A SPECIMEN OF THE BOTANY OF NEW HOLLAND.
A SPECIMEN OF THE BOTANY OF NEW HOLLAND,

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THE FIGURES BY JAMES SOWERBY, F. L. S.

"Tendebantque manus ripae ulterioris amore." VIRG.

VOL. I.

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TO

THOMAS WILSON, ESQ. F. L. S.

AT WHOSE PERSUASION

THIS WORK WAS UNDERTAKEN,

AND

ON WHOSE FRIENDLY COMMUNICATIONS

IT IS FOUNDED,

THE FOLLOWING PAGES

ARE INSCRIBED

BY THE AUTHOR.
PREFACE.

An attempt to make the Public acquainted with some of the productions of a country of which they have lately heard so much, and in which they are now as a nation so deeply interested—a country too so extremely unlike all those best known to Europeans, cannot fail to be acceptable, however imperfect in its extent. The present work must be considered only as, what it pretends to be, a Specimen of the riches of this mine of botanical novelty. It may inform the cultivators of plants concerning what they have already obtained from New Holland, as well as point out some other things worthy of their acquisition in future. As the author intends it for the use of his countrymen and countrywomen, it is written in their own language—a language every day growing more universal, and which many circumstances now seem to point out as likely to become the most so of any modern one.

The
viii PREFACE.

The essential characters alone are given in Latin, as well as in English. The figures are taken from coloured drawings, made on the spot, and communicated to Mr. Wilson by John White Esq. Surgeon General to the Colony, along with a most copious and finely-preserved collection of dried specimens, with which the drawings have in every case been carefully compared.

December 1793.
BILLARDIERA scandens.

*Climbing Apple-berry.*

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**PENTANDRIA Monogynia.**


*Petals* five, alternate with the leaves of the calyx. *Nectar* none. *Stigma* simple. *Berry* superior, with many seeds.

*Spec. Char.* B. pedunculis solitariis unifloris, foliis subhirsutis.

Flower-stalks solitary, single-flowered. Leaves somewhat hairy.

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**AMID** all the beauty and variety which the vegetable productions of New Holland display in such profusion, there has not yet been discovered a proportionable...
tional degree of usefulness to mankind, at least with respect to food. This is our first and most natural enquiry in a scene of such novelty; but it is an enquiry natural to all the lower orders of sensible beings, as well as to man. It may perhaps mortify his pride to think how much more quickly and certainly inferior animals judge upon such a subject. Their powers however reach no farther. It is the peculiar privilege of reasoning man, not only to extend his enquiries to a multiplicity of attainable benefits to himself and his species, besides the mere animal necessity of food, but also to walk with God through the garden of creation, and be initiated into the different plans of his providence in the construction and economy of all these various beings; to study their dependencies upon one another in an infinitely complex chain, every link of which is essential; and to trace out all those various uses and benefits to every branch of the animal creation, of which each animal is a judge only for himself. In this point of view no natural production is beneath the notice of the philosopher, nor any enquiry trifling under the guidance of a scientific mind.

In compliance however with those who do not look so deep into natural knowledge, we here introduce to their acquaintance almost the only wild eatable fruit of the country we are about to illustrate. It may serve as an olive-branch, to procure their patience as we proceed together hereafter through the consideration of
left conspicuously interesting objects. Nor will the scientific botanist find the plant before us unworthy of his most accurate attention.

Its genus is easily characterised in the Linnaean system by the many-seeded berry above the flower, and may stand somewhere between *Escallonia* and *Mangifera*. We cannot certainly tell what genera are its natural allies, especially as we have no knowledge of the fruit and seeds except from a drawing. May it be akin to the *Capparides* of M. de Jussieu?

The name *Billardiera* is given it in honour of James Julian la Billardiere, M. D. F. M. L. S. now engaged as botanist on board the French ships sent in search of M. de la Peyrouse. His *Icones Plantarum Syrie rariorum*, the fruits of a journey to the Levant in 1786, justly entitle him to such a distinction.

We have acquired two species of this genus from New South Wales. The root of the present is woody and zigzag, with a reddish inner bark. *Stems* several, twining among other shrubs, branched, woody, round, downy when young, destitute of leaves except on the young branches. *Leaves* alternate, sessile, lanceolate, blunted, mostly entire, but undulated and revolute in such a manner as to appear dentated, which they sometimes really are, paler beneath, slightly veined, most hairy when young. *Stipules* none. *Flowers* solitary, enveloped in long leaves, terminating the young branches, on short downy footstalks, drooping, of a pale lemon-colour, without
without bracteae. Calyx regular, of five equal, narrow, pointed, leaves, hairy and ciliated. Petals five, twice as long, equal, lanceolate, pointed, attenuated at the base, inserted into the receptacle. Stamina five, as long as the calyx, and opposite to it, equal, tubulate, smooth. Anthera arrow-shaped. Germen altogether superior, oblong, very hairy. Style short, erect. Stigma simple. Berry cylindrical, yellow, very obtuse at both ends, downy, terminated by the permanent style, and said to have a very fine flavour, not unlike a roasted apple. Seeds numerous, horizontal, blackish.

EXPLANATION OF TAB. I.

TETRATHECA juncea.

Rushy Tetratheca.

OCTANDRIA Monogynia. Fl. complete.


Cal. four-cleft, inferior. Cor. of 4 petals. Caps. of two cells and two valves, with the partition from their middle. Seeds about two in each cell.


