This article was downloaded by: [NSTL]
On: 05 September 2015, At: 21:38
Publisher: Taylor & Francis
Informa Ltd Registered in England and Wales
Registered Number: 1072954 Registered office: 5
Howick Place, London, SW1P 1WG

Annals and Magazine of Natural History: Series 1

Publication details, including
instructions for authors and
subscription information:

[http://
www.tandfonline.com/loi/
tnah07](http://www.tandfonline.com/loi/tnah07)

XXII.—Floræ Insularum Novæ Zelandiæ Precursor; or a specimen of the Botany of the Islands of New Zealand

Allan Cunningham Esq.
Published online: 15 Mar
2010.

To cite this article: Allan Cunningham Esq. (1838) XXII.—Floræ
Insularum Novæ Zelandiæ Precursor; or a specimen of
the Botany of the Islands of New Zealand , Annals and

Magazine of Natural History: Series 1, 1:3, 210-216, DOI:
[10.1080/00222933809512270](https://doi.org/10.1080/00222933809512270)

To link to this article: [http://
dx.doi.org/10.1080/00222933809512270](http://dx.doi.org/10.1080/00222933809512270)

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at [http://
www.tandfonline.com/page/terms-and-conditions](http://www.tandfonline.com/page/terms-and-conditions)

mentioned species, I think their mutual affinities and their diagnostic characters will be fully determined as follows :

1. *Epilobium canescens*, nob. Foliis lanceolatis, acuminatis, integerrimis; ramisque sericeo canescentibus; siliquâ pedunculi longitudine.
2. *Epilobium angustissimum*, Curtis. Foliis lanceolato-linearibus, obtusis, glanduloso-serratis; ramisque glaberrimis, siliquâ pedunculo duplo longiori.
3. *Epilobium rosmarinifolium*, Haenke. Foliis lanceolatis, acuminatis, subintegerrimis, ramisque puberulis; siliquâ pedunculo quadruplo longiori.

I will now beg leave to remark with respect to the *Epilobium angustissimum* of Curt., that that species furnishes a variety with leaves still more narrow and stem feeble, which has been designated by the name of *Epilobium Dodonæi* by Allioni, of *Epilobium Lobelii* by Villars, of *E. Halleri* by Retz; and in later periods by *E. angustissimum*, *β alpinum* by Sering.

And with respect to the *E. rosmarinifolium*, Haenke, I beg leave to remark that it is a species totally distinct from his homonym, the *E. rosmarinifolium*, Pursch. This last is in fact a North American plant, discovered in 1810 in the environs of Philadelphia, and since by Bigelow, who calls it *E. lineare*; some few years still later in a hundred places south-west of that city, in the territory of Boston. Nuttall has found it, and has given it the name of *E. squamatum*.

XXII.—*Flora Insularum Novæ Zelandiæ Precursor; or a Specimen of the Botany of the Islands of New Zealand.* By ALLAN CUNNINGHAM, Esq.

[Continued from p. 378 of vol. ii. of Sir W. J. Hooker's Companion to the Botanical Magazine.]

EXOGENÆ SEU DICOTYLEDONES.

PIPERACEÆ, Rich.

1. PIPER, L.

323. *P. excelsum*. Forst. Prodr. n. 20. Ræm. & Sch. Syst. Veg. i. p. 313. A. Rich. Fl. Nov. Zel. p. 356.—*Kana-Kana* of the natives.

New Zealand (Middle Island).—1773, Forster. (Northern Island,) a strong rambling shrub, frequent on the margins of forests.—1834, R. Cunningham.

2. PEPEROMIA, Ruiz & Pav., Kunth.

324. *P. Urvilleana*, foliis ovati-oblongis obtusis, basi attenuatis subtrineriis membranaceis glabris, spicis lateralibus rectis filiformibus (solitariis), caule filiformi erectiusculo subsarmentoso. *A. Rich. Fl. Nov. Zel.* p. 356.

New Zealand (Middle Island), shores of Tasman's Bay.—1827, *D'Urville*. (Northern Island), upon shady rocks on the sea-shore, &c.—1834, *R. Cunningham*.

CONIFERÆ, Juss.

