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**NEW COLLECTIONS AND NOTES ON THE PLANTS OF
HENDERSON, PITCAIRN, OENO, AND DUCIE ISLANDS**

BY

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NEW COLLECTIONS AND NOTES ON THE PLANTS OF
HENDERSON, PITCAIRN, OENO, AND DUCIE ISLANDS

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INTRODUCTION

It may seem superfluous to add another paper on the flora of Henderson Island, so soon after the account in Fosberg, Sachet and Stoddart (1983), but the Paulay and Spencer collections added several species and additional information on some others, already known. It also provides a convenient opportunity to make needed nomenclatural adjustments and corrections, as well as comments on variability.

45 species were collected on Henderson, including one additional exotic (*Setaria*), and two other previously unrecorded native plants. 16 previously listed plants (Fosberg 1983) were not found. This does not necessarily mean that they have disappeared. There was no botanist on the expedition, so the plants were collected by other members of the party in addition to their other activities, so naturally the plant collecting may not be as complete as if a full-time botanist had been available. The additional notes over and above the bare list show that, even botanically, the expedition's accomplishments were significant.

In the list the parenthetical (St. J. & P.) indicates the reference to species in the 1962 paper by St. John and Philipson. The parenthetical (Fosberg et al.) indicates the

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page reference in the paper by Fosberg, Sachet, and Stoddart in 1983. The parenthetical upper case letter symbols are the Lanjouw System (Holmgren, Keuken and Schofield 1981) symbols for the herbaria where the specimens are deposited.

For completeness, we have also listed the collections from Oeno and Ducie Atolls and Pitcairn Island. Lists of previous collections from these islands have been published by Philipson and St. John (1960) for Oeno, indicated in the list by (P. and St. J.) and St. John (1987) for Pitcairn, indicated in the list by (St. J.). We also include several additional species, collected by Miss Ross, brought to our attention by Rhys Gardner, of Auckland Institute and Museum. As a matter of information, we have recently learned of a substantial collection from Pitcairn, collected by S.P. Twyford in 1955, housed in the University of the South Pacific Herbarium in SUVA. We regret that time was not available to list and check identities of these specimens.

In all of the lists the collection data were furnished by Paulay and Spencer: the identifications and comments by Fosberg, and the manuscripts were assembled by Oliver. In all three lists, all species collected by the Smithsonian Expedition are cited with pertinent synonymy and abbreviated references to previous lists. Species not found by the Expedition are only mentioned, in the main list, if we disagree with the name used earlier or if there are comments to be made on the occurrence or matters of distribution, variation or taxonomic interest. This seems sufficient since for each of the three islands there is a published modern annotated list citing collections.

The full set of Smithsonian Expedition collections are housed in the U.S. National Herbarium (US), with duplicates, if any, at Bishop Museum (BISH), occasional extra ones are at DSIR, Christchurch (CHR) and a few other herbaria. A few earlier specimens studied are cited with the herbaria indicated.

Polypodiaceae

Asplenium nidus L. (St. J. & P. 178; Fosberg et al. 29)

Common, NW beach site, Paulay and Spencer 602 (US, BISH, BM)

Generally rather common.

Davallia solida Sw. (St. J. & P. 178; Fosberg et al. 29)

Top plateau, inland of NW beach site, Paulay and Spencer 613 (US, BISH)

Nephrolepis hirsutula (Forst. f.) Presl

Nephrolepis biserrata (Sw.) Schott (Fosberg et al. 29; St. J. & P. 178).

Nephrolepis exaltata Schott (St. J. & P. 179; Fosberg et al. 29).

Common on top of cliff, NW beach Paulay and Spencer 608 (US, BISH).

This is rather atypical, though having rhizome scales with shiny, black bases. The scales on rhachis and pinnae are very sparse, some appearing glandular, reddish, but scales woolly. The sori are not as close to the margin as usual, but not as far from it as in *N. biserrata*, which has been reported from the island earlier. Probably only *N.*

hirsutula occurs on this island.

Polypodium sp.

Polypodium scolopendria "aberrant" of Copeland, non
Burm. P. 179)

NW beach site, Paulay and Spencer 611 (US, BISH, BM).
S.l. St. John & Fosberg 15125 (BISH),

This species, probably endemic, will be described in a later publication.

Polypodium scolopendria Burm. f.

