Flora of Niue: Supplementary notes

Author: W. R. Sykes, Allan Herbarium, Manaaki Whenua Landcare Research, Lincoln, New Zealand.

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Background: This manuscript has not been previously published and was among the research files of W. R. Sykes (1927–2018) that are held by Allan Herbarium, Manaaki Whenua Landcare Research. The draft manuscript was reviewed by David Glenny in November 2011 and Peter Heenan in December 2023. Minor editing was undertaken to address editorial issues such as uniform style and internal consistency of the presentation of information, but the original text as written by W. R. Sykes has not been altered. The nomenclatural and taxonomic decisions and associated notes and discussion remain those of W. R. Sykes at 9 November 2011. Since the manuscript contains important information on the flora of Niue it was deemed appropriate to be published and made available through the Manaaki Whenua Landcare Research DataStore.

Some of the new naturalised records documented herein have been published elsewhere, such as by Gardner (2020), but others have not previously been documented. Infact, some of the new records documented herein were specifically mentioned by Gardner (2020) as being absent from Niue (e.g., *Tridax procumbens* L, *Sonchus arvensis* L., *Sphagneticola trilobata* (L.) Pruski, *Bidens alba* (L.) DC.) when specimens were available at CHR and known to W. R. Sykes (being his 2006 collections). Other Sykes collections from Niue have been cited in invasive species reports by Space & Flynn (2000) and Space et al. (2004), literature that wasn't included in Gardner (2020).

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P. B. Heenan, February 2024.

Flora of Niue: Supplementary notes

W. R. Sykes, Allan Herbarium, Manaaki Whenua Landcare Research, Lincoln, New Zealand

INTRODUCTION

Notes to update 'Contributions to the Flora of Niue' by Sykes (1970: *Bull. N.Z. Dept. Scient. Indust. Res. 200*). In this Supplement all references to my bulletin are noted simply as being to 'the Bulletin', plus the page number. The other bulletin sometimes mentioned, but always with the author's name is T. G. Yuncker's 'The Flora of Niue Island' (Yuncker 1943; *Bernice P. Bishop Mus. Bull. 178*), this being the work upon which my 1970 Bulletin is based. Another work that is sometimes referred to is the comprehensive study of the Fijian flora, *Flora Vitiensis Nova*, in 5 volumes published between 1978 and 1992 by A. C. Smith. I am indebted to the author for several identifications, especially of sterile material of indigenous woody plants.

The main categories of data in these notes are:

1. New records subsequent to 1970, nearly all of these resulting from my subsequent visits in 1975 and 2006. Most of the taxa listed in this group are of new additional adventives, these consisting of accidentally introduced plants and escapes from cultivation. This includes plants that are mentioned as being only in cultivation in the Bulletin but which have subsequently escaped and grow wild. Some cultivated species are listed that are commonly grown but not wild at all, a few of them being listed in the Bulletin as being rarely grown. These new adventive records are noted as such. Also included are additional indigenous plants.
2. Taxa that are now treated as under a different name from that in the Bulletin. Most of these changes are the result of taxonomic studies subsequent to the late 1960s but a few are the result of misidentifications. Most of the latter are woody plants, some of them named from inadequate material at the time. Also subsequent to that time, large collections of plants have been deposited in the Allan Herbarium (CHR) from neighbouring Pacific Island countries and territories, especially Tonga, Fiji, Samoa, and the Cook Islands. This has enabled more meaningful comparisons with Niuean plants than was possible in 1970.

Format of this Supplement

The listing follows that of the Bulletin in that the families are treated alphabetically in the three main groups: Pteridophyta (ferns and fern allies); Gymnospermae (only two species involved); Angiospermae (flowering plants), the last being divided into Dicotyledonae and Monocotyledonae.

Herbarium specimens are generally cited here under the collector's name and number, e.g. my specimens are cited with my name and running number followed by /Niue.

Family names are mostly as in the Bulletin, those that differ are noted and likewise where the circumscription differs this is also noted under the family heading. Special mention must be made of the recent publication '*Trees and shrubs of Niue: an identification guide to the island's indigenous and naturalised woody plants*' by R. O. Gardner, Research Associate of the Auckland War Memorial Museum (Gardner 2011). The author describes and illustrates each species he treats, this not having been done before. Because it is recent, the name changes from the Bulletin accepted in this Supplement are not surprisingly adopted by Gardner.

Frits Jensen's collection

Frits Jensen was a horticulturist and artist who lived in Sydney and was apparently sent to Samoa in the 1870s to collect living plants for the Sydney Botanic Gardens. In the Pacific islands he was also employed by the Rev. Samuel Whitmee who worked in Samoa and collected plants as well as writing books and papers on the region. Jensen was sent to various islands in Melanesia and several in the Tokelau Group and Kiribati, as well as Niue. See Mabberley, D.J. (1990) Frits Jensen's Pacific plant collections. *Kew Bull. 45 (1)*: 199–204.

Mabberley details the complex arrangements made by Whitmee in relation to Jensen's work. Thus the latter's specimen are not numbered properly and the localities were often confused. The outcome is still unclear and negative as far as Niue is concerned because many of the 45 species that he supposedly collected on Niue in 1876 were almost certainly collected much further west on the coral island of Lifou in the Loyalty Islands, just east of New Caledonia. Some habitats in the Loyalty Islands do not occur on Niue and provide further evidence that some of these specimens were not collected on Niue. Unfortunately, the well-known Pacific botanist Harold St John uncritically and without discussion published them all as coming from Niue. Thus, he states that some were new records and even describes *Myoporum niueanum* as a new endemic there, the genus and family otherwise not being recorded between the New Caledonian area and the Cook Islands in the tropical South Pacific. His specimen actually represents *M. tenuifolium* G.Forst. that grows in the Loyalty Islands. Likewise, there are two species of *Acacia*, both known from the Loyalty Islands but unknown on Niue. See St John, H. (1976). A plant collection from Niue Island by Jensen in 1876. Pacific Plant studies 29. *Bot. Mag. Tokyo 80*: 235–240.

Several specimens are of ferns that have not been collected otherwise on Niue and must have come from wetter habitats than exist there. On the other hand, several specimens are of widespread Pacific Island species that are recorded in my Bulletin and in T.G. Yuncker's Bulletin and thus could have been collected on Niue. Finally, as stated above, Jensen worked in the Pacific under the auspices of Rev. S. Whitmee a well-known plant collector in Samoa, and when examining specimens at the British Museum supposedly collected by both men, I found that the writing on the labels was the same and almost certainly was the work of museum staff. Also, the lack of numbers on some of the specimens, especially the supposed new records, is a further indication that they should not automatically be treated as coming from Niue. Some of the above information is also given by W. Arthur Whistler, Notes on the flora of Niue, *N.Z. Journ. Bot. 22*: 565–567 (1984).

Vernacular Niuean names

This Supplement to my 1970 Bulletin continues to use the same spellings of Niuean names in respect to the use of 's' instead of 't' when followed by 'e' or 'i, as well as putting 'n' before every 'g'. This is more in line with the usual pronunciations of such words on Niue today. However, this is in contrast with Gardner (2011) in his recent '*Trees and shrubs of Niue*' because he uses the 't' and 'g' in such instances, although admittedly sometimes the pronunciation of words like 'si' (*Cordyline fruticosa*) and 'selie' (*Termindia catappa*) is more like tsi and tselie.

TAXONOMY AND NOMENCLATURE NOTES

PTERIDOPHYTA

ASPLENIACEAE

***Asplenium australasicum* Hook.**

New indigenous record.

In the Bulletin *Asplenium nidus* L. is recorded and three specimens cited. A comment there states that it is 'a very common species all over Niue' and especially so in primary forest on the Upper Terrace. However, it is now generally accepted that on many islands in the region two taxa have been included under this name, one being *Asplenium nidus* and the other *A. australasicum*.

Niue is an example, and it is now apparent that *A. australasicum* is much the commoner of the two. Thus, of the three specimens cited as *A. nidus* in the Bulletin only part of CHR 150617 actually represents it. However, since 1970 two further specimens of *A. nidus* have been collected. On the other hand, *A. australasicum* is represented by CHR 150618, CHR 150619, and CHR 150617 (in part) that are cited in 1970 and Sykes 1493/Niue (CHR 659588) from the Huvalu Conservation Area in Hakupu District, collected in 2006.

In the Bulletin I stated that the Niuean names luku laua and luku fua are used and the latter is cooked and eaten whereas luku laua is not considered very palatable. Luku laua is *A. australasicum* whereas luku fua or *A. nidus* is the favoured one. The latter has flattened midribs on the lower side of the fronds unlike the ridged ones of *A. australasicum*.

***Asplenium laserpitiifolium* Lam.** kapihi

(*Asplenium robustum* Blume)

Name update.

In the Bulletin these two names are given the other way round. It is one of the two *Asplenium* species called kapihi on Niue. *A. laserpitiifolium* is quite variable and young plants especially could be easily mistaken for a different species. *Asplenium robustum* Blume is restricted to Malesia.

***Asplenium polyodon* G.Forst.** kapihi

(*A. adiantoides* (L.) C.Chr.; *A. falcatum* Lam.)

Name update.

This fern is recorded as *Asplenium adiantoides* in the Bulletin, p. 24. The aggregate of species to which *Asplenium polyodon* belongs has been studied by Dr. P.J. Brownsey and I am indebted to him for determination of the name of this common forest fern on Niue. As stated in the Bulletin the name kapihi is applied to this species and to the other species with dissected fronds, *A. laserpitiifolium* (see this species).

***Deparia petersenii* (Kunze) M.Kato**

New indigenous record.

A sterile fern in the forest at Lefuka is most likely to represent this species, Sykes Niue/1265. This forest is more humid than is usual in forests there; see also the comment under *Pleocnemia cumingiana*, Dryopteridaceae. *Deparia petersenii* is a very widespread fern in tropical to warm temperate East Asian and Pacific regions southwards to New Zealand. However, it does not usually grow on coral islands.

In addition, the *Diplazium* sp. in the Bulletin, pp. 26–27, is based on a record of *Athyrium* sp. growing in the forest not far from Lakepa in The Flora of Niue Island by T.G. Yuncker. His specimen has 3-pinnate fronds, but it is possible that it represents *Deparia petersenii* although that usually has 2-pinnate fronds.

DRYOPTERIDACEAE

***Pleocnemia cumingiana* C.Presl**

New indigenous record.

A rare fern collected in 1975 in the Lefuka area of old secondary forest in the centre of Niue, Sykes Niue/1260. This area is suggested by me in the Bulletin, p. 3, as having one of the most humid habitats on the island because ferns such as *Angiopteris evecta* (G.Forst.) Hoffm. and *Pteris tripartita* Sw. are confined to the Lefuka area. Such species usually grow on moister volcanic islands and there plants are often much larger.

LYCOPODIACEAE

***Huperzia phlegmaria* (L.) Rothm.**

(*Lycopodium phlegmaria* L.)

Name update.

