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THE LOCATIONS OF COLLECTION AND COLLECTORS OF SPECIMENS DESCRIBED BY  
LABILLARDIERE IN 'NOVAE HOLLANDIAE PLANTARUM SPECIMEN' - ADDITIONAL NOTES.

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(with three tables)

ABSTRACT

Several plants described by Labillardière and indicated to have been collected in Tasmania are shown to be species endemic to Western Australia. The locations are corrected and collectors are indicated if the original specimens could not have been collected by Labillardière. The reasons for these errors are discussed and it is concluded that caution is required in accepting Labillardière's type locations.

INTRODUCTION

Jacques Julien Houtou de Labillardière visited the Australian and Pacific regions between 1791 and 1796. He was a member of the French expedition that was sent by *l'Assemblée Constituante* to search for the ships, commanded by La Pérouse, that had not been heard from since leaving Botany Bay in 1788. The search expedition was commanded by D'Entrecasteaux and was commissioned to conduct scientific investigation *en route*. Labillardière was on the expedition as a naturalist and therefore was able to make botanical and zoological observations and collections (Chevalier 1953, Stafleu 1966, Nelson in press). Labillardière published descriptions of some of his Australian [New Holland] plants between 1804 and 1807 in '*Novae Hollandiae Plantarum Specimen*'.

The author has already shown that certain plant specimens described by Labillardière in '*Novae Hollandiae Plantarum Specimen*' (1804) were incorrectly labelled in that volume and, in some cases, could not have been collected by Labillardière (Nelson in press). There is evidence available to show that some of the specimens were collected by Leschenault de la Tour (Nelson in press), who was a botanist on the French expedition, led by Baudin, that was in the Australian region between 1801 and 1803 (Cornell 1966).

That evidence concerned those specimens labelled '*Habitat in terra van-Lewin*' by Labillardière and which were all allegedly collected in Western Australia at *Baie Le Grand* [Esperance Bay] (Labillardière 1800, 1804, Nelson in press). The investigations relating to the '*terra van-Lewin*' specimens did not include the second and larger group of species that are labelled '*Habitat in capite van-Dieman*' [Tasmania]. Some of these latter specimens are discussed in this paper and similar conclusions concerning the locations of collections and the collectors can be reached as for the '*terra van-Lewin*' species. A few of the specimens are incorrectly labelled '*capite van-Dieman*' (for easier comparisons with '*Novae Hollandiae Plantarum Specimen*' the ablative case is retained though the nominative case - '*caput van-Dieman*' should be used) as they could have been collected only in Western Australia, according to available information, or, in a single case, from New Caledonia. Some of these anomalous taxa were probably collected by Labillardière, but some of the species must have been collected by other botanists.

LABILLARDIERE'S VISITS TO TASMANIA

'*Capite van-Dieman*' refers to the areas on the island of Tasmania that Labillardière visited in the years 1792 and 1793 while he was a member of D'Entrecasteaux's expedition. The voyage of the ships commanded by D'Entrecasteaux has been discussed by

Stafleu (1966) and Nelson (in press). Accounts are available that were written by Labillardière (1800) and by another member of the expedition, Rossel (1808). A summary of the voyage of the vessels L'ESPERANCE and LA RECHERCHE is given below.

After leaving France in September 1791, the expedition sailed round the Cape of Good Hope and travelled east towards Australia [New Holland]. In April 1792 the ships dropped anchor in *Baie de l'Aventure* on the south-east coast of Tasmania. Here Labillardière made his first Australian collections. After visiting several other places in Tasmania, the vessels sailed north along the east coast of Australia to New Caledonia and the islands of the New Guinea region. Then they voyaged into the Indian Ocean and eventually reached Western Australia, at Cape Leeuwin, in December 1792. The ships sailed east along the south coast of the continent and anchored in *Baie Le Grand* [Esperance Bay]. It was in the environs of *Baie Le Grand* that Labillardière collected the specimens that are labelled '*terra van-Lewin*' (Labillardière 1800, 1804, Nelson in press). Leaving this area on 18 December 1792, the ships sailed direct to Tasmania where Labillardière expanded his '*capite van-Dieman*' collections before the expedition left Tasmania, once again, and journeyed to the New Guinea region, without calling at any place on the east coast of Australia.

The ships eventually reached Java where the republican scientists and members of the crew were detained by the Dutch authorities; Labillardière was among those arrested. Rossel, however, persuaded the Dutch to allow him to return to France on a Dutch ship, and he took with him Labillardière's biological specimens. Before reaching its destination the ship bearing Rossel was captured by the English and the collections were taken to London. Banks later secured the return of the collections to Labillardière in 1796 (de Beer 1960).