Phymatodes scolopendria (Burm f.) Ching (St. J. & P. 179)

Common at base of cliff NW beach site, Paulay and Spencer 601 (US).

A very large form., with 8-11 narrow lobes on a side, very acuminate, sinuses broad, rounded, sori in one row on each side of a lobe, round to elliptic, impressed in blade. Where Polypodium pitcairensis and P. sylvaticum Brack. fit into the P. scolopendria complex on Henderson can only be determined by more collections and study.

Pyrrosia serpens (Forst. f.) Ching

Cyclophorus blepharolepis C. Chr. (St. J. & P. 119; Fosberg et al. 29)

Top plateau, mid fossil lagoon, Paulay and Spencer 618 (US, BISH, BM); St. John & Fosberg 15154 (US), det Hovenkamp.

Poaceae

Lepturus repens (Forst. f.) R. Br. (St. J. & P. 179; Fosberg et al. 29)

N. beach, Paulay and Spencer 633 (US, BISH)

This species is said by St. John to be rare, found only at top of beaches. No. 633 is an unusual coarse form. The leaves are lanceolate, broad and short, crowded. Only one young spike is present. The glumes are narrowly lanceolate, not aristate.

Setaria verticillata (L.) Beauv. (det S.A. Renvoize)

N. beach, at landing Paulay and Spencer 660 (US).

This weedy grass is apparently a new record for the island; probably recently introduced. The specimen is depauperate, depressed, badly wilted, the panicles unusually narrow, 5 mm or less wide, 4-5 cm long.

Liliaceae

Cordyline fruticosa (L.) Chev. (Fosberg et al. 30)

Cordyline terminalis (L.) Kunth (St. J. & P. 179)

N. beach site, cliff top, Paulay and Spencer 626 (US, BISH, BM)

No. 626 is the large-leaved green form, usually, as in this case, sterile, probably dispersed throughout Polynesia by the Polynesians, and doubtless planted on Henderson by the Pitcairn people.

Dianella intermedia Endl.

Dianella intermedia var. *gambierensis* F. Br. (St. J. & P. 179; Fosberg et al. 30)

Occasional top plateau, fossil lagoon, Paulay and Spencer 617 (US).

Sterile specimen, but probably this species as the leaf margins are spinulose, but variety cannot be determined.

Piperaceae

Peperomia hendersonensis Yunker (1937; St. J. & P. 180; Fosberg et al. 30)

N. beach, inland, Paulay and Spencer 655 (US, BISH), nr. base of cliff NW beach 597 (US, BISH, BM)

Endemic to Henderson, apparently common.

A feature was noticed possibly unique to this species, or at least uncommon in the genus, occasional on # 655, stipules or stipule-like structures at or very slightly above axils of some leaves. These are very small, 1 mm long and wide or less, broadly ovate or triangular, slightly cordate at base, apex subcuspidate with glandular tip, somewhat carinate from tip, sides thin.

Ulmaceae

Celtis sp.

Celtis paniculata var. *viridis* F. Br. (St. J. & P. 180; Fosberg et al. 30)

N. beach trail, fossil lagoon-plateau, Paulay and Spencer 647 (US), beach just inland of coconut grove, 623 (US)

In forest on plateau. A distinctive form; probably does not belong in *C. paniculata* Planch.

Urticaceae

Procris pedunculata (Forst.) Wedd. (St. J. & P. 180; Fosberg et al. 30)

Common, top terrace, NW beach side, Paulay and Spencer 600 (US).

Viscaceae

Korthalsella platycaula var. ***vitiensis*** (v. Tiegh.) Danser

Korthalsella vitiensis (v. Tiegh.) Engler (St. J. & P. 180, Fosberg et al. 30)

Korthalsella margaretae F. Br. new var. ? (F. Brown, Bish. Mus. Bull. 130: 60, 1935)

Korthalsella complanata sensu Danser, non (v. Tiegh) Engler

Paulay and Spencer 654 (US, BISH, BM))

There is little agreement on the status of this taxon. Its affinities are certainly with K. platycaula (v. Tiegh.) Engler, type from Tahiti, but what little material available from Fiji, Rurutu, Rapa and Henderson Island differs consistently from the Society Island forms in its broader, shorter elliptic segments, with strong longitudinal ridges (or veins?). A.C. Smith (Fl. Vit. Nova 3: 474, 1985) lumps this form with K. platycaula. His photos, fig. 189A and D., the above-mentioned features very well. St. John and Philipson 180, go the other way and recognize K. vitiensis as an independent species. F.B.H. Brown goes still farther and makes at least two species of it. My first impression was to treat it as K. platycaula, but after examining all readily available material, I feel that it is at least merits varietal rank and am treating it so, as above. Certainly it has nothing to do with the Hawaiian K. complanata (v. Tiegh.) Engler, as claimed by Danser.