The genus *Lycopodium* is now accepted as being much smaller than it was in the traditional sense and thus now is a genus of terrestrial habitats in temperate regions. Thus, the rare Niuean epiphyte above is listed as *Lycopodium phlegmaria* in the Bulletin, p. 23. Unfortunately, this attractive epiphyte has not been collected since 1901. However, it is probably still present high up on trees in the moister central and eastern parts.

OPHIOGLOSSACEAE

***Ophioglossum reticulatum* L.**

Name update.

Incorrectly listed as *Ophioglossum petiolatum* Hook. in the Bulletin, p. 29. The two species have sometimes been considered as one but I am treating them as distinct.

POLYPODIACEAE

***Phymatosorus grossus* (Langsd. & Fisch.) Brownlie**

(*Microsorum grossum* (Langsd. & Fisch.) S.B.Andrews)

Name update.

This generally common to abundant terrestrial, lithophytic or epiphytic fern (towards the base of trees) with creeping rhizomes is recorded as *Phymatodes scolopendria* (Burm.f.) Ching in the Bulletin, pp. 30–31. However, this Melanesian species is a truly epiphytic with fewer and more spreading pinna segments and is correctly called *Phymatosorus scolopendria* (Burm.f.) Pic.Serm. Thus, the common coastal and lowland plant in both West and East Polynesia is *P. grossus*.

***Phymatosorus membranifolius* (R.Br.) S.G.Lu**

(*Phymatosorus nigrescens* (Blume) Pic.Serm.; *Phymatodes nigrescens* (Blume) J.Sm.)

Name update.

This species is recorded in the Bulletin, p. 30, under the second name in brackets above. It is an apparently uncommon fern in the inland forest on Niue and is easily distinguished from the common *Phymatosorus grossus* by its thin, conspicuously-veined pinnae and deeply immersed sori that appear like pustules on the upper surface of the pinnae.

***Tectaria dissecta* (G.Forst.) Lellinger**

Name update.

The fern that is recorded as *Tectaria chrysotricha* (Baker) C.Chr. in the Bulletin, p. 32, from several specimens is really *T. dissecta*. This common fern is found in many of the shadier and less exposed forests on Niue and is fairly variable as it often is elsewhere. *Tectaria dissecta* is also recorded as *Dryopteris dissecta* (G.Forst.) Kuntze in 'The Flora of Niue Island' by T.G. Yuncker in 1943 and has been collected several times in 2006.

Note that *Tectaria* was regarded as being in its own family in the Bulletin, but is now included in the Polypodiaceae.

PTERIDACEAE (including **VITTARIACEAE**)

***Haplopteris elongata* (Sw.) E.H.Crane**

(*Vittaria elongata* Sw.)

New indigenous record.

A few small clumps were seen in 2006 in crevices of very rough makasea near Halangingie Point on the west side of Niue (Sykes 1300/Niue). A common fern of many high islands where it usually grows epiphytically, but this habitat in the forest at Halangingie Point is presumably too dry.

***Pteris vittata* L.**

New indigenous record.

Alofi District, Alofi South. Coastal makasea. By track, on a boulder down to the reef. A few plants were seen. Collected in 2006, e.g. Sykes 1400/Niue.

THELYPTERIDACEAE

***Thelypteris opulenta* (Kaulf.) Fosberg**

New indigenous record.

This is a new record for Niue, being represented by Sykes 1543/Niue; collected in 2006 from the rainforest margin by the Vinivini Bush Rd in the Hakupu District. *Thelypteris opulenta* is characterised by the scales at stipe bases being subulate to the base, the pinnae lower surfaces with numerous

small yellow glandular hairs, especially present distally, as well as the basal pinnae narrowed noticeably but not otherwise reduced.

Members of this family are notoriously difficult to identify, and the generic limits have been the subject of considerable debate. Thus, there may be other species as yet unidentified and unrecorded on Niue.

***Thelypteris rodigasiana* (T.Moore) C.F.Reed**

(*Cyclosorus transversarius* var. *rodigasiana* C.Chr.)

Name update.

This is the fern recorded as *Cyclosorus transversarius* (Brackenr.) Ching in the Bulletin, p. 34. There I state that it was only seen in the Lefuka area in the centre of Niue, but in 2006 I collected it by the Vinivini Bush Road in the Hakupu District towards the south-west of the island.

As stated under *Amphineuron opulentum* above, members of this family are often difficult to identify, even at generic level. *Thelypteris rodigasiana* is characterised by its fronds up to ≈2m long, the glabrous pinnae with the basal ones very reduced.

***Thelypteris forsteri* C.V.Morton**

(*Cyclosorus invisus* (G.Forst.) Copel.)

Name update.

The common thelypterid fern of open places especially plantations and waste places, is recorded as the name in brackets in the Bulletin, p. 33. Its small pinnae are very hairy and have raised veins below but lack any glands.

GYMNOSPERMAE

ARAUCARIACEAE

***Araucaria columnaris* (G.Forst.) Hook.** Cook pine

Cultivated.

This New Caledonian tree is sometimes grown, the largest probably being the landmark tree in the middle of Hakupu Village. Sykes 1588/Niue.

Araucaria heterophylla (Salisb.) Franco that is listed in the Bulletin as being rare on Niue was not seen in 2006. This is the subtropical Norfolk Island pine and is less successful in the tropics than *A. columnaris*.

CYCADACEAE

***Cycas seemanii* A.Braun** longolongo

(*Cycas circinalis* sensu auct. non L.)

Name update.

The cycads are unusual looking cultivated plants in Polynesia because of their stout short trunks and long leathery leaves that are sometimes used for decoration. Of the two species on Niue treated in

the Bulletin, p. 35, *Cycas circinalis* L. is referrable to *C. seemanii*; *C. circinalis* L. has been wrongly used in the tropical Pacific.

DICOTYLEDONAE

ACANTHACEAE

***Justicia brandegeeana* Wassh. & L.B.Sm.** Shrimp plant

(*Beloperone guttata* Brandeg.; *Drejerella guttata* (Brandeg.) Bremek.)

Name update.

The well-known shrimp plant has usually been known by the first name in brackets such as is given in the Bulletin, p. 37.

***Nicoteba betonica* (L.) Lindau** white shrimp plant

Cultivated.

Alofi South. Cultivated and collected there but also fairly commonly grown elsewhere on Niue; Sykes 1436/Niue.

***Pachystachys lutea* Nees** yellow cardinal's guard or yellow shrimp plant

Cultivated.

Alofi, Paliasi. Cultivated in a garden there and elsewhere. Sykes 1639/Niue. Collected in 2006. Commonly known in English as 'yellow cardinal's guard' or 'yellow shrimp plant'.

***Pseuderanthemum maculatum* (G.Lodd.) I.M.Turner**

(*Eranthemum abropurpureum* W.Bull; *Pseuderanthemum atropurpureum* (W.Bull) Radlik.; *Pseuderanthemum carruthersii* (Seem.) Guillaumin; *Pseuderanthemum reticulatum* Radlk.)

Cultivated.

A plant collected by Vinivini Bush Road (Hakupu District) in 2006 was probably originally planted and thus was a relic of cultivation; Sykes 1537/Niue.

Pseuderanthemum reticulatum, now treated as cultivar 'Reticulatum' of *Pseuderanthemum maculatum*, is commonly grown on Niue, see the Bulletin, p. 39.

***Ruellia blechum* L.**

(*Blechum pyramidatum* (Lam.) Urb.).

New adventive record.

Amanau to Alofi South. Old house site. Very local. Also collected at Vaipapahi Experimental Farm in a plantation forming a low herb cover. Uncommon there but was collected in 2006. Sykes 1397/Niue, Sykes 1514/Niue.

***Ruellia prostrata* Poir.**

(*Dipteracanthus prostratus* (Poir.) Nees)

New adventive record.

An adventive only seen in the Amanau area, especially around the Niue Hotel, Sykes 1384/Niue, Whistler 4953, collected in 1981.

This sprawling or semi-prostrate species has a strong likeness to the related *Asystasia gangetica* (L.) T.Anderson. which also grows wild on Niue, see the Bulletin, p. 37. Since 1975, *Ruellia prostrata* has been collected several times and has obviously increased on Niue.

AMARANTHACEAE

***Alternanthera brasiliana* (L.) Kuntze 'Rubiginosa'**

Cultivated.

Alofi South. Nr. Peleni's Guest House. Cultivated – fairly common and collected in 2006; Sykes 1435/Niue.

***Amaranthus blitum* subsp. *oleraceus* (L.) Costea**

(*Amaranthus lividus* L.)

New adventive record.

Similar to the common weedy little *A. viridis* L. Collected from waste places at Fonuakula Farm and near Alofi Wharf, eg. Sykes 1117/Niue, collected in 1975.

The two species can be distinguished by the inflorescence stems being almost glabrous and the fruits smooth or slightly wrinkled in *A. lividus*, as opposed to the puberulent inflorescence stems and strongly wrinkled fruits of *A. viridis*.

APIACEAE (UMBELLIFERAE)

The old name for this well-known, mainly temperate climate family in the Bulletin, pp. 208–209, is in brackets above.

***Cyclospermum leptophyllum* (Pers.) Sprague** Niuean taletale

(*Apium leptophyllum* (Pers.) F.Muell.)

New name.

The Niuean taletale is recorded in the Bulletin, p. 208, under the name in brackets above.

APOCYNACEAE

Including the Asclepiadaceae of the Bulletin, p. 48.

***Cascabela thevetia* (L.) Lippold**

(*Thevetia peruviana* (Pers.) Schum.)

New adventive record.

An occasional young plant was found wild eg. in a passionfruit plantation at Mutalau, not far from a cultivated bush, Sykes 1185/Niue. Also seen in 2006 by the Lakepa-Pulihiki Track on an Upper Terrace forest margin slope, where a small group of spontaneous plants grew eg. Sykes 1555/. Listed in the Bulletin, p. 46, as *Thevetia peruviana* and said to be a rarely cultivated plant.

ARALIACEAE

***Polyscias cumingiana* (C.Presl) Fern.-Vill.**

Cultivated.

In the villages and is sometimes common. Apparently rather shy flowering as compared to other cultivated araliads on Niue; e.g. Sykes 1575/Niue, Sykes 1633/Niue.

***Polyscias fruticosa* (L.) Harms** Ming aralia

Cultivated.

Commonly grown, at least in Alofi; e.g. Sykes 1434/Niue, Sykes 1573/Niue.

ASTERACEAE

***Achillea millefolium* L.** yarrow

New adventive record.

A collection of this temperate European species was made in an area of mown grass at Vaipapahi in 1975; Sykes 1199/Niue. Presumably seed was accidentally introduced in crop or pasture seed from New Zealand where it is a very common plant.

***Bidens alba* (L.) DC.**

New adventive record.

Near Hanan Airport, by boundary fence where it was very local in 2006. Sykes 1450/Niue. This composite with white ray florets like the abundant *Bidens pilosa* L., kofetonga, of the Bulletin, p. 63, has a very different appearance due to its almost prostrate habit.

***Eleutheranthera ruderalis* (Sw.) Sch.Bip.**

New adventive record.

