

Flowers hermaphrodite. Perianth regular or nearly so, straight or curved, the slender tube opening equally or along the lower side only, the limb ovoid oblong or linear, the laminæ remaining long coherent, or rarely separating as the tube opens. Anthers narrow, sessile in the concave laminæ, the connective thick, usually very shortly produced beyond the cells. Hypogynous scales 4, very thin and membranous (rarely deficient?). Ovary very small and sessile; style usually longer than the perianth, rigid, curved and protruding from the slit in the perianth-tube until the end is set free by the separation of the laminæ, and then either straightened or remaining hooked or curved, rarely straight from the first and not exceeding the perianth; the stigmatic end on a level with the anthers, of a different texture but smooth, or striate and furrowed, continuous with the style or with a prominent rim at the base, the real stigma small and terminal; ovules 2, collaterally attached about the middle. Fruit a compressed capsule, opening at the broad end (or rather outer margin, for the scar of the style is lateral) in two hard often woody horizontal valves. Seeds usually 2, compressed, with a terminal membranous wing broad and rounded like the valves, the seeds separated by a plate of the same shape (the consolidated outer integuments of the inner side of the two seeds) free from the ripe seeds, simple (completely consolidated) between the nuclei, double (remaining distinct) between the wings.—Trees or shrubs. Leaves alternate or rarely verticillate or nearly so, usually narrow, entire toothed pinnatifid or pinnate, with numerous (rarely few) short teeth lobes or segments, the primary veins numerous and transverse, rarely inconspicuous or irregular and the minute reticulations numerous on the under surface, with a minute tomentum rarely wanting in the areolæ, and sometimes white and covering the whole under surface, the upper surface almost always glabrous and smooth. Flowers sessile in pairs, in dense terminal cylindrical oblong or globular spikes, either terminal and sessile above the last leaves or rarely lateral or on short lateral branches; each pair of flowers subtended by one bract and two lateral rather smaller bracteoles, both bracts and bracteoles densely woolly-villous on the sides, the tips glabrous tomentose or villous, either clavate and obtuse or truncate, or shortly acuminate, always densely imbricate in parallel spiral or rarely vertical lines. Perianth-tube very slender and entire within the bracts, ultimately splitting beyond them. In fruit the bracts and bracteoles become consolidated with the rhachis into a thick woody cone, either covered with the withered remains of the perianths amongst which the capsules are entirely concealed, or, where the flowers are wholly deciduous, the valves of the capsules protrude more or less beyond the bracts, the

lower indehiscent portion containing the nuclei of the seeds remaining imbedded among the bracts. The proportion of perfect capsules is usually very small in relation to the number of flowers, of which there are often from 500 to above 1000 in the same spike.

The genus is endemic in Australia, and the greater number of species are Western, two only of the Eastern species penetrate into the tropics, besides one which is exclusively tropical, if it be really more than a variety of the most widely diffused of the Eastern species.

SECT. 1. *Oncostylis*.—Leaves linear or rarely lanceolate, with revolute margins or nearly flat but very white underneath, entire denticulate or pinnate with small numerous regular segments. Style remaining hooked after the perianth-limb has opened, the stigmatic end very small.

Perianth-tube villous, less than half as long as the style, the limb glabrous. Leaves small, entire. Western species.

Perianth-tube about 4 lines long. Leaves incurved or erect, $\frac{1}{4}$ to $\frac{1}{2}$ in. long

1. *B. pulchella*.

Perianth-tube about 3 lines long. Leaves spreading or reflexed, not exceeding $\frac{1}{2}$ in.

2. *B. Meissneri*.

Perianth-tube more than half as long as the style, silky as well as the limb.

Leaves linear with closely revolute entire margins and not truncate at the end. Western species.

Leaves mostly short. Perianth under 1 in. long. Bracts with glabrous tips

3. *B. nutans*.

Leaves mostly long. Perianth above 1 in. long. Bracts entirely woolly-villous

4. *B. sphaerocarpa*.

Leaves linear, truncate or notched at the end and often denticulate, especially near the end.

Western species, leaves long.

Leaves (2 to 4 in.) very narrow, with closely revolute entire margins. Bracts villous to the end

5. *B. tricuspis*.

Leaves (2 to 4 in.) with revolute or recurved margins, entire or denticulate towards the end. Bracts with glabrous tips

6. *B. occidentalis*.

Leaves (4 to 8 in.) more open, showing the tomentose under surface. Bracts tomentose at the end

7. *B. littoralis*.

Eastern species.

Leaves (about $\frac{1}{2}$ in.) very narrow with closely revolute entire margins

8. *B. ericifolia*.

Leaves ($1\frac{1}{2}$ to 3 in.) narrow-linear with closely revolute entire or denticulate margins

9. *B. spinulosa*.

Leaves ($1\frac{1}{2}$ to 3 in.) linear, more open, showing the white under surface, denticulate to the base or rarely entire

10. *B. collina*.

Leaves mostly verticillate, oblong-lanceolate or broadly linear, entire or rarely toothed at the end, white underneath.

Western species

11. *B. verticillata*.

- Leaves pinnate with numerous small regular contiguous but distinct segments.
- Leaf-segments broad, triangular. Spikes small, globular or ovoid 12. *B. dryandroides*.
- Leaf-segments narrow, falcate. Spikes large, oblong or cylindrical 13. *B. Brownii*.

SECT. 2. **Cyrtostylis**.—Leaves flat or undulate, the margins not revolute, toothed, pinnatifid or pinnate. Style arched or nearly straight and turned upwards after flowering, not hooked, the stigmatic end small, not striate. Western species.

- Perianth obtuse or acute, not aristate.
- Leaves narrow, regularly serrate, usually white underneath.
- Spikes narrow. Perianth glabrous, under $\frac{3}{4}$ in. long 14. *B. attenuata*.