3. DAMMARA, Rumph., Lamb.

325. *D. australis*, foliis alternis oppositisve lineari-oblongis ellipticisve enerviis rigidis strobilis turbinatis, squamis apice patulis acutis. *Don. in Lamb. Pin. ed. 2. App.*—*Agathis australis. Salisb. in Linn. Tr. vol. viii. p. 312. Loud. Encycl. Pl. p. 802.*—*Podocarpus? zamiaefolius. A. Rich. Fl. Nov. Zel.* p. 360.—*Kauri* or *Kouri* of the natives.

New Zealand (Northern Island). *Cook, Forster*. In forests at the river Thames, at Mercury Bay and along the coasts north of the Bay of Islands and Wangaroa on the eastern side, and Hokianga on the western coast.—1826, *A. Cunningham*.—1834, *R. Cunningham*. It is said not to exist on the Middle Island.

The most important among the timbers of these islands, inhabiting dark forests, as well on the coasts as remote from the sea-shore, where it is to be observed from 50 to 100 feet high; the trunk, at the base of such, varying from six to twelve feet in diameter. The timber is of excellent quality, close-grained, durable, and applicable to a variety of purposes, in house carpentry, as well as in plank or spar for naval uses. As yards and topmasts for ships, it has been found, by repeated trials, superior to all others, both as regards strength and flexibility. The tree yields a large quantity of a white and amber-coloured resin, which burns with a bright flame, diffusing an agreeable smell. This resin is called by the natives "*Vare*," and is used by them as a masticatory. It is also burnt for the soot, which the smoke deposits in abundance, and from which pigment, called by these people *Ngarahū*, is obtained the colouring substance employed by them in the operation of tattooing their persons.

4. PHYLLOCLADUS, R. Br., Rich. Conif. p. 129.

326. *P.* trichomanoides*, frondibus pinnatis, foliolis cuneatis inciso-lobatis, lobis truncatis dentatis. *Don. in Lamb. Pin. edit. 2. App. Rich. Conif.*

* Species altera hujus generis est :

P. rhomboidalis, frondibus rhomboideis lineatis inciso-serratis, inferioribus connatis decurrentibus. *Don. in Lamb. Pin. ed. 2. App. Rich. Conif. p. 129. f. 3.*—*Podocarpus asplenifolius. Labill. Nov. Holl. 2. p. 71. t. 221. Parsley-leaved* or *Adventure-Bay Pine, Colonis.*

Hab. In Insula Van Diemen, ad Adventure Bay, &c.—1793, *J. J. Labillardière*.—1819, *A. Cunningham*.

p. 129. t. 3.—*P. rhomboidalis*. *A. Rich. Fl. Nov. Zel.* p. 363. *non E. L. Rich., Br. et excl. syn. Labill.*—*Tanekaha* of the natives, *Rev. W. Yate*. "*Toa-toa* ab incolis vulgo dicitur," *D'Urville*.

New Zealand (Northern Island), forests on the banks of the river Thames, and in dry woods on hills at the Bay of Islands, Wangaroa, &c.—1826, *A. Cunningham*.

A tree of straight tapering growth, occasionally attaining the height of sixty feet, seldom, however, exceeding a diameter of three feet. The wood is a shade darker than the *Dammara* or *Kauri*; it has a closer grain, smells strongly of turpentine, and being less affected with wet than any other pine, is regarded as an exceedingly valuable wood. "It is used," says the *Rev. W. Yate*, "for all kinds of outside work, such as posts and floors for verandahs, and is much sought after for the decks of vessels." Its bark is used by the natives for dying a red colour, which they prepare in the following way: "The bark," says *Bennett*, "is pounded and then placed in a vessel of cold water, into which hot stones are thrown till the water boils, this being the natives' mode of treating water, since, having no knowledge of pottery, they possess no vessel which can be placed on the fire. After the bark has been boiled for some hours, the decoction becomes of a dark red colour; it is then left to cool, when it is strained and ready for use."

5. *PODOCARPUS, L'Hérit.*

327. *P. ferruginea*, foliis pectinatis lineari-lanceolatis acuminatis falcatis. *Don. in Lamb. Pin. ed. 2. App.*—*Miro* or *Mairi* of the natives.

New Zealand (Northern Island), in forests near the Keri-Keri, and in the country between that river and the Hokianga, &c.—1834, *R. Cunningham*. Occasionally to be observed on hilly ground.—1792, *Govr. Phillip*.

