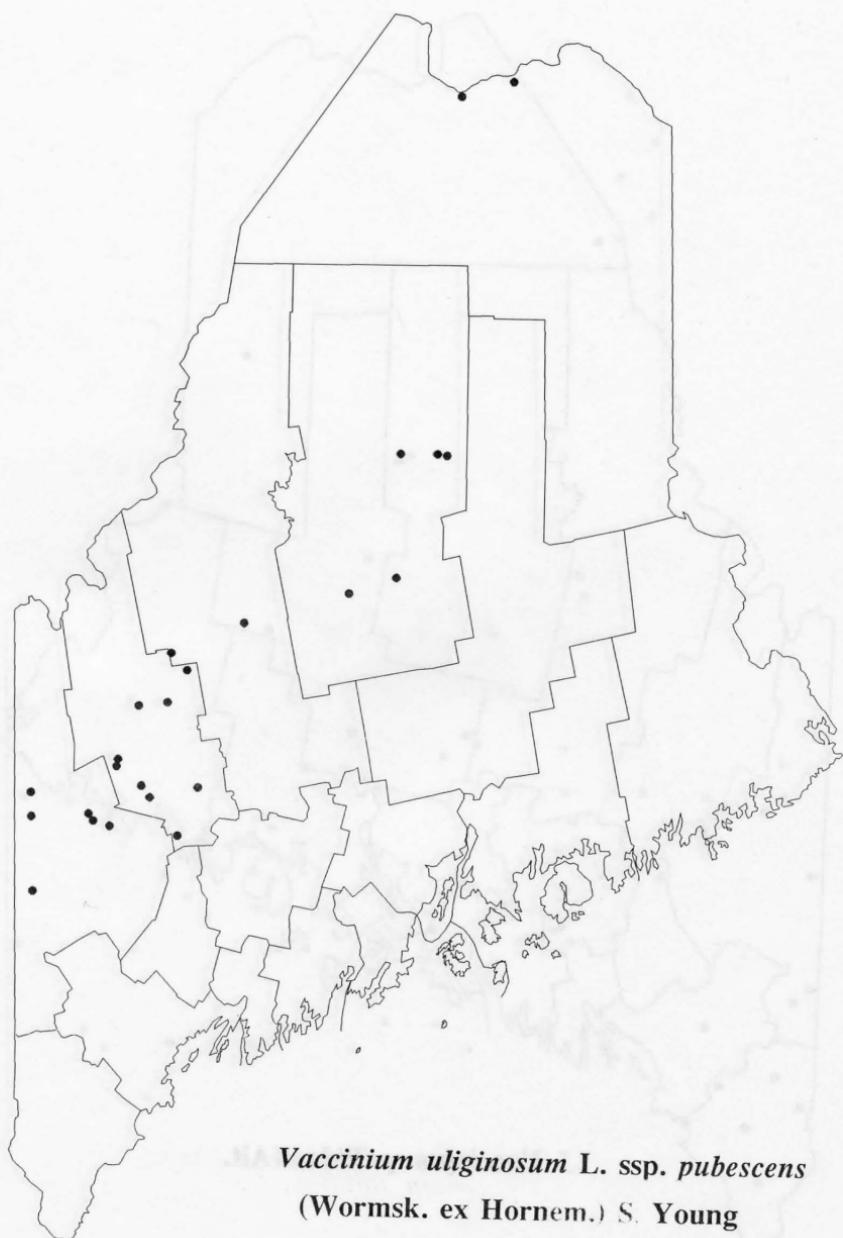
*Vaccinium corymbosum* L.