A plantation and waste area plant mainly seen near Hanan Airport, e.g. Sykes 1062/Niue and Sykes 1121/Niue, collected in 1975. Also from Alofi North in an old graveyard in 2006, Sykes 1425/Niue, and collected by W.A. Whistler.

This little yellow-flowered herb is superficially similar to the abundant *Synedrella nodiflora* (L.) Gaertn. of the Bulletin, p. 68, but the latter is a larger plant with its leaves usually ± sessile and shining above, whilst *Eleutheranthera ruderalis* has its leaves obviously petiolate, soft and hairy and thus not shining above. Other more fundamental characters distinguish the little yellow flower heads (capitula).

***Erigeron sumatrensis* Retz.**

(*Conyza sumatrensis* (Retz.) E.H.Walker; *Conyza canadensis* auct. non (L.) Cronq.)

Name update.

This pubescent ± erect herb is wrongly named *Conyza canadensis* in the Bulletin p. 64. A more recent collection is Sykes 1454/Niue from an old quarry margin in the Fuata area of Avasele District.

***Sonchus arvensis* L.** pupulele

New adventive record.

Amanau, in waste area. Fairly locally in 2006. Sykes 1421/Niue. In the Bulletin, p. 68, I only recorded *S. oleraceus* L. Called pupulele like the commoner composite *Emilia sonchifolia* on Niue. *S. arvensis* is probably called by this Niuean name also.

***Sphagneticola trilobata* (L.) Pruski** Wedelia daisy

(*Wedelia trilobata* (L.) Hitch,)

New adventive record.

Alofi North, growing in a small clearing by an old house site and collected there in 2006, Sykes 1402/Niue. Several similar patches were growing around Niue, each forming a dense mat of few to a number of square metres. Introduced for cultivation but now is thus adventive. This tropical American plant should be watched in case these small populations 'take off' and spread.

***Symphyotrichum subulatum* (Michx.) G.L.Nesom**

New adventive record.

Collected in Alofi North and at Amanau near the Ministry of Works machinery depot in a waste place, Sykes 1428/Niue, Sykes 1248/Niue. This eastern North American species is usually adventive in warm temperate or sub-tropical areas, e.g. it is abundant on Raoul Island southwest of Niue at 29°S.

***Tithonia rotundifolia* (Mill.) S.F.Blake**

New adventive record.

Collected at Hanan Airport where a few plants grew in a rough pasture in 1975. A minor escape from cultivation, Sykes 1386/Niue. Previously tentatively recorded in the Bulletin, p. 69, although stated to be in cultivation by Yuncker 1943, p. 117, in his Flora of Niue.

This is a much smaller plant than the shrubby *Tithonia diversifolia* (Hemsl.) Gray that is the usual species seen on Niue and elsewhere in the tropical Pacific islands; see the Bulletin, p. 69.

***Tridax procumbens* L.**

New adventive record.

Alofi North, roadside bank. Local but often there abundant in 2006, e.g. Sykes 1427/Niue. *Tridex procumbens* has greyish leaves and white floret rays in the flower head.

***Wollastonia biflora* (L.) DC.** matakula

(*Wedelia biflora* (L.) DC.)

Name update.

The accepted name for this very common indigenous sprawling shrub along the coast is as above, the name in brackets being that in the Bulletin, p. 70.

***Youngia japonica* (L.) DC.**

New adventive record.

Alofi North. Around old house site and on a nearby track. Locally common in this area in 2006; Sykes 1403/Niue. Also collected by W.A. Whistler on Niue. This small rosette herb is in the same group of composites as *Sonchus* and *Taraxacum*; see the Bulletin, pp. 66–68.

BASELLACEAE

***Anredera cordifolia* (Ten.) Steenis**

(*Boussingaultia cordifolia* Ten.)

Name update.

In addition to the name in brackets two other names are given in synonomy for ‘Madeira vine’ in the Bulletin, p. 50.

BEGONIACEAE

***Begonia popenoei* Standl.**

Cultivated / semi-adventive.

Alofi North. Roadside scrub, opposite house, below tall shrubs. Sykes 1431/Niue. Commonly cultivated in 2006. Sometimes, as in the above site, this ornamental plant can be classed as being semi-adventive.

BIGNONIACEAE

***Dolichandra unguis-cati* (L.) L.G.Lohmann** cats claw

(*Macfadyena unguis-cati* (L.) A.H.Gentry)

Cultivated / new adventive record.

Tapeu area. By Agriculture Dept. One large plant was a relic of cultivation in 2006, Sykes 1446/Niue. In addition, a number of young spontaneous plants of cats claw were growing nearby.

***Tecoma stans* (L.) Juss. ex Kunth** yellow elder

New information.

1407/Niue. Alofi North. Around old house site where it was growing as a relic of cultivation in 2006; Sykes 1407/Niue.

In the Bulletin, p. 51, I state that it was not seen in 1965.

***Spathodea campanulata* P.Beauv.** African tulip tree

New adventive record.

Fernland scrub near site of the old Fasiau village. Collected there in 2006; Sykes 1638/Niue and now a fairly common adventive in this area, mostly present as young trees.

BORAGINACEAE

***Heliotropium arboreum* (Blanco) Mabb.**

(*Tournefourtia argentea* L.f.; *Messerschmidia argentea* (L.f.) I.M.Johnst.)

Name update.

The most appropriate name for this well-known coastal shrub is indicated above, with the other two well-known names being synonyms; see the Bulletin, p. 52.

BRASSICACEAE

(= **CRUCIFERAE** of the Bulletin, pp. 75–77).

***Rorippa sarmentosa* (G.Forst. ex DC.) J.F.Macbr.** holofa

(*Cardamine sarmentosa* G.Forst. ex DC. ≡ *Nasturtium sarmentosum* (G.Forst. ex DC.) Rech.)

Name update.

The second name in brackets is the one used for the holofa in the Bulletin, p. 77. Also, on this page is mention of an unnamed specimen from similar coastal habitat in the S.E. of Niue. This is probably a form of *R. sarmentosa*, Sykes 787/Niue.

CASUARINACEAE

***Casuarina equisetifolia* L.** toa

New adventive record.

1490/Niue, near Vaiea Farm, Hakupu Rd. Collected in 2006 by the roadside in low open scrub; Sykes 1490/Niue. Only recorded as being in cultivation in the Bulletin, p. 58.

CELASTRACEAE

***Gymnosporia crenata* (G.Forst.) Seem.**

(*Maytenus vitiensis* (Gray) Ding Hou; *Gymnosporia vitiensis* (Gray) Seem.)

Name update / new information.

In the Bulletin, p. 58, said to be rare with only 1 record of it. Alofi South – Amanau. Coastal makasea on Lower Terrace cliff. Fairly common there in 2006. Sykes 1399/Niue.

CLUSIACEAE

***Calophyllum neoebudicum* Guillaumin** tamanu

(*Calophyllum vitiense* sensu auct. non Turrill)

Name update.

This is the tree called *Calophyllum vitiense* Turrill in the Bulletin, pp. 100–101, but this species is now considered to be endemic to Fiji. On the other hand, *C. neoebudicum* has the distribution that I gave *C. vitiense* then, ie. Solomon Islands east to West Polynesia, including Niue. The specific epithet is often written with a hyphen. The genus *Calophyllum* L. is recorded in the Guttiferae in the Bulletin, p. 100.

CONVOLVULACEAE

***Ipomoea carnea* subsp. *fistulosa* (Mart. ex Choisy) D.F.Austin**

Cultivated.

Hakupu Village, fairly commonly cultivated there and elsewhere. Sykes 1630/Niue.

***Ipomoea hederifolia* L.**

New adventive record.

Alofi Central. On tall shrubs near cliff edge. Only a single plant seen, this being presumably an escape from cultivation. Much commoner as a wild plant in Tonga. Collected in 2006. Sykes 1422/Niue.

***Ipomoea indica* (Burm.) Merr.**

New adventive record.

Listed by St. John (1976) as *I. congesta* R.Br. from a specimen in the Jensen collection of 1876. The origin of this collection is very suspect; see the Introduction above but the species has been collected since; in Alofi North climbing over shrubs and spread over about a ¼ hectare in 1975, Sykes 1093/Niue.

***Ipomoea pes-caprae* (L.) R.Br.**

New indigenous record.

This well-known Pacific Island strand plant was collected on Niue for the first time in 1975, Sykes 1242/Niue, from near Avasele. Presumably the lack of sandy beaches because of the upraised coral (makasea) surrounding nearly all of the island is the reason for its failure to become properly established on Niue before.

***Ipomoea violacea* L.** fue sea

(= *Ipomoea tuba* (Schlecht.) G.Don; *Ipomoea grandiflora* (Choisy) Hallier.f.)

Name update.

The correct name for fue sea is as above; *I. tuba* being given in the Bulletin, p. 73.

***Operculina ventricosa* (Bertero) Peter**

Name update.

This is a redetermination of the species in the Bulletin, p. 74, that is named *Operculina turpethum* (L.) Silva Manso. Other specimens have been more recently collected, the latest probably being Sykes 1558/Niue collected in 2006 from the coastal area of Puluhiki on the east side of the island.

CUCURBITACEAE

***Zehneria mucronata* (Blume) Miq.**

(*Cucumis anguria* L.; *Melothria grayana* Cogn.; *M. rechingeri* Cogn.; *M. samoensis* Gray)

Name update.

The first and third names in brackets are used in the Bulletin, pp. 77, 79, for the wild Niuean cucurbits asiu and ume respectively. There I expressed uncertainty over the botanical name for ume. The second and fourth names in brackets are used by Yuncker in his Flora of Niue Island. Finally the status of this species is uncertain but at least part of the population on Niue seems to be truly indigenous.

EBENACEAE

Diospyros foliosa (Rich. ex A.Gray) Bakh.

(*Diospyros elliptica* (J.R.Forst. & G.Forst.) P.S.Green) kanume

Name update.

The kanume of Niue was incorrectly recorded as *Diospyros ferrea* (Willd.) Bakh. in the Bulletin, p. 81. *D. ferrea* is now treated as being confined to India and Sri Lanka.

ELAEOCARPACEAE

***Elaeocarpus floridanus* Hemsl.** malalava or mamalava

(*Elaeocarpus tonganus* Burkill; *Elaeocarpus samoensis* Lauterb.)

Name update.

The Niuean malalava or mamalava is now treated in a much wider sense than in the Bulletin, p. 82, where it is listed as *Elaeocarpus tonganus* Burkill and stated to be a West Polynesian endemic. Accepting the name *E. floridanus* implies that the species extends from West Melanesia to East Polynesia.

EUPHORBIACEAE

***Acalypha wilkesiana* Müll.Arg. cv. 'Circinata'**

(*Acalypha amentacea* subsp. *wilkesiana* (Müll.Arg.) Fosberg

Name update.

This is the plant recorded as *A. godseffiana* Mast. in the Bulletin, p. 84. Its prominent large, rounded and creamy margined leaf teeth distinguish it from the common form of copper leaf, *A. wilkesiana*.

***Acalypha indica* L.**

New adventive record.