"A tree," says the *Rev. W. Yate*, "growing from forty to sixty feet high, but never arriving at a larger circumference than twelve feet. It produces a brittle, close-grained, durable wood, of a red colour, planes up smoothly, and appears capable of receiving a high polish. It is, however, too brittle for the cabinet-maker, or it would not be a bad substitute for mahogany. The fruit, which is devoured by the large wood-pigeon, is of the colour of the yew berry, but larger, and with a strong taste of turpentine."

328. *P. ? Totarra*, foliis undique versis lineari-lanceolatis mucronatis subtus glaucis. *Don. in Lamb. Pin. ed. 2. App.*—*Dacrydium taxifolium*. *Sol. MSS. Lamb. Pinn.* p. 137.—*Totarra* of the natives.

New Zealand (Northern Island).—1769, *Sir Jos. Banks*.—1792, *Phillip*.—1826, *A. Cunningham*. Banks of the Kahio, Wangaroa, &c.—1834, *R. Cunningham*. (Middle Island,) of large size, like *Dammara* or *Kauri*.—1791, *A. Menzies*.

This pine is regarded with great esteem by the New Zealanders while growing, and when it has acquired a sufficient magnitude, is felled to construct canoes; its lightness, toughness, and durability giving it a higher value than even the *Kauri* itself. The *Totarra* is a red pine of stately erect growth, twenty to sixty feet high to the branches, and hence producing excellent spars. The value placed by the natives on this pine, the trunk of which varies in circumference from six to eighteen feet, is sometimes the occasion of quarrels sufficiently serious to terminate in bloodshed, if it be cut down by any one except the party by whom it is claimed; for which reason a mark is placed on the trunk that it may be known to whom it belongs. The tree is then sufficient to stand till it has acquired a suitable bulk for use, so that it is not unusual for a *Totarra* to descend from the father to the son.

6. DACRYDIUM, *Soland. and Lamb., Rich. Conif.*

329. *D. ? Mai*, foliis aversis linearibus obtusis apiculo subcalloso, marginibus revolutis, supra lævibus viridibus, subtus glaucis, ramulis adultioribus strictis, junioribus valde virgatis.—*Mai* or *Metai* of the natives.

New Zealand (Northern Island), in forests at some distance from the sea-coast, where it attains the height of eighty feet.—1826, *A. Cunningham*.—1834, *R. Cunningham*.

A red pine, as dark as cedar. The wood has been found durable, but being brittle it furnishes very indifferent spars.

330. *D. ? plumosum*, foliis (ramuli junioris) pectinatis linearibus mucronato-aristatis, adultioribus (parvis) compresso-triquetris distichis arcte imbricatis carinatis obtusis supra concavis, ramulis quum complanatis oppositis. *Don. in Lamb. Pin. ed. 2. App.*—*Kawa-ka* of the natives, *Rev. W. Yate*.

New Zealand (Northern Island), forests near the Bay of Islands, &c.—1829, *G. Bennett*.—1834, *R. Cunningham*.

Mr. Yate informs us that it is a tree growing about thirty feet high with a diameter of one to three feet. The wood is beautifully grained, close and heavy, and would make beautiful picture frames if they were required of a deep stain. It is, however, not much known, and has never as yet been sought after to be applied to any useful purposes.—*Yate's New Zealand*, p. 45.

331. *D. excelsum*, foliis laxè imbricatis subulatis compresso-tetragonis mucronatis glaucis angulis depressis. *Don. in Lamb. Pin. ed. 2. App.*—*Podocarpus dacrydioides*. *A. Rich. Fl. Nov. Zel.* p. 358. t. 39.—*Kahi-Katea*, nom. vernac.

New Zealand (Northern Island), swampy grounds on the margins of rivers, viz. the Thames, Kana-Kana, and Hokianga.—1826, *A. Cunning-*

ham. (Middle Island), in marshy forests on the shores of Tasman's Bay.—1827, *D'Urville*.

A white pine of tall stately growth, exhibiting oftentimes a clear stem of eighty feet, and with its branched head attaining a height of 120 and 130 feet, the diameter of such trees exceeding five feet. Except for common canoes, in the construction of which it is employed by the natives on account of the great length of its trunk, its wood is seldom used, being of so soft and spongy a nature as to rot in a few months of exposure to the weather. It has been asserted that as for all the canoes made on Middle Island this timber is employed, so the *Dammara* or *Kauri* does not grow upon it. Certain it is, at least, that the latter noble tree has not been seen in its forests by voyagers.