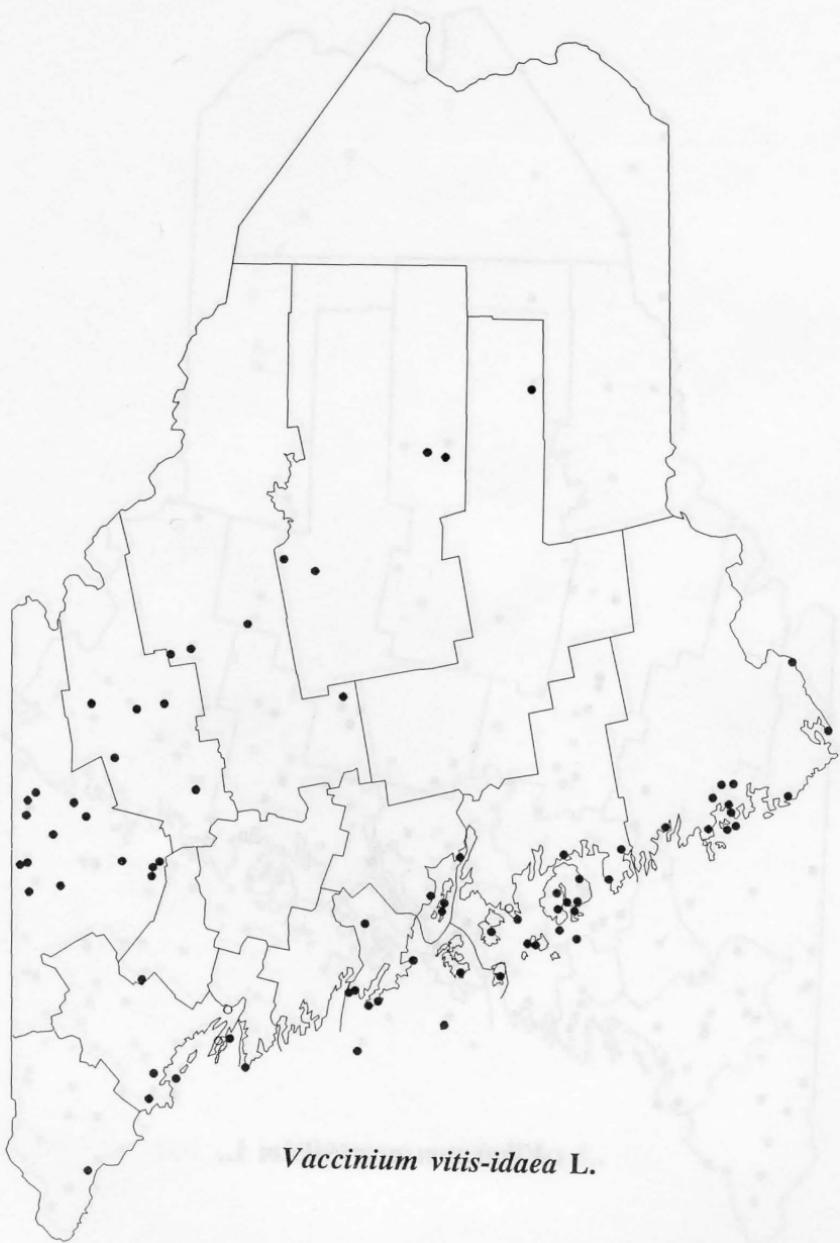


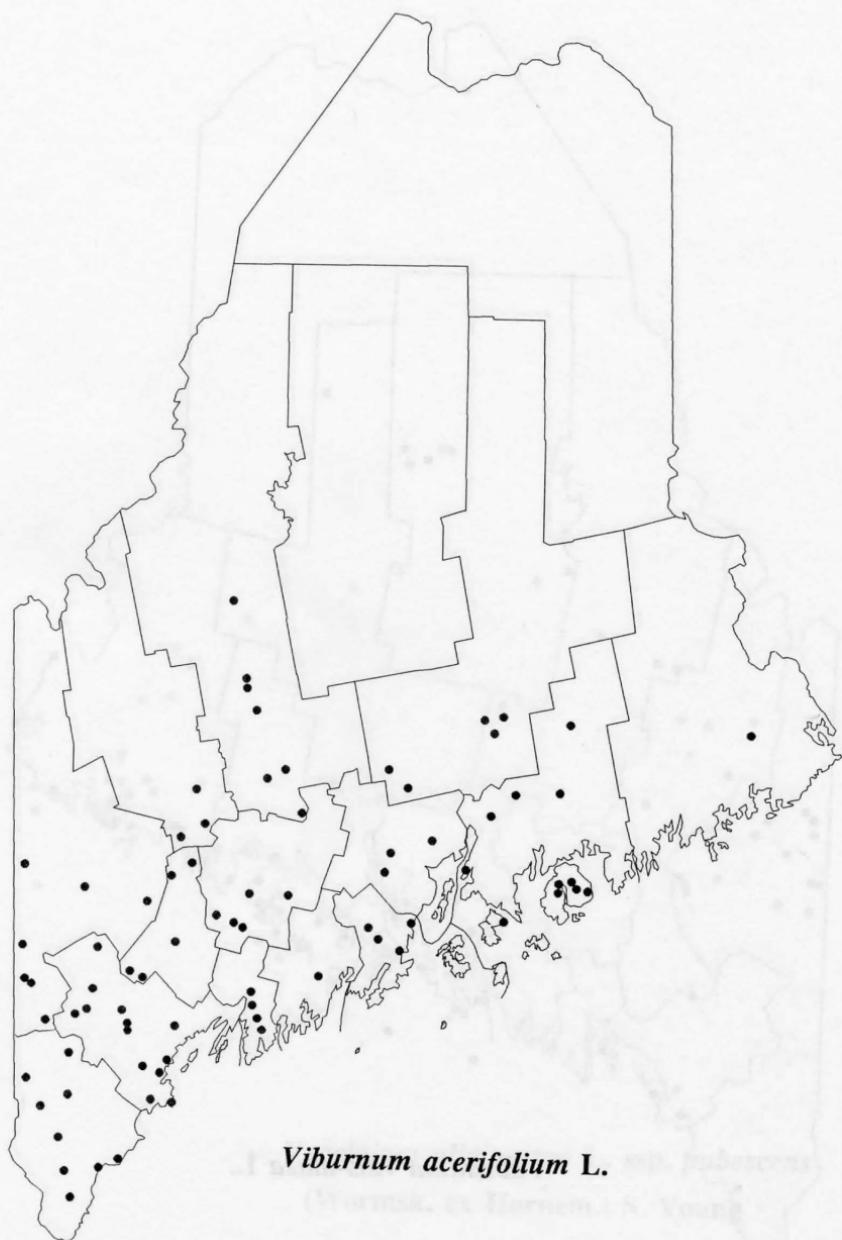


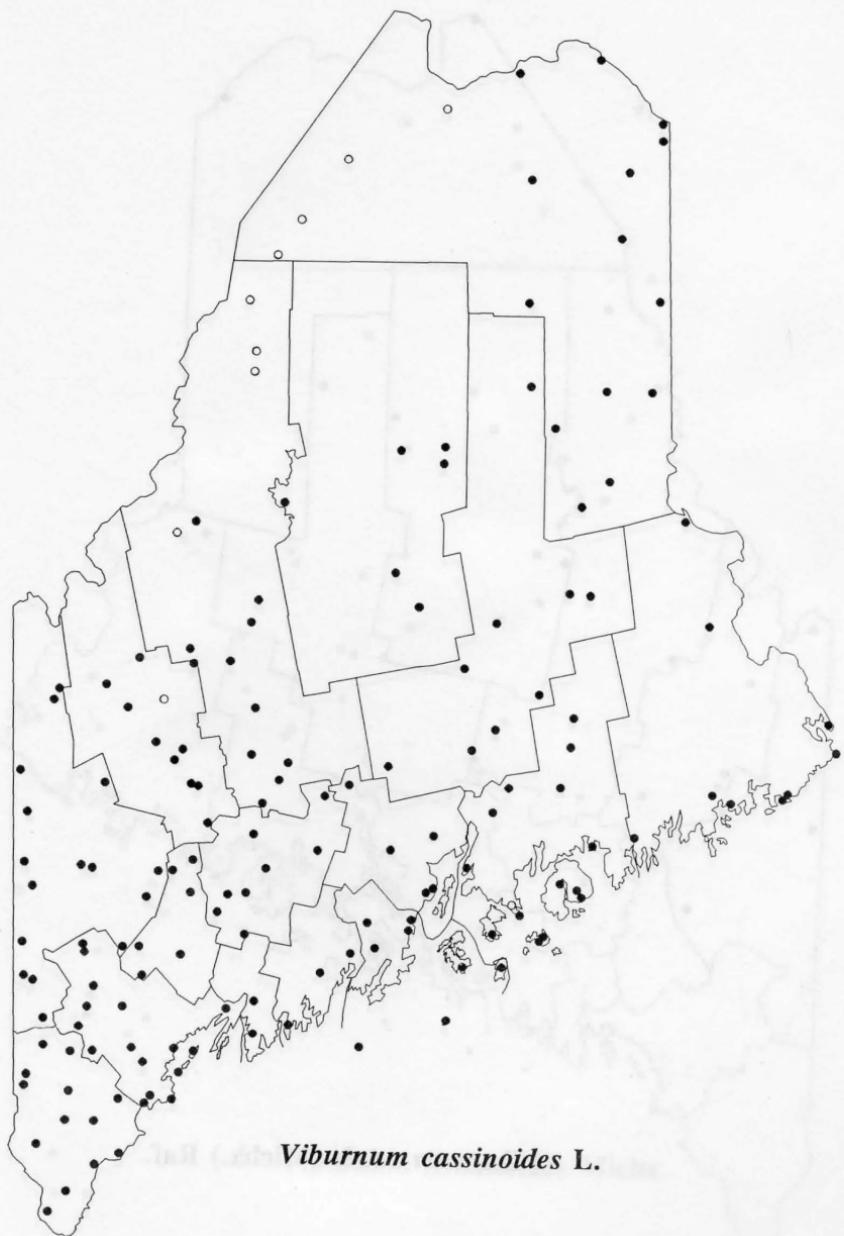