Korthalsella rubescens (v. Tiegh.) Engler (St. J. & P. 180); Fosberg et al. 30)

Top plateau, NW beach, Paulay and Spencer 599 (US).

We cannot distinguish this species from K. horneana v. Tiegh. (ex char.) but hesitate to combine them in absence of specimens of the latter.

Nyctaginaceae

Boerhavia tetrandra Forst. f. (Fosberg et al 32)

Boerhavia diffusa var. tetrandra (Forst. f.) Heimerl (St. J. & P. 181)

N. beach, level of cliff notch, Paulay and Spencer 639 (US), N. beach, cliff face 632 (US).

No. 639 is rather bushy and small-leaved for this species, with young buds only. No. 632 is of normal stature and habit, but with leaves rather broadly ovate and peduncles very long, in bud only.

Aizoaceae

Sesuvium portulacastrum L. (Fosberg et al. 30)

N. beach, cliff face, Paulay and Spencer 634 (US, BISH, BM).

This plant is a slender, prostrate, completely green form, with small spatulate leaves and white flowers, with perianth lobes 4 mm long. It does not have the coarse habit and conspicuously gray-green leaves of var. griseum Degener & Fosberg.

Lauraceae

Cassytha filiformis L. (St. J. & P. 181; Fosberg et al. 31)

N. beach, cliff face, Paulay and Spencer 651 (US, BISH)

Parasitic vine, attacking various shrubs and herbs.

Hernandiaceae

Hernandia stokesii (F. Br.) Kubitzki, Bot. Jahrb. 89: 141, 1969.

Hernandia ovigera var. stokesii F. Br. Fosberg et al. 31)

Local on top plateau off NW beach Paulay and Spencer 592 (US, BISH, BM)

This shrub, local on very rough pinnacled limestone on the west side of the plateau, said to be identical with the Rapa plant of this name, is neither H. ovigera L. nor H. sonora L. and not even very close to the last named. It still must be compared with the Rapa plant, which is found in a very different habitat, as the identity depends on a comparison of a single Whitney Expedition specimen, lacking data. For the present it can bear this name.

Brassicaceae

Lepidium bidentatum Montin (St. J. & P. 181; Fosberg et al 31)

Nr. top of cliff face, NW beach Paulay and Spencer 598 (US, BISH, BM)

Fabaceae

Caesalpinia major (Medic.) Dandy & Excell

N. beach, cliff top, Paulay and Spencer 630 (US, BISH)

C. bonduc (L.) Roxb. has been previously recorded from the island (St. J. & P. 181), but the present specimen, though sterile, lacks stipules or even scars of stipules, so is interpreted as C. major.

Cassia glanduligera St. John (St. J. & P. 181-184)

Common on top plateau off NW beach Paulay and Spencer 591 (US, BISH, BM)

The South Pacific equivalent of the Hawaiian C. gaudichaudii H. & A.

Euphorbiaceae

Euphorbia sparrmannii Boiss. (Fosberg et al. 31)

Euphorbia ramosissima H. & A. (non Loisel.) (St. J. & P. 186)

Euphorbia pitcairnensis F. Br.

N. beach cliff, Paulay and Spencer 653 (US), N. beach, limestone cliff notch, 638 (US, BISH), N. beach 631 (US), 2/3 up steep cliff, NW beach site, 607 (US, BISH)

Euphorbia pitcairnensis F. Br. is certainly conspecific with E. ramosissima H. & A., an illegitimate later homonym. E. sparrmannii includes this as well as several other similar taxa in the western Pacific. Several varieties are to be recognized, but they are not completely sorted out yet. The plant is common on the cliff-tops. It is

slender, prostrate, spreading from a gnarled woody caudex. F. Brown was in error in referring to a calyx in E. pitcairnsis, mistaking the involucre or cyathium for a calyx.