In 1804, Labillardière published the first part of his flora, '*Novae Hollandiae Plantarum Specimen*', and this contained descriptions of many of his Australian specimens. Stafleu (1966) indicated that Labillardière worked on his own specimens only, but it can be shown that he had access to other collections, particularly those of Leschenault (Nelson in press). The plants collected in Tasmania were labelled '*Habitat in capite van-Dieman*', while those collected in Western Australia were labelled '*Habitat in terra van-Lewin*'. It is known that '*terra van-Lewin*' referred to one area - *Baie Le Grand*. While in the Australian area Labillardière did not collect at any locations other than at *Baie Le Grand* and in Tasmania. He did collect on New Caledonia, and specimens from that island are labelled accordingly. Most of the New Caledonian specimens are described in a separate volume (Labillardière 1824).

#### TASMANIAN FLORA: HISTORY AND COMPOSITION

While Labillardière was not the first botanist to make collections on Tasmania, his specimens did include some previously undescribed species. Prior to Labillardière, collections had been made by Johann and Georg Forster in 1773 and by Nelson and Anderson in 1777. These collectors were on separate expeditions led by Cook (Hooker 1860, Maiden 1908). Extensive collections were sent to Banks by various collectors following the establishment of penal colonies by the English in New South Wales and on Tasmania in the latter part of the eighteenth century (Hooker 1860).

Both Brown (botanist on Flinders' expedition) and Leschenault (on Baudin's expedition) made collections on Tasmania in the early part of the nineteenth century. Collection was greatly increased in the following years due to the arrival of resident botanists on the island. In 1840, Tasmania was visited by Hooker, who was the surgeon-botanist on Ross' expedition with the ships EREBUS and TERROR. Hooker's account of the flora of Tasmania (1860) includes his very perceptive introductory essay. Charles Darwin also visited Tasmania, while on the voyage of the BEAGLE in 1836 (Darwin 1839; Hooker 1860; Moorehead 1969; Marshall 1970), but made no collections there.

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TABLE 1  
EARLY BOTANICAL INVESTIGATIONS IN TASMANIA, UP TO THE PUBLICATION OF  
LABILLARDIÈRE'S FLORA.

Date	Collector	Remarks
1773	Johann R. FORSTER J. Georg A. FORSTER Andrew SPARMANN	Sparmann and the Forsters (father and son) were on Cook's second voyage. They collected at Adventure Bay (Tasmania); the bay was named after Furneaux's vessel 'ADVENTURE'.
1776	David NELSON William ANDERSON	These botanists were on Cook's third voyage and collections were made in Tasmania.
1792-1793	J.J.H. de LABILLARDIÈRE	Collected at Storm Bay on two occasions during D'Entrecasteaux's voyage.
1802	Robert BROWN LESCHENAULT de la Tour	Botanist with Flinders. Botanist with Baudin.
1804	William PATERSON	Lieutenant-Governor of Tasmania; he sent specimens to Banks.
1804-1807	NOVAE HOLLANDIAE PLANTARUM SPECIMEN	published.

The Tasmanian flora includes endemic species and genera, and is generally regarded as containing many primitive relict elements derived from a Gondwanaland flora. The Tasmanian flora does not exhibit as high a rate of endemism as the flora of south-western Western Australia (Burbidge 1960). Having studied the flora and its relationships with the floras of other areas, Hooker (1860) was led to suggest that the distribution patterns and evolutionary relationships could only indicate "that the three southern Floras, the Antarctic, the Australian and the South African....may all have been members of one great vegetation which may once have covered..a southern area, and.. the geographical changes that have resulted in its dismemberment into isolated groups scattered over the Southern Ocean, must have been great indeed".

However, using the available information on species distributions it is possible to examine Labillardière's species to ascertain the origin of certain taxa that do not appear to be correctly labelled.

SPECIES LABELLED '*HABITAT IN CAPITE VAN-DIEMAN*'

The methods used in this investigation are the same as those employed in the survey of the '*terra van-Lewin*' species (Nelson in press). All the angiosperm specimens labelled '*Habitat in capite van-Dieman*' were listed and the nomenclature was revised to correspond to present usage. The distribution patterns of the taxa were determined using available literature. Those species that were anomalous and which do not occur in Tasmania today, according to available data (Curtis 1956, Willis 1972), were noted and further details of their distribution patterns were ascertained. These taxa are discussed below and listed in table 2.