- Spikes broad. Perianth 1 in. long, the tube villous, the limb at length glabrous 15. *B. media*.
- Leaves large, on long petioles, irregularly toothed or lobed.
- Tree. Outer bracts short 16. *B. Solandri*.
- Low prostrate shrubs. Outer bracts linear-subulate.
- Leaves closely surrounding the spike and not along the prostrate stem 17. *B. Goodii*.
- Leaves erect along the prostrate stem, white underneath, none round the spike 18. *B. petiolaris*.
- Leaves large, on long petioles, deeply and irregularly pinnatifid.
- Low prostrate shrubs. Spikes oblong.
- Perianth 1 in. long, the limb hirsute with loose usually persistent hairs 19. *B. repens*.
- Perianth scarcely $\frac{3}{4}$ in. long, the limb clothed with intricate loose ferruginous very deciduous hairs 20. *B. prostrata*.
- Leaves large, pinnate, with triangular distinct but contiguous segments. Spikes cylindrical 21. *B. grandis*.
- Perianth acuminate with long awn-like points. Leaves nearly sessile, not very large, irregularly toothed or lobed.
- Spikes 3 to 4 in. long, rather narrow. Bracts with glabrous tips 22. *B. quercifolia*.
- Spikes 4 to 8 in. long, very thick. Bracts villous at the end 23. *B. Baueri*.

SECT. 3. **Eubanksia**.—Leaves linear-lanceolate, oblong or cuneate, with recurved or revolute, entire or dentate margins, white underneath. Style at first curved, straight and very spreading or reflexed after the perianth-limb has opened, the stigmatic end small, not striate. Eastern or tropical species.

- Leaves (mostly 1 to 2 in.) entire or rarely toothed, reticulate underneath, without any or with few and irregular primary transverse veins 24. *B. marginata*.
 - Leaves (mostly 3 to 6 in.) entire or rarely toothed, with transverse primary veins underneath, usually numerous but not much more prominent than the reticulations and white like them 25. *B. integrifolia*.
 - Leaves (mostly 4 to 8 in.) broad, coarsely toothed, the transverse primary veins prominent underneath and not so white as the reticulations 26. *B. dentata*.
- (*B. latifolia*, has nearly the flowers and style of *Eubanksia*, but flat leaves not white underneath).

SECT. 4. **Orthostylis**.—Leaves flat or undulate (irregularly in *B. Caleyi* and *B. coccinea*), serrate, pinnatifid or pinnate, with short lobes or segments. Perianth usually straight. Style, after the perianth-limb has opened, curved upwards near the base, then straight and erect, the stigmatic end prominently angled and furrowed or striate.

- Eastern species.
- Leaves 2 to 3 in. long, broad, irregularly toothed. Style end of *Eubanksia* 27. *B. latifolia*.
- Leaves 3 to 6 in. long, $\frac{3}{4}$ to 1 in. broad, regularly serrate. Style-end thickened at the base.
- Style-end cylindrical 28. *B. serrata*.
- Style-end ovoid, very short 29. *B. æmula*.
- Leaves 2 to 4 in. long, $\frac{1}{2}$ to $\frac{3}{4}$ in. broad, regularly serrate. Style-end oblong 30. *B. ornata*.
- Western species.
- Perianth villous.
- Leaves $\frac{1}{2}$ in. broad or more, very shortly sinuate, toothed.
- Leaves $1\frac{1}{2}$ to $2\frac{1}{2}$ in. long, very broad, often cordate. Perianths, before opening, in double-straight rows alternating with double rows of styles 31. *B. coccinea*.

- Leaves $1\frac{1}{2}$ to $2\frac{1}{2}$ in. long. Spikes long, the perianths and styles alternating in single rows 32. *B. sceptrum*.
- Leaves 6 in. to 1 ft. long 33. *B. Menziesii*.
- Leaves under $\frac{1}{2}$ in. broad, regularly serrate, the veins inconspicuous underneath.
- Leaves 2 to 4 in. long. Spikes globular. Style-end small and slender 34. *B. lævigata*.
- Leaves 4 to 8 in. long. Spikes oblong. Style-end long, with a thickened base 35. *B. Hookeriana*.
- Leaves deeply and regularly serrate or lobed, the transverse veins connivent in each lobe. Style-end stipitate above its thickened base.
- Leaf-lobes short and broad, not reaching halfway to the midrib 36. *B. prionotes*.
- Leaf-lobes triangular, acuminate, reaching more than halfway to the midrib 37. *B. Victoriae*.
- Leaves pinnate with contiguous broad acute segments. Style hairy.
- Spikes oblong. Perianth-limb obtuse. Leaves often 1 ft. long 38. *B. speciosa*.
- Spikes globular. Perianth-limb acute. Leaves under 6 in.

NIB

PROTEACEAE

Banksia dentata
Linn.

21. **HAKEA**, Schrad.

(Conchium, Sm.)

Flowers hermaphrodite. Perianth irregular or rarely regular, the tube revolute or curved under the limb or rarely straight, the limb globular or rarely ovoid, often oblique, the laminae often cohering long after the tube has opened. Anthers all perfect, sessile in the base of the concave laminae, the connective not produced beyond the cells. Hypogynous glands united in a single semiannular or semicircular rarely disk-shaped gland occupying the upper side of the torus, in some species very small. Ovary stipitate but usually very shortly so, with 2 amphitropous ovules laterally attached about the middle; style either long and protruding from the slit of the perianth before the summit is set free from the limb as in *Grevillea*, or not exceeding the perianth, more or less dilated at the end into a straight or oblique or lateral cone or disk, bearing the small stigma in the centre of the disk or at the summit of the cone. Fruit a hard usually woody capsule opening in 2 valves. Seeds 2, compressed and collateral, the testa produced at the upper end into a broad membranous wing usually longer than the nucleus and more or less decurrent down the upper or both margins and sometimes completely surrounding the nucleus, the nucleus itself flat and smooth on the inner face (next the other seed), convex on the outer face and usually rugose or muricate, the protuberances fitting into corresponding cavities in the valve; each seed with its wing sometimes covering the whole inner surface of the valve, more frequently placed near the upper margin and covering about half only or rather more, the remainder of the valve a hard woody mass.—Shrubs or rarely small trees. Leaves alternate, very diversified in shape, flat or terete, the margins rarely recurved and the two surfaces usually similar and equally veined. Flowers in pairs along the rhachis of a short and dense raceme or cluster or rarely in a longer raceme; the clusters or racemes sessile in the axils or rarely also terminal or in a very few species all terminal. Indumentum