Sapindaceae

Allophylus sp.

N. beach, fossil lagoon-plateau, Paulay and Spencer 637 (US).

A sterile specimen, glabrous, with leaf-shape and margin not right for the widespread strand species, A. timoriensis (DC.) Bl.

Tiliaceae

Triumfetta procumbens Forst f. (St. J. & P. 187; Fosberg et al. 32)

N. beach, top of beach, Paulay and Spencer 650 (US); Rare, on shore, NW beach 604 (US)

A prostrate creeper with yellow flowers and burr-like fruit, found on sandy beaches.

Flacourtiaceae

Xylosma suaveolens var. **haroldii** Sluemer (St. J. & P. 187; Fosberg et al. 32)

N. beach trail fossil lagoon-plateau, Paulay and Spencer 644 (US, BISH, BM), top plateau mid fossil lagoon, 620 (US, BISH, BM)

Variety endemic to Henderson; abundant in forest on Plateau, No. 644 staminate.

Lythraceae

Pemphis acidula Forst. (St. J. & P.; Fosberg et al. 32)

NW beach Paulay and Spencer 596 (US, BISH, BM, MO).

This species is usually a large shrub, but at the NW Beach in 1934 we found a fair-sized tree, which was seen again in 1987. In Paulay and Spencer, this volume, Vegetation, the species is referred to as a shrub.

Myrtaceae

Eugenia rariflora Benth. (St. J. & P.; Fosberg et al. 32)

Top plateau inland of NW beach, Paulay and Spencer 605 (US, BISH, BM).

Generally common or abundant on coastal flats, cliffs and plateau. We are tentatively maintaining this as a distinct species, though Merrill (1950) included it in

the Malaysian Jossinia reinwardtiana. We have the impression that Merrill's lumping together most of the Pacific plants of this affinity (genus Jossinia Comm.) in J. reinwardtiana Bl. was perhaps a course of desperation, rather than a considered judgement. After struggling with the variability of the group, one can understand and sympathize. I have not seen the type of Myrtus reinwardtiana, and fail to get a clear concept of it from Blume's later and fuller description. The scanty material available from Malaysia does not permit a better concept. For the present, I am applying the name E. rariflora to the eastern Polynesian plant, usually a shrub, with leaves broad obovate to suborbicular very obtuse to rounded at apex, green above pale beneath, venation faint, subglabrous when mature, margins tending to be revolute; pedicels shorter than leaves, usually unbranched, fruit with conspicuous persistent sepals, tending to be erect. This does not include some plants with thinner, narrower leaves, which I leave unnamed for the present.

Myrsinaceae

Myrsine hosakae St. John (St. J. & P. 188-190; Fosberg et al. 32)

Top plateau 100-300 m inland from NW beach, Paulay and Spencer 606 (US), very rare, top plateau, fossil lagoon, inland from NW beach, 616 (US), top plateau 619 (US, BISH, BM), fossil lagoon-plateau, 25-30 m, 643 (US), N. beach trail Lagoon -plateau, 25-30 m, 636 (US), N. beach, top of plateau, Paulay and Spencer 659 (US).

This species, endemic in Henderson Island, was overlooked in our account of Eastern Polynesian species of Myrsine (Fosberg and Sachet 1975, 1971). St. John placed it next to M. ovalis Nad. of Tahiti. Suggesting relationship among species of Myrsine is, at best, uncertain. I would consider it closer to N. niauensis Fosberg & Sachet, to which M. ovalis var. wilderi Fosberg & Sachet is close. It resembles M. niauensis in the abundant very minute punctations on the upper leaf surface (which St. John failed to notice), but differs in being equally punctate on the under surface, in the lack of strong inter-marginal veins, and in the ellipsoid rather subglobose fruit. No. 616 is sterile, very coarse, and does not show the punctations very well. It may be something else. No. 606 is small-leaved, and with terminal buds on dwarf branchlets with crowded small cataphylls or scars on same, and zones of crowded scars at intervals on branchlets. These are described by St. John as "terminal scaly buds". They are not easy to interpret and should be studied carefully by the next collector of this species.

Sapotaceae

Nesoluma st-johnianum Lam & Meeuse (St. J. & P. 190; Fosberg et al 32)

N. beach, trail fossil lagoon - plateau, Paulay and Spencer 641 (US, BISH, BM, MO, CHR); top plateau, very abundant, fossil lagoon, NW beach site, 615 (US, BISH); top plateau, NW beach, Paulay and Spencer 603 (US, BISH).