## Locality and Collector of Labillardière's Plant Specimens

Labillardière's own herbarium specimens only bear the name and occasionally the draft of the description, published in '*Novae Hollandiae Plantarum Specimen*', in his handwriting. They do not normally bear any indication of the collector (other than handwriting) or the date and location of the collections. Thus if a name or location is attached the specimen is probably not one that was collected by Labillardière, especially if the location is not known to have been visited by Labillardière (Steinberg pers. comm., Nelson in press).

## COLLECTOR AND LOCATION OF COLLECTION OF ANOMALOUS SPECIES

A full list of these species with details of their distribution, according to present knowledge is given in table 2. The species are discussed below. None of these species grows wild in Tasmania today. (Curtis 1956).

TABLE 2

DISTRIBUTION OF ANOMALOUS SPECIES LABELLED '*capite van-Dieman*'.  
Districts (in brackets) after Western Australia refer to south-west province (Beard 1970, Nelson in press) except where Ereman zone is indicated.

tom.	page	tab.	Present nomenclature [basonym if different]	Distribution (Willis 1972, Beard 1970)
ii.	39	182	<i>Helichrysum cinerum</i> (Labill.) F. Muell ex Benth. [ <i>Chrysocoma cinerea</i> Labill.]	(New Caledonia)
ii.	73	223	<i>Adriana quadripartita</i> (Labill.) Gaudich. in Freyc. [ <i>Croton quadripartitum</i> Labill.]	Victoria and Western Australia (Irwin, Darling, Stirling, Eyre).
ii.	29	170	<i>Astartea fascicularis</i> (Labill.) DC. [ <i>Melaleuca fascicularis</i> Labill.]	Western Australia (Darling, Stirling, Avon)
i.	88	114	<i>Frankenia tetrapetala</i> Labill.	Western Australia (Stirling, Ereman zone - Coolgardie)
i.	106	134	<i>Gompholobium tomentosum</i> Labill.	Western Australia (Stirling, Irwin, Avon, Darling)
i.	17	16	<i>Lepidosperma squamatum</i> Labill.	Western Australia (Darling, Warren)
i.	11	-	<i>Pimelea clavata</i> Labill.	Western Australia (Stirling, Warren)
i.	56	80	<i>Scaevola cuneiformis</i> Labill.	Western Australia (Eyre)
i.	23	29	<i>Stipa elegantissima</i> Labill.	Victoria, South Australia, Western Australia, (Irwin, Darling, Warren, Stirling, Ereman zone - Austin, Coolgardie)
i.	65	90	<i>Sollya heterophylla</i> Lindl. [ <i>Billardiera fusiformis</i> Labill.]	Western Australia (Darling, Stirling, Eyre)
ii.	86	235	<i>Acacia saligna</i> (Labill) Wendl. ( <i>Mimosa saligna</i> Labill)	Western Australia (Eyre) (Maslin in press)
ii.	9	147	<i>Leptospermum sericeum</i> Labill.	Western Australia (Cape Le Grand only)

i. *Helichrysum cinereum* (Labill.) F. Muell. ex Benth. (basionym: *Chrysocoma cinerea*)

The identity of the species described by Labillardière was confused for a considerable time. Hooker (1860) referred it to *Ozothamnus cinerea* R.Br. stating that Labillardière's specimen differed from that supplied by a later collector, Gunn, "only in rather shorter leaves.." Wakefield later indicated that Labillardière's specimen must be of New Caledonian origin, and was not Tasmanian (Wakefield 1951, 1954, Burbidge 1958). Labillardière did collect in New Caledonia.

ii. *Adriana quadrupartita* (Labill.) Gaudich. in Freyc. (basionym: *Croton quadrupartitum*)

This species occurs in Victoria (Willis 1972) and in Western Australia (Bentham 1863, Blackall and Grieve 1954, Beard 1970). Weston (pers.comm.) has collected this plant at Esperance. It exhibits a disjunct distribution pattern that is occasionally found in southern Australia, when a species is apparently absent from the southern-central regions of the continent; in particular on the Nullarbor Plain (Green 1965). The species has been confused with *A. klotzschii* (F. Muell.) F. Muell. which is found in South Australia and it is possible that more detailed taxonomic studies are required on this particular taxon to establish its exact nature.

Assuming the present nomenclature to be correct and the distribution patterns to be accurate, the species occurs in southern Victoria (Willis 1972) and in Western Australia from the Irwin district to the Eyre district of the south-west province (Beard 1970). Bentham (1863) listed "Tasmania - Labillardière" as one of the collections. Hooker (1860) did not list the species at all. It would appear to be incorrect to assume that Labillardière collected the species in Tasmania as it is not found there today (Curtis 1956) but it is possible that he collected the species at Baie Le Grand in Western Australia; thus the specimen should probably have been labelled '*terra van-Lewin*'.

iii. *Astartea fascicularis* (Labill.) DC. (basionym: *Melaleuca fascicularis*).