To this pretty genus, three species of which have been sent from New South Wales, we have given the name Tetratheca, on account of the curious structure of its
its anthera, each of which consists of four cells, communicating with one common tube, the excretory duct of the pollen. In the construction of this name we run counter indeed to a precept of Linnaeus (Crit. Bot. p. 44), and we do so because in that instance we think him in the wrong. After objecting, with reason, to generic names too similar in sound to each other, he is somewhat unmerciful in stigmatizing almost all that have any syllables in common, and wonders at Vaillant for using the termination theca at all. The word surely in itself is unexceptionable; and as all the generic names of Vaillant constructed with it, even Tetragonotheca (which Linnaeus at first retained), are now laid aside, and therefore there can be no ambiguity, we hope to be excused for adopting theca, as it so precisely suits our purpose.

Tetratheca probably belongs to M. de Jussieu’s order of Ericae, not indeed that it answers well to his characters of that order, but it is allied to some of its genera, especially Pyrola. All its species are small shrubs with red flowers (varying to white), which retain their colour when dried.

Tetratheca juncea has a small woody root, which has some appearance of that of an annual plant. The stem is much branched, even from the base; the branches alternate, long and slender, very acutely triangular, and almost winged. Leaves mostly small and not numerous, alternate, lanceolate, entire. Stipula none. Each branch produces
produces a simple series of drooping flowers, in a raceme order, on simple capillary red footstalks, with a small leaf at the base of each. Calyx deeply cloven, obtuse. Petals obovate, crimson, paler on the outside, entire. Stamina equal; the filaments very short; anthera slightly curved, with four blunt angles, and four furrows, brown, tipped with a pale simple tube, into which the four cells of the anthera open. Germen very small, obovate, compressed. Style short and simple. Capsule pendulous, obovate, compressed, pointed. Seeds two in each cell, one above the other, cylindrical, standing on a white twisted pedicle.

Every part is smooth. We have specimens of a variety with white petals, but the calyx and footstalk remain red.

EXPLANATION of TAB. II.

CERATOPETALUM gummiferum.

*Three-leaved Red-gum Tree.*

**DECANDRIA Monogynia.**


WHEN a botanist first enters on the investigation of so remote a country as New Holland, he finds himself as it were in a new world. He can scarcely meet with any certain fixed points from whence to draw his analogies; and even those that appear most promising, are frequently in danger of misleading, instead of informing him. Whole tribes of plants, which at first sight seem familiar to his acquaintance, as occupying links in Nature's chain, on which he has been accustomed to depend,
pend, prove, on a nearer examination, total strangers, with other configurations, other œconomy, and other qualities; not only all the species that present themselves are new, but most of the genera, and even natural orders.

The plant before us justifies the above remarks. Its botanical characters are so new, we can scarcely tell to what tribes it is allied; and although, from the peculiar felicity of the Linnaean sexual system, founded on parts which every plant must have, we are at no loss to find its class and order in that which is an artificial system, we still scarcely know what genera are its natural allies. It, however, seems most nearly related to Dictramnus and Ruta, of all the Decandria Monogynia, and may be safely inserted near them. We dare not positively say it belongs to M. De Jussieu's natural order of Rutacee, but for the present it may be so considered, till future discoveries shall authorize us to constitute a new one. The generic character above given certainly distinguishes it from all other genera, and the name applies to the very unusual horn-like divisions of the petals, like those in the leaves of the Ceratophyllum of Linnaeus. One species only is already known.

This, Mr. White informs us, is one of the trees (for there are several, it seems, besides the Eucalyptus resini-fera, mentioned in his Voyage, p. 231.) which produce the red gum. He further remarks, that it is the only wood of the country that will swim in water.
The tree is of a considerable height, upright, much branched, and of a beautiful appearance when the flowers are come to maturity, or rather about perfecting their seed, as in the specimen here figured. Every part is quite smooth. Branches opposite, round, slightly angular at the top. Leaves opposite, on footstalks, ternate. Leaflets sessile, nearly equal, lanceolate, obtuse, serrated, veiny, shining, paler beneath. Stipule none. Panicles terminal, first oppositely, and then alternately branched, with a small pointed glutinous bractea at the base of each partial flower-stalk. Flowers at first expanding small, but the calyx afterwards becomes much enlarged, whitish, tinged with red, and all their parts continue permanent till the fruit is ripe. The Calyx is inferior, five-cleft; its segments lanceolate, acute, slightly ribbed; its margin at the base of the segments surrounded with a ring bearing the petals and stamens, as in icofandrous plants. Petals alternate with its segments, at first equal to them in length, then much shorter, irregularly and unequally pinnatifid; their divisions linear and acute. Stamina shorter than the petals, awl-shaped. Anthera roundish, of two oval cells, and with a spur at their base. Germen in the bottom of the calyx, globular, ten-ribbed. Style awl-shaped, short. Stigma cloven, acute. Capsule in form like the germen, small, with a coriaceous covering, originally two-celled, but one side seems always abortive, and the seed in the other pushes the partition from the centre.

We
We have only seen the fruit half ripe, and the imperfect seeds were withered, but they appear to be solitary.

EXPLANATION OF TAB. III.

1. A bunch of young flowers, of their natural size.
2. The more advanced calyx laid open, with its petals and stamens in their proper situations.
3. A petal and stamen separate.
4. The same magnified.
5. Back of the filament and anthera.
6. Germin in a young state.
7. Its coriaceous covering.
8. Stigma.
9. Germin somewhat farther advanced, cut across to shew the cells.
TAB. IV.

BANKSIA spinulosa.

Prickly-leaved Banksia.

TETRANTRIA MONOGYNIA.