as in *Grevillea*, consisting of closely appressed hairs attached by the centre, rarely of erect or spreading hairs.

The genus is limited to Australia. As will be perceived on comparing the above character with that of *Grevillea*, there is no one organ in which the two genera are absolutely distinct excepting the seed-wing, and even that, although essentially terminal in *Hakea* and annular when present in *Grevillea*, is exceptional in *Hakea platysperma*, for instance, where the wing is almost of equal breadth all round the nucleus; but even there the texture and venation of the wing is that of *Hakea*, not of *Grevillea*, and the two genera are with few exceptions so natural, that there are very few species that would not at once be referred to their right genus even without the fruit, especially as the wing of the seed can generally be traced in the ovule immediately after fecundation. The racemes are generally axillary and reduced to sessile clusters in *Hakea*, terminal and loose in *Grevillea*, but they are loose and elongated in the section *Grevilleoides* of *Hakea*, and terminal in *H. ruscifolia* and a few others; whilst the section *Manglesia* of *Grevillea* as well as *G. hakeoides* and a few others have the inflorescence of *Hakea*. The so called involucre or imbricate bud-scales enveloping the nascent inflorescences of *Hakea*, appear to be wanting in *Grevillea*, but they are also deficient in the section *Grevilleoides* of *Hakea*, and are always so deciduous as to be generally absent from flowering specimens. The same variations of form in the perianth occur in the two genera, but in *Hakea* the hairs or beard inside the tube of many *Grevillea* are always wanting and the ovary is always glabrous. *Hakea* has also the various modifications of the pistil of *Grevillea*, except the turgid style of the section *Manglesia*. The fruit is in general totally different in the two genera, and yet that of *Grevillea gibbosa* is certainly a near approach to that of *Hakea platysperma*.

The determination of the species of *Hakea* generally requires the presence both of flowers and fruit. Species, especially amongst the terete-leaved ones, with scarcely distinguishable flowers and leaves, have sometimes very different fruits, whilst closely similar fruits have occasionally very different flowers and leaves. I have found the flowers chiefly available for sectional, the fruits for specific distinction. The dorsal protuberances on the fruit-valves of some species usually called *spurs*, appear to me to be more appropriately termed *horns*, as they occur always close to the apex not to the base of the valve.

SECT. 1. **Grevilleoides**.—Flowers in oblong or cylindrical or rarely short racemes, without any involucre. Perianth much revolute. Stigmatic disk oblique or lateral, flat or broadly conical. Tropical or subtropical species.

- Leaves terete, usually very long.
- Racemes as well as the whole plant quite glabrous 1. *H. chordophylla*.
- Racemes pubescent or villous.
- Leaves mostly above 1 ft. long. Racemes 3 to 6 in. long.
- Perianth-tube 4 to 5 lines.
- Torus very oblique 2. *H. Cunninghamii*.
- Torus scarcely oblique 3. *H. lorca*.
- Leaves slender, mostly about $\frac{1}{2}$ ft. long. Racemes 1 to 2 in. Perianth-tube under 3 lines 4. *H. Fraseri*.
- Leaves flat, linear, usually long.
- Seed-wing not at all or scarcely decurrent along the nucleus.
- Racemes 3 to 6 in. long. Perianth villous, 5 to 6 lines long 5. *H. macrocarpa*.
- Racemes under $\frac{1}{2}$ in. long, pedunculate. Perianth silky, under 2 lines 6. *H. arborescens*.
- Seed-wing decurrent on both sides round the base of the nucleus 7. *H. stenophylla*.
- Leaves flat, 3-nerved, oblong or lanceolate. Racemes glabrous, about 2 in. long. Perianth 3 lines 8. *H. trineura*.

SECT. 2. **Euhakea**.—Racemes usually short or reduced to sessile clusters, enclosed before their development in an involucre or bud of imbricate scales. Perianth revolute,

at least under the limb. Stigmatic disk oblique or lateral, flat or slightly convex, without any cone (except in *H. rugosa* and *H. rostrata*).

SERIES 1. **Obliquæ**.—Perianth pubescent. Torus oblique, the ovary at the shortest margin, the remainder occupied by a large very concave adnate gland. Leaves entire. Species all Western.

- Leaves flat, tapering at the base, obscurely several-nerved.
Leaves 4 to 8 in. long. Fruit curved with a broad, rather long, closely inflexed beak 9. *H. cyclocarpa*.
Leaves under 3 in. Fruit large and thick, nearly smooth, with a very small inflexed beak 10. *H. crassifolia*.
Leaves 2 to 4 in. long. Fruit very large and thick, covered with large conical tubercles 11. *H. pandanocarpa*.
Leaves narrow, under 2 in. Fruit unknown 12. *H. Roei*.
Leaves linear-terete.
Leaves erect, with short erect or curved points. Fruit rather large, very broad, with a small inflexed beak 13. *H. adnata*.
Leaves spreading, pungent-pointed. Fruit twice as long as broad, with a short nearly straight beak 14. *H. obliqua*.