This species is found today in the Darling, Stirling and Warren districts of Western Australia (Beard 1970). Bentham (1863) listed specimens from the Murchison River to Lucky Bay, east of Cape Le Grand on the eastern side of Baie Le Grand [Esperance Bay]. Bentham indicated several early collections including Labillardière's; "King George Sound, Lucky Bay - Brown, Labillardière". He made several comments on the nature of Labillardière's specimen, stating that it represented a coarse form of the species with leaves less clustered than in other material. He did not doubt the identity of Labillardière's specimen nor the description. Bentham (1863) assumed the location of collection to have been in Western Australia, though he did not discuss the label '*capite van-Dieman*' used in '*Novae Hollandiae Plantarum Specimen*' (Labillardière 1804).

As early as 1844 it was recognised that there had been an error in the location of collection given by Labillardière. In '*Plantae Preissianae*' (Lehmann 1844) the species is described and the description includes the statement: "*In terra van-Lewin: Labill. sic enim certo legendum pro loco, lapsu memoriae allato Prom. Van-Dieman*". Thus the error was noted and corrected and this was repeated by Hooker (1860) who said "stated by Labill. to have been found in Tasmania, is not so, but a native of South-western Australia". Both these statements are corroborated by data on the distribution of the taxon, and it can be said that Labillardière was in error in his flora. He could have collected the species at Baie Le Grand and thus should have used the label '*terra van-Lewin*'. The species has been collected at Esperance recently (Weston pers.comm.).

iv. *Frankenia tetrapetala* Labill.

According to extant data this species is found in the Stirling district and in the Coolgardie district of Western Australia (Beard 1970). Bentham (1863) listed specimens from King George Sound and "south coast".

## Locality and Collector of Labillardière's Plant Specimens

With reference to Labillardière's specimen, Bentham stated that it was "said to have come from Tasmania; but there is very likely to have been some mistake.... there is no doubt about the identity" of the specimens. Hooker (1860) said "Labillardière figures *F. tetrapetala* as a native of Tasmania. It much resembles a Western Australian plant..." This species appears to have been incorrectly labelled '*capite van-Dieman*' by Labillardière (1804); he probably collected the material at Baie Le Grand - '*terra van-Lewin*'. Summerhayes (1928) revised the Australian members of this family and corrected the type location.

v. *Gompholobium tomentosum* Labill.

This plant is confined to Western Australia and is found in areas south of the Murchison River (Bentham 1863, Beard 1970). It does not apparently occur near Baie Le Grand. The author has collected it within 100 km of that bay.

Bentham does not comment on the distribution of the species but he does list Labillardière's specimen as coming from King George Sound, which is not possible, as Labillardière never visited the Sound (Nelson in press). Hooker (1860) stated that the species "is erroneously described as a native of Tasmania in De Candolle's *Prodromus*". It is also erroneously described thus in Labillardière's flora (1804). The species must have been collected in Western Australia and it is not improbable that the specimens used by Labillardière were collected by Leschenault at King George Sound as the species is absent from the environs of Baie Le Grand today.

vi. *Lepidosperma squamata* Labill.

There has been considerable confusion about the nomenclature of the material that Labillardière described, mainly because of the location given for the species in '*Novae Hollandia Plantarum Specimen*' (Labillardière 1804). Bentham did not list the species but referred to it in a note on another species. He stated that Labillardière's specimens appeared to represent "*L. angustatum* R.Br.; a Western Australian form only". A similar conclusion was reached by Hooker (1860). Thus, the label in Labillardière's flora may be regarded as incorrect. The species is found in the Darling and Warren districts of Western Australia today (Beard 1970), and the specimens that Labillardière used most probably were collected by Leschenault.

vii. *Pimelea clavata* Labill.

This Western Australian endemic species is found in the southern coastal areas of the region from Augusta to the Fitzgerald River in the Stirling and Warren districts (Bentham 1863, Beard 1970). Neither Bentham (1863) nor Hooker (1860) comment on the location of Labillardière's collection. However in a footnote in 'Botanical Magazine' in a section on *P. ligustrina* Labill. (*P. hypericina* Cunn.) the following comments are found: "Another, and even rarer species in the English gardens has been in flower during the last spring at Kew. It proved to be *Pimelea clavata* Labill., a plant originally discovered, many years ago, in Van Dieman's Land, and afterwards observed on the south coast of N. Holland by Mr. Brown; and from the desert native shores of others of its kindred, King George's Sound, was introduced to the Royal Gardens in 1823". The author of the note is uncertain though the main description (of *P. hypericina*) is attributed to Allan Cunningham (1834, t.3330.)