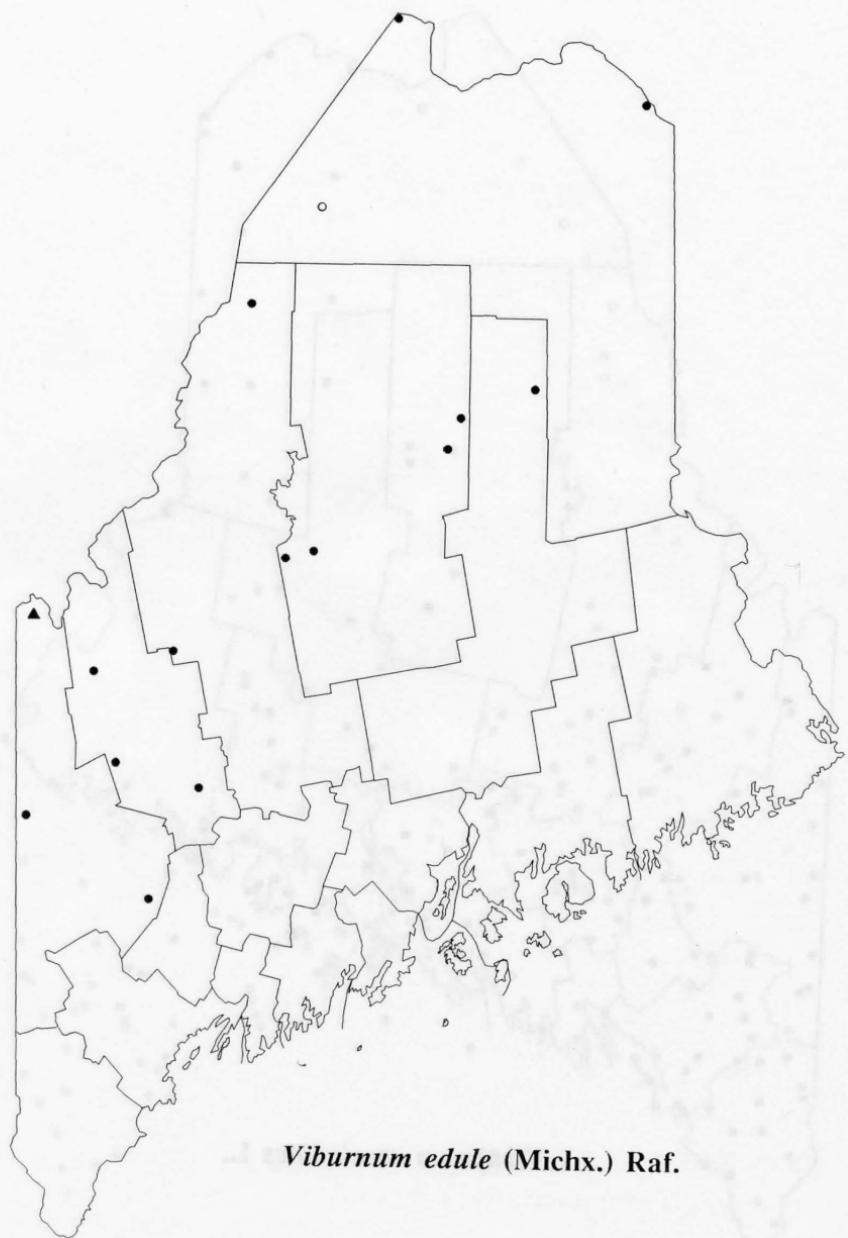
*Vaccinium uliginosum* L. ssp. *pubescens*  
(Wormsk. ex Hornem.) S. Young