A rather uncommon weed of waste places and plantations, mainly on the west side of Niue. A number of specimens have been collected in 1965 and subsequently. Unfortunately, the species was confused by me in the Bulletin, p. 210, for the superficially similar but unrelated *Laportea interrupta* (L.) Chew (Urticaceae); all specimens cited in the Bulletin, p. 210, as *L. interrupta* are *A. indica*. True *L. interrupta* has been collected in 1975; see under this species in this Supplement.

Acalypha lanceolata* Willd. var. *lanceolata

(*Acalypha boehmerioides* Miq.)

New name.

The herbaceous *Acalypha lanceolata* Willd., recorded as *A. boehmerioides* Miq. in the Bulletin, p. 84, is very rare and the specimen cited there is still the only one known on Niue.

***Drypetes vitiensis* Croizat**

New indigenous record.

The tentative record of the lauraceous *Litsea magnifolia* Gill. (Sykes 1970, p. 106) is in error for the above species. Although there is still only a single specimen from a sapling representing it there is no doubt that *Drypetes vitiensis* is represented. The latter is thus now known to occur in Fiji, Samoa, Tonga and Niue.

***Euphorbia fosbergii* (J.Florence) Govaerts**

New name.

The name *Euphorbia atoto* in the Bulletin, p. 88, should only be applied to an inland submontane plant on Tahiti. The coastal plant of East Polynesia is *E. fosbergii* and its counterpart in West Polynesia and Fiji is very similar in most respects except for stipules and cyathial glands, hence my interim name of *C. fosbergii* is provisionally applied. Many accounts treat plants from this latter region as *E. chamissonis* (Klotzsch & Garcke) Boiss., but this name applies to a Micronesian taxon and seemingly should not be used for West Polynesia.

***Euphorbia heterophylla* (L.) Kl. & Garcke**

(*Euphorbia geniculata* Ortega)

New adventive record.

Since the mid-1960s this species has become a common roadside and plantation weed. Beyond Niue this seems to be only known from Hawai'i in Polynesia although it grows in many Melanesian areas. Examples from Niue are Whistler 4957 and Sykes 1251/Niue, collected in 1981 and 1975 respectively, as well as more recent specimens of mine in 2006.

Euphorbia heterophylla is similar to and has often been confused with *E. cyathophora*. The main difference is the lack of red colouring in the floral leaves in *E. heterophylla* that is such a feature of the other species as well as the spherical cyathial glands in the latter as opposed to the broad elliptic ones of *E. cyathophora*. The latter is treated in the Bulletin, pp. 88–89, where these differences are pointed out because of past confusion between the two.

***Euphorbia leucophala* Lotsy** white lace euphorbia

Cultivated.

An ornamented shrub that has recently been introduced and is yet rather uncommon, e.g. Sykes 1419/Niue, collected in 2006 in Hikutavake. It will probably become commoner as it has done in other tropical Polynesian countries.

***Euphorbia maculata* L.**

New adventive record.

Alofi, central part of town. In small pavement gap by road. Rare. A new record of this small species collected in 2006, Sykes 1424/Niue.

Related to *C. prostrata* (Ail.) Small ie. *Euphorbia prostrata* Ait. of the Bulletin, p. 89, but distinguished by the paler leaf upper surface as opposed to the dark purplish ones of *C. prostrata*, and the uniformly hairy capsules of *C. maculata* against the capsules of the other species with its marginal hairs only.

***Euphorbia sparrmannii* Boiss.**

New adventive record.

This is the plant mentioned under *Euphorbia atoto* G.Forst. in the Bulletin, pp. 88, 90, under the name *E. ramosissima* Hook. & Arn. Now I am treating it as separate from that species. As stated in the Bulletin, p. 90, under the provisional name *E. ramosissima*, *E. sparrmanii* extends to Henderson Island in the Pitcairn group in easternmost East Polynesia. Recent specimens of *E. sparrmanii* are Sykes 1460/Niue, just in from Kaloni Landing in Alofi South, Sykes 1560/Niue, from Uluvehi, growing on makasea, Sykes 1616/Niue, Talava, by track to coast through makasea, in 2006.

***Jatropha curcas* L.** physic nut

Cultivated.

Introduced fairly recently and used as a host for vanilla vines. Cultivated in Hakupu Village; e.g. Sykes 1634/Niue collected in 2006. This use for physic nut, apart from its medicinal ones, is found in other tropical South Pacific countries.

***Jatropha integerrima* Jacq.** Peregrina

Cultivated.

This species has become a very common cultigen. Collected in 2006 in Alofi South by an old house site, Sykes 1470/Niue. Peregrina is a shrub and has a long flowering period so its prominent crimson petals ensure its popularity.

FABACEAE

(= **LEGUMINOSAE**)

Also recorded in Caesalpiniaceae, Mimosaceae and Papilionaceae in the Bulletin. In this Supplement the genera area all listed alphabetically and not according to subfamily.

***Canavalia rosea* (Sw.) DC.** feseka

(*Canavalia maritima* Thouars.)

New name.

A trailing plant that is very local in distribution still as in the 1960's. The name in brackets excepting the authority is that in the Bulletin, p. 145.

***Chamaecrista nictitans* var. *glabrata* (Vogel) H.S.Irwin & Barneby**

(*Cassia mimosoides* L.)

New name.

This weedy little herb that looks like a yellow-flowered sensitive plant, *Mimosa pudica*, minus prickles, is recorded by the name in brackets in the Bulletin, p. 55.

***Crotalaria pallida* Aiton**

(*Crotalaria mucronata* Desv.)

New name.

The name in the Bulletin, p. 149, for this very common yellowed-flowered herb of modified open habitats is that in brackets.

***Dendrolobium umbellatum* (L.) Benth.**

(*Desmodium umbellatum* (L.) DC.)

New name.

This distinctive coastal species is now treated in a different genus to *Desmodium* Desv. as in the Bulletin p. 152.

***Desmodium incanum* (Sw.) DC.**

(*Desmodium canum* (J.F.Gmel.) Schinz & Thell.)

New name.

The herbaceous weedy species of *Desmodium* L. are often difficult to distinguish. Thus *D. canum* of the Bulletin, p. 151, is now correctly named as the first name above.

***Macroptilium lathyroides* (L.) Urb.** phasey bean

. (*Phaseolus lathyroides* L.)

New name.

The in brackets is that used for phasey bean in the Bulletin, p. 158, for this erect weedy species but as in the case of the previous species above, ie. the siratro they should now be treated in the genus *Macroptilium* (Benth.) Urb.

***Mimosa diplotricha* C.Wright** giant mimosa

(*Mimosa invisa* Verdc.)

New adventive record.

Talafa, behind Airport. Collected, Katarina Tawiri, Nov. 14, 2007. This potentially serious, invasive weed has been the subject of a campaign of elimination and hopefully will soon be eradicated. In 2006 the colony covered a small area of less than a hectare.

***Senna alata* (L.) Roxb.** mulamula

(*Cassia alata* L.)

New name.

This attractive small tree is often used for its medicinal properties in curing skin ailments. The name in brackets is that in the Bulletin, p. 55.

***Senna occidentalis* (L.) Link**

(*Cassia occidentalis* L.)

New name.

A rather uncommon herbaceous plant that is recorded under the name in brackets in the Bulletin, p. 56. Most of the herbaceous *Cassia* L. species are now treated in *Senna* Mill.

***Schleinitzia insularum* (Guill.) Burkart** pepe

(*Leucaena insularum* (Guill.) Däniker)

New name.

This fairly common little tree along the western coast of Niue is recorded in the Bulletin, p. 121, by the name in brackets and also as its type variety.

***Vigna unguiculata* subsp. *sesquipedalis* (L.) Verdc.** yard-long bean

(*Vigna sesquipedalis* Fruw.)

New name.

The correct name for the well-known edible yard-long bean is the first name above. This is suggested as possibly being so in the Bulletin, p. 162.

FLACOURTIACEAE

***Flacourtia jangomas* (Lour.) Raeusch.**

New adventive record.

The record of *Xylosma samoensis* (Christoph.) Sleumer (as *Xylosma samoense*), palamu or Niuean plum, in the Bulletin, p. 96, is in error for this species. It thus implies that *Flacourtia jangomas* is an introduced plant to Niue, being valued for its edible fruit. *Xylosma samoensis* is a Samoan endemic with wider leaves, much smaller fruits and is restricted there to forests above 700m; i.e. an unlikely species to grow on lowland makasea on Niue.

***Xylosma orbiculata* (J.R.Forst. & G.Forst) G.Forst.**

New information.

A very common coastal species on the makasea cliffs of the Lower Terrace along the west and north sides and was one of the four plants collected by the Forster's on Niue in their brief visit in 1774. The statement in the Bulletin, p. 96 (as *Xylosma orbiculatum*), that it was not seen in 1965 is wrong because it was seen and even collected then. However, it was confused with the superficially similar *Eugenia reinwardtiana* (Bl.) DC. (Myrtaceae; listed as *E. rariflora* Benth. in the Bulletin, p. 96). In 1975 *Xylosma orbiculata* was found to be often much more abundant than this myrtaceous species which grows in the same habitat.

GESNERIACEAE

***Gloxinia perennis* (L.) Druce**

New name/new information.

Alofi South. Cultivated by house. Uncommon in 2006; Sykes 1445/Niue. Recorded by Yuncker in his Flora but not seen by me in 1965.

HERNANDIACEAE

***Hernandia nymphaeifolia* (C.Presl) Kubitski** puka kula or puka uti

(*Hernandia ovigera* auct. non L.; *Hernandia peltata* Meisn.)

New name.

The two names in brackets are given in the Bulletin p. 102 for the well-known puka kula or puka uti, but the accepted name above is generally used now for it.

LAMIACEAE

As a result of more recent molecular studies the circumscription of this family has been widened and now includes some genera that were in the Verbenaceae, e.g. *Clerodendrum*, *Premna*, *Vitex* that are included in the latter family in the Bulletin, pp. 212–216.

***Clerodendrum chinense* (Osbeck) Mabb.** Honolulu rose

(*Clerodendrum philippinum* Schauer)

New name.

The Honolulu rose has not become a serious weed as feared in the Bulletin, pp. 212–213, the name for it there being that in brackets above. But it still grows in a few places always as a double-flowered clone.

***Clerodendrum* ×*speciosum* Dombrain** bleeding heart

Cultivated.

Fairly commonly grown now on Niue. This hybrid has become a common plant in other parts of the tropical Pacific recently. It is most likely to have the well-known *C. thompsonae* Balf., bleeding heart, as one parent. The latter is recorded in the Bulletin. *C.* × *speciosum* was collected in 2006 at Hakupu, Sykes 1458/Niue.

***Clerodendrum laevifolium* Blume**

Cultivated.

An uncommon, cultivated plant in 2006; Sykes 1627/Niue collected in Alofi North. This species lacks a common name in the Pacific according to Whistler, W.A. 2000, Tropical ornamentals – a guide: pp. 136–137. It is a shrub with hanging racemes of white flowers that have long exserted stamens.

***Coleus scutellarioides* (L.) Benth.** selevese or coleus

(*Coleus blumei* Benth.; *Plectranthus scutellarioides* (L.) R.Br.)