Common receptacle elongated, scaly. Cor. of 4 petals. Stamina inferted into the limb. Capsule with two valves, two seeds, and a moveable partition between them.


Leaves linear, revolute, with a little sharp point, and with spinous denticulations towards the top.

THIS hitherto non-descript species of Banksia has a woody branched stem, the branches commonly three or more together, curved upwards. Leaves irregularly scattered, closely covering the branches, on very short footstalks, but little spreading, from an inch and half to two inches in length, linear, very narrow, revolute in the margin, green and smooth above, white and downy beneath, ending very abruptly, tipped with three
three little spines, and having several of the same kind hooked upwards, in the margin, particularly towards the top. The young leaves are very downy. *Flowers* thick set in a cylindrical erect spike, arising from the divergences of the branches. Their common receptacle is cylindrical, rather obtuse, covered with closely imbricated downy scales, some of the lowermost of which terminate in a long downy pointed arista, and from among the rest the flowers come out in pairs. The structure of the flower is well expressed in the annexed plate. We suspect the fruit figured in Mr. White's Voyage, page 225, fig. 1, may belong to this species, but we have no positive authority to assert it.

Our *Bankia spinulosa* differs from *B. ericafolia* of Linnaeus (Herb. Linn.) in having leaves at least four times as long, obtuse, but with a small central sharp point from the mid-rib between the other two terminal points, as well as in having a greater or lesser number of small sharp-hooked lateral teeth towards the end of each leaf. The natives of New South Wales call it *Wattangre*.

**EXPLANATION of TAB. IV.**

1. A scale of the receptacle.
2. A flower unexpanded.
3. The same expanded.
4. Stigma.
5. Tip of a petal magnified, shewing one of the stamens in its natural situation.
GOODENIA ramosissima.

Branching blue Goodenia.

PENTANDRIA MONOGYNIA. Fl. of one petal, superior.


Caps. with two cells, two valves, and many seeds; partition parallel to the valves. Seeds imbricated. Cor. longitudinally cloven on the upper side, exposing the organs of fructification; limb five-cleft, leaning one way. Antherae linear. Stigma cup-shaped, ciliated.


F Leaves
Leaves linear-lanceolate, slightly dentated, rough as well as the stem. Style very hirsute at the top. Corolla externally hairy.


WE refer the reader to the Linnaean Transactions above quoted for the history of this genus, which is named in honour of the Rev. Dr. Goodenough. Eight species are there enumerated, of which this is one of the most striking.

The stem is herbaceous, two or three feet high, much branched and straggling, round, rough with short stiff hairs, as are also the leaves. The latter are of a narrow lanceolate form, mostly entire, but sometimes dentated, and even sinuated. *Stipulae* none. *Flowers* solitary, terminating the branches, and appearing in October. The plaits of the *corolla* are externally hairy. The *antherae* very minutely bearded. *Style* very hairy in its upper part. The *fruit* of this species we have not seen ripe, but the enlarged *germen* is oval and hairy.

EXPLANATION OF TAB. V.

1, 2. Two different views of the Style. 3. Stamen. 4. Anthera magnified.
PLATYLOBIUM formosum.

Orange Flat-Pea.

DIADELPHIA DECANDRIA.  *Stamina all connected together.*

**GEN. CHAR.**  *Cal. campanulatus, quinquefidius; laciniis duabus supremis maximis, obtusis. Legumen pedicellatum, compressum, dorso alatum, polypermum.*

*Cal.* campanulate, five-cleft; two upper segments very large and obtuse. *Pod* on a footstalk, compressed, winged along the back; seeds many.

**SPEC. CHAR.**  *P. foliiis cordato-ovatis, germine piloso.*

Leaves cordato-ovate. Germen hairy.

THIS genus may be found in the Linnaean Transactions along with the preceding, and it is needless to repeat the minute description there given of the species. It will be more useful to give the character of another species very lately received from New Holland, and which we at first considered as a variety of that here figured, but now believe them to be distinct.

PLATYLOBIUM parviflorum.

P. foliis lanceolato-ovatis, germine glabro.


THIS agrees with the preceding in habit, but the flowers are smaller and less beautiful; the leaves longer and narrower; the germin quite smooth.

Both these shrubs promise to be extremely ornamental to our greenhouses, as they produce abundance of bloom, and are among the most elegant of all their tribe.

EXPLANATION of TAB. VI. P. formosum.

EMBOTHRIUM speciosissimum.

Great Embothrium, or Waratâh.

TETRANORIA Monogynia.


Cor. of 4 petals. Stamina inferted into the limb. Follicle containing many winged seeds.


Leaves obovate, obtuse, unequally ferrated. Spike somewhat capitate. Involucrum of many leaves.

THE most magnificent plant which the prolific soil of New Holland affords is, by common consent both of Europeans and Natives, the Waratâh. It is moreover a favourite with the latter, upon account of a rich honeyed juice which they sip from its flowers. Our figure was taken from a coloured drawing made from the
the wild plant, compared with very fine dried specimens sent by Mr. White. Only one garden in Europe, we believe, can boast the possession of this rarity, that of the Dowager Lady de Clifford, at Nyn Hall, near Barnet, who received living plants from Sidney Cove, which have not yet flowered. The seeds brought to this country have never vegetated.