SERIES 2. **Pubifloræ**.—Perianth pubescent. Torus straight or rarely oblique, the gland thick or semiannular. Leaves entire, toothed or divided.

- Leaves flat. Fruit-valves without dorsal appendages (except in the two doubtful species).
Leaves thick, tapering at the base, obscurely several-veined (unless very narrow). Western species.
Leaves (mostly 3 in. or more), oblong-spathulate or lanceolate, obtuse, entire. Fruit large and thick 15. *H. Hookeriana*.
Leaves (1 to 2 in.) oblong-linear or linear-lanceolate, entire. Fruit large and thick 16. *H. incrassata*.
Leaves fan-shaped, toothed at the end.
Leaves truncate at the toothed end. Perianth-tube narrow, under 3 lines long 17. *H. flabellifolia*.
Leaves rounded at the toothed end. Perianth-tube broad, above 3 lines long.
Leaf-teeth short and callous. Seed-wing decurrent on both margins of the nucleus 18. *H. Brownii*.
Leaf-teeth prickly. Seed-wing decurrent only on the upper margin of the nucleus 19. *H. Baxteri*.
Leaves from broadly cuneate to long and narrow, mostly lobed or variously divided 20. *H. ceratophylla*.
Leaves not so thick, lanceolate, obscurely penniveined. Fruit much longer than broad.
Leaves 1 to 2 in. long. Perianth densely villous. Western species 21. *H. lasiantha*.
Leaves 3 to 5 in. long. Perianth silky. Eastern species 22. *H. eriantha*.
Leaves thick and veinless or obscurely penniveined, but flowers unknown and therefore the affinities doubtful. Fruit-valves with dorsal appendages.
Leaves obovate-oblong ($1\frac{1}{2}$ to 3 in.). Fruit above 2 in. long, $1\frac{1}{2}$ in. broad 23. *H. megalosperma*.
Leaves narrow-oblong (1 to 2 in.). Fruit $\frac{3}{4}$ in. long, under $\frac{1}{2}$ in. broad 24. *H. clavata*.
Leaves mixed linear-terete and flat, or some or all linear-terete and divided. Western species.
Leaves narrow-linear or rarely terete, entire or pinnate, grooved underneath. Fruit large, with a long straight beak 25. *H. orthorrhyncha*.
Leaves some linear-terete and some linear and flat, all entire, not grooved. Perianth loosely villous. Fruit rather large, with a short inflexed beak 26. *H. Candolleana*.
Leaves all or almost all terete and divided. Perianth villous. Fruit narrow.
Leaves mostly $1\frac{1}{2}$ to 3 in., with 3 segments; a few often entire and flat. Stigmatic disk broad 27. *H. trifurcata*.
Leaves mostly 1 in. with 3 or 5 segments. Stigmatic disk oblong-linear 28. *H. erinacea*.
Leaves all entire, linear-terete.
Western species.
Leaves thick, 3 to 5 in. long. Perianth above 4 lines. Fruit globular, smooth, $1\frac{1}{2}$ to 2 in. diameter. Seeds winged all round 29. *H. platysperma*.
Leaves slender, 1 to 3 in. Perianth 1 line. Fruit compressed, rugose, 1 in. diameter. Seeds winged all round 30. *H. brachyptera*.
Leaves slender, 1 to 3 in. Perianth small. Fruit under 1 in., smooth, thick, broadly beaked. Seed-wing decurrent on one side 31. *H. Kippistiana*.
Leaves thick, short. Perianth 2 lines. Fruit narrow, two-horned. Seed-wing decurrent on one side 32. *H. Preissii*.
Eastern species.
Fruit-beak straight or obsolete.
Fruit narrow, with an obliquely transverse crestlike rugose prominence below the beak 33. *H. pugioniformis*.
Fruit with a broad gibbous base and scarcely distinct broad beak, without any crest 34. *H. Pampliniana*.
Fruit ovoid, nearly smooth, with a broad smooth dark line down each suture 35. *H. vittata*.
Fruit recurved at the base, then incurved with an inflexed beak.
Fruit rugose. Stigmatic disk with a central cone.
Fruit above 1 in. long, $\frac{3}{4}$ in. broad 36. *H. rostrata*.
Fruit $\frac{1}{2}$ to $\frac{3}{4}$ in. long, under $\frac{1}{2}$ in. broad 37. *H. rugosa*.
Fruit smooth. Stigmatic disk flat 38. *H. epiglottis*.

SERIES 3. **Glabrifloræ.**—*Perianth glabrous. Torus straight or slightly oblique, the gland semiannular or none.*