New name.

The well-known ornamental selevese or coleus with variously coloured leaves is now known as *Coleus scutellarioides*. In recent years also placed in *Plectranthus* L'Hér. As stated in the Bulletin, p. 103, there are still wayside populations with coloured uniform or nearly so leaves.

Leucas decemdentata* (Willd.) Sm. var. *decemdentata

(*Leucas flaccida* R.Br.)

New name.

This is a name change from the Bulletin, p. 103, for this small, white-flowered plant that is possibly indigenous on Niue.

***Pogostemon cablin* (Blanco) Benth.** pasiole

New name / new information.

The famous aromatic pasiole is recorded in the Bulletin, pp. 102–103, as *Coleus amboinicus* Lour. but the latter is quite different, including its aroma, and flowers freely when cultivated. On the other hand *Pogostemon cablin* never flowers on Niue or elsewhere in Polynesia as far as I can tell. Thus it is likely that a single clone of this tropical Asian species is represented and thus it is vegetatively propagated for its wonderful fragrant perfume. Yuncker (1943, p. 104) records the pasiole as *Pogostemon nepetoides* Stapf in his Flora of Niue Island.

***Premna serratifolia* L.** aloalo

(*Premna corymbosa* (Burm.f) Rottl. & Willd.; *P. integrifolia* L.f.; *P. obtusifolia* R.Br.; *P. taitensis* var. *rimatarensis* F.H.Br.)

New name.

The aloalo has had quite a complicated nomenclature for its Latin name. Thus both of the names given for supposedly two separate species of *Premna* in the Bulletin, p. 214, are here treated as one species – *P. serratifolia*. It is unfortunate that this name has to be used for Niuean plants because their leaves are entire. This is because the aloalo is now considered to be part of a much more widely distributed species that has its type much further west.

LECYTHIDACEAE

Includes Barringtoniaceae as treated in the Bulletin, p. 49.

***Barringtonia procera* (Miers) R.Knuth**

Cultivated.

Hakupu. Cultivated on Niue in 2006, one tree being seen then so the species is at least very rare now; Sykes 1589/Niue. Grown for its edible seeds.

MALVACEAE

***Abelmoschus esculentus* (L.) Moench** okra or lady's finger

(*Hibiscus esculentus* L.)

New name.

The well-known okra or lady's finger has the Latin names the other way round in the Bulletin, p. 112. This edible-fruited annual is recorded by Yuncker but has not been recorded since his Flora of Niue Island in 1943 although it is almost certainly still grown on Niue occasionally.

***Abelmoschus manihot* (L.) Medik.** peli

(*Hibiscus manihot* L.)

New name.

The edible-leaved peli has the Latin names the other way round in the Bulletin, p. 113, but it seems preferable that the genus *Abelmoschus* Medik. is recognised as distinct from the large and very diverse genus *Hibiscus* L.

***Abelmoschus moschatus* Medik.** fouingo

(*Hibiscus abelmoschus* L.)

New name.

These Latin generic names are given the other way round in the Bulletin, p. 112 as in the previous two species. However, this change is foreshadowed there for the Niuean fouingo. It is still the only one of the three species on Niue that is wild there.

***Abutilon grandifolium* (Willd.) Sweet**

New name.

The record of *Abutilon indicum* (L.) Sweet for Niue is in error for *A. grandifolium*. Although I used *A. indicum* in the main part of the Bulletin, p. 111, I corrected it to the name of the tropical American species *A. grandifolium* in a brief supplementary note at the end of the Bulletin, p. 321.

***Hibiscus diversifolius* Jacq.** fou hele

New information / new name.

This is the plant listed in the Bulletin, pp. 112–113, as *Hibiscus cannabinus* L. and also by Yuncker in the Flora of Niue Island in 1943. However, Smith, A.C. in Flora Vitiensis Nova. Vol. 2, p . 419 (1981) points out that our records are based on *H. diversifolius*. St John (1976) records *H. diversifolius* for Niue but this is based on an unnumbered Jensen specimen that may well have been collected elsewhere, see Whistler, W.A. in *New Zealand Journ. of Botany 22(4)*, p. 566 (1984) and also the notes on F. Jensen's collection in this Supplement.

H. diversifolius still grows in fernland and low scrub in inland areas of Niue. The species is widespread in tropical and subtropical Pacific islands unlike the Asian *H. cannabinus* that also has a very different habit and is cultivated extensively for its fibres that are a substitute for jute, *Corchorus* species, in the related family Tiliaceae. I have not seen any records of *H. cannabinus* for the Pacific Is.

MELASTOMACEAE

***Heterotis rotundifolia* (Sm.) Jacq.-Fél.**

Cultivated.

Near Tapeu (N.Z. Residency). Shrubbery on old garden site. A small patch there in 2006 constituted a relic of cultivation, Sykes 1438/Niue. Also cultivated occasionally elsewhere on Niue.

MELIACEAE

***Didymocheton alliaceus* (G.Forst.) Mabb.** moota

(*Dysoxylum forsteri* C.DC.)

New name.

The adoption of a wider concept for moota implied by this name change from the Bulletin, pp. 118–119, follows a specialist in the family Meliaceae, D.J. Mabberley in his *Dysoxylum Flora Malesiana Vol. 12(1)*, pp. 61–133 (1995).

MENISPERMACEAE

***Pachygone vitiensis* Diels**

New indigenous record.

The record of an undetermined member of the Menispermaceae in the Bulletin, p. 119, has been identified as the above species. It also occurs naturally in Tonga and Fiji and is presumably indigenous to Niue also. See A.C. Smith in *Flora Vitiensis Nova. Vol. 2*, p. 150 (1981).

MORACEAE

***Broussonetia papyrifera* (L.) L'Hér. ex Vent.** hiapo or paper mulberry

New information.

Rare and probably a recent reintroduction because it seems to have died out before 1965 as stated in the Bulletin, p. 124. This has happened elsewhere in the tropical Pacific, presumably because it is really a warm temperate Chinese species that only survives in the tropics when actively cultivated as it has been in Tonga for a very long time because of being such an important plant.

Broussonetia papyrifera is the hiapo or paper mulberry and is famous for the production of tapa cloth from its bark, this being a standard substance for clothing etc. in pre–European Polynesia. Therefore not surprisingly it has been reintroduced to islands such as Niue.

***Ficus scabra* G.Forst.** masi, ata

New information.

This fig is recorded under this name in the Bulletin, p. 126, but also on pp. 124–125 are listed *Ficus godeffroyii* Warb. and *F. longecuspidata* Warb., albeit both tentatively. Their inclusion follows their acceptance as being distinct from the very common *F. scabra* by Yuncker, T.G. in his 'The Flora of Niue Island.' However, I agree with Gardner, R.O. in his 'Trees and shrubs of Niue' that neither of these Samoan species have been collected on Niue; Yuncker's specimens are of *F. scabra*.

MYRTACEAE

***Eugenia reinwardtiana* (Blume) DC.** liki

(*Eugenia rariflora* Benth.)

New name.

The name I now accept for liki means that the species is considered to extend from Malesia and N.E. Australia eastwards across the Pacific to Henderson Id. in the Pitcairn Group. In the Bulletin, p. 129, *Eugenia rariflora* is described as extending from Fiji to East Polynesia.

***Psidium guajava* L.** Dr. Rant's guava or kautonga fifine

(*Psidium cujavillus* Burm.f.)

New information.

This is now recognised as a freak form with small leaves known as Dr. Rant's guava, see the discussion in the Bulletin, pp. 130–131. It occurs sporadically in many parts of the tropical Pacific where ordinary *P. guajava* grows. It has always been rare on Niue apparently and is only seen in close proximity to the ordinary guava, *P. guajava*. The Niuean name kautonga fifine also reflects the closeness to the common kautonga or kautonga tāne ie. *P. guajava*.

***Syzygium dealbatum* (Burkill) A.C.Sm.** tuale

New name.

This is the correct name for the Niuean tuale which was recorded as *S. clusiifolium* (Gray) C.Muell. in the Bulletin, pp. 131–132. The latter species is also recorded for Tonga by Yuncker in his Bulletin (1959) but his specimen is likewise of *S. dealbatum*. *S. clusiifolium* is cauliflorus unlike *S. dealbatum* and the fruits are of a different shape and colour. But *S. dealbatum* does also occur in Tonga and Samoa as well as Wallis and Futuna. Thus it is widespread in West Polynesia.

***Syzygium samarangense* (Blume) Merr. & L.M.Perry** kolivao

New name.

This is the correct name for the Niuean kolivao which was recorded as *S. richii* (Gray) Merr. & Perry in the Bulletin, p. 136. However, the latter is a small strand tree with much larger leaves and flowers which does not occur on Niue. The distribution of *S. samarangense* is interesting and there is a possibility that this Malesian species was introduced to Niue, because it was not mentioned at all by Loel (1924) in his studies of Niuean culture and history. Also, it may have been introduced to Samoa in recent times. Thus kolivao is an integral part of forest communities now throughout Niue and is also abundant on the sparsely inhabited volcano of Niuafo'ou, Tonga.

NYCTAGINACEAE

***Boerhavia glabrata* Blume** katule

(*Boerhavia diffusa* auct. non L.; *B. repens* auct. non L.)

New name.

The nomenclature and taxonomy of the Niuean katule is quite complicated *Boerhavia glabrata* seems to be the most acceptable one.

OLEACEAE

***Chionanthus vitiensis* (Seem.) A.C.Sm.** hooto or oota

(*Linociera vitiense* A.C.Sm.)

New name.

The name in brackets is that given for hooto or oota in the Bulletin, p. 142.

Jasminum laurifolium* Roxb. ex Hornem. f. *laurifolium

(*Jasminum nitidum* Skan)

Cultivated.

The name in brackets for this beautiful New Guinea species is that used in the Bulletin, p. 141. It is still a rarely cultivated plant.

PASSIFLORACEAE

***Passiflora foetida* L.**

New adventive record.

This record is based on plants collected at Hakupu, Sykes 1215/Niue in 1975. Subsequently it has been collected in the Alofi District, nr. Amanau. There a few plants were seen growing round a derelict building site in 2006, Sykes 1391/Niue. This tropical weedy species is now adventive in many parts of the tropical Pacific.

PHYLLANTHACEAE

Genera accepted for this family are included in Euphorbiaceae in the Bulletin, pp. 86, 91, 95, ie. *Bishofia*, *Breynia*, *Glochidion*, *Phyllanthus*.

***Bischofia javanica* Blume**

New information.

In the Bulletin, p. 86, it is stated that this indigenous species was only seen in a sterile state. However Sykes 1492/Niue collected in 2006 from the roadside through the Upper Terrace forest inland from Alofi is fertile.

***Breynia disticha* J.R.Forst. & G.Forst.**

Cultivated / new information.

Cultivated commonly on Niue; see the Bulletin p. 86, as *Breynia nivosa* (Bull) Small cv. 'Roseo-picta'. The bushes sometimes produce an underground suckering system and this spreads naturally beyond the area where it has been planted, Sykes 1226/Niue collected in 1975; Sykes 1549/Niue. Lakepa, by house – semi-adventive. Collected in 2006.