This would appear to indicate, when considered with extant data, that Labillardière's location was an error and that the label should have read '*terra van-Lewin*'. However the present distribution of the species would indicate that Labillardière could not have collected the species himself, at Baie Le Grand, and thus the material must have been obtained elsewhere by another collector, probably at King George Sound.

viii. *Scaevola cuneiformis* Labill.

This species is confined today to the Eyre district of south-west Australia, and the taxon is common around Baie Le Grand. Labillardière would have been able to collect the species when he visited that area, though he indicated that the specimen came from 'capite van-Dieman'. Hooker (1860) stated that the taxon, while "described by Labillardière as a Tasmanian plant is probably a native of south-western Australia". Bentham (1863) repeated this and he was able to indicate that the figure and description given (Labillardière 1804) left no doubt about the identity of the material despite the stated location of collection.

ix. *Stipa elegantissima* Labill.

This species is very widespread in southern Australia but it is absent from Tasmania (Curtis 1956). It occurs in Victoria (Willis 1972) and in South Australia (Black 1924), as well as in Western Australia (Beard 1970). Bentham (1863) stated that Labillardière's specimen from Capt. Baudin in Herb. Brown, is, however, marked 'Nouv. Hol. Sud-Oeust'. Hooker (1860) made this statement; "*S. elegantissima* is stated by Brown (Prodromus 175) (1810) on authority of the late Mr. Lambert's herbarium to be a native of Tasmania. It is a native of South-Western Australia and Swan River...".

The absence of the species from Tasmanian collections (Bentham 1863, Curtis 1956, Willis 1972) and the data on present distribution patterns indicates that Labillardière could not have collected the taxon in Tasmania. The statement of Bentham (1863) that Labillardière's specimen was from Baudin, indicates that the species was not collected by Labillardière but by Leschenault. The location of the collection - Nouv. Holl. Sud-Oeust - could be either Geographe Bay or King George Sound, which are both situated within the distribution range of the species. Bentham's indication that the material was obtained by Baudin's expedition confirms the use of material collected by other French botanists by Labillardière (Nelson in press).

x. *Sollya heterophylla* Lindl. (synonym: *Billardiera fusiformis* Labill.)

This blue-flowered climbing plant is found in Western Australia only; in the Darling, Stirling and Eyre districts (Beard 1970). Bentham gave Labillardière's collection location as King George Sound, which is incorrect. In '*Plantae Preissianae*' (Lehmann 1844) Putterlich stated "*Crescit in Australiae insulae Van-Dieman* (Jan. 1793. Labillardière ex sched. specim. authent.)". While Bentham makes no comment on Labillardière's specimen, apart from giving an incorrect location, Hooker (1860) does make a most interesting and significant statement. Hooker said, in a preamble to the genus: "Endlicher says that the genus *Sollya* (*Billardiera fusiformis* Labill. of south west Australia) is also found in Tasmania; but I know of no species from that country. Putterlich also (Pl. Preiss, 203) [quoted above in latin original] says that he has examined an authentic specimen of Labillardière's gathered in Tasmania in January 1793. Both statements probably arise from some errors that are known to have crept in Labillardière's localities."

In an entry in the Tasmanian Journal of Natural Science requesting information on biological matters the following was found: "*Solbya angustifolia* [should read *Sollya*] - Has any botanist in the island collected *Solbya angustifolia* (*Billardiera fusiformis* Labill.). It is a blue-flowered species of climber and stated to be an inhabitant of Van Dieman's Land." (Anon. 1842).

All these statements, when considered with extant data on the genus' distribution, indicate that Labillardière must have been incorrect in labelling the species 'capite van-Dieman'. He could have collected the species at Baie Le Grand; the species is found there today.

xi. *Leptospermum sericeum* Labill.

Curtis (1956) included this species in the Tasmanian flora, but it has since been reassessed and the taxon endemic to Tasmania is *L. glaucescens* Schauer (Willis 1967). The species described by Labillardière is a Western Australian endemic that is restricted to the granite monadnocks of the Cape Le Grand region, where Labillardière made his collections in 1792. It is certain that Labillardière collected this species so the location should have read '*terra van-Lewin*'.

xii. *Acacia saligna* (Labill) Wendl. (basionym; *Mimosa saligna*)

The status of this species has been discussed by Maslin (in press) and he has pointed out the error in the type location. Labillardière collected the type specimen himself as it bears his autographic description and the taxon is a Western Australian species, not Tasmanian. The location given by Labillardière is in error, it should be '*terra van-Lewin*'. Labillardière (1804) incorrectly indexed *A. saligna* as "*Mimosa salicina*"; the latter epithet is a valid epithet for another species *A. salicina* Lindl.

xiii. *Pultenaea dentata* Labill.