An endemic tree in plateau forest. The genus is widespread but rare in the Pacific. No. 641 is in bud only, 603 somewhat more mature but still not in full flower; 615 with one mature fruit.

Loganiaceae

Geniostoma hendersonense St. John (St. J. & P. 190-192; Fosberg et al. 32)
 "Species of Buddleia" Beechey ?

N. beach top plateau, Paulay and Spencer 658 (US, BISH, BM); top plateau off NW beach, common Paulay and Spencer 594 (US).

Excellent fruiting specimen # 658, capsule valves 5-9 mm long, black when dry, strongly transversely rugose. Number 594 flowering.

Apocynaceae

Alyxia sp.

Alyxia stellata sensu auct. non Forst. (St. J. & P. 192; Fosberg et al. 32)

Very common, Top plateau, NW beach site, Paulay and Spencer 621 (US)

The Henderson Island plant hitherto referred to Alyxia stellata is an endemic species, well-characterized by 4 leaves in a whorl, large inflorescences and fruit. I have had it in manuscript for some time. The present fruiting specimen helps to complete the description.

Convolvulaceae

Ipomoea macrantha R. & S. (Fosberg et al. 32)
Ipomoea glaberrima Boj. (St. J. & P. 192)

N. beach cliff path near top, Paulay and Spencer 627 (US, BISH); rare at top of cliff face, NW beach, 609 (US).

Boraginaceae

Cordia subcordata Lam. (St. J. & P. 193; Fosberg et al. 32).

N. beach, top plateau, Paulay and Spencer 657 (US, BISH)

Heliotropium anomalum var. argenteum Jtn.

Heliotropium anomalum var. candidum St. John (St. J. & P. 192-193; Fosberg et al. 32)

N. beach, beach strand, Paulay and Spencer 635 (US), near top of cliff face, NW beach site, 612 (US, BISH)

The variety candidum said to be in Henderson Island, indeed differs sharply from the eastern Polynesian var. anomalum, in its indument, which, at least in our specimens, I would call, at least the Paulay specimens, densely sericeous, rather than pilosulus, as described by St. John. In this respect this plant resembles the Hawaiian var. argenteum, in fact, comparison of no. 635 with a good series of Hawaiian specimens show that it falls well within the range of that variety. The variation in this species needs further study, and especially careful field observation. In some varieties the flowers are strongly dimorphic, even with different fragrances.

Tournefortia argentea L. f. (Fosberg et al. 33)

Messerschmidia argentea (L. f.) I.M. Jtn. (St. J. & P. 193)

N. beach strand, Paulay and Spencer 625 (US).

Verbenaceae

Premna cf. serratifolia L.

Premna integrifolia L. (St. J. & P., 193)

Premna obtusifolia R. Br. (Fosberg et al. 33)

N. beach trail, fossil lagoon plateau Paulay and Spencer 645 (US); North beach, top plateau, 656 (US), N. beach, lagoon-plateau, 622 (US).

Apparently common on plateau.

These specimens are sterile and have entire medium-small oblong obtuse firm leaves # 622 has reticulate, almost obovate leaves, old inflorescence, several loose pyriform fruits with reflexed calyx. This species is bewilderingly variable over its Indo-Pacific-wide range.

Rubiaceae

Canthium barbatum f. *callicola* Fosb. (St. J. * P. 193; Fosberg et al. 33)

Common in forest on Plateau off NW beach, Paulay and Spencer 593 (US, BISH, BM)

Canthium odoratum (Forst. f.) Seem. (St. J. & P. 193; Fosberg et al. 33)

Abundant on top plateau off NW beach, Paulay and Spencer 595 (US, BISH, POM, MO, BM, CHR)

Abundant on rough coral on plateau.

Ixora fragrans (H. & A.) Forst f. (St. J. & P. 187; Fosberg et al. 32)

Cephaelis fragrans H. & A.

N. beach trail, fossil lagoon-plateau, Paulay and Spencer 648 (US); top plateau off NW beach 588 (US).

This is a member of *Ixora* sect. Phylleilema, characterized by its cymes strongly reduced and enclosed between two leaf-like, usually cordate bracts. No. 648 is sterile, no. 588 is fruiting.