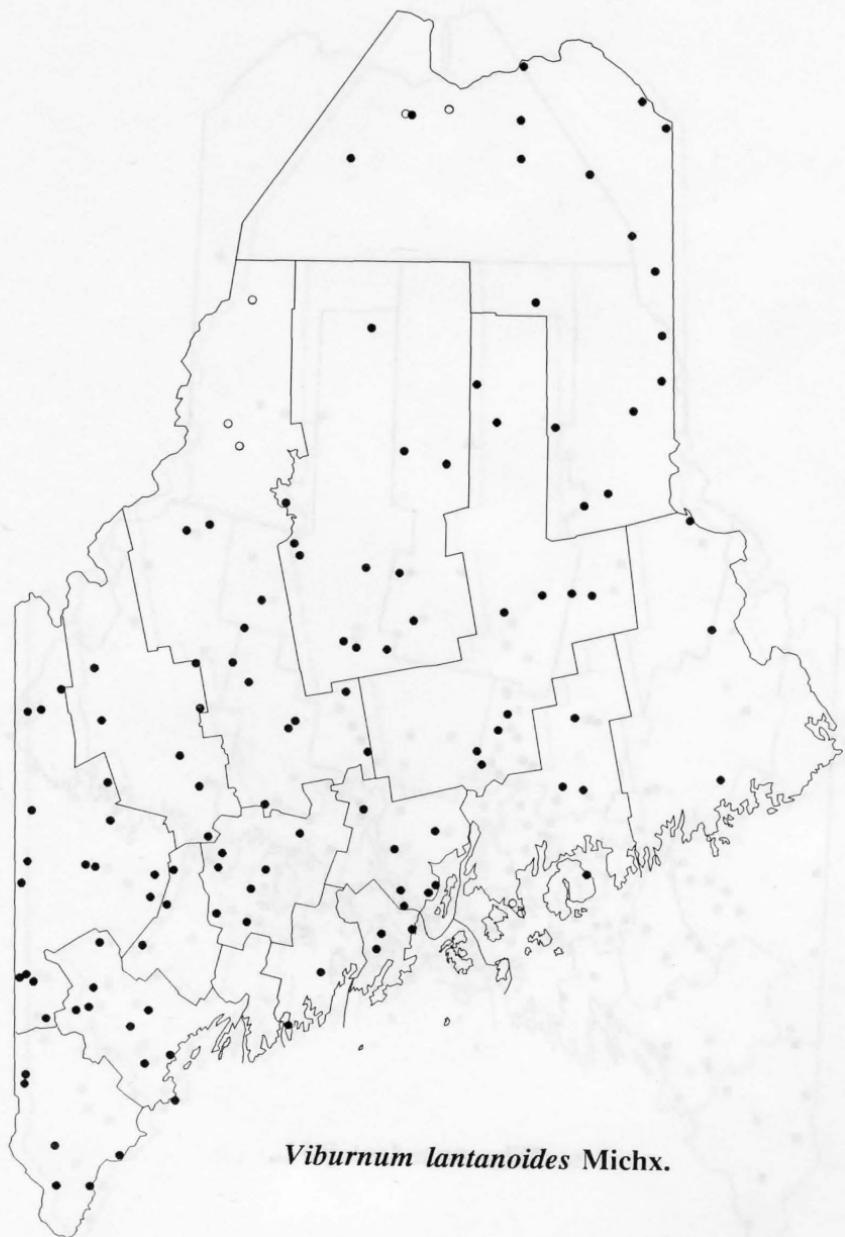




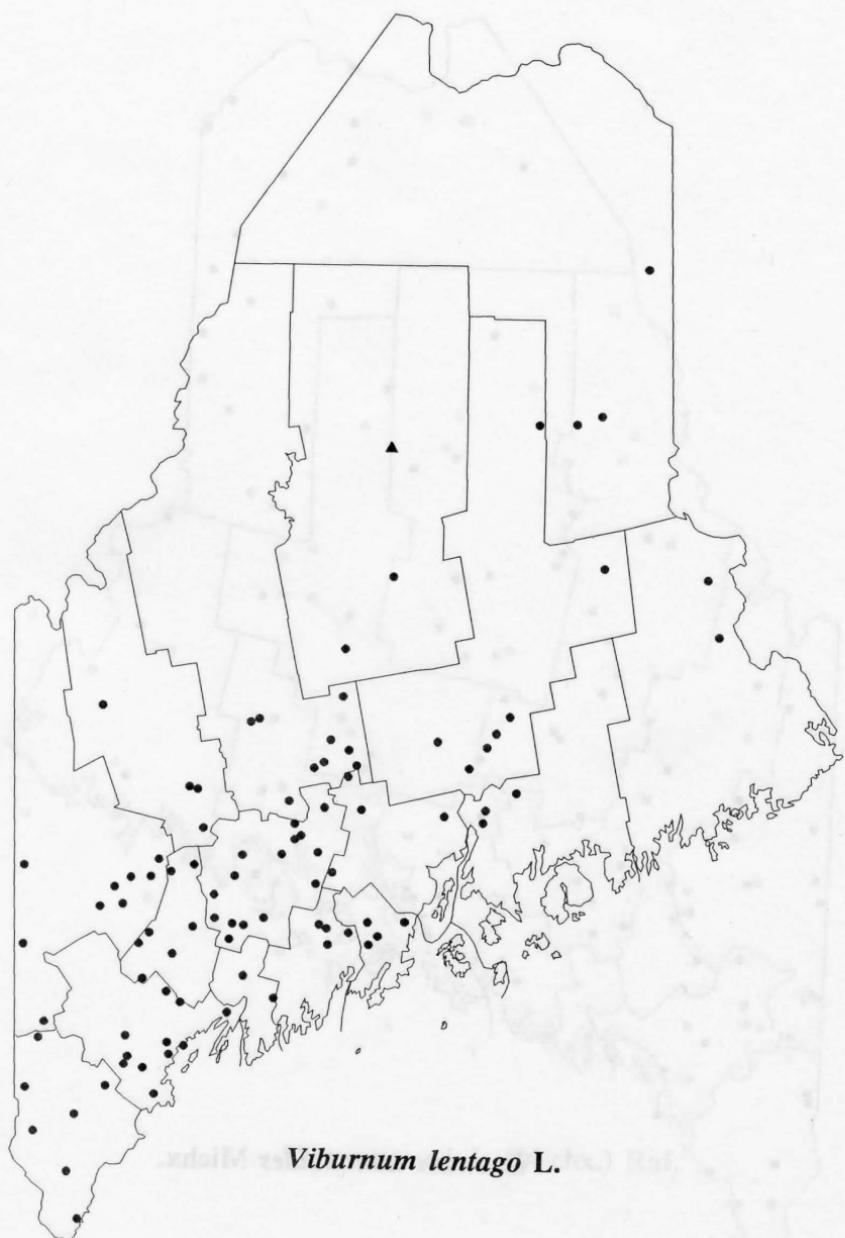


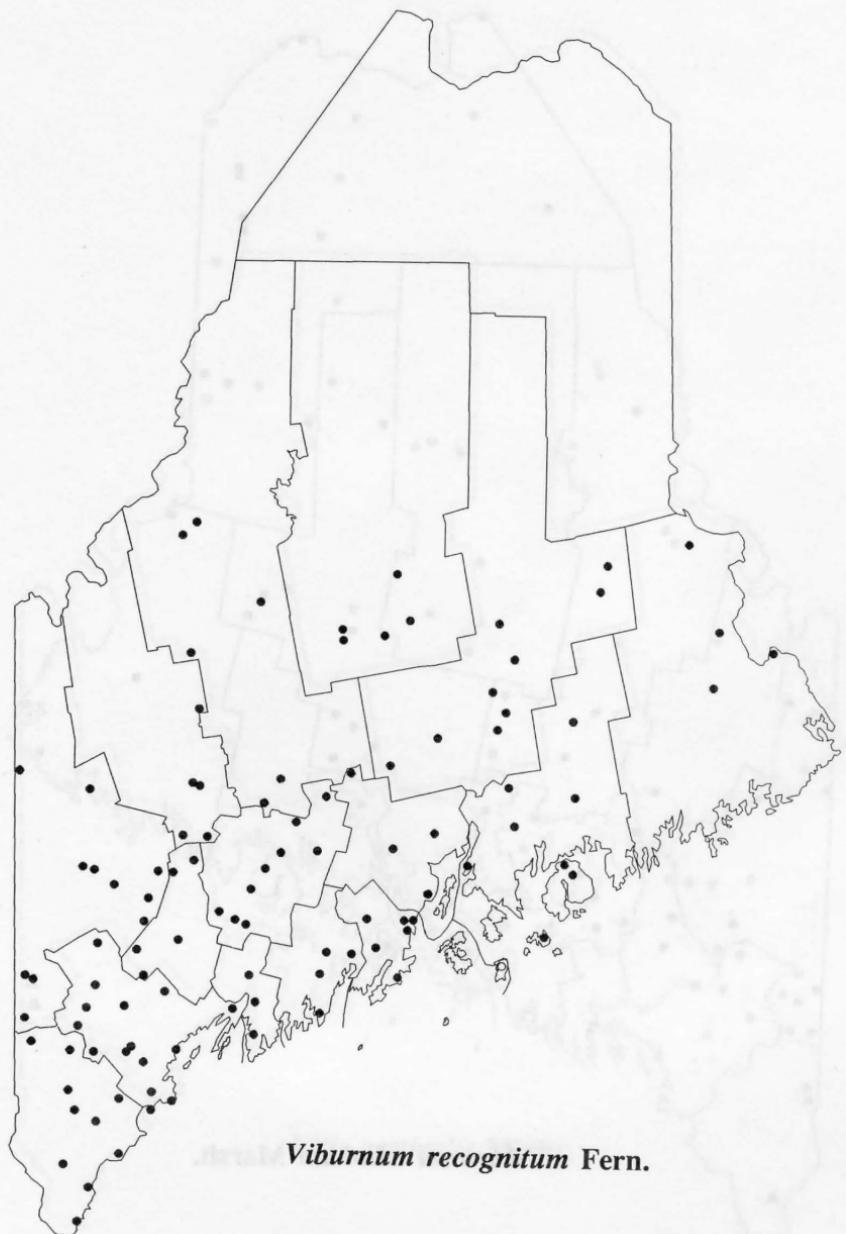
*Viburnum cassinoides* L.



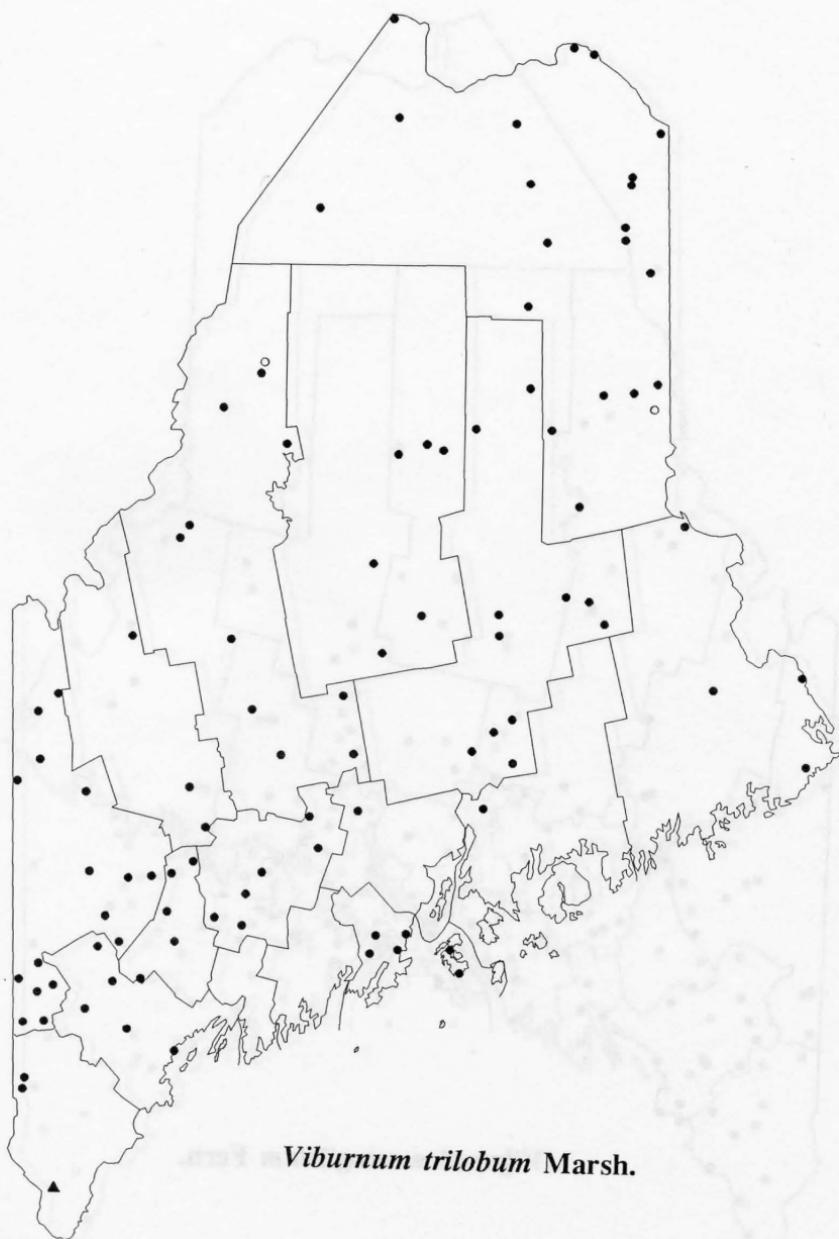


*Viburnum lantanoides* Michx.