This taxon has already been discussed in detail in the paper on Labillardière's '*terra van-Lewin*' plants (Nelson in press). It was labelled '*terra van-Lewin*' in *Novae Hollandiae Plantarum Specimen*', but should have been labelled '*capite van-Dieman*' (Labillardière 1804, Nelson in press) as it is not found in Western Australia (Beard 1970). Hooker (1860) stated with reference to this species; "This agrees so well in most respects with Labillardière's figure and description that I can hardly doubt it being his plant, though that is described as coming from '*Terra van-Leeuwyn*'."

## DISCUSSION

Hooker's statement that "errors are known to have crept into Labillardière's localities" is most significant [see *Sollya heterophylla* above]. It indicates that he recognised that care was needed in dealing with localities quoted by Labillardière.

The problem arises from the fact that Labillardière did not put the location of collection on his specimens. They bear the name used in '*Novae Hollandiae Plantarum Specimen*' and sometimes the page of the description, the plate number or the autographic description in Labillardière's handwriting (Steinberg pers. comm.). When this is recognised there is little difficulty in identifying Labillardière's personal specimens, assisted by comparisons of the handwriting. Burbidge (1958) states "At Kew there is a specimen from Herbarium Hookerianum with a label "*Chrysocoma cinerea* t 182" (*Helichrysum cinereum*). There is nothing to indicate that this is from Labillardière's herbarium but the quotation of the original plate may be significant." The lack of information on the herbarium sheet other than the name and plate number, would appear to indicate that this specimen was from Labillardière's herbarium. Specimens of Labillardière's from Herbarium Webbianum in Firenze (FI), similarly, bear no name or location (though this is often added in different handwriting).

Hooker (1860) corrected most of Labillardière's errors when they referred to Tasmanian species; all the species discussed above, when mentioned by him, bear a statement correcting the location of the collection. Bentham (1863) also used the corrected location but occasionally gives Labillardière's collecting area as King George Sound. Labillardière did not visit that area, so that either that location is incorrect or another collector was responsible for making the collection at the Sound. In the case of *Stipa elegantissima* and *Pileanthus limacis* the material was collected on Baudin's voyage, probably by Leschenault, either at King George Sound, Geographe Bay or Shark Bay (Nelson in press). Later authors have recognised errors, but no attempt has been made to assess the Labillardière specimens as a unit.

TABLE 3

SUMMARY OF COLLECTORS AND LOCATIONS OF COLLECTIONS OF ANOMALOUS SPECIES described by Labillardière in '*Novae Hollandiae Plantarum Specimen*' (1804) - *capite van-Dieman* and *terra van-Leuwin* (Nelson in print); *capite van-Dieman* = Tasmania; *terra van-Leuwin* = Baie Le Grand (Esperance Bay) Western Australia.

Species [basionym]	Labillardière's location	corrected location	Collector
<i>Adriana quadripartita</i> (Labill.) Gaudich. in Freyc.	capite van-Dieman	Western Australia	Labillardière
<i>Astartea fascicularis</i> (Labill.) DC.	capite van-Dieman	Western Australia	Labillardière
<i>Frankenia tetrapetala</i> Labill.	capite van-Dieman	Western Australia	Labillardière
<i>Gompholobium tomentosum</i> Labill.	capite van-Dieman	Western Australia	? Leschenault
<i>Lepidosperma squamatum</i> Labill.	capite van-Dieman	Western Australia	? Leschenault
<i>Pimelea clavata</i> Labill.	capite van-Dieman	Western Australia	? Leschenault
<i>Scaevola cuneiformis</i> Labill.	capite van-Dieman	Western Australia (Esperance)	Labillardière
<i>Stipa elegantissima</i> Labill.	capite van-Dieman	Western Australia	Leschenault
<i>Leptospermum sericeum</i> Labill.	capite van-Dieman	Western Australia (Esperance)	Labillardière
<i>Acacia salicina</i> (Labill.) Wendl.	capite van-Dieman	Western Australia (Esperance)	Labillardière
<i>Helichrysum cinereum</i> (Labill.) F. Muell ex Benth.	capite van-Dieman	New Caledonia	Labillardière
<i>Knightia strobilina</i> Labill.	terra van-Leuwin et Nova-Caledonia	New Caledonia only	Labillardière
<i>Pultenaea dentata</i> Labill.	terra van-Leuwin	Tasmania	Labillardière
<i>Eucalyptus ovata</i> Labill.	terra van-Leuwin	Tasmania	Labillardière
<i>Actinotus helianthi</i> Labill.	terra van-Leuwin	New South Wales	? Lahaie
<i>Platysace lanceolata</i> (Labill.) Norman	terra van-Leuwin	New South Wales	?
<i>Pileanthus limacis</i> Labill.	terra van-Leuwin	Shark Bay, Western Australia	Leschenault
<i>Stylidium glaucum</i> Labill.	terra van-Leuwin	? King George Sound Western Australia	? Leschenault
<i>Stylidium spinulosum</i> R.Br. [ <i>Stylidium setaceum</i> Labill.]	terra van-Leuwin	? King George Sound Western Australia	? Leschenault
<i>Cephalotus follicularis</i> Labill.	terra van-Leuwin	King George Sound Western Australia	Leschenault