332. *D. cupressinum* (Sol.), foliis linearibus subulatis tetragonis muticis viridibus angulis elevatis, junioribus divaricatis, adultioribus laxè imbricatis, ramulis flexuosis dependentibus. Sol. MSS. *Lamb. Pin.* p. 93. t. 41. *Rich. Conif.* p. 127. t. 2. *A. Rich. Fl. Nov. Zel.* p. 361.—Spruce tree of New Zealand. *Cook's 2nd Voyage*, i. p. 70. t. 51.—*Rium* or *Deum* of the natives.

New Zealand (Middle Island), Dusky Bay.—1773, *G. Forster*.—1791, *A. Menzies, Esq.* Astrolabe Harbour.—1827, *D'Urville*. (Northern Island).—1769, *Sir Jos. Banks*.—1826, *A. Cunningham*. Bay of Islands, &c.—1834, *R. Cunningham*.

This elegant tree, a red pine, attains its greatest perfection, as we learn from Mr. Yate, in shaded woods and in moist rich soils. Its topmost branches are not more than eighty feet from the ground, and the diameter of its trunk seldom exceeds four feet. The foliage, especially when the individual is young, is remarkably graceful and beautiful. Capt. Vancouver, who met with it in abundance in the forests of Dusky Bay, cut down several of these trees to refit his vessel, and found the timber solid and close-grained and very much resembling the Bermudas cedar. From the younger branches, which give out a bitter resinous juice, Capt. Cook on his second voyage to those islands prepared a kind of spruce beer, which he found excellent in scorbutic complaints, with which some of his seamen were affected.

URTICÆ, *Juss.*

1. URTICA, *L.*

333. *U. ferox*. Willd. *Sp. Pl.* 4. p. 352. *A. Rich. Fl. Nov. Zel.* p. 354. *Forst. Prodr.* n. 346.

New Zealand (Middle Island), Queen Charlotte's Sound, Cook's Strait.—1773, *G. Forster*.

334. *U. debilis*, caule herbaceo erectiusculo foliisque alternis ovatis petiolatis integerrimis pilosiusculis, pedunculis axillaribus trifloris. *Endl. Prodr.*

Fl. Norf. p. 37.—*Parietaria debilis*. *Forst. Prodr. n.* 387. *Willd. Sp. Pl.* 4. p. 958. *A. Rich. Fl. Nov. Zel.* p. 354. *Id. Ferd. Bauer. t.* 116. (Endl.)

New Zealand (Middle Island).—1773, *G. Forster*. (Northern Island), flooded banks of the Kana-Kana river, Bay of Islands.—1826, *A. Cunningham*.

2. *ELATOSTEMA*, *Forst. Char. Gen. t.* 53. *Endl.*

335. *E. ? rugosa*, caulescens, foliis sessilibus alternis ovato-oblongis acuminatis obliquis rugosis scabris versus basin angustatis grosse inæqualiterque serratis, basi auriculatis, capitulis axillaribus subsessilibus.—*Dorstenia rugosa*. *Banks and Sol. MSS. in Herb. Banks.*—*Paratanaiwa* of the natives. *R. C.*

New Zealand (Northern Island).—1769, *Sir Jos. Banks*. Frequent in damp shady woods on the banks of rivers, the Kana-Kana, &c.—1826, *A. Cunningham*.—1834, *R. Cunningham*.

It appears closely allied to *E. pubescens*, *Forst.*, or *sessile* of the same author, a plant indigenous to the Society group; but that species is described as having axillary capitula on pedicles and leaves not wholly destitute of petioles.

3. *HEDYCARIA*, *Forst. Char. Gen. 127. t.* 64.