The shrub is 8 or 10 feet in height, with several wand-like simple round branches, covered with a smooth brown bark, and clothed with numerous large alternate leaves, without stipulae. These leaves are from 4 to 6 or 8 inches long, obovate, not broad, blunt, but tipped with a small point, smooth and veiny, paler and even glaucous beneath, more or less serrated in their upper part with sharp unequal teeth, entire, and very much attenuated at the base, running down into a short rusty-coloured footstalk. A very dense simple spike or head of flowers, appearing in October, terminates each branch, surrounded at the base with an involucrum of many large lanceolate acute leaves, of a most splendid crimson, downy on their upper side. The flowers are very thickly set round a conical receptacle, each on its own footstalk of half an inch in length. The petals cohere together at their base, except at the back of the flower, where the style separates them early. The antherae are reniform, slightly pedicellated, sheltered by a concavity in the tip of each petal. Germen pedicellated. Style incurved. Stigma large, obtuse. Fruit a coriaceous follicle, or pouch of one piece, cylindrical, smooth, recurved,
recurved, splitting longitudinally along its upper edge, and containing many flattened *seeds*, each furnished with a membranous lanceolate wing.

**EXPLANATION OF TAB. VII.**

1. A flower fully expanded.
2. 2. Antheræ.
4. Stigma.
5. Follicle.

All of their natural size.
TAB. VIII.

EMBOTHRIUM filaifolium.

Cut-leaved Embothrium.

TETRANDRIA Monogynia.

Gen. Char. See Tab. 7.


Leaves tripinnatifid; segments decurrent, acute. Flowers spiked, standing in pairs, on footstalks.

OF this new and very singular species of Embothrium a plant brought from New Holland flowered last summer, for the first time, at Messrs. Grimwood's at Kenfington, from which our figure was drawn; the fruit only was taken from native specimens.

The root is perennial, and prefers a light sandy soil. Stems somewhat shrubby, 3 or 4 feet high, erect, but little and alternately branched, round, slightly striated, leafy.
leafy. *Leaves* alternate, on longish footstalks, spreading, smooth, thrice divided into narrow, decurrent, sharp, entire segments, sometimes three-cleft, of a dark green colour, and firm rigid substance, much resembling the leaves of *Peucedanum Silaus*. The upper and lowermost are more simple. *Flowers* inodorous, in a long, loose, terminal, simple spike; standing in pairs, back to back, each on its proper footstalk, with one lanceolate sharp bractea in common to the two. *Petals* white, much spreading, and revolute at the tip. *Antherae* two-lobed. *Germa* with three remarkable glands at the base of its footstalk in front. *Style* much incurved. *Follicle* oval, slightly carinated.* The *seeds* we have not seen, but they should seem to be very few.

**EXPLANATION OF TAB. VIII.**

1. Corolla, the natural size.
2. Anthera.
5. Stigma.
6. Follicle after its seeds are discharged.
EMBOTHRIUM sericeum.

Silky Embothrium.

SPEC. CHAR. E. foliis ternatis integerrimis revolutis subtus sericeis, spica recurva, fructu tuberculato glabro.

Leaves ternate, entire, revolute, silky beneath. Spike recurved. Fruit tuberculated, not downy.

THIS shrub is said to form a bush four or five feet in height. Our knowledge of it is entirely from dried specimens and drawings, for it has not yet been raised from any seeds brought to Europe. In New South Wales it should seem to be not uncommon, flowering in October.

The root is perennial, thick and woody. Stem very much branched even from the bottom, round, the
younger branches angular, and clothed with fine silky
down, as are likewise the flower-stalks, corollae, and backs
of the leaves. The leaves are for the most part ternate,
covering the branches without any order, nearly sessile,
the uppermost, or those which grow on the weaker
branches, being simple. Their form is mostly elliptical,
sometimes linear, always tipped with a minute very
sharp point, entire, revolute, three-nerved, and veiny,
the lateral nerves running in a very peculiar manner
very near the margin and along the sharp edge made
by its being turned in; upper surface bright green,
smooth, and naked. Stipula none. Spikes terminal,
solitary, short and dense, recurved, simple. Flowers on
shortish, alternate, solitary, simple footstalks, all directed
upwards, without bracteae or involucra. Corolla rose-
coloured, silky without, clothed partly with very dense
erect hairs within, and split about half way down into
four segments. Antherae small, yellowish, sessile in the
hollow tips of the corolla, as in other species of this
genus. Germin oval, green; style smooth, red; stigma
hemispherical, smooth. Follicle oval, black, tubercu-
lated, destitute of hair or down, brown within. Seeds
two, flattish, attached by a very short wing to the upper
end of the follicle.

There are three very remarkable varieties of this
species, viz.

a minor. This is its most frequent appearance, and is
what we have principally represented in the figure.
$\beta$ major. In all its parts twice as large, and somewhat less silky.

$\gamma$ angustifolia. With very long and linear leaves, and flowers like var. $\alpha$.

From the most attentive consideration it appears these, however different in appearance and even in the figure of their leaves, are really not specifically distinct.

**EXPLANATION of TAB. IX.**

1. A Branch of var. $\alpha$. 2. A Flower. 3. Half-ripe Fruit. 4. A Seed. 5. Leaves of var. $\beta$. 6. Ditto of $\gamma$. 
TAB. X.

EMBOTHRIUM buxifolium.

Box-leaved Embothrium.

SPEC. CHAR. E. foliis ellipticis integerrimis revolutis supra scabris subtus pubescentibus, floribus umbellatis, fructu villoso.

Leaves elliptical, entire, revolute, rough above, downy beneath. Flowers in umbels. Fruit downy.

THIS, like the preceding species, is hitherto a stranger to our gardens. In its native country it flowers about November.