TABLE 3 (continued)

Species [basonym]	Labillardière's location	corrected location	Collector
<i>Adenanthos obovata</i> Labill.	terra van-Leuwin	King George Sound Western Australia	Leschenault
<i>Anthocercis littorea</i> Labill.	terra van-Leuwin	probably correct	Labillardière
<i>Thomasia triphylla</i> (Labill.) Gay	terra van-Leuwin	probably correct	Labillardière
<i>Opercularia spermacoea</i> Labill.	terra van-Leuwin	probably correct	Labillardière
<i>Opercularia apiciflora</i> Labill.	terra van-Leuwin	probably correct	Labillardière
<i>Lobelia heterophylla</i> Labill.	terra van-Leuwin	Recherche Archipelago W.A.	Labillardière
<i>Chorizema ilicifolia</i> Labill.	terra van-Leuwin	correct location	Labillardière

A summary of the conclusions of this paper and the previous discussion of 'terra van-Leuwin' specimens (Nelson, in press) is found in table 3. The information presented is in some cases already known and published but this happened mostly over a hundred years ago through the work of Hooker (1860) and Bentham (1863). The conclusions have little overall taxonomic significance as *locus classicus* (collecting area of a type specimen) is of little consequence in nomenclatural debates. Most taxonomists regard specimens without location data attached as of little use unless they are annotated type specimens.

The conclusions do throw some light on the early history of Australian botanical investigations. Labillardière's collections suffered unusual fates, being passed from hand to hand for several years, but they would appear to have suffered little from that experience. Keeping in mind the lapse of four years between the date of collection and the return to France of the specimens from Banks, it is obvious that Labillardière was uncertain about the origin of certain specimens. It is also apparent that Labillardière had access to collections from other workers, despite statements to the contrary (Stafleu 1966). Labillardière must have been in an excellent position, as a regular member of the French Academy of Science and as friend to Desfontaines, who was Curator of the herbarium of *Muséum nationale d'Histoire Naturelle*, to use specimens obtained by Leschenault on Baudin's voyage. Some of this material arrived back in France in 1802 and the Western Australian material reached Paris in 1803, in time for inclusion in '*Novae Hollandiae Plantarum Specimen*' which was published between 1804 and 1807.

While *Novae Hollandiae Plantarum Specimen* contains a large number of descriptions, few of his first set of specimens have been critically examined by later specialists (Stafleu 1966) and no list of his Australian collection, in its entirety, exists. Labillardière had a herbarium of over 4,000 specimens (Chevalier 1953) but in all he only published descriptions of about 400 species; 265 of which were Australian. There are other Australian specimens in his collections, some of which could be the first specimens of the taxa to have been obtained that have never been catalogued; one such species is *Euphrasia kingii* Curtis from Tasmania that Labillardière collected but never listed as he referred it to a New Zealand taxon (Barker pers. comm.)

Also, while several specimens have been noted that were, or could have been collected by Leschenault, it is possible that other specimens from that collector were used in the preparation of Labillardière's descriptions. If Labillardière made extensive use of specimens derived from Leschenault or other botanists, this extraneous material may have been undetected in this study, as the distribution patterns of those species may not

have been inconsistent with the labels used, and Labillardière's known collecting localities. In these cases the type specimens would have been collected, by these other botanists, in places that Labillardière did not visit. Of Labillardière's '*terra van-Lewin*' specimens listed in the flora (1804) six could only have been collected at Baie Le Grand according to present data. The remainder occur in other areas not visited by Labillardière but visited by Leschenault, Brown or Menzies.

While no records were noted in the work on these papers, it is possible that Labillardière exchanged material with English botanists receiving in return material from collections of Menzies and Brown; Labillardière forwarded specimens to Banks after 1796, and duplicates of Labillardière's specimens are found in collections including those of Lambert (Lasegue 1845).