Flores dioici. *MAS.* Perianth. monophyllum, plano-rostratum, 8—10-fidum, laciniis lanceolatis subæqualibus. *Stam.* *Antheræ* plurimæ (50) oblongæ quadrisulcæ, apice barbatae, per totum fundum perianthii sessiles. *Fœm. Perianth.* ut in *Masc.* persistens. *Pistillum.* *Pedicelli* breves numerosi cylindrici, in medio perianthii elevantes. *Germina* globoso-depressa. *Styli* nulli. *Stigmata* papillæ per germine sparsa. *Pericarpium* nuce (8 s. 10) pedicellatæ, globosæ, subosseæ, monospermæ. *Fruities* *Novæ Zelandiæ et Australasiæ.* *Folia opposita, petiolata, exstipulata, venosa, pellucido-punctata dentato-serrata, serraturis glanduloso-callosis.* *Racemi* axillares.

336. *H. dentata**, foliis ovatis obovatisve obtusiusculis remote denticulato-serratis ramulisque glabris, racemis axillaribus corymbosis tomentosis. *Forst. Prodr. n.* 349. *Willd. Sp. Pl.* 4. p. ? *A. Rich. Fl. Nov. Zel.* p. 354.

* In New South Wales two other species have been observed, which may be thus characterised, viz.

H. macrophylla; foliis ellipticis obtusiusculis breviter petiolatis remote serratis quandoque sub coriaceis rare integerrimis, utrinque glabris reticulato-venosis, venis prominulis, ramulis racemi axillaris cinereo-scabridis.

A large shrub, frequent in shaded woods on the coast, especially on the banks of the larger rivers of the colony.—1804, *R. Brown, Esq.*—1818, *Alan Cunningham*.

H. angustifolia, glaberrima, foliis lanceolatis ovato-lanceolatis attenuatis acutis discoloribus, a basi versus medium integerrimis, deinde ad apicem grosse serratis, racemis axillaribus simplicibus.

In ravines in the Blue Mountains.—1834, *R. Cunningham*.

—*Zanthoxylum Novæ Zelandiæ*. *A. Rich. Fl. Nov.* p. 291. t. 33.—Poroki-wiri of the Islanders. *R. Cunningham*.

New Zealand (Middle Island).—1773, *G. Forster*. (Northern Island), a tree twenty-five feet high, frequent on the banks of the Kana-Kana and other rivers at the Bay of Islands, Wangaroa, &c.—1826, *A. Cunningham*.—1834, *R. Cunningham*.

337. *H. scabra*, foliis elliptico-ovatis vel ovato-lanceolatis distanter serratis utrinque ramulisque scabris, corymbis axillaribus strigoso-pilosis. *Spreng.? conf. Steud. Nomencl. Bot.* p. 390.

New Zealand (Northern Island), a tree thirty feet high, Keri-Keri river, Bay of Islands.—1826, *Allan Cunningham*.

4. BROUSSONETIA, *Vent. tab.* 3. p. 567.

338. *B. papyrifera*. *Duham. Arb.* ii. xvi. t. 5. *Willd. Sp. Pl.* 4. p. 743. *Andr. Repos.* t. 480.—*Morus papyrifera*. *L. Forst. Prodr.* n. 347.

New Zealand, in the northern parts of the Northern Island.—1769, *Cook*.

After enumerating certain plants that he observed in cultivation among the New Zealanders, on his first visit in 1769, Capt. Cook adds, "We also found the Chinese *Paper Mulberry Tree*, the same as that of which the inhabitants of the South Sea Islands make their cloth; but it was scarce, and only used to wear as an ornament in the holes which they make in their ears."—*Cook's First Voyage*, iii. p. 443.

Obs. An verè indigena?

[To be continued.]

XXIII.—*Observations upon some recent Communications of Mr. J. E. Gray, of the British Museum, to the Annals of Natural History; with Descriptions of two New Kangaroos from Van Diemen's Land.* By W. OGILBY, Esq., M.A., F.R.A.S., F.L.S., F.G.S., F.Z.S., &c.

IN the first number of the *Annals of Natural History*, p. 27, Mr. Gray has given a notice of two skins of an animal originally described by the late Mr. Bennett, but which that gentleman refrained from naming, because from the imperfect nature of the materials at his disposal, he was not certain whether it was a *Zebra* or an *Antelope*. Mr. Bennett's own opinion originally was that the animal in question belonged to the genus *Equus*; but the researches which, as most zoologists know, I have myself prosecuted for the last six years on the subject of the *Ruminantia*, enabled me to arrive at a more just conclusion, and to determine both the characters and affinities of this beautiful quadruped. This result I communicated to Mr. Bennett, expressly stating to him my conviction that it was