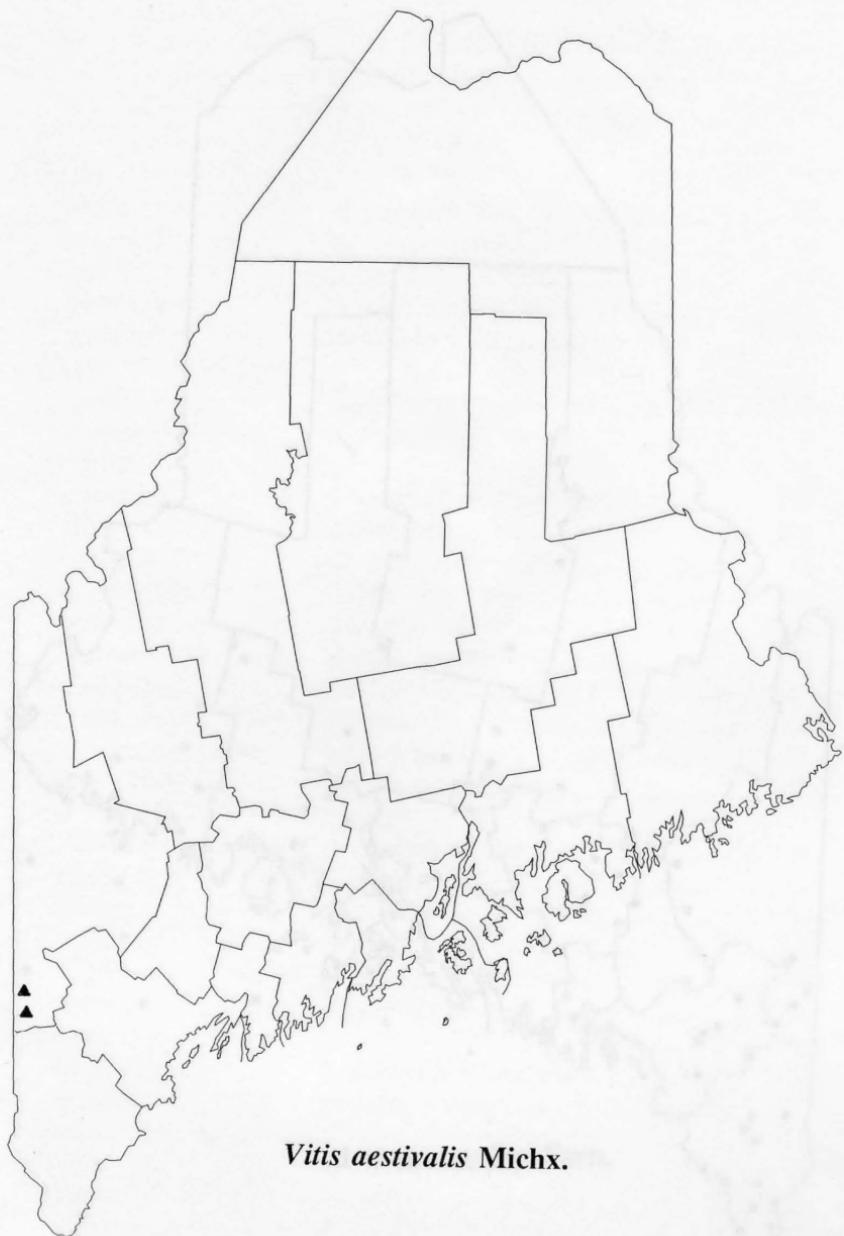




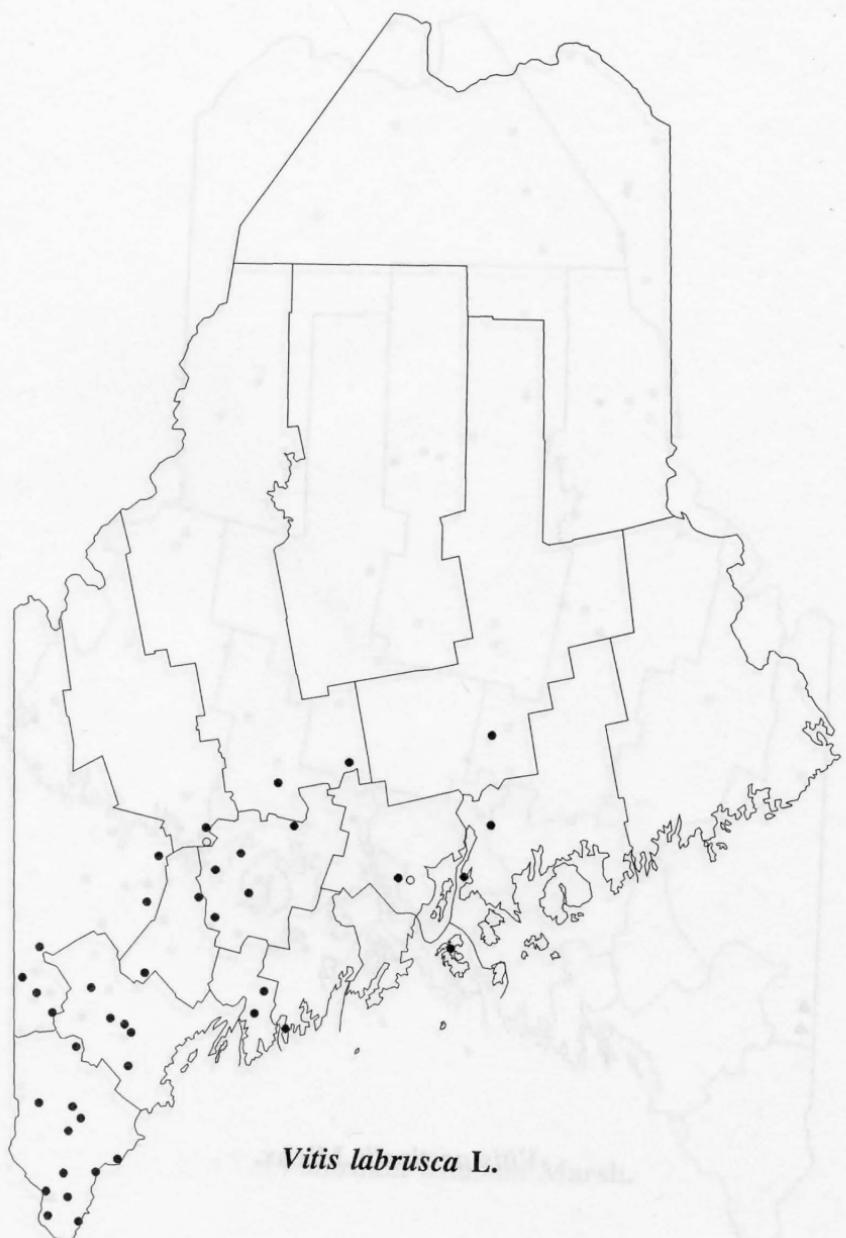
*Viburnum recognitum* Fern.