Morinda umbellata var. *forsteri* (Seem.) Fosberg (St. J. & P. 194; Fosberg et al. 33)

Morinda forsteri Seem.

N beach trail, fossil lagoon-plateau, Paulay and Spencer 646 (US); top plateau off NW beach, 589 (US).

Occasional climber in forest on western plateau, 1987 specimens sterile.

Timonius polygamus (Forst. f.) Robins. (St. J. & P. 193; Fosberg, occ. Pap. Bis. Mus. 13: 263, 1937.; Fosb. et al. 33)

Timonius forsteri DC

N. beach, cliff top, Paulay and Spencer 652 (US, BISH, BM), beach trail, fossil lagoon-plateau, 649 (US), 1-300 m, NW beach site, 610 (US, BISH); top plateau off NW beach, 587 (US)

This shrub is notoriously variable in habit, leaf size and shape, and size of cyme. It is abundant in forest on the plateau and cliffs. No. 652 is staminate, with large open cymes. no. 649 is similar with smaller cymes, no. 717 similar but leaves smaller, 3.5 X 2 cm.

Goodeniaceae

Scaevola sericea var. tuamotuensis (St. John.) Fosb. (Fosberg et al. 33)

Scaevola taccada var. tuamotuensis St. John (St. J. & P. 194)

N. beach strand, Paulay and Spencer 628 (US, BISH, BM, CHR), N. beach 624 (US, BISH).

Typical var. tuamotuensis, prostrate and with glabrous narrowly spatulate leaves. This variety extends westward at least to the Cook Islands.

Asteraceae

Bidens hendersonensis Sherff (St. J. & P. 194, Fosberg et al. 33)

Common in central lagoon, top plateau, NW beach site, Paulay and Spencer 614 (US, BISH, BM); rare on top plateau off NW beach 590 (US, BISH).

Leaves simple, broadly elliptic, on slender petioles; inflorescence loosely corymbose, achenes less than 1 cm long, flat, thin, biaristate, pappus spine-like, with strong retrorse spinelike barbs, margins ciliate with antrosely subspreading barbs.

Senecio stokesii F. Br. (St. J. & P. 194; Fosberg et al. 33)

N. beach, trail, fossil lagoon-plateau, Paulay and Spencer 642 (US, BISH); N. beach trail, fossil plateau, 640 (US)

Apparently fairly common on plateau, becoming rather weedy in disturbed places, as along a cut path. A medium sized glabrous suffrutescent herb; originally described as endemic in Rapa. Many earlier collections available.

Additional specimens examined, Tait 36, 39 (BISH); St. John and Fosberg 15141, 15080, 15108, 15109, 15178, 15077m, all (BISH).

Henderson Island specimens of this species vary in height up to 2 m, stems simple to much-branched, especially toward apex, glabrous, leaf blade 2-12 cm x .08-7 cm, thin, elliptic to ovate or broadly ovate, apices from rounded to obtuse or, usually, acute to slightly acuminate. The original description is reasonably complete, but based only on the type, Stokes 108 (BISH) from Rapa. It also occurs on Raivavae,

St. John 16036 (BISH).

The following 7 plants were seen but not collected in 1987, all quite common: Pandanus tectorius Park., Cocos nucifera L., Thuarea involuta (Forst. f.) R. & S., Thespesia populnea (L.) Sol. ex Correa, Glochidion pitcairnense (F. Br.) St. J., Pisonia grandis R. Br., and Guettarda speciosa L.

Previously recorded from Henderson but not found on this trip were the following 15 species: Asplenium lobulatum Mett., Asplenium obtusatum Forst. f., Fimbristylis cymosa R. Br., Santalum hendersonense F. Br., Achyranthes aspera var. pubescens (Moq.) Townsend, Portulaca lutea Sol. ex Forst. f., Capparis sandwichiana DC., Pittosporum arborescens Rich. ex Gray, Sesbania coccinea (L. f.) Poir. Suriana maritima L., Aleurites moluccana (L.) Willd., Meryta brachypoda Harms, Jasminum didymum Forst. f. (?), Lycium carolinense var. sandwicense (A. Gray) Hitchc., and Fitchia nutans Hook. f. (?).

Plants of Pitcairn Island

Polypodiaceae

Davallia solida (Forst. f.) Sw.