- Leaves flat, 1-nerved or obscurely penniveined. Western species, except *H. saligna*.
 Leaves prickly-toothed or lobed, stem-clasping at the base.
 Leaves 4 to 8 in. long, gradually expanded at the base into large prickly-toothed auricles 39. *H. amplexicaulis*.
 Leaves 1½ to 3 in., more or less obovate or oblong-cuneate, usually contracted near the base 40. *H. glabella*.
 Leaves 1½ to 3 in., narrow, dilated at the end, with 3 to 5 prickly teeth or lobes, auriculate at the base 41. *H. auriculata*.
 Leaves distinctly petiolate, obovate, undulate and prickly-toothed 42. *H. cristata*.
 Leaves linear-lanceolate, sessile, prickly-toothed or entire 43. *H. linearis*.
 Leaves 3 to 4 in., oblong-cuneate, entire. Umbels axillary, pedunculate 44. *H. stenocarpoides*.
 Leaves small, petiolate, entire, with a fine point. Branches hirsute with long hairs. Inflorescence terminal 45. *H. ruscifolia*.
 Leaves lanceolate, obtuse, entire. Eastern species 46. *H. saligna*.
 Leaves terete. Eastern species.
 Style at least twice as long as the perianth.
 Leaves undivided. Fruit 2 horned. Seed-wing scarcely decurrent 47. *H. verrucosa*.
 Leaves divided. Fruit scarcely horned. Seed-wing decurrent all round the nucleus 48. *H. purpurea*.
 Style not twice as long as the perianth.
 Pedicels pubescent or hirsute, perianth alone glabrous.
 Branches densely villous. Fruit as broad as long, with a short incurved beak 49. *H. gibbosa*.
 Branches glabrous or scarcely pubescent.
 Perianth 1 line long.
 Fruit as broad as long, straight and obtuse.
 Leaves rather stout 50. *H. propinqua*.
 Fruit narrower than long, with a slightly incurved beak. Leaves slender 51. *H. nodosa*.
 Perianth 2 lines long or more 52. *H. acicularis*.
 Pedicels glabrous as well as the flower.
 Flowers in short racemes, the peduncle and rhachis ½ to ¾ in. long 53. *H. leucoptera*.
 Flowers in sessile clusters.
 Leaves all terete. Fruit 1½ in. long and nearly as broad. Seed-wing decurrent all round the nucleus 54. *H. cycloptera*.
 Leaves some terete and some flat. Fruit ½ in. long ¼ in. broad. Seed-wing not decurrent 55. *H. microcarpa*.
 Leaves terete. Western species. Pedicels always glabrous.
 Leaves 3 to 5 in., rigid, thick, spreading or recurved. Perianth 3 lines long 56. *H. recurva*.
 Leaves ¾ to 1½ in. long, terete and smooth.
 Branches tomentose. Perianth 2 lines. Racemes or clusters mostly terminal. Seed-wing decurrent all round the nucleus 57. *H. circumalata*.
 Quite glabrous. Racemes or clusters mostly axillary.
 Perianth near 3 lines. Fruit about ½ in. long. Seed-wing decurrent on one side of the nucleus 58. *H. commutata*.
 Perianth 2 lines. Fruit 1½ to 2 in. long, very thick and broad. Seed-wing decurrent all round the nucleus 59. *H. strumosa*.

SECT. 3. **Conogynoides.**—*Racemes usually short or reduced to sessile clusters, rarely elongated, enclosed before their development in an involucre or bud of imbricate scales. Perianth glabrous, revolute under the limb. Stigmatic cone erect or scarcely oblique.*

SERIES 1. **Longistylæ.**—*Leaves flat, entire, oblong-lanceolate or narrow. Style at least twice as long as the perianth. Stigmatic cone long and narrow. Western species, one also central.*

- Leaves (6 to 8 in.) very finely many-nerved. Racemes oblong, 1 to 3 in. long 60. *H. multilinea*.
 Leaves (4 to 6 in.) 3- or 5-nerved, often falcate, on long petioles.
 Racemes globular 61. *H. laurina*.
 Leaves (under 3 in.) 3-nerved, sessile 62. *H. obtusa*.
 Leaves (4 to 7 in.) very thick, narrow, very prominently triplinerved, tapering at the base 63. *H. cinerea*.
 Leaves (under 3 in.) thick, 1-nerved, tapering to the base.
 Flower-clusters almost verticillate 64. *H. corymbosa*.

SERIES 2. **Petiolares.**—*Leaves broad, triplinerved and reticulate (the veins prominent or obscure), tapering into a distinct petiole. Style not twice as long as the perianth. Western species.*

- Leaves prickly-toothed, prominently-veined 65. *H. undulata*.

- Leaves quite entire.
 Leaves prominently veined. Perianth near 3 lines long.
 Fruit with a rather long straight beak.
 Leaves acuminate. Petiole long. Seed-wing decurrent on both margins 66. *H. petiolaris*.
 Leaves scarcely acuminate. Petiole short. Seed-wing decurrent on one margin only 67. *H. neurophylla*.
 Leaves obscurely veined. Perianth about 2 lines. Fruit with a short slightly curved beak 68. *H. loranthifolia*.

SERIES 3. Sessiles.—Leaves broad to oblong-lanceolate, 3- or more-nerved and reticulate, sessile or nearly so. Western species.

- Leaves (of the flowering stems) broadly orbicular-cordate, entire or prickly-toothed 69. *H. cucullata*.
 Leaves ovate to ovate-lanceolate, acute or acuminate, entire.
 Leaves glabrous, often cordate, shortly acuminate. Fruit 1 in. long, including the long beak 70. *H. ferruginea*.
 Leaves usually pubescent, acutely acuminate, never cordate.
 Fruit $\frac{1}{2}$ in. long, not distinctly beaked 71. *H. smilacifolia*.
 Leaves obtuse or with a small callous point.
 Leaves broadly oval or elliptical, several-nerved 72. *H. elliptica*.
 Leaves oblong-elliptical to lanceolate, 3-nerved 73. *H. ambigua*.

SERIES 4. Nervose.—Leaves lanceolate or linear, prominently 3- or more-nerved (rarely 2- or 1-nerved when very narrow), smooth between the nerves.

- Eastern species. Seed-wing decurrent on one side of the nucleus.
 Leaves 4 to 6 in. long, falcate, 5- to 9-nerved. Perianth 2 lines long 74. *H. plurinervia*.
 Leaves lanceolate or linear-lanceolate, usually 3-nerved. Perianth 1 line long.
 Leaves usually lanceolate, obtuse or acute, not pungent. Pedicels silky-pubescent 75. *H. dactyloides*.
 Leaves usually linear-lanceolate or linear, pungent-pointed. Pedicels glabrous 76. *H. ulicina*.
 Western species. Seed-wing decurrent all round the nucleus.
 Leaves linear-lanceolate, 3-nerved, under 3 in. long 77. *H. falcata*.
 Leaves linear, very thick and silky, 4 to 8 in. long 78. *H. pycnoneura*.