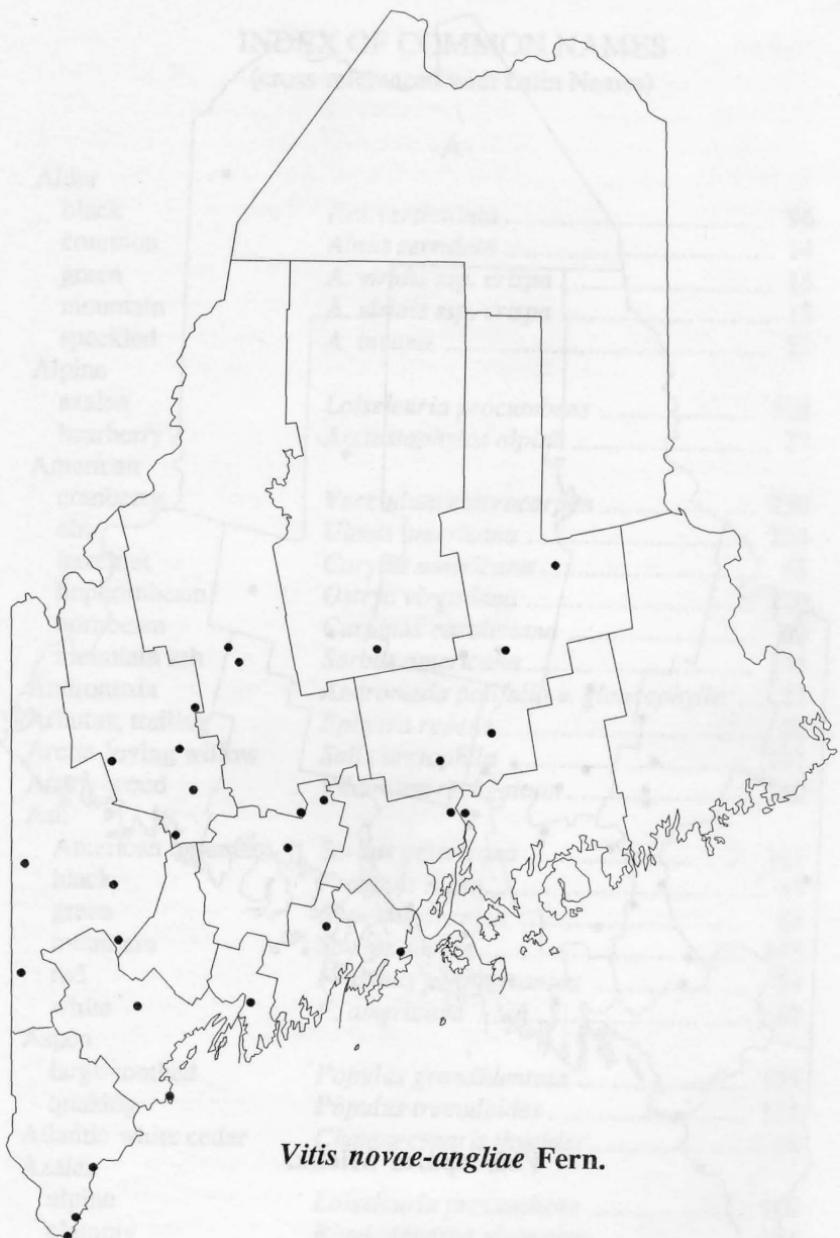


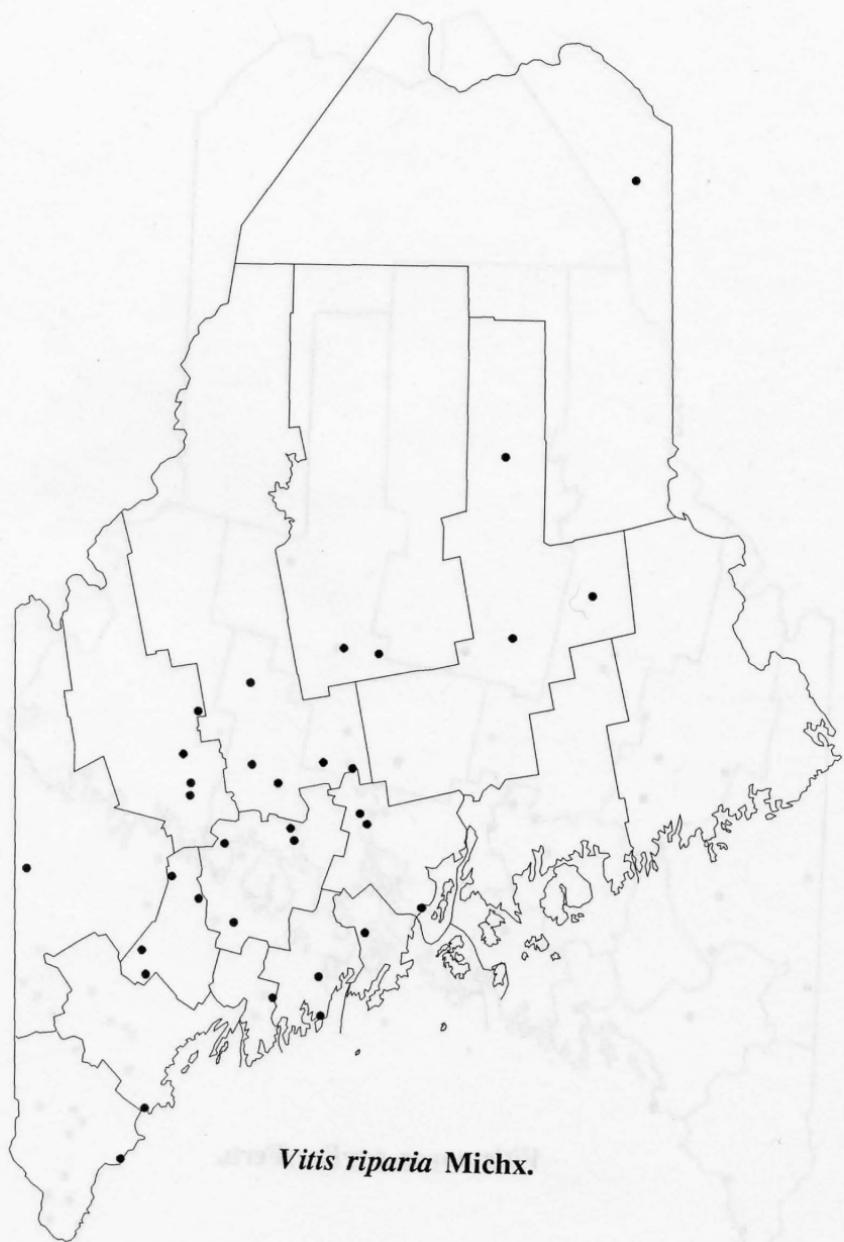
*Viburnum trilobum* Marsh.



*Vitis aestivalis* Michx.







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quaking	<i>Populus tremuloides</i> .....	135
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clammy	<i>Rhododendron viscosum</i> .....	158
Baked-apple berry	<i>Rubus chamaemorus</i> .....	178
Balm of Gilead	<i>Populus balsamifera</i> .....	133

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Balsam		
fir	<i>Abies balsamea</i> .....	7
poplar	<i>Populus balsamifera</i> .....	133
willow	<i>Salix pyrifolia</i> .....	208
Basswood	<i>Tilia americana</i> .....	220
Bayberry	<i>Myrica pensylvanica</i> .....	117
Beach		
heather	<i>Hudsonia tomentosa</i> .....	93
plum	<i>Prunus maritima</i> .....	138
Beaked hazelnut	<i>Corylus cornuta</i> .....	64
Bear oak	<i>Quercus ilicifolia</i> .....	149
Bearberry		
alpine	<i>Arctostaphylos alpina</i> .....	27
common	<i>A. uva-ursi</i> .....	28
Beech	<i>Fagus grandifolia</i> .....	81
blue	<i>Carpinus caroliniana</i> .....	40
Bilberry		
alpine	<i>Vaccinium uliginosum v. pubescens</i> .....	234
dwarf	<i>V. caespitosum</i> .....	228
Birch		
black	<i>Betula lenta</i> .....	35
dwarf	<i>B. glandulosa</i> .....	34
dwarf white	<i>B. minor</i> .....	36
gray	<i>B. populifolia</i> .....	38
low	<i>B. pumila</i> .....	39
mountain paper	<i>B. cordifolia</i> .....	33
paper	<i>B. papyrifera</i> .....	37
swamp	<i>B. pumila</i> .....	39
sweet	<i>B. lenta</i> .....	35
yellow	<i>B. alleghaniensis</i> .....	32
Bitternut	<i>Carya cordiformis</i> .....	41
Bittersweet, climbing	<i>Celastrus scandens</i> .....	46
Black		
alder	<i>Ilex verticillata</i> .....	96
ash	<i>Fraxinus nigra</i> .....	83
birch	<i>Betula lenta</i> .....	35
cherry	<i>Prunus serotina</i> .....	142
chokeberry	<i>Aronia melanocarpa</i> .....	30
crowberry	<i>Empetrum nigrum</i> .....	79
currant		
bristly	<i>Ribes lacustre</i> .....	166
wild	<i>R. americanus</i> .....	162

gum	<i>Nyssa sylvatica</i> .....	119
huckleberry	<i>Gaylussacia baccata</i> .....	87
oak	<i>Quercus velutina</i> .....	153
raspberry	<i>Rubus occidentalis</i> .....	185
spruce	<i>Picea mariana</i> .....	126
willow	<i>Salix nigra</i> .....	203
Blackberry	<i>Rubus spp.</i> .....	174-190
Blackberry		
smooth	<i>R. canadensis</i> .....	177
sow-teat	<i>R. allegheniensis</i> .....	174
Blue beech	<i>Carpinus caroliniana</i> .....	40
Blueberry		
early sweet	<i>Vaccinium pallidum</i> .....	233
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low	<i>V. pallidum</i> .....	233
low sweet	<i>V. angustifolium</i> .....	226
northern	<i>V. boreale</i> .....	227
sourtop	<i>V. myrtilloides</i> .....	231
velvet-leaf	<i>V. myrtilloides</i> .....	231
Bog		
laurel	<i>Kalmia polifolia</i> .....	103
rosemary	<i>Andromeda polifolia v. glaucophylla</i> ....	22
spruce	<i>Picea mariana</i> .....	126
Bristly		
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Buckthorn	<i>Rhamnus alnifolia</i> .....	154
Bur oak	<i>Quercus macrocarpon</i> .....	150
Bush honeysuckle	<i>Diervilla lonicera</i> .....	76
Butternut	<i>Juglans cinerea</i> .....	97
Buttonbush	<i>Cephalanthos occidentalis</i> .....	47
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Canada plum	<i>Prunus nigra</i> .....	139
Candleberry	<i>Myrica pensylvanica</i> .....	117
Cassandra	<i>Chamaedaphne calyculata</i> .....	49
Cat spruce	<i>Picea glauca</i> .....	125
Cedar		
Atlantic white	<i>Chamaecyparis thyoides</i> .....	48
Northern white	<i>Thuja occidentalis</i> .....	219
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Checkerberry	<i>Gaultheria procumbens</i> .....	86

Cherry		
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choke	<i>P. virginiana</i> .....	143
fire	<i>P. pensylvanica</i> .....	140
pin	<i>P. pensylvanica</i> .....	140
sand	<i>P. pumila v. depressa</i> .....	141
Chestnut	<i>Castanea dentata</i> .....	44
Chokecherry	<i>Prunus virginiana</i> .....	143
Chokeberry		
black	<i>Aronia melanocarpa</i> .....	30
red	<i>A. arbutifolia</i> .....	29
Cinquefoil		
shrubby	<i>Potentilla fruticosa</i> .....	136
three-toothed	<i>P. tridentata</i> .....	137
Clammy azalea	<i>Rhododendron viscosum</i> .....	158
Clematis, purple	<i>Clematis occidentalis v. occidentalis</i> .....	52
Climbing bittersweet	<i>Celastrus scandens</i> .....	46
Cloudberry	<i>Rubus chamaemorus</i> .....	178
Common		
bearberry	<i>Arctostaphylos uva-ursi</i> .....	28
elder	<i>Sambucus canadensis</i> .....	211
greenbrier	<i>Smilax rotundifolia</i> .....	215
juniper	<i>Juniperus communis</i> .....	98
Cranberry		
American	<i>Vaccinium macrocarpon</i> .....	230
highbush	<i>Viburnum trilobum</i> .....	242
large	<i>Vaccinium macrocarpon</i> .....	230
mountain	<i>V. vitis-idaea</i> .....	235
small	<i>V. oxycoccus</i> .....	232
Creeper, Virginia	<i>Parthenocissus spp.</i> .....	121-122
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snowberry	<i>Gaultheria hispidula</i> .....	85
Crowberry		
black	<i>Empetrum nigrum</i> .....	79
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Currant		
bristly black	<i>Ribes lacustre</i> .....	166
red	<i>R. triste</i> .....	167
skunk	<i>R. glandulosum</i> .....	164
wild black	<i>R. americanum</i> .....	162