Root knobbed and woody. Stem much branched, three or four feet high; the branches round, clothed with harsh down, and thickly covered with very numerous alternate solitary leaves, about the size of those of box, almost sessile, elliptical, with a little sharp point, entire, revolute, but destitute of the lateral nerves observable in E. fericeum, veiny, dark green, very rough.
above, with minute prominent tubercles, downy beneath. *Stipule* none. *Flowers* numerous, in solitary terminal erect umbels, without *involucra*. *Flower-fstalks* simple, round, thickly clothed with reddish brown hairs. *Corolla* clothed externally with the same coloured hairiness as the flower-fstalks, and internally with white; its four segments cohere together, so that their four cells form one common cavity, destitute of hair, and of a brown colour, in which stand, in the form of a star, the four yellowish *anthers*, each of two cells. *Germen* oval, with a gland at its base, very hairy, as is the *style*; *stigma* lateral, a little below the pointed apex of the *style*, prominent, blackish, not hairy, rugged. *Follicle* ovate, gibbous, black, covered with white hair. *Seeds* two, each attached by a very short wing.

**EXPLANATION of TAB. X.**

1. A Flower separate. 2. The same with the segments of its Corolla forcibly divided. 3. Anthera. 4. Pistillum. 5. Gland at the base of the Germen. 6. Ripe Fruit. 7. A Seed.
TAB. XI.

PIMELEA linifolia.

Flax-leaved Pimelea.

DIANDRIA MONOGYNIA. Fl. inferior, of one petal, regular.


Cal. none. Cor. four-cleft. Stamina inserted into the orifice. Nut coated, of one cell.


THIS elegant shrub flowered in the greenhouse of Lord Viscount Lewisham, in February 1794. The same
species flowered the preceding year at Sion Houfe. It is a native of the coast of New South Wales, among rocks, as we believe are all the species of *Pimelea*. The genus was first published by Forster in his *Nova Plantarum Genera*, and there called *Bankfia*; but every species of which it is composed having been referred by the younger Linnæus to *Pafferina*, and he having in the same work named another tribe of plants after Sir Joseph Banks, Gærtner, in restoring the original genus of Forster, adopted the name of *Pimelea* from the manuscripts of Dr. Solander. It is derived from πελάς, fat, but is rather a pleasantly sounding, than a very apt denomination, unless there may be any thing oily in the recent fruit. In natural affinity *Pimelea* nearly approaches *Pafferina* and *Daphne*, but their number of flaminas being so very different, surely justifies us in keeping it separate from them. In this natural order we are not yet indeed quite clear upon what principles genera ought to be discriminated, and therefore dare not undertake to remove the great uncertainty in which all authors have left them.

*Pimelea linifolia* has a small zigzag root, from which arises a straight round smooth upright stem, branched irregularly for the most part, though sometimes appearing dichotomous, in consequence of the young branches springing in pairs from the upper part of the old flowering ones. The bark is reddish, cracking longitudinally; its inner layer remarkably silky, which is
characteristic of this natural order. *Leaves* clothing the younger branches, opposite, on very short footstalks, slightly spreading, linear-lanceolate, varying much in breadth, sharpish, entire, with a simple nerve. *Stipule* none. *Flowers* in terminal heads, numerous, inodorous. *Bracteae* four broad ovate entire leaves, close to the flowers. *Corolla* very slender, tubular, snow-white, silky externally; the *limb* in four equal ovate spreading segments, with a red spot at the base of each withinside. *Stamina* two, their filaments rather shorter than the limb, and inserted into the base of two of its segments, so that they are altogether without the tube, and not within it as in *Daphne, Paeferina,* &c; *antherae* oblong, yellow. *Germen* superior, oval, green, very small, smooth; *style* rather longer than the tube, simple and capillary; * stigma* capitate, very small. *Fruit* a small oval dry berry or rather *drupa,* invested with the permanent base of the corolla, and containing a solitary hard seed or nut. *Common receptacle* clothed with numerous white permanent hairs.

**EXPLANATION of TAB. XI.**

1. A Flower entire. 2. The same opened, to shew the stamina and style. 3. Pistillum. 4. Common receptacle after the fruit has fallen. 5. Fruit invested with the permanent base of the corolla. 6. Fruit naked.
Polionea stipulacea
PULTENÆA stipularis.
Scaly Pultenæa.

DECANDRIA MONOGYNA. *Fl. of many unequal petals.*


*Cal.* five-toothed, with an appendage on each side. *Cor.* papilionaceous; the wings shorter than the standard. *Pod* of one cell, with two seeds.


Leaves linear, tipped with a small point, slightly ciliated. *Stipulæ* solitary, two-nerved, lacerated.

NEW Holland abounds with papilionaceous plants, mostly belonging to new genera, and many of them having perfectly distinct stamina, which therefore can...
by no means be admitted into the clafs Diadelphbia, but must come next to Sophora in that of Decandria. The plant before us is one among several species which constitute one of the most distinct of these genera, and to which we have given the name of Pultenea in order to commemorate the merits of a very amiable and deserving English Botanist, Dr. Richard Pulteney, F. R. and F. L. S, of Blandford in Dorsetshire, well known by his Sketches of the Progress of Botany in England, and more especially by his Biography of Linnaeus.

This genus differs materially from the true Sophora, in having a roundish pod of one cell, and only two seeds, instead of a long many-seeded pod divided into numerous cells; and although many of the Cape Sophora do indeed approach Pultenea in their fruit, the last mentioned genus is essentially distinguished from them, and all others we have hitherto seen, by the two appendages to the calyx, affixed either to its base or sides.