***Phyllanthus amarus* Schumach. & Thonn.**

(*Phyllanthus niruri* auct. non L.)

New name.

The latter name was used in the Bulletin, p. 95.

***Phyllanthus concolor* (Müll.Arg.) Müll.Arg.** Kahāme

(*Glochidion concolor* Müll.Arg.)

New name.

Kahāme is recorded under *Glochidion ramiflorum* G.Forst. in the Bulletin, p. 91. Since then there has been considerable research into determining the taxa of this genus. As a result, the widely distributed *G. ramiflorum* has been divided into several species and West Polynesian populations have been largely included in *Phyllanthus concolor*. The species are quite variable and specific boundaries are somewhat uncertain.

***Phyllanthus virgatus* G.Forst.**

(*Phyllanthus simplex* Retz.)

New name.

The name in brackets is used in the Bulletin, p. 95.

PIPERACEAE

***Piper puberulum* (Benth.) Seem.** kava vao or kavakava

(*Piper puberulum* var. *glabrum* (C.DC.) A.C.Sm.)

New name.

This is the kava vao or kavakava of Niue and recorded as the name in brackets in the Bulletin, p. 168. Subsequently, Smith, A.C. Flora Vitiensis Nova Vol. 2. p. 68 (1981) describes this plant as *Macropiper puberulum* forma *glabrum* but I am not using this infraspecific category in this Supplement.

***Peperomia pellucida* (L.) Kunth**

New adventive record.

Alofi South, Utoku Landing, near track down to reef from Lower Terrace. On a rock overhang where a single plant was growing in 2006; Sykes 1565/Niue/ The species is likely to grow elsewhere in the vicinity.

Peperomia pellucida is adventive on Niue as it is on other islands in the region, being of tropical American origin. It is easily distinguished from the indigenous forms of *P. pallida* (G.Forst.) A.Dietr. that also grow on coastal rock outcrops; see the Bulletin, pp. 164–166, because unlike them *P. pellucida* is scarcely succulent and has thin translucent stems, membranous, semi-translucent leaves, and dry, finely longitudinally ribbed fruits. It was probably accidentally introduced to Niue.

PORTULACACEAE

***Portulaca* 'Wildfire'** purslane

(also known as *Portulaca* Wildfire hybrids)

Cultivated.

Alofi North. A fairly common cultigen now. Most plants have rose petals but some have yellow ones. This ornamental purslane has become commonly grown in tropical Polynesia recently and this cultivar may be a hybrid group with the edible purslane, *Portulaca oleracea* L. Collected in 2006, Sykes 1588/Niue.

RUBIACEAE

***Ixora calcicola* A.C.Sm.** moea

(*Ixora triflora* (G.Forst.) Seem.)

New name.

In the Bulletin, p. 179, the name accepted is in brackets above whilst I now believe that the correct name for the moea is one of the two treated as synonyms there. Thus the name now accepted means that this Niuean plant also occurs in Fiji, Tonga, Wallis & Futuna Is.

***Gynochthodes myrtifolia* (A.Gray) Razafim. & B.Bremer** kanai kula

(*Morinda forsteri* Seem; *M. umbellata* var. *forsteri* (Seem.) Fosberg)

New name.

In the Bulletin, p. 180, the name of kanai kula is accepted as the second name in brackets above.

***Pentas lanceolata* (Forssk.) Deflers**

New adventive record.

Alofi North. Around old house site where semi-adventive when collected in 2006. Sykes 1404/Niue (white form). Also at this time and also in Alofi North around another old house site was growing a single ± adventive clump with mauve flowers; Sykes 1429/Niue, that was growing with the white form. In the Bulletin, p. 180, this species is only recorded as being cultivated.

***Spermacoce remota* Lam.**

(*Borreria laevis* auct. non (Lam.) Griseb.)

New name.

This very common little adventive herb is said to be probably the most common weed on Niue in the Bulletin, p. 175. The correct name, however, is that given above.

***Spermacoce pusilla* Wall.**

(*Borreria verticillata* of Niue Bulletin)

New name.

The correct name of this little herb is rather uncertain although it is certainly not *Borreria verticillata* (L.). G.Mey. as recorded in the Bulletin, p. 175. Since 1970 it seems to have increased and I collected it three times in different parts of Niue in 2006.

RUTACEAE

Citrus ×taitensis Risso rough lemon

New adventive record.

Nr. Hakupu, Tuhia'atua Track where on the Upper Terrace slope an apparently spontaneous sterile plant was collected in 2006. This is almost certainly a rough lemon since these are cultivated in the vicinity; eg. Sykes 1531/Niue.

***Melicope retusa* (A.Gray) T.G.Hartley** kalakalai or kalapalai

(*Acronychia niueana* St.John)

New name / new information.

The common small tree in secondary forest locally called kalakalai or kalapalai is recorded as being endemic to Niue in the Bulletin, p. 181, but subsequent studies have shown that this indigenous tree also occurs in the Wallis & Futuna Is, Tonga and Samoa – all in West Polynesia.

SAMBUCACEAE

***Sambucus mexicana* C.Presl ex DC.** Mexican elder

Cultivated.

Alofi South, near Peleni's Guest House. Fairly commonly grown now on Niue and elsewhere in the region, Sykes 1433/Niue, collected in 2006.

SAPINDACEAE

***Allophylus timoriensis* (DC.) Blume** takatakapalu

(*Allophylus cobbe* (L.) Raeusch; *A. ternatus* (J.R.Forst. & G.Forst.) Radl.)

New name.

The first name in brackets is accepted for this uncommon species in the Bulletin, p. 185, and *A. timoriensis* is cited as a synonym of it. Yuncker's Flora of Niue Island treats the species under the name *A. rhomboidalis* (Nadeaud) Radl. implying that takatakapalu is mainly an East Polynesian plant. Acceptance of the name *A. timoriensis* indicates a much wider distribution.

***Elattostachys apetala* (Labill.) Radlk.**

(*Elattostachys falcata* (A.Gray) Radl.)

New name / new information.

Recorded in the Bulletin, pp. 186–187, as *Elattostachys falcata* (Seem.) Radl. In addition, a doubtful specimen was listed there with a question as to whether or not it belonged to this species. Although sterile it does seem to represent it and since then nothing has been collected of this rare species on Niue to suggest that more than one entity grows there.

SAPOTACEAE

***Planchonella garberi* Christoph.** oluolu

New name.

The oluolu of Niue was incorrectly recorded as *Planchonella membranacea* H.J.Lam. in the Bulletin, p. 189. The latter thus occurs in Tonga and Fiji only, and *P. garberi* occurs in Fiji, Samoa, Tonga (Vava'u), Horne and Wallis Islands, as well as Niue.

***Planchonella tahitensis* (Nadeaud) Pierre ex Dubard** kalaka

(*Planchonella costata* var. *vitiensis* (A.Gray) H.J.Lam)

New name.

The kalaka of Niue was recorded as *Planchonella costata* var. *vitiensis* (A.Gray) H.J.Lam in the Bulletin, p. 188. However, it is quite distinct from *P. costata* (Endl.) Pierre which occurs in Norfolk Island and New Zealand, and therefore I revert to *P. tahitensis*, the name accepted by Plants of the World Online.

SCROPHULARIACEAE

***Torenia crustacea* (L.) Cham. & Schltdl.**

New adventive record.

Collected at Tuapa in 1975 in a temporary rainwater channel at the roadside, Sykes 1282/Niue.

This widespread creeping herb generally occurs in moist places on other Pacific islands, either around swamps at low altitudes or on drier sites at higher and wetter altitudes on volcanic islands. It is valued as a medicinal plant in the Cook Islands.

SOLANACEAE

***Brugmansia* ×*candida* Pers.**

(*Datura candida* (Pers.) Saff.)

New name.

The two names of this taxon are treated the other way round in the Bulletin, p.193, but it is now generally considered that the genus *Brugmansia* Pers. with its shrubby habit and ± pendent smooth fruits is distinct from the herbaceous ± prickly fruited *Datura* species.

***Nicandra physalodes* (L.) Gaertn.** apple of Peru

New adventive record.

Only seen in a waste place by a building at Vaiola, south of Alofi in 1975, Sykes 1235/Niue. A tropical American species which has escaped from cultivation in many subtropical and warm temperate countries, but it seems to be unknown in cultivation on Niue.

***Physalis angulata* L.** manini

(*Physalis minima* L.)

New information.

In the Bulletin, pp. 196–197, two of the three *Physalis* L. species, manini, ie. except *Physalis peruviana*, are divided into *P. angulata* and the small-leaved entity called *P. minima*. Even in 1970 I was doubtful about the status of the latter and since then studies had shown more conclusively that *P. angulata* and *P. minima* are conspecific.

***Solanum americanum* Mill.** edible black nightshade, polo kai

(*Solanum nigrum* L. agg of the Bulletin, p. 197; *Solanum americanum* subsp. *nutans* (R.J.F.Hend.) R.J.F.Hend.)

New adventive record.

This is the well-known edible black nightshade, polo kai, of Niue. True *S. nigrum* L., that is the usual black nightshade of temperate countries such as New Zealand, does not grow on Niue. *Solanum americanum* subsp. *nutans* (R.J.F.Hend.) R.J.F.Hend. is also a synonym.

***Solanum lycopersicum* L.** tomato

(*Lysopersicum esculentum* Mill.)

New name.

This is the main tomato species that has usually been treated in the separate genus *Lycopersicon* Mill. (spelt *Lycopersicum* in the Bulletin) but this cannot be separated convincingly from the large and very variable genus *Solanum* L.

***Solanum repandum* G.Forst.**

New information.

Recorded and described in the Bulletin, p. 198, and only mentioned here because the description must be expanded to include the two specimens cited under *Solanum uporo*, now treated as *S. viride*, qv. This is because these specimens cited under *S. viride* below means that *S. repandum* is now accepted as having both stellate (star-like) and simple hairy forms whereas in the Bulletin, p. 198, only the former hair type is given in the description. Unfortunately, this old probably pre-European introduction may be now extinct on Niue.

***Solanum tongaense* H.St. John** polo isi

New information.

This species may have died out on Niue because it could not be found in 2006. It is only mentioned here to record my non-acceptance of this species being included in the related *S. viride* q.v. *S. tongaense* is an erect, annual herb with small globose berries c. 1cm diameter and is or was not cultivated. Gardner, R.O. in his recent guide to Niuean woody plants ‘Trees and shrubs of Niue’, p. 204, treats *S. tongaense* under *S. viride* as if it was a synonym of it but I cannot accept this.

***Solanum torvum* Sw.** turkey berry

New adventive record.

This potentially serious prickly species was collected in 1975 amongst stocks of various ornamental woody species imported from Fiji; Sykes 1126/Niue, near Hanan Airport. Hopefully it is no longer present on Niue. It has fairly recently appeared in Tonga also and has now also been collected in Auckland. It seems to be the only spiny species that has been seen on Niue and if any appear in the future they should be of course eradicated.