Roadside, Paulay, Spencer and Schuster 685 (US).

Nephrolepis hirsutula (Forst. f.) Presl

Very common, Paulay, Spencer and Schuster 684 (US).

Polypodium scolopendria Burm. f.

Paulay, Spencer and Schuster 693 (US).

Thelypteris cf. parasitica (L.) Tard.

Paulay, Spencer and Schuster 694 (US).

Poaceae

Cynodon dactylon (L.) Pers.

Seashore, Paulay, Spencer and Schuster 683 (US).

Paspalum conjugatum Berg

Occasional, Paulay, Spencer and Schuster 676 (US).

Setaria verticillata (L.) Beauv.

Paulay, Spencer and Schuster 674 (US).

Sorghum halepense (L.) Pers.

Disturbed, fallow ground, rampant, Paulay, Spencer and Schuster 667 (US), 673

(US).

Commelinaceae

Commelina diffusa Burm f.

Adamstown, common, Paulay, Spencer and Schuster 691 (US).

Amaranthaceae

Alternanthera brasiliensis (L.) O. Ktze.

Roadside, Adamstown, Paulay, Spencer and Schuster 679 (US).

Nyctaginaceae

Mirabilis jalapa L.

Roadside, Adamstown, Paulay, Spencer and Schuster 669 (US).

Fabaceae

Bauhinia cf. purpurea L.

Roadside, Adamstown, Paulay, Spencer and Schuster 692 (US).

Cassia (Senna) septemtrionalis Viviani

S.I. Ross 31b (AK).

Dolichos lablab L.

Paulay, Spencer and Schuster 664

Erythrina variegata var. *orientalis* (L.) Merr.

Not common, Paulay, Spencer and Schuster 686 (US).

Inga ynga (Vell.) J.W. Moore

Probably planted, Ross 69 (AK).

Leucaena leucocephala (Lam.) de Wit

Paulay, Spencer and Schuster 665 (US).

Oxalidaceae

Oxalis corniculata L.

Paulay, Spencer and Schuster 696

Malvaceae

Abutilon pitcairens Fosberg

a second collection of this has come to light, thanks to Rhys Gardner.
Pitcairn Island, Ross 31-19 Pitcairn name "Foutoo" (AK 74663)

Hibiscus ornamental hybrid aff. **H. rosa-sinensis** L.

Paulay, Spencer and Schuster 675 (US).

Flaucortiaceae

Homalium taypau St. John

Main ridge, common, Paulay, Spencer and Schuster 678 (US).

Xylosma suaveolens Forst.) Forst. f.

Main ridge, very rare, Paulay, Spencer and Schuster 677 (US).

Myrtaceae

Eugenia uniflora L.

Roadside, Paulay, Spencer and Schuster 687 (US).

zygium jambos (L.) Alston

Abundant, Paulay, Spencer and Schuster 680 (US).

Begoniaceae

Begonia sp. (probably a cultivated hybrid).

Paulay, Spencer and Schuster 655 (US).

Myrsinaceae

Myrsine aff. **niauensis** Fosb. & Sacht

Bumelia sp.

S.I. Ross, sterile, US).

Apocynaceae

Allamanda hendersonii Bull

Paulay, Spencer and Schuster 682

Convolvulaceae

Ipomoea indica (L.) Merr.

Common, Paulay, Spencer and Schuster 666 (US).

Verbenaceae

Lantana camara L.

Rampant, Paulay, Spencer and Schuster 697 (US).

Verbena bonariensis L.

Radio station (Adamstown) not seen elsewhere, Paulay, Specer and Schuster 681 (US).

Plantaginaceae

Plantago major L.

Down Niger, Paulay, Spencer and Schuster 689 (US), Adamstown, 690 (US).

Caprifoliaceae

Lonicera japonica Thunb.

Big fence, Paulay, Spencer and Schuster 672 (US).

Asteraceae

Bidens pilosa L.

Roadside, Paulay, Spencer and Schuster 668 (US).

Conyza bonariensis (L.) Cronq.

Spreading over whole island, Paulay, Spencer and Schuster 661 (US).

But heads are far smaller than usual.

Sonchus oleracus L.

Big fence, Paulay, Spencer and Schuster 671 (US).

Vernonia cinerea (L.) Less.