We received a living specimen of this plant from Mr. Alexander Murray, gardener to Benjamin Robertson, Esq. at Stockwell, who raised it late in the autumn of 1792 from seeds brought from New South Wales. It first flowered in April 1794.

The stem is shrubby, variously branched, round; the wood hard and whitish; bark brown, covered more or less with withered bristly stipules: branches long and straight, pointing upwards, clothed with leaves, and terminated by round heads of handsome yellow inodorous flowers. The leaves surround the branches in great
numbers without any regular order, and are linear, very narrow, tipped with a little sharp point, entire, smooth, without any projecting vein or nerve, most frequently ciliated with fine stiff hairs. Footstalks very short, pale and smooth, erect at night, by which the leaves become closely pressed to the branch, and imbricated one over the other, though in the day time, and especially in bright sunshine, they spread horizontally. The very remarkable stipulae stand solitary just above the insertion of each footstalk, erect, and close-pressed to the branch, whose bark they by that means completely conceal; they are brown, of a chaffy texture, lanceolate, cloven and sometimes laciniated, furnished with two parallel nerves. The flowers are about twenty or more, in a round head, among spreading leaves, and the branch they at first terminate is at length sometimes protruded beyond them, by which they become verticillate; each stands on a short, round, smooth flowerstalk, with bracteae like the leaves, but smaller, and likewise accompanied with stipulae. Calyx slightly campanulate, red, divided half way down into five acute, spreading, ciliated teeth, of which the two uppermost are the shortest and broadest; between them and the next pair stand the two appendages which make a material part of the generic character, and which agree exactly in appearance with the proper teeth, except in being somewhat narrower, and inserted, one on each side, about half way down the entire part of the calyx, to which their lower end is closely applied, so that they make the calyx appear to
have seven teeth of equal length. Corolla of five petals. Standard with a firm horizontal claw, its limb erect, round, slightly notched, the two sides generally folded together, deep yellow, with a red semicircular line near the base. Wings nearly linear, obtuse, concave, with a large tooth at the base, deep yellow, horizontal, much shorter than the standard. Keel of two pale yellow, obovate, concave petals, as long as the wings, strongly connected by their lower edge, and with a tooth near their base on the upper. Stamina all nearly equal, somewhat shorter than the keel, a little declining; filaments inserted into the receptacle, cylindrical, tapering to a point; anterae small, roundish. Germin small, green, oval, smooth, tipped with a tuft of white hair, and containing the rudiments of two or three seeds; style longer than the stamina, subulate, recurved, smooth; stigma acute. Pod scarcely longer than the calyx, roundish, pointed, turgid, brown, hairy at the extremity, of one cell, containing two seeds on short footstalks, inserted into the upper edge of each valve near the base.

The plant appears to abound with mucilage, especially the leaves.

EXPLANATION OF TAB. XII.

EUCALYPTUS robusta.

Brown Gum Tree, or New Holland Mahogany.

ICOSANDRIA Monogynia.


Cal. superior, permanent, truncated, covered before flowering with an entire lid, soon falling off. Cor. none. Caps. of 4 cells, opening at the top, containing many seeds.

Spec. Char. E. operculo conico medio confircto, umbellis lateralibus terminalibusque; pedunculis pedicellisque compressis.

Lid conical, contracted in the middle. Umbels lateral and terminal: general and partial flower-stalks compressed.

The genus of Eucalyptus, establiished by the celebrated French botanist M. L'Heritier, of whose fate amid the present dreadful convulsions of his country we have
for some time been ignorant, was first published in the *Hortus Kewensis*, vol. 2. 157. The original species there mentioned is named *obliqua*, and a figure of it is given in M. L'Heritier's *Sertum Anglicum*, tab. 20; but the description has not yet appeared. Having lately received specimens from New South Wales of five more very distinct species, we shall now attempt to characterize them, first describing more fully that exhibited in our plate.

*eucalyptus robusta* is one of the largest and loftiest of trees, frequently 100 feet in height; its wood hard, heavy and strong, of a reddish colour, and abounding with resin. *Branches* round below, covered with smooth bark, very angular towards the extremity. *Leaves* alternate, on footstalks, firm, smooth, with a strong rib and fine parallel veins, ovate, pointed, entire, generally oblique, and often a little unequal at the base, but not universally so. *Stipules* none. *Umbels* on flower-stalks, frequently from the axillae of the leaves, and solitary, sometimes two or more together, forming a sort of alternate *racemus*, and sometimes such *racemi* terminate the branches. *Bracts* none. *General flower-stalk* an inch or more in length, compressed, two-edged, dilated upwards; *partial ones* about eight or ten together, nearly of the same form, but much shorter, single-flowered, dilated into the base of the calyx. *Flowers* yellowish, occasionally with a red tinge. *Calyx* obconical, sometimes round, often two- or even four-edged, entire; *lid* rather more than equal to it in length, swelling above the base, then suddenly con-
tracked, and terminating in a blunt, slightly curved, conical point. When the lid falls off, it discloses numerous stamina, which soon spread very wide. The style stands on four cross ribs in the centre of the flower, which crown the germin; it is club-shaped, compressed or angular; stigma simple; germin in the bottom of the calyx. We have not seen the fruit ripe. Every part of this plant, and indeed of every other Eucalyptus we have examined, is void of all pubescence. This is not so highly aromatic as some other species, though very perceptibly so when rubbed, and it is likewise astringent and acrid. Its resin is an inferior sort of red gum, of a brown hue. The size and strength of the tree, like that of the European Quercus Robur, seem peculiarly to justify the name robusta.