SERIES 5. Uninerves.—Leaves narrow or small, flat, 1-nerved with nerve-like margins. Fruit-valves without dorsal appendages. Western species.

- Leaves linear, very thick and silky, 4 to 8 in. long 78. *H. pycnoneura*.
 Leaves linear or lanceolate, $1\frac{1}{2}$ to 4 in. long. Fruit 1 to $1\frac{1}{2}$ in. long, 2 to 3 lines broad 79. *H. stenocarpa*.
 Leaves lanceolate, $\frac{3}{4}$ to $1\frac{1}{2}$ in. long. Fruit $\frac{3}{4}$ in. long, 3 to 4 lines broad 80. *H. marginata*.
 Leaves mostly ovate, $\frac{1}{2}$ to $\frac{3}{4}$ in. long, with a long point 81. *H. myrtilloides*.
 Leaves linear, pungent-pointed, under $\frac{1}{2}$ in. long, the keel or midrib very prominent underneath 82. *H. costata*.

SERIES 6. Enerves.—Leaves mostly flat, obscurely penniveined, the midrib not prominent, entire prickly-toothed or lobed. Fruit-valves with dorsal horns or protuberances. Western species.

- Leaves oblong-lanceolate, quite entire or very rarely with 1 or 2 minute teeth 83. *H. oleifolia*.
 Leaves lanceolate, acute, mostly prickly-toothed 84. *H. florida*.
 Leaves more or less cuneate or pinnatifid with prickly teeth or lobes, thick and here and there almost terete 85. *H. varia*.

SERIES 7. Teretifoliae.—Leaves linear-terete entire, usually angular or striate (rarely a few flat ones intermixed). Fruit-valves without dorsal appendages. Western species except *H. flexilis*.

- Leaves sulcate, occasionally flat.
 Fruit ovoid; beak straight. Flowers in close clusters 86. *H. sulcata*.
 Fruit small, ovoid-globular, with an inflexed beak. Flowers in short dense racemes 87. *H. Meisneriana*.
 Leaves very finely striate. Fruit-beak straight 88. *H. subsulcata*.
 Leaves angular or terete and smooth.
 Fruit mucicate with fringed tubercles. Western species 89. *H. Lehmanniana*.
 Fruit smooth or rugose. Eastern species 90. *H. flexilis*.

SECT. 4. Manglesioides.—Racemes short or reduced to sessile clusters, enclosed before their development in an involucre or bud of imbricate scales. Perianth glabrous, straight, the limb erect in the bud. Stigmatic cone erect. Western species.

- Leaves obovate oblong or lanceolate, entire or prickly-toothed 91. *H. niti-la*.
 Leaves terete (under 2 in.), smooth, undivided, pungent-pointed 92. *H. Oldfieldii*.
 Leaves terete (3 to 4 in.), simply pinnate or also undivided, stout 93. *H. suaveolens*.
 Leaves terete (1 to $1\frac{1}{2}$ in.), twice or simply pinnate with few segments.
 Rhachis of the clusters under $\frac{1}{2}$ in. long. Fruits $\frac{1}{2}$ to $\frac{3}{4}$ in. long, with short dorsal horns 94. *H. lissocarpa*.
 Rhachis of the racemes $\frac{1}{4}$ to $\frac{1}{2}$ in. long. Fruits $\frac{3}{4}$ to 1 in. long, with long dorsal horns 95. *H. bipinnatifida*.

H. carduiifolia, Lodd., *H. echinata*, Mackay, *H. Lamberti*, Sweet, *H. latifolia*, Lodd., and *H. subulata*, Cunn., entered in Steud. Nom. Bot. ed. 2, are garden names without descriptions, belonging probably to some of the species here enumerated.

H. longifolia and *H. tenuifolia*, Dum. Cours. in Roem. and Schult. Syst. iii. 425, are also garden plants described only as to their foliage, and quite insufficiently for recognition.

SECT. 3. *Amblyanthera*.—Style elongated beyond the anther-cells, with a terminal stigma. Connective of the anthers not produced beyond the cells.

* *Western species*. Ovary glabrous, the stipes articulate above the base. Leaves flat.

- Leaves linear or linear-lanceolate, falcate, 5 to 8 in. long 22. *P. longifolia*.
Leaves oblong-lanceolate, straight, 3 to 6 in. long 23. *P. articulata*.
Leaves broadly ovate or elliptical, $1\frac{1}{2}$ to 3 in. long 24. *P. elliptica*.

** *Eastern species*. Stipes of the ovary inarticulate or articulate at the very base.

Ovary villous (rarely almost glabrous in *P. media*).

Leaves glabrous, flat, ovate, obovate, elliptical or broadly lanceolate.