Adamstown Paulay, Spencer and Schuster 662

Plants of Oeno Atoll

Bryaceae

Brachymenium indicum (Doz. & Molk.) Bosch. & Lac.

W. Islet, Paulay and Spencer 711 (US)

Polypodiaceae

Polypodium scolopendria Burm. f.Phymatodes scolopendria (Burm. f.) Ching (P. & St. J. 402)W. Islet, Paulay and Spencer 709 (US, BISH, BM).

Fronds rather small, lobes very narrow, lower ones mostly 2 cm or less wide, upper ones narrower.

Poaceae

Lepturus repens (Forst. f.) R. Br. var.Lepturus repens (Forst. f.) R. Br. var. repensW. Islet, Paulay and Spencer 698

No. 698 is a tufted slender plant strongly resembling var. septentrionalis of the Northern Marshall Islands, but with triangular lanceolate glumes, rather bluntly pointed, not at all subulate or aristate. Disposition of the southern Polynesian form must await a critical consideration of the Forster specimens.

Amaranthaceae

Achyranthes velutina H. & A. f. rosea (P. & St. J. p. 402).W. Islet, Paulay and Spencer 701 (US, BISH, BM)

Flowers bright-rose pink.

Nyctaginaceae

Pisonia grandis R. Br. (P. & St. J. 402).W. Islet, Paulay and Spencer 703 (US, BISH, BM).

A narrow tomentose line along side of midrib and principal veins.

Boerhavia tetrandra Forst. f.Boerhavia diffusa var. tetrandra (Forst. f.) Heimerl (P. & St. J. 402).W. Islet, Paulay and Spencer 708 (US, BISH, BM).

An unusual small-leaved form of this widespread species, but probably this.

Lauraceae

Cassytha filiformis L. (P. & St. J. 402)W. Islet, Paulay and Spencer 710 (US).

Brassicaceae

Lepidium bidentatum Mont. (P. & St. J. 402).

W. Islet, Paulay and Spencer 700 (US, BISH, BM)

A rather dwarfed small-leaved form.

Pandanaaceae

Pandanus tectorius Park.

Pandanus faruliferus St. J. (P. & St. J. 402)

W. Islet, Paulay and Spencer 707 (US)

Terminal fragment of leaf only.

Surianaceae

Suriana maritima L. (P. & St. J. 403).

W. Islet, Paulay and Spencer 699 (US, BISH, BM, CHR)

The leaves on this collection are shorter than often seen in this species, and with a tendency to be rather scattered on the upper stems rather than in terminal rosettes as is often the case.

Boraginaceae

Tournefortia argentea L. f.

Messerschmidia argentea (L. f.) Jtn. (P. & St. J. 403).

W. Islet, Paulay and Spencer 704 (US).

Rubiaceae

Hedyotis romanzoffiensis (C. & S.) Fosb. (P. & St. J. 403).

W. Islet, Paulay and Spencer 706 (US).

Leaves and fruit unusually small, easternmost occurrence of the species.

Goodeniaceae

Sacaevola sericea var. **tuamotuensis** (St. John) Fosb.

Previously unrecorded from Oeno.

W. Islet, Paulay and Spencer 702

Fruits unusually small, 5 X 4 mm, appearing blackish when dry.

Ducie Atoll

A search was made on Ducie Atoll for plant species but only one, Tournefortia argentea L. f., was found, reported previously by Rehder and Randall (ARB, 183: 18, 1975), and earlier by Chapin in 1936 and Quayle (ms journal) of the Whitney Expedition in 1922, who also noted "a few rare clumps of coarse grass Lepturus" and "one vine of a common Tuamotu shrub = Epigaea?" [This may have been Nesogenes euphrasioides A. Gray, or Triumfetta procumbens Forst. f. the only Tuamotu plant even faintly resembling Epigae]. Cuming, who visited in 1827, in a letter to Hooker at Kew wrote of his observation on Ducie, "has a number of trees and a small stunted grass". The grass was probably Lepturus repens and the trees, as well as those casually mentioned by earlier visitors, were doubtless Tournefortia. The fact that despite careful searches neither Rehder and Randall, nor the 1987 Expedition, found any trace of other land-plants suggests that in the interval between 1922 and 1975 storm waves may have swept the island, removing or killing the two herbaceous plants. The Tournefortia would have survived, and now forms a low forest over much of the atoll.

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