EXPLANATION OF TAB. XIII.

1. i. A young flower. 2. Calyx. 3. Lid. 4. Stamina not full grown. 5. A complete stamen. 6. Style.

CHARACTERS OF SOME OTHER SPECIES.

2. E. tereticornis, operculo conico tereti lævissimo calyce triplo longiori, umbellis lateralibus solitariis.
Lid conical, round, very smooth, thrice as long as the calyx. Umbels lateral, solitary.
The lid of this species is remarkably smooth and polished, not wrinkled even in the dry specimen; it often breaks off a little above the base, leaving its thin lower part like a loose ring round the calyx. The leaves are lanceolate.

3. E. capitellata, operculo conico calyceque angulofo subancipiti, capitulis lateralibus pedunculatis foliariis.

Lid conical, and, as well as the calyx, angular, and somewhat two-edged. Heads of flowers lateral, solitary, on flower-stalks.

The leaves are ovato-lanceolate, firm, astringent, but not very aromatic. We have seen no other species in which the flowers stand in little dense heads, each flower not being pedicellated so as to form an umbel. The lid is about as long as the calyx. Flower-stalk compressed, always solitary and simple.

The fruit of this species, standing on part of a branch whose leaves are fallen off, is figured in Mr. White's Voyage, page 226, along with the leaves of the next species.

4. E. piperita, operculo hemisphaerico mucronulato, umbellis lateralibus subpaniculatis solitariis; pedunculis compressis, ramulis angulatis.

Lid hemispherical, with a little point. Umbels lateral, somewhat paniculated, or solitary; flower-stalks compressed. Young branches angular.
SYN. E. piperita, *White’s Voy.* p. 226, figure of the leaves only.

A fine essential oil, much like that of Peppermint, is obtained from this species, and every part of the dried plant exhalés the same odour when rubbed.—We are now convinced this is distinct from the following, having compared the flowers of both. At the same time we have observed the minute white spots on the leaves (*White’s Voy.* 228.) in *E. piperita*, as well as in the other.

5. *E. obliqua*, operculo hemisphaerico mucronulato, umbellis lateralibus solitariis; pedunculis ramulifque teretibus.

Lid hemispherical, with a little point. Umbels lateral, solitary: flower-stalks and young branches round.


From the only specimen we have seen of this, which is in Sir Joseph Banks’s herbarium, it appears the branches are all round to the very top. General flower-stalks round, the partial ones only slightly angular, not compressed. Bark rough from the scaling off of the cuticle, but this may be an unnatural appearance. Leaves ovato-lanceolate, aromatic, but without the flavour of peppermint.

Lid hemispherical, with a little point. Umbels panicled in a fort of terminal corymbus.

This, when in flower, is the most magnificent of its genus. The leaves are lanceolate, astringent and acrid, but scarcely at all aromatic. Flower-stalks all compressed. Lid somewhat membranous.

All the species are destitute of hairiness or pubescence, the leaves simple, lanceolate, or ovato-lanceolate, pointed, entire, most frequently oblique, and often unequal at the base, on angular footstalks, without stipule. Stamina very numerous. Style and stigma simple.

There seems to be another species in the gardens, with narrow leaves, the young ones of a rich purple, but its flowers are as yet unknown.
**STYPHELIA tubiflora.**

*Crimson Styphelia.*

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**PENTANDRIA MONOGYNIA.** *Fl. inferior, of 1 petal, with seed-vessels.*


*Cal. imbricated. Cor. tubular. Stam. inserted into its orifice. Drupa of 5 cells, with 2 seeds in each.*

**Spec. Char.** *S. corolla clavata longiflora: limbo revoluto hirsuto, floribus axillaribus foliariis, foliis obovato-linearibus.*

*Corolla club-shaped, very long; limb revolute and hairy. Flowers axillary, solitary. Leaves linear, slightly obovate.*

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IT has lately been a complaint among cultivators of plants, that the vegetable productions of New Holland,
however novel and singular, are deficient in beauty. We do not think the cen­sure by any means just in general; and if it were so, the shrub here delineated might atone for a multitude of unattractive ones, by its own transcendent elegance, as well as by its resemblance to the favourite *Erica tubiflora*. We hope it will one day be introduced into our gardens, and remain a perpetual affirmer of the botanical honour of its country.

Our figure is taken from a drawing, obligingly communicated by the late Major Ross, and assisted by very magnificent specimens from Mr. White. This species escaped the observation of Sir Joseph Banks and Dr. Solander, though several others of the same genus, which is an extensive one, were brought to Europe by them, as well as by Dr. Forster. The latter confounded the genus with his *Epacris*, as did the younger Linnaeus after him; a mistake which Gærtner corrected, and called our *Styphelia* by the name of *Ardisia*; but that denomination having been previously given by Dr. Swartz and Mr. Aiton to another plant, we adopt Dr. Solander's original name, *Styphelia*, derived from *σφηκική* harsh, hard or firm, expressive of the habit of the whole genus, and indeed of the whole natural order. This shrub forms a thick bush, two or three feet in height, variously branched, firm and rigid in all its parts; the branches round, downy when young. *Leaves* scattered, sessile, spreading, of a narrow obovate figure, entire, tipped with a spine, smooth, marked with many
parallel veins beneath. *Stipula* none. *Flowers* about the middle of the branches, axillary, solitary, spreading, on very short, downy *flower-stalks*, furnished with two or three minute, pungent, downy *bracteae*. *Calyx* imbricated, smooth, cried, pungent; the five innermost leaves lanceolate, nearly equal; the three, four or five outer ones much shorter, broader, and gradually less. *Corolla* four times as long as the calyx, crimson, tubular, swelling upwards, externally smooth, internally very hairy, especially just above the base; *limb* in five linear, revolute, hairy segments. *Stamina* alternate with those segments, and inserted at their base, projecting, simple, smooth; *antherae* versatile, incumbent. *Germen* small, globular, furrowed, smooth, invested at the base with a sort of entire membrane, probably the *nectarium* of Soolander; *style* capillary, longer than the stamina; *stigma* small, obscurely notched, smooth. *Fruit* an oval smooth *drupa*, which we have only seen half-ripe, but in that state it plainly exhibited the generic character.