- Perianth ferruginous-hirsute 25. *P. ferruginea*.
Perianth pubescent with appressed hairs.
Leaves mostly lanceolate. Perianth-segments tipped with dorsal points 26. *P. media*.
Leaves mostly elliptical. Perianth-segments without points 27. *P. cornifolia*.
Leaves mostly obovate. Perianth-segments tipped with dorsal points 28. *P. marginata*.
Leaves pubescent or silky-villous, flat or with recurved margins, from lanceolate to obovate.
Leaves mostly obovate or oblong-spathulate 29. *P. sericea*.
Leaves mostly narrow 30. *P. Mitchellii*.
Leaves scabrous or hispid, with revolute margins.
Leaves narrow-linear, spreading, incurved, $\frac{3}{4}$ to $1\frac{1}{2}$ in. long . 31. *P. fastigiata*.
Leaves oblong, rarely exceeding $\frac{1}{2}$ in. 32. *P. hirsuta*.
Leaves smooth, linear-subulate, with recurved margins, about $\frac{1}{2}$ in. long 33. *P. chamæpitys*.
Ovary glabrous. Flowers erect. Leaves flat, veined, mostly about $1\frac{1}{2}$ in., elliptical, falcate, lanceolate or linear, usually glabrous.
Perianth 8 or 9 lines long (6 lines or under in all the following species) 34. *P. arborea*.
Leaves mostly falcate, 4 to 8 in. long. Pedicels 2 to 4 lines long 35. *P. salicina*.
Stems prostrate or trailing. Leaves usually short and broad. Pedicels short 36. *P. prostrata*.
Stems erect. Leaves rarely above 4 in. when narrow, always shorter when broad.
Leaves mostly lanceolate or elliptical. Pedicels very short.
Flowers solitary or rarely 2 together 37. *P. lanceolata*.
Flowers in axillary short racemes or clusters of 6 to 10 . 38. *P. confertiflora*.
(See also 26. *P. media*).
Leaves linear-lanceolate, acute, rather long. Pedicels 1 to 3 lines long 39. *P. lucida*.
Leaves linear, often very narrow. Flowers axillary. Ovary 2-ovulate 40. *P. linearis*.
Leaves filiform. Flowers in dense racemes with short floral leaves. Ovary 1-ovulate 41. *P. pinifolia*.
Ovary glabrous. Flowers erect on very short pedicels. Leaves with recurved margins or sometimes flat, usually obtuse, veinless, glabrous or silky underneath, not exceeding 2 in. Perianth about 5 lines long.
Leaves narrow-linear. Perianth-segments tipped with subulate points 42. *P. Calryi*.
Leaves oblong-linear. Perianth segments without points . 43. *P. levisifolia*.
Leaves from ovate-oblong to oblong-lanceolate, very obtuse . 44. *P. revoluta*.
Perianth about 9 lines long. Leaves flat, thick, very obtuse . 45. *P. Gunnii*.

Ovary glabrous. Flowers erect, almost sessile. Leaves with much recurved or revolute margins, narrow, acute, nerveless, silky underneath.

- Leaves spreading, smooth above, lanceolate or linear-lanceolate, $1\frac{1}{2}$ to $2\frac{1}{2}$ in. long 46. *P. mollis*.
Leaves incurved, scabrous above, $\frac{3}{4}$ to $1\frac{1}{2}$ in. long.
Leaves spatulate or linear-spathulate. Perianth villous . 47. *P. rigidz*.
Leaves narrow-linear. Perianth pubescent 48. *P. curvifolia*.
Ovary glabrous (rarely with a few hairs in *P. oblongata*).
Flowers spreading or nodding. Leaves flat or with recurved margins, the midrib conspicuous, under $1\frac{1}{2}$ in. long.
Leaves ovate-lanceolate (1 to $1\frac{1}{2}$ in.). Pedicels about $\frac{1}{2}$ in. long. Perianth glabrous, without points 49. *P. oblongata*.
Leaves broad or lanceolate, under 1 in. Pedicels 1 to 4 lines long.
Leaves ovate, flat ($\frac{1}{2}$ to 1 in.). Perianth glabrous, with long points to the segments 50. *P. Cunninghamii*.
Leaves lanceolate to almost ovate, flat ($\frac{1}{2}$ to 1 in.) Perianth pubescent, with moderate points 51. *P. myrtilloides*.
Leaves ovate (2 to 3 lines) to lanceolate (3 to 6 lines). Perianth glabrous, without points 52. *P. oxycoccoides*.
Leaves narrow-linear 53. *P. nutans*.
Ovary glabrous. Leaves linear (broad or narrow), concave or grooved above or nearly flat without any prominent midrib.
Leaves mostly 1 to $1\frac{1}{2}$ in. long.
Leaves oblong-linear or linear-lanceolate, $1\frac{1}{2}$ to 2 lines broad. Pedicels short and thick 54. *P. angulata*.
Leaves narrow-linear. Pedicels slender 55. *P. virgata*.
Leaves mostly $\frac{1}{4}$ to $\frac{3}{4}$ in. long.
Leaves narrow-linear, not pungent. Ovary 1-ovulate . . . 56. *P. chamæpeuce*.
Leaves narrow-linear or subulate, pungent-pointed . . . 57. *P. juniperina*.
Leaves filiform, not pungent.
Ovary 2-ovulate. Perianth-segments without points . . . 58. *P. tenuifolia*.
Ovary 1-ovulate. Perianth-segments with subulate points . 59. *P. acerosa*.

6. **H. arborescens**, *R. Br. in Trans. Linn. Soc. x. 187, Prod.* 386. A tall shrub or small tree, the young shoots silky. Leaves linear linear-lanceolate or sometimes rather broader and slightly falcate, obtuse or acuminate, contracted at the base, longitudinally but obscurely several-veined, minutely silky-pubescent on both sides, 3 to 6 in. long. Flowers small, in short dense almost globular racemes or clusters on lateral peduncles of $\frac{1}{4}$ to $\frac{1}{2}$ in., often on the old wood. Pedicels filiform, 1 to 2 lines long. Perianth silky-pubescent, the tube slender, scarcely $1\frac{1}{2}$ lines long, revolute under the limb. Torus straight. Gland semiannular, not very prominent. Ovary shortly stipitate. Stigmatic disk nearly straight with a short broad cone. Fruit nearly straight, $1\frac{1}{2}$ to nearly 2 in. long, 1 in. broad, very shortly beaked. Seed-wing decurrent along the upper margin of the nucleus to the base.—*Meissn. in DC. Prod. xiv. 410.*

N. Australia. Islands of the Gulf of Carpentaria, *R. Brown, Heene*; Copeland island, *A. Cunningham*; Victoria river, *F. Müller*; Port Essington, *Armstrong*.

Queensland. Rockingham Bay, *Dallachy*; Mount Elliott, *Fitzalan*.