***Solanum viride* Spreng.**

(*Solanum anthropophagorum* Seem.; *S. uporo* Dunal)

New information / cultivated.

The taxonomy of the red-fruited solanums of Section *Irenosolanum* has caused confusion. The name *S. uporo* Dunal was used by Yuncker (1943, p. 106) and in the Bulletin, p. 200, for Niuean plants. However, Sprengel's name *S. viride* must take precedence over the name *S. uporo* (Garnock-Jones, P.J. *Taxon* 35:127 1986).

Furthermore, the taxon itself has been misunderstood on Niue. Yuncker's specimen 10039 may represent *S. viride* Spreng. but Sykes 627/Niue and Sykes 749/Niue that are listed under *S. uporo* in the Bulletin, p. 200, really represent the more distantly related *S. repandum* G.Forst. Confusion has arisen because the latter species has two forms one with stellate (star-like) hairs and the other with simple hairs, as mentioned under the latter species in this supplement. Thus the detailed description and discussion under the heading *S. uporo* in the Bulletin, pp. 200, 202, refers mainly to *S. repandum*.

However, true *S. viride* is represented by Sykes 1254/Niue, collected from a cultivated shrub in the Alofi area in 1975. It is still sometimes grown on Niue but is never wild unlike its close relation *S. tongaense* q.v. or *S. repandum*, neither having been collected on Niue recently. On the other hand *S. viride* is probably represented by the same clone that grows elsewhere in tropical Polynesia, e.g. it is common in Cook Island and Tongan gardens. The fruits of this clone are usually 2–4 cm long and broadly avoid to subglobose, whilst the colour is glossy scarlet.

ULMACEAE

***Trema orientale* (L.) Blume** mangele

New information.

In the Bulletin, pp. 207–208, *Trema orientale* var. *viridis* Lauterb. and *Trema orientale* var. ? were listed. However, examination of Yuncker's three specimens of the genus seem to confirm that only a single entity is involved, referable to *Trema orientale*. Unfortunately, despite searching for it, mangele was not seen in 1965, 1975 or 2006. In addition, this Niuean name that was given by Yuncker was circulated on Niue but no one produced a specimen of *Trema* and its characteristics thus must have now been forgotten there if it is still present.

URTICACEAE

***Laportea interrupta* (L.) Chew**

(*Fleurya interrupta* (L.) Gaudich.)

New adventive record.

Collected beside a shed at Alofi Wharf in 1975; Sykes 1116/Niue. This may be the only gathering from the island. Thus the records of this species in the Bulletin, p. 210, are in error for the euphorbiaceous *Acalypha indica*: see this species in the Supplement, and the three specimens cited under *Laportea interrupta* in 1970 are also *Acalypha indica*. Both species are widespread weedy herbaceous plants in the Pacific region.

***Pilea cadierei* Gagnep. & Guillaumin** aluminium plant

New adventive record.

Vaipapahi Experimental Farm, entrance to shade house. Semi-adventive because planted nearby originally. Otherwise fairly common in cultivation in 2006. The Vaipapahi plant is Sykes 1505/Niue.

This plant with its marbled variegated leaves is the aluminium plant of the tropical Pacific and is not to be confused with an unrelated plant called by this common name in temperate regions of Australasia.

***Pilea depressa* (Sw.) Blume**

New adventive record.

Alofi North in Wayside graveyard. Between graves; locally abundant there in 2006; Sykes 1401/Niue. Vaipapahi Experimental Farm, near buildings and growing in makasea crevices and on rocks. Collected there also in 2006, Sykes 1517/Niue.

VERBENACEAE

***Stachytarpheta jamaicensis* (L.) Vahl**

New adventive record.

An occasional weed in rough pastures. Collected at Vaea Farm and near Hanan Airport; Sykes 1324/Niue, collected in 1975 and Whistler 4970 collected later. Also collected in recent times in Tonga and Samoa and has become quite common now there as well as on Niue where it grows in many waste places around villages and along roadsides.

The mauve as opposed to the blue flowers and the less glossy leaves of *Stachytarpheta jamaicensis* distinguish it from the abundant *S. urticaefolia* (Salisb.)Sims.

MONOCOTYLEDONAE

AMARYLLIDACEAE

***Urceolina ×grandiflora* (Planch. & Linden) Traub** Amazon lily

(*Eucharis grandiflora* sensu auct. non Planch. & Linden)

New name.

In the Bulletin, p. 220, the name of the Amazon lily is accepted as that in brackets.

***Hippeastrum puniceum* (Lam.) Voss.** Barbados lily

(*Amaryllis punicea* Lam.)

Cultivated.

Barbados lily. Different colour forms of this popular bulbous plant are cultivated around houses and grave sites and occasionally appear almost wild, eg. Sykes 1570/Niue, collected in Alofi South by an old house site in 2006. This name almost certainly includes at least some plants recorded as *Amaryllis vittata* L'Hér. hybrids in the Bulletin, p. 218.

It is now generally accepted that the American plants previously treated in *Amaryllis* L. should now be put into *Hippeastrum* Herbert; true members of the former genus being African.

***Proiphys amboinensis* (L.) Herb.** Brisbane lily

(*Eurycles amboinensis* (L.) Lindl.)

New name.

In the Bulletin, p. 220, the name for the Brisbane lily is that in brackets above.

ARACEAE

***Amorphophallus paeoniifolius* (Dennst.) Nicolson** seve

(*Amorphophallus campanulatus* Decne)

New name.

The minor food plant seve is recorded in the Bulletin, p. 221, as the name in brackets above.

***Epipremnum pinnatum* (L.) Engl. 'Aureum'**

(*Scindapsus aureus* (Linden & André) Engl.)

New name.

Sometimes cultivated and at Vaipapahi it is adventive, having spread in moshfiel secondary forest to a limited extent. Also adventive in front of forest margin at Amanau. It is noteworthy that this plant produces large leaves on shoots climbing on trees whereas those shoots running along the ground are always small, Sykes 1210/Niue and Sykes 1587/Niue. In the Bulletin, p. 223, the plant is given the cultivar name 'Tricolor'.

***Syngonium angustatum* Schott**

New adventive record.

1432/Niue, Alofi North. nr. Boundary roadside forest margin and roadside verge. A fairly common adventive in such modified habitats. Collected 20 September 2006.

***Xanthosoma sagittifolium* (L.) Schott**

New adventive record.

Sykes 1529/Niue, Hakupu District. In plantation. This fairly common plant is cultivated for its edible tubers and is sometimes adventive, eg. Sykes 1529 Niue. It is recorded with a question mark in the Bulletin, p. 223, as a cultivated plant only.

ARECACEAE

***Livistona* sp.**

Cultivated.

Hakupu. Cultivated, specimen trees seen in 2006 eg. Sykes 1628/Niue.

***Veitchia merrillii* (Becc.) H.E.Moore**

Cultivated / new information.

1437/Niue. Afofi. Nr. Peleni's Guesthouse. Cult. 21 September 2006

Recorded tentatively in the Bulletin, p. 268. This is based on Sykes 516/Niue, collected from a small, cultivated tree that also grew in Alofi. Although it has no fruits unlike the 2006 specimen, Sykes 1437/Niue, it is almost certainly this Philippines species that originates from limestone habitats there. *Veitchia merrillii* is a popular cultivated species in the tropical Pacific unlike the Melanesian indigenous species in Fiji and further west.

ASPARAGACEAE

***Asparagus densiflorus* (Kunth) Jessop 'Sprengeri'**

(*Asparagus sprengeri* Regel)

New name.

Recorded in the Bulletin, p. 254, under the name in brackets above but this well-known hanging basket subject is now regarded as a cultivar only.

Recorded in family Liliaceae in the Bulletin, p. 254.

***Cordyline fruticosa* (L.) A.Chev.** si

(*Cordyline terminalis* (L.) Kunth)

Cultivated / adventive.

This first name is the generally accepted one for this well-known culturally important small tree. It is generally accepted that si was introduced to Polynesia and that its region of origin is probably Western Melanesian and/or Malesia.

Cordyline fruticosa is treated in the Liliaceae in the Bulletin, p. 255, but many genera in the traditional circumscription of this family have been removed. R.O. Gardner in his recent 'Trees and shrubs of Niue' bulletin puts this species in the Agavaceae but molecular evidence now favours the Asparagaceae.

COMMELINACEAE

***Tradescantia zebrina* Bosse** wandering Jew

(*Zebrina pendula* W.Schnizl.)

New name.

This ornamental creeping plant is recorded by the name in brackets in the Bulletin, p. 225. Sometimes known as ‘wandering Jew’ but this common name applies to another *Tradescantia* sp. in New Zealand.

***Tradescantia spathacea* Sw.** talotalo, oyster plant

(*Rhoeo spathacea* (Sw.) Stearn; *Rhoeo discolor* (L’Hér.) Hance)

New name.

An escape from cultivation that grows mainly on the western side of Niue on makatea outcrops almost devoid of soil. Recorded under the second name in brackets in the Bulletin, p. 225.

CYPERACEAE

***Cyperus mindorensis* (Steud.) Huygh**

(*Cyperus kyllingia* Endl.)

New name.

In the Bulletin, p. 227, the name for this little sedge with globose, white, densely-flowered inflorescences is that given in brackets here.

DRACAENACEAE

***Dracaena angustifolia* (Medik.) Roxb.**

Cultivated.

Alofi South by Peleni’s Guesthouse. Commonly cultivated, usually grown in its variegated form, e.g. Sykes 1574/Niue.

***Dracaena marginata* Lam. ‘Tricolor’**

Cultivated.

Liku, cultivated on makasea in villages. Sykes 1593/Niue. Although this plant of unknown origin is usually known as above its correct name may be *Dracaena cincta* Baker.

***Dracaena reflexa* Lam.**

Cultivated.

Cultivated in the villages for its ornamented leaves, e.g. Sykes 1581/Niue & Sykes 1591/Niue.

HELICONIACEAE

***Heliconia rostrata* Ruiz & Pav.** hanging lobster claw

Cultivated.

Not collected but photographed in 2006. This well-known striking *Heliconia* with pendent racemes of scarlet and yellow flowers will probably become more commonly grown on Niue.

IRIDACEAE

***Trimezia martinicensis* (Jacq.) Herb.**

New adventive record.

Lakepa-Puluhiki Track on the Upper Terrace slope. Forest margin by track – Sykes 1556/Niue. Also cultivated in Alofi at Peleni's Guesthouse and collected there in flower in 2006, Sykes 1572/Niue.

MUSACEAE

***Musa troglodytarum* L.** fehi banana

(*Musa fehi* Bert. ex Vieill.)

Cultivated.

In small clearing on the edge of the Huvalu forest to where it was presumably introduced long ago, probably in pre European times. Loeh (1926) refers to the fehi banana on Niue but it is unrecorded in the Bulletin. Sykes 1375/Niue – collected in 1975.

ORCHIDACEAE

***Bulbophyllum distichobulbum* P.J.Cribb**

New indigenous record.