**EXPLANATION of TAB. XIV.**

1. Flower-stalk, *bracteae* and calyx. 2. Calyx leaves. 3. A flower opened. 4. A magnified stamen. 5. Ger-
men magnified, with its membrane. 6. Half-ripe fruit of its natural size.
The other species which we have been able with certainty to determine, though we have incomplete specimens, or drawings, of several more, are

2. *S. ericoides*, corollae limbo patente hircutiissimo, racemis axillaribus brevissimis erectis, foliis lanceolato-ellipticis revolutis.
Limb of the corolla spreading, very hairy. Clusters axillary, very short, erect. Leaves elliptical, somewhat lanceolate, revolute.

Limb of the corolla spreading, naked; the orifice hairy. Clusters axillary and terminal, very short, erect. Leaves awl-shaped.

Limb of the corolla somewhat concave, naked. Clusters axillary, very short, recurved. Leaves linear-lanceolate.

5. *S. daphnoides*, corollae limbo patente subpubescenti, floribus axillaribus solitariis, foliis ellipticis concaviusculis.
Limb of the corolla spreading, slightly downy. Flowers axillary, solitary. Leaves elliptical, a little concave.

   Limb of the corolla revolute, hairy. Clusters aggregate, terminal. Leaves linear-lanceolate. 

   f. 2?

This in good fair specimens has no resemblance to Juniper, and the term *acerofa* is applicable to almost every species, as is that of *fasciculata* likewise to the following. We have therefore been obliged to find a name which might not mislead.

   Limb of the corolla spreading, naked. Clusters aggregate, mostly terminal. Leaves elliptical, somewhat lanceolate.

All these species have the leaves tipped with a sharp point, which in *S. daphnoides* is less pungent than in the rest.
MIMOSA myrtifolia.

Myrtle-leaved Mimosa.

POLYGAMIA MONOECIA.


Hermaphrodite fl. Cal. five-toothed. Cor. five-cleft. Stam. 5 or more. Pfitr. 1. Fruit a pod.

Male, Cal. Cor. and Stam. like the hermaphr.


Leaves simple, elliptico-lanceolate, oblique, entire, cartilaginous in the margin. Heads of flowers in axillary racemi. Pods linear, with a thick edge.

Syn. Mimosa myrtifolia. Trans. of Linn. Soc. v. i. 252.
THIS shrub is now not uncommon in our greenhouses, having been raised in plenty from seeds brought from Port Jackson. It generally bears its fragrant flowers late in the autumn, and might then at first sight be sooner taken for a *Myrtus* than a *Mimosa*.

It grows to the height of three or four feet, the branches alternate, upright, angular, with a very tough, smooth bark. Leaves of the young seedlings in pairs, pinnated; their leaflets oval: but when the stem rises, the common footstalks of its leaves become dilated, the leaflets cease to appear, and the whole shrub is ever after furnished with such dilated naked footstalks, which we beg permission to call leaves, because they undoubtedly to all intents and purposes are so; these are alternate, vertical, lanceolate, narrow at each extremity, tipped with a little sharp point, entire and cartilaginous in the margin, smooth, firm, glaucous. Stipules none. On their upper edge near the base is a small concave gland. Racemis axillary, solitary, erect, of about six alternate heads, each of three or four small white flowers, whose calyx has only four segments, and the corolla four petals. The stamens are very numerous. Germen roundish; style and stigma simple. Pod linear, pointed, zigzag, brown, with a very thick margin. Seeds about six, oblong.

**EXPLANATION of TAB. XV.**

1. A flower in front. 2. The same seen behind, magnified. 3. A stamen. 4. Germen, natural size and magnified. 5. Pod open, natural size. 6. A seed.
MIMOSA hispidula.

Little harsh Mimosa.


Leaves simple, elliptical, oblique, rough on each side and at the margin. Young branches clothed with short harsh down. Heads of flowers solitary.

A more extraordinary Mimosa than even the preceding. We know no other species that has so much asperity about it; certainly every other simple-leaved one yet discovered is perfectly smooth. It has not appeared in the gardens, nor were any specimens sent till last year.

It seems to form a thick rigid bush, the branches numerous, alternate, spreading, round, very rough with a short, dense, rigid pubescence, especially when young. Leaves alternate, apparently vertical, sessile, elliptical, oblique, pointed, entire, extremely harsh with minute,
prominent, scattered points, especially on the rib and the cartilaginous margin, so that they might be called dentate. *Stipulae* in pairs, very minute, triangular, membranous. *Flowers* pale yellow, many together in little round heads, which stand solitary, on rough axillary flower-stalks shorter than the leaves, destitute of bracteae. *Calyx* in four segments, ciliated. *Petals* four, concave. *Pod* compressed, broadish in proportion to its length.

**EXPLANATION OF TAB. XVI.**