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Dewberry	<i>Rubus arenicola</i> .....	175
	<i>R. recurvicaulis</i> .....	188
	<i>R. flagellaris</i> .....	182
Diapensia	<i>Diapensia lapponica</i> .....	75
Dogwood		
flowering	<i>Cornus florida</i> .....	59
round-leaved	<i>C. rugosa</i> .....	61
stiff	<i>C. foemina</i> ssp. <i>racemosa</i> .....	60
Dwarf		
bilberry	<i>Vaccinium caespitosum</i> .....	228
birch	<i>Betula glandulosum</i> .....	34
huckleberry	<i>Gaylussacia dumosa</i> v. <i>bigeloviana</i> .....	88
mistletoe	<i>Arceuthobium pusillum</i> .....	26
sumac	<i>Rhus copallina</i> .....	159
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Elm		
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slippery	<i>U. rubra</i> .....	225
red	<i>U. rubra</i> .....	225

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Fir, balsam	<i>Abies balsamea</i> .....	7
Fire cherry	<i>Prunus pensylvanica</i> .....	140
Flowering dogwood	<i>Cornus florida</i> .....	59
Fly		
honeysuckle	<i>Lonicera canadensis</i> .....	109
mountain	<i>L. oblongifolia</i> .....	111
swamp	<i>L. villosa</i> .....	113
Fox grape	<i>Vitis labrusca</i> .....	244
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Gale, sweet	<i>Myrica gale</i> .....	116
Golden heather	<i>Hudsonia ericoides</i> .....	92
Gooseberry	<i>Ribes</i> spp. .....	162-167
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Grape		
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frost	<i>V. riparia</i>	246
New England	<i>V. novae-angliae</i>	245
pigeon	<i>V. aestivalis</i>	243
riverbank	<i>V. riparia</i>	246
summer	<i>V. aestivalis</i>	243
Gray birch	<i>Betula populifolia</i>	38
Great laurel	<i>Rhododendron maximum</i>	157
Green		
alder	<i>Alnus viridis</i> ssp. <i>crispata</i>	15
ash	<i>Fraxinus pennsylvanica</i>	84
osier	<i>Cornus alternifolia</i>	57
Greenbrier, common	<i>Smilax rotundifolia</i>	215
Gum, black	<i>Nyssa sylvatica</i>	119
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Hackmatack	<i>Larix laricina</i>	104
Hardhack	<i>Spiraea tomentosa</i>	217
Hawthorn	<i>Crataegus</i> spp.	65-73
Hazel, -witch	<i>Hamamelis virginiana</i>	89
Hazelnut		
American	<i>Corylus americana</i>	63
beaked	<i>C. cornuta</i>	64
Heath, beach	<i>Hudsonia tomentosa</i>	93
Heather, golden	<i>H. ericoides</i>	92
Hemlock	<i>Tsuga canadensis</i>	223
Hickory		
bitternut	<i>Carya cordiformis</i>	41
shagbark	<i>C. ovata</i>	42
Highbush		
blueberry	<i>Vaccinium corymbosum</i>	229
cranberry	<i>Viburnum trilobum</i>	242
Hoary willow	<i>Salix candida</i>	194
Hobblebush	<i>Viburnum lantanoides</i>	239
Holly		
mountain	<i>Nemopanthus mucronata</i>	118
winterberry	<i>Ilex verticillata</i>	96
Honeysuckle	<i>Lonicera dioica</i>	110
bush	<i>Diervilla lonicera</i>	76
coral	<i>Lonicera sempervirens</i>	112
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mountain fly	<i>L. villosa</i> .....	113
swamp fly	<i>L. oblongifolia</i> .....	111
Hophornbeam, American	<i>Ostrya virginiana</i> .....	120
Huckleberry		
black	<i>Gaylussacia baccata</i> .....	87
dwarf	<i>G. dumosa v. bigeloviana</i> .....	88
Hudsonia	<i>Hudsonia spp.</i> .....	92-93
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Indigo, wild	<i>Babtisia tinctoria</i> .....	31
Inkberry	<i>Ilex glabra</i> .....	94
Ironwood	<i>Carpinus caroliniana</i> .....	40
Ivy, poison	<i>Ostrya virginiana</i> .....	120
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Juniper, common	<i>Juniperus communis</i> .....	98
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Labrador tea	<i>Ledum groenlandicum</i> .....	105
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Lapland rosebay	<i>Rhododendron lapponicum</i> .....	156
Larch	<i>Larix laricina</i> .....	104
Large		
cranberry	<i>Vaccinium macrocarpon</i> .....	230
pussy willow	<i>Salix discolor</i> .....	197
-toothed aspen	<i>Populus grandidentata</i> .....	134
Laurel		
bog	<i>Kalmia polifolia</i> .....	103
great	<i>Rhododendron maximum</i> .....	157
pale	<i>Kalmia polifolia</i> .....	103
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Leatherleaf	<i>Chamaedaphne calyculata</i> .....	49
Leverwood	<i>Ostrya virginiana</i> .....	120
Long-beaked willow	<i>Salix bebbiana</i> .....	193
Low blueberry	<i>Vaccinium pallidum</i> .....	233
sweet	<i>V. angustifolia</i> .....	226
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Maleberry	<i>Lyonia ligustrina</i> .....	114
Maple		
mountain	<i>Acer spicatum</i> .....	12
red	<i>A. rubrum</i> .....	9

river	<i>A. saccharinum</i> .....	10
rock	<i>A. saccharum</i> .....	11
silver	<i>A. saccharinum</i> .....	10
striped	<i>A. pensylvanicum</i> .....	8
sugar	<i>A. saccharum</i> .....	11
swamp	<i>A. rubrum</i> .....	9
Maple-leaved viburnum	<i>Viburnum acerifolium</i> .....	236
Mayflower	<i>Epigaea repens</i> .....	80
Meadowsweet	<i>Spirea latifolia</i> .....	216
Mistletoe, dwarf	<i>Arceuthobium pusillum</i> .....	26
Mooseberry	<i>Viburnum edule</i> .....	238
Moosewood	<i>Acer pensylvanicum</i> .....	8
Moss plant	<i>Viburnum lantanoides</i> .....	239
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Mountain	<i>Quercus macrocarpa</i> .....	150
alder	<i>Alnus viridis</i> ssp. <i>crispa</i> .....	15
ash	<i>Sorbus decora</i> .....	145
American	<i>S. americana</i> .....	144
birch	<i>Betula cordifolia</i> .....	33
cranberry	<i>Vaccinium vitis-idaea</i> .....	235
fly honeysuckle	<i>Lonicera villosa</i> .....	113
holly	<i>Nemopanthus mucronata</i> .....	118
laurel	<i>Kalmia latifolia</i> .....	102
maple	<i>Acer spicatum</i> .....	12
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Nannyberry	<i>Viburnum lentago</i> .....	240
New England grape	<i>Vitis novae-angliae</i> .....	245
New Jersey tea	<i>Ceanothus americana</i> .....	45
Ninebark	<i>Physocarpus opulifolius</i> .....	124
Northern		
red oak	<i>Quercus rubra</i> .....	152
white cedar	<i>Thuja occidentalis</i> .....	219
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Oak		
bear	<i>Quercus ilicifolia</i> .....	149
black	<i>Q. velutina</i> .....	153
mossy-cup	<i>Q. macrocarpa</i> .....	150
northern red	<i>Q. rubra</i> .....	152
red	<i>Q. rubra</i> .....	152
scarlet	<i>Q. coccinea</i> .....	148