1. *H. chordophylla*, *F. Muell. in Hook. Kew Journ.* ix. 23. A tree perfectly glabrous and more or less glaucous. Leaves terete, smooth, mostly from $\frac{1}{2}$ to 1 ft. long. Racemes from the old wood, loosely cylindrical, 3 to 4 in. long, quite glabrous. Pedicels about $\frac{1}{4}$ in. long. Perianth glabrous, the tube 4 to 5 lines long, much dilated and oblique at the base, revolute under the limb. Torus very oblique. Gland large, horseshoe-shaped. Ovary stipitate; style long; stigmatic disk broad, oblique, not convex. Fruit obliquely lanceolate, about $1\frac{1}{2}$ in. long and $\frac{1}{2}$ in. broad near the base, tapering into a short slightly incurved beak. Seed-wing not decurrent along the nucleus.—*Meissn. in DC. Prod.* xiv. 699.

N. Australia. Sturt's Creek, *F. Mueller* (the perianth-tube scarcely 4 lines long); Kekwick springs, *Waterhouse* (the perianth-tube fully 5 lines long).

2. **H. Cunninghamii**, *R. Br. Prot. Nov.* 26. A small tree of 12 to 16 ft. Leaves terete, rigid, mostly above 1 ft. long, but usually not so long as in *H. lorea*. Racemes lateral on the old wood, loosely cylin-

dric, 3 to 6 in. long, the rachis pedicels and perianths clothed with appressed silky hairs. Pedicels 3 to 5 lines long. Perianth-tube 4 to 5 lines long, somewhat dilated and very oblique at the base, attenuate and revolute under the limb. Torus very oblique. Gland large, horse-shoe-shaped. Ovary on a long stipes. Style very long, slightly clavate under the oblique convex or broadly conical stigmatic disk. Fruit obliquely ovate-lanceolate, $1\frac{1}{4}$ to $1\frac{1}{2}$ in. long and $\frac{3}{4}$ in. thick. Seed-wing not decurrent along the nucleus or only very shortly so on the upper margin.—Meissn. in DC. Prod. xiv. 394; *H. longifolia*, A. Cunn. Herb.; F. Muell. Fragm. vi. 190.

N. Australia. Bay of Rest, N.W. coast, *A. Cunningham*; Nichol Bay, *F. Gregory's Expedition*; Victoria river, *F. Mueller*.

5. **H. macrocarpa**, *A. Cunn. in R. Br. Prot. Nov. 30.* A tree of 15 to 20 ft. of robust growth with a rugged bark. Leaves linear-lanceolate, 6 to 8 in. long, 2 to 5 lines broad, mostly obtuse, tapering at the base, thick, minutely silky-pubescent on both sides, the veins longitudinal, slightly anastomosing, scarcely prominent. Racemes loosely cylindrical, 3 to 6 in. long, tomentose-pubescent as in *H. laevis*. Pedicels 2 to 5 lines long. Perianth-tube about 5 lines, oblique, dilated

below the middle, revolute upwards. Torus oblique. Gland large, semicircular. Ovary shortly stipitate, style rather thick, not long; stigmatic disk oblique, broadly conical. Fruit ovate-lanceolate, $1\frac{1}{2}$ to $1\frac{3}{4}$ in. long, 7 to 8 lines broad.—Meissn. in DC. Prod. xiv. 411; F. Muell. Fragm. vi. 191; *Grevillea Alphoniana*, F. Muell. in Hook. Kew Journ. ix. 22; Meissn. l.c. 699.

N. Australia. Arid shores of Cygnet Bay, N.W. coast, *A. Cunningham*; Roebuck Bay and Glenelg river, *Martin*; remotest parts of Sturt's Creek, *F. Mueller*.

W. Australia. Three hundred miles up the Murchison river, *Walcott*.

NIB

PROTEACEAE

Hakea morrisoniana

W. V. Fitzg.

N2B

PROTEACEAE

Hakea rhombalis

F. Muell.

7? **H. stenophylla**, *A. Cunn.*; *Meissn. in DC. Prod.* xiv. 417. A small tree of 12 to 15 ft., glabrous or the young shoots minutely hoary. Leaves very narrow-linear, entire, flat, 2 to 4 in. long, rather thick, veinless or with a scarcely prominent midrib. Flowers unknown. Fruit rather above 1 in. long, $\frac{3}{4}$ in. thick, smooth with a very short conical straight beak. Seed-wing broad, more or less decurrent all round the nucleus.

N. Australia. Arid sands, Bay of Rest, N.W. coast, *A. Cunningham*.—Appears allied to *H. arborescens*, but the affinities must be very uncertain until the flowers are known.

N56

PROTEACEAE

Hakea suberea?

N 51 B

PROTEACEAE

Hakea suberosa

(*Lysanthe and Stylurus, Salisb., Anadenia, R. Br., Manglesia, Endl., Strangea and Molloya, Meissn.*)

Flowers hermaphrodite. Perianth irregular or regular, the tube revolute or curved under the limb or straight and slender, the limb globular or rarely ovoid, usually oblique, the laminae usually cohering long after the tube has opened. Anthers all perfect, ovate, sessile in the base of the concave laminae, the connective not produced beyond the cells. Hypogynous glands united in a single

semi-annular or semicircular gland occupying the upper (often the shortest) side of the torus or rarely completely annular surrounding the ovary, or altogether wanting. Ovary stipitate or rarely sessile, with 2 amphitropous ovules laterally attached about the middle; style filiform or somewhat dilated, usually long and protruding from the slit on the lower side of the perianth tube before the summit is set free from the limb, ultimately straightened and erect or in a few species of *Lissostyles* and *Conogyne* remaining hooked, more or less dilated at the end into a straight oblique or lateral cone or disk