#### CONCLUSIONS

As was shown with respect to Labillardière's '*terra van-Lewin*' species, errors in location of collection occur in species labelled '*capite van-Dieman*'. In most cases the specimens are of Western Australian origin but one specimen apparently was collected in New Caledonia. While there is little nomenclatural significance in these inaccuracies, the establishment of the correct location of Labillardière's collections is important in taxonomic, biogeographical and historical contexts as several of the species described are endemic to restricted areas in Australia. It is unacceptable to continue to regard Labillardière's locations as correct especially in the cases discussed.

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#### REFERENCES

- Anonymous, 1841: Note on *Sollya fusiformis*. *Tasmanian J. Nat. History*, 1, 319.
- Beard, J.S., 1970: *A descriptive catalogue of West Australian wildflowers*, Perth.
- Bentham, G., 1863: *Flora Australiense*, London (7 volumes).
- Black, J., 1924: *Flora of South Australia*, Adelaide (4 volumes).
- Blackall, W.E. & Grieve, B.J., 1954: *How to know Western Australian wildflowers*, Perth (3 volumes).
- Burbidge, N.T., 1958: A monographic study of *Helichrysum* subgenus *Ozothamonus* (Compositae) and of two related genera formerly included therein. *Aust. J. Bot.*, 6, 229-284.
- \_\_\_\_\_, 1960: Phytogeography of the Australian region. *Aust. J. Bot.*, 8, 75-212.
- Chevalier, A., 1953: Un grand voyageur, naturaliste normand J.J.H. de Labillardière (1775-1834). *Rev. int. Bot. appl.*, 33, 97-124, 185-202.
- Cornell, C., 1964: *Questions relating to Nicolas Baudin's Australian Expedition, 1800-1804*. B.A. (Hons.) thesis. Univ. of Adelaide, published by Libraries Board of S. Australia (1965).

## Locality and Collector of Labillardière's Plant Specimens

- Cunningham, A., 1834: Note on *Pimelea hypericina*. *Bot. Mag.*, t.3330.
- Curtis, W.M., 1956: *A Student's Flora of Tasmania*. Hobart (3 volumes).
- Darwin, C., 1839: *Narrative of the voyage ... of BEAGLE*. vol. 3, London.
- de Beer, G., 1960: *The Sciences were never at War*. London.
- Green, J.W., 1965: Discontinuous and presumed vicarious plant species in southern Australia. *J.R.Soc.W.Australia*, 47, 25-32.
- Hooker, J.D., 1860: *Flora Tasmaniae* (including Introductory Essay) in *EREBUS/TERROR Botany*, vol. 3.
- Labillardière, J.J.M. de, 1800: *Relation du voyage à la recherche de La Pérouse*. Paris.
- \_\_\_\_\_, 1804: *Novae Hollandiae Plantarum Specimen*. Paris.
- \_\_\_\_\_, 1824: *Sertum Austro-Caledonicum*. Paris.
- Lasegue, A., 1845: *Musée botanique de M. Benjamin Delessert*. Paris.
- Lehmann, J.G.C., 1844: *Plantae Preissianae*. Hamburg.
- Maiden, J.H., 1908: Records of Australian Botanists. *Proc.Roy.Soc. N.S.W.*, 42, 60-132.
- Marshall A.J., 1970: *Darwin and Huxley in Australia*. Sydney.
- Maslin, B., (in press): Note on *Acacia* sp., *Nuytsia*
- Moorehead, A., 1969: *Darwin and the BEAGLE*. London.
- Nelson, E.C., (in press): The collectors and type locations of some of Labillardière's 'terra van-Lewin' (Western Australia) specimens, *Taxon*.
- Rosset, F. de, 1808: *Relation du voyage à la recherche de La Pérouse*, Paris.
- Stafleu, F.A., 1966: Introduction to facsimile of Labillardière's 'Nova Hollandiae Plantarum Specimen', *Historiae Naturalis Classica*. Weinheim.
- Summerhayes, V.S., 1928: A revision of the Australian species of *Frankenia*. *J.Linn. Soc.Lond.*, 47, 337-387.
- Wakefield, N.M., 1951: Some revision in *Helichrysum*. *Vict.Nat.*, 68, 49.
- \_\_\_\_\_, 1954: Notes on some of Labillardière's specimens of *Helichrysum* *Webbia*, 9, (2), 465-468.
- Willis, J.M., 1967: Systematic notes on the Indigenous Australian Flora. *Muelleria*, 1, (3), 117-164.
- \_\_\_\_\_, 1972: *A handbook on plants in Victoria*. vol. 2. Melbourne.