scrub	<i>Q. ilicifolia</i> .....	149
swamp white	<i>Q. bicolor</i> .....	147
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Osier		
green	<i>Cornus alternifolia</i> .....	57
red	<i>C. sericea</i> .....	62
Pale		
blueberry	<i>Vaccinium pallidum</i> .....	233
laurel	<i>Kalmia polifolia</i> .....	103
Paper birch	<i>Betula papyrifera</i> .....	37
Partridgeberry	<i>Mitchella repens</i> .....	115
Pepperbush, sweet	<i>Clethra alnifolia</i> .....	54
Pignut	<i>Carya cordiformis</i> .....	41
Pin cherry	<i>Prunus pensylvanica</i> .....	140
Pine		
jack	<i>Pinus banksiana</i> .....	128
pitch	<i>P. rigida</i> .....	130
prince's	<i>Chimaphila umbellata</i> ssp. <i>cisatlantica</i>	51
red	<i>Pinus resinosa</i> .....	129
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Phyllodoce caerulea	<i>Phyllodoce</i> .....	123
Pipsissewa	<i>Chimaphila umbellata</i> ssp. <i>cisatlantica</i>	51
Pitch pine	<i>Pinus rigida</i> .....	130
Plum		
beach	<i>Prunus maritima</i> .....	138
Canada	<i>P. nigra</i> .....	139
Poison		
ivy	<i>Toxicodendron toxicaria</i> .....	221
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Poplar, balsam	<i>Populus balsamifera</i> .....	133
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Quaking aspen	<i>Populus tremuloides</i> .....	135
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Raisin, wild	<i>Viburnum cassinoides</i> .....	237
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Red		
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-berried elder	<i>Sambucus racemosa</i> ssp. <i>pubens</i> .....	212
cedar	<i>Juniperus virginiana</i> .....	100
chokeberry	<i>Aronia arbutifolia</i> .....	29
currant	<i>Ribes triste</i> .....	167
elm	<i>Ulmus rubra</i> .....	225
maple	<i>Acer rubrum</i> .....	9
oak	<i>Quercus rubra</i> .....	152
osier	<i>Cornus sericea</i> .....	62
pine	<i>Pinus resinosa</i> .....	129
spruce	<i>Picea rubens</i> .....	127
willow	<i>Cornus amomum</i> .....	58
Rhodora	<i>Rhododendron canadense</i> .....	155
River		
-bank grape	<i>Vitis riparia</i> .....	246
maple	<i>Acer saccharinum</i> .....	10
Rock maple	<i>A. saccharum</i> .....	11
Rope-bark	<i>Dirca palustris</i> .....	77
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Rosebay, Lapland	<i>Rhododendron lapponicum</i> .....	156
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bristly	<i>Aralia hispida</i> .....	23
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creeping	<i>Juniperus horizontalis</i>	99
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Scarlet oak	<i>Quercus coccinea</i>	148
Scrub oak	<i>Q. ilicifolia</i>	149
Serviceberry	<i>Amelanchier spp.</i>	16-21
Shadbush	<i>Amelanchier spp.</i>	16-21
Shagbark hickory	<i>Carya ovata</i>	42
Sheep laurel	<i>Kalmia angustifolia</i>	101
Sheepberry	<i>Viburnum lentago</i>	240
Shining		
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willow	<i>Salix lucida</i>	201
Shrubby cinquefoil	<i>Potentilla fruticosa</i>	136
Silky willow	<i>Salix sericea</i>	209
Silver maple	<i>Acer saccharinum</i>	10
Skunk currant	<i>Ribes glandulosum</i>	164
Slippery elm	<i>Ulmus rubra</i>	225
Small cranberry	<i>Vaccinium oxycoccus</i>	232
Smooth		
blackberry	<i>Rubus canadensis</i>	177
sumac	<i>Rhus glabra</i>	160
winterberry	<i>Ilex laevigata</i>	95
Snowberry, creeping	<i>Gaultheria hispida</i>	85
Soapberry	<i>Shepherdia canadensis</i>	214
Sourtop blueberry	<i>Vaccinium myrtilloides</i>	231
Sow-teat blackberry	<i>Rubus allegheniensis</i>	174
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Spikenard	<i>Aralia racemosa</i>	25
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Spring beauty	<i>Epigaea repens</i>	80
Spruce		
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bog	<i>P. mariana</i>	126
cat	<i>P. glauca</i>	125
red	<i>P. rubens</i>	127
white	<i>P. glauca</i>	125
Squashberry	<i>Viburnum edule</i>	238
Staghorn sumac	<i>Rhus typhina</i>	161

Steeplebush	<i>Spirea tomentosa</i>	217
Stiff dogwood	<i>Cornus foemina ssp. racemosa</i>	60
Stinking elder	<i>Sambucus racemosa ssp. pubens</i>	212
Striped maple	<i>Acer pensylvanicum</i>	8
Sugar maple	<i>A. saccharum</i>	11
Sumac		
poison	<i>Toxicodendron vernix</i>	222
shining	<i>Rhus copallina</i>	159
smooth	<i>R. glabra</i>	160
staghorn	<i>R. typhina</i>	161
Summer grape	<i>Vitis aestivalis</i>	243
Swamp		
birch	<i>Betula pumila</i>	39
fly honeysuckle	<i>Lonicera oblongifolia</i>	111
maple	<i>Acer rubrum</i>	9
white oak	<i>Quercus bicolor</i>	147
Sweet		
birch	<i>Betula lenta</i>	35
low blueberry	<i>Vaccinium angustifolium</i>	226
gale	<i>Myrica gale</i>	116
pepperbush	<i>Clethra alnifolia</i>	54
Sweetfern	<i>Comptonia peregrina</i>	55
Sycamore	<i>Platanus occidentalis</i>	132
	-T-	
Taccamahac	<i>Larix laricina</i>	104
Tamarack	<i>L. laricina</i>	104
Tea, New Jersey	<i>Ceanothus americana</i>	45
Teaberry	<i>Gaultheria procumbens</i>	86
Three-toothed cinquefoil	<i>Potentilla tridentata</i>	137
Trailing arbutus	<i>Epigaea repens</i>	80
Trumpet honeysuckle	<i>Lonicera sempervirens</i>	112
Tupelo	<i>Nyssa sylvatica</i>	113
Twinflower	<i>Linnaea borealis</i>	107
	-V-	
Velvet-leaf blueberry	<i>Vaccinium myrtilloides</i>	231
Viburnum, maple-leaved	<i>Viburnum acerifolium</i>	236
Virgins-bower	<i>Clematis virginiana</i>	53
Virginia creeper	<i>Parthenocissus spp.</i>	121-122

## -W-

Water		
oleander	<i>Decodon verticillatus</i>	74
willow	<i>D. verticillatus</i>	74
White		
ash	<i>Fraxinus americana</i>	82
birch	<i>Betula papyrifera</i>	37
dwarf	<i>B. minor</i>	36
oak	<i>Quercus alba</i>	146
swamp	<i>Q. bicolor</i>	147
pine	<i>Pinus strobus</i>	131
spruce	<i>Picea glauca</i>	125
Wicopy	<i>Dirca palustris</i>	77
Wild		
black currant	<i>Ribes americanum</i>	162
indigo	<i>Babtisia tinctoria</i>	31
sarsasparilla	<i>Aralia nudicaulis</i>	24
Willow		
arctic-loving	<i>Salix spp.</i>	191-210
balsam	<i>S. arctophila</i>	191
black	<i>S. pyrifolia</i>	208
hoary	<i>S. nigra</i>	203
large pussy	<i>S. candida</i>	194
long-beaked	<i>S. discolor</i>	197
sandbar	<i>S. bebbiana</i>	193
shining	<i>S. exigua</i>	198
silky	<i>S. lucida</i>	201
small pussy	<i>S. sericea</i>	209
smooth	<i>S. humilis</i>	200
Winterberry		
holly	<i>Ilex laevigata</i>	95
Wintergreen, spotted	<i>I. verticillata</i>	96
Witch-hazel	<i>Chimaphila maculata</i>	50
Witherod	<i>Hamamelis virginiana</i>	89
Woodbine	<i>Viburnum cassinoides</i>	237
	<i>Parthenocissus spp.</i>	121-122
Yellow		
-barked oak	<i>Quercus velutina</i>	153
birch	<i>Betula alleghaniensis</i>	32
Yew	<i>Taxus canadensis</i>	218

## -Y-