In the Bulletin, p. 257, there is a short description followed by citations of three 1965 collections recorded as *Bulbophyllum* species nova. Two of these have flowers and have recently been named as *Bulbophyllum distichobulbum*, otherwise confined to American Samoa. This small epiphyte has yellow flowers, almost globose pseudo bulbs and much smaller leaves than *B. longiscapum* the other species of the genus in Niue.

***Crepidium lunatum* (Schltr.) M.A.Clem. & D.L.Jones**

New indigenous record.

This terrestrial herb is represented by a specimen, Sykes 629/Niue, that is recorded as *Malaxis* sp. in the Bulletin, p. 260. The other two specimens cited as this there have been identified as *C. resupinata*, see this species below. *C. lunatum* is otherwise confined to Fiji and Vanuatu as far as is known although it is part of a species complex whose members are all very similar according to P.J.Korres in *Allertonia 5(1)*: 51 (1989).

***Crepidium resupinatum* (G.Forst.) Szlach.**

New indigenous record.

In the Bulletin, p. 260, three 1965 collections are cited under the heading of *Malaxis* sp. These are all fruiting specimens and thus lack the diagnostic flowers. Subsequent material has rectified this and

thus from them two species can now be identified. Two of these specimens represent *Malaxis resupinatum*; a widespread tropical Pacific species from Vanuatu to French Polynesia with purple flowers.

***Papilionanthe* 'Miss Joaquim'**

(Vanda 'Miss Joaquim')*

Cultivated.

This well-known cultivar is fairly common and usually grown on coconut husks. Sykes 1590/Niue, collected in Liku in 2006.

*Mentioned as footnote in the Bulletin, p. 265.

***Spathoglottis pacifica* Rchb.f. cultivar**

Cultivated.

Hakupu. Although only cultivated the species is indigenous in tropical Polynesia. Sykes 1631/Niue represents a fairly commonly grown clone that is also grown in the Cook Is.

***Trachoma papuanum* (Schltr.) Clem. Wood & Jones**

(*Tuberolabium papuanum* (Schltr.) J.J.Wood ex B.A.Lewis & P.J.Cribb**)**

New indigenous record.

In the Bulletin, p. 263, this little epiphytic orchid is recorded as *Sarcochilus* sp. None of the specimens cited have flowers but the prominent winged capsules of this species are present on them. *Trachoma papuanum* is a widespread tropical Pacific species, extending west to New Guinea as indicated by the species name. It is sometimes known by the name in brackets.

PANDANACEAE

***Pandanus tectorius* Parkinson** fa, fa fi, fa vao, fa niua

(*Pandanus tahitensis* Martelli var. *niueana* B.C.Stone; ?*P. spurius* Miq.)

New information.

The common *Pandanus tectorius* is said to have two wild forms on Niue, fa fi being on the Lower Terrace and fa vao from further inland; see the Bulletin, p. 269.

Also in the Bulletin, p. 269, is the first name in brackets above, this now being considered to be part of *P. tectorius*. The second name in brackets is very likely no more than part of this species too. Thus the cultivar without leaf prickles, fa aifai tala, called *P. spurious* 'Putat', that is recorded as being used for weaving in the Bulletin, p. 268, is almost certainly part of *P. tectorius*.

***Pandanus tectorius* Parkinson 'Veitchii'** fa sea

(*Pandanus veitchii* Hort.)

New name.

Fa sea is or was the most popular pandanus used for weaving. Although treated as a species in the Bulletin, pp. 269–270, it is really only a cultivar of the common *P. tectorius* and its type is apparently from Tahiti.

POACEAE grasses

***Andropogon gayanus* var. *bisquamulatus* (Hochst.) Hack.**

New adventive record.

This variety is probably of West African origin and was introduced to Niue for trial as a pasture plant. It has spread to a minor extent at Vaipapahi where it was originally sown, Sykes 1202/Niue, and thus can now also be described as adventive. Sykes 1202/Niue represents the latter.

***Axonopus fissifolius* (Raddi) Kuhlm.**

New adventive record.

Liku-Tautu track. Collected in 2006 by the Liku-Tautu track and probably is a common or fairly common grass. It has usually been known as *A. affinis* Chase elsewhere. Sykes 1599/Niue.

***Bothriochloa bladhii* (Retz.) S.T.Blake**

New adventive record.

Sykes 1467/Niue. Around old house site there in 2006 and then abundant in waste places in the area. Near Hanan Airport. Low adventive scrub near boundary fence and locally fairly common there in 2006, e.g. Sykes 1451/Niue.

***Cenchrus ciliaris* L.** buffel grass

New adventive record.

Buffel grass was introduced for cultivation and grown at the experimental farms at Vaipapahi and Vaiea as recorded in the Bulletin, p. 236. In 1975 it was collected in a waste place on the cliff edge near the Amanau Hotel and was apparently rare there, Sykes 1332/Niue.

***Cenchrus purpureus* (Schumach.) Morrone** elephant grass

(*Pennisetum purpureum* Schumach.)

Name update / adventive.

An escape from cultivation at Amanau where it grew by the roadside in a waste place in 2006. Sykes 1334/Niue. Elephant grass was recorded as cultivated at Vaiola not far away (Sykes 1970 p. 250, as Pennisetum purpureum Schumach.) in the Bulletin, p. 250. Also collected at Hakupu and the Paliasi area in waste places in 2006.

***Chloris barbata* Sw.**

(*Chloris inflata* Link)

New adventive record.

An uncommon weed collected at Alofi wharf and nearby roadsides between 1975 and 2006, eg. Krauss 1592, Sykes 1123/Niue, Sykes 1466/Niue, Sykes 1563/Niue, Whistler 4951.

***Chrysopogon zizanioides* (L.) Roberty** vetiver grass

(*Vetiveria zizanioides* (L.) Nash)

Cultivated.

Vetiver grass is recorded in the Bulletin, p. 253, under the name in brackets above. Its use for scenting oil is mentioned there and in modern times it is also grown for stabilising soil in some places elsewhere.

***Cymbopogon nardus* (L.) Rendle** lemon grass

Cultivated.

Amanau. Cultivated. Collected in 2006 and seems to be the first time that fertile material has been collected on Niue and possibly other countries in the region; Sykes 1583/Niue.

***Dactyloctenium aegyptium* (L.) Willd.**

New adventive record.

Vaipapahi – waste ground, scattered. Also a roadside weed at Anaana near an area where Ministry of Works machinery depot is situated; Sykes 1246/Niue, 1519/Niue. A common grass of coral soils on many islands.

***Dichanthium caricosum* (L.) A.Camus** Nandi blue grass

New adventive record.

Collected at Vaipapahi where it has spread beyond the original plot where it was cultivated e.g. Sykes 1201/Niue. This is Nandi blue grass and it was introduced from Fiji for pasture trials; see the Bulletin p. 239.

***Echinochloa colonum* (L.) Link**

New adventive record.

This widespread tropical grass was collected in a temporary channel near the Alofi wharf in 1975, Sykes 1115/Niue, and on the cliff edge at Amanau, Sykes 1250/Niue. On other Pacific islands this species usually grows in moist places such as taro swamps.

Lepturus repens* (G.Forst.) R.Br. subsp. *repens

(*Lepturus cinereus* Burch.; *L. repens* var. *cinereus* (Burch.) Fosberg)

New name.

This indigenous coastal grass is recorded as *Lepturus cinereus* Burch. in the Bulletin, p. 244. Although typical more erect plants corresponding to the type of *L. repens* do not occur on Niue apparently, the variability of the species elsewhere in Polynesia means that it is impractical to recognise more than one taxon.

***Paspalum urvillei* Steud.**

New adventive record.

1414/Niue. Vaiea District. In a *Morinda* (nonu) plantation and apparently uncommon there. Sykes 1414/Niue. Both collections were made in 2006. Amanau. Old building surrounds where is seemed fairly common.

***Setaria palmifolia* (J.Koenig) Stapf** grass palm

Cultivated.

Alofi South. This large broad-leaved grass was collected in cultivation near the roadside there in 2006, Sykes 1476/Niue.

***Setaria sphacelata* (Schumach.) Stapf & C.E.Hubb. ex Moss**

New adventive record.

Adventive in a lawn opposite the Niue Hotel and not seen elsewhere, Whistler 4948. Presumably introduced to Niue for fodder as it has been to Tonga, Samoa and Fiji. Also collected in a nonu plantation in the Vaiea District in 2006. Sykes 1413/Niue.

Sorghum bicolor* (L.) Moench subsp. *bicolor

(*Sorghum vulgare* Pers.)

New name / new information.

In the Bulletin, p. 251, I wrongly recorded the infamous *Sorghum halepense* (L.) Pers., Johnson grass, for Niue but the specimens cited are all of *S. bicolor* subsp. *bicolor* along with other ones collected since 1965. *S. bicolor* subsp. *bicolor* is a large tufted annual grass that lacks the pernicious creeping rhizomes of *S. halepense*.

Sorghum halepense should be removed from the flora of Niue (see below).

***Sorghum bicolor* subsp. *verticilliflorum* (Steud.) de Wet ex Wiersema & J.Dahlb.**

New name / new information.

The record of *Sorghum verticilliflorum* (Steud.) Stapf in the Bulletin, p. 251, really refers to a form of *S. bicolor* since that is what Sykes 530/Niue, on which it is based, is. *Sorghum verticilliflorum* should be removed from the flora of Niue.

***Sorghum halepense* (L.) Pers.**

New information.

The record of *Sorghum halepense* (L.) Pers. in the Bulletin, p. 251, should be removed from the flora of Niue. See discussion for *Sorghum bicolor* subsp. *bicolor* above.

***Sporobolus diandrus* (Retz.) P.Beauv.**

New adventive record.

Tapeu (N.Z. High Commission) in lawn. 26 September 1975. Stamens: 2 or 3. Sykes 1234/Niue. Alofi District, near Amanau. In a site devastated by Hurricane Heta in 2005, Sykes 1392/Niue.

This Old World species is often confused with the American *Sporobolus jacquemontii* Kunth. It is much less common than *S. africanus* (Poir.) Robyns & Tournay recorded in my Bulletin and is distinguished from it by its much looser inflorescence with the branches ± divergent from the main rachis.

***Urochloa dictyoneura* (Fig. & De Not.) Veldkamp**

(*Brachiaria humidicola* (Rendle) Schweicht)

New adventive record.

An escape from cultivation at Vaiea Experimental Farm where it is now adventive around the farm buildings, eg. Sykes 1316/Niue. This grass was introduced to Fiji where it is known as koronivia grass. Also collected by the Vaiea-Avasela Rd where a few clumps were seen on the grass verge in 2006; e.g. Sykes 1416/Niue.

***Zoysia matrella* (L.) Merr.**

New adventive record.

Alofi South, opposite Alofi Rentals. Many square metres with uniform covering of this mat-forming grass present there in 2006. Sykes 1468/Niue.

ZINGIBERACEAE

***Curcuma longa* L.** turmeric

(*Curcuma domestica* Valeton)

New name.

The correct name for this valued culinary spice is given as above whereas in the Bulletin, p. 271, the two names above are given the other way round. However, true *Curcuma longa* L. is the turmeric in the tropical Pacific and not wrongly applied as I stated in the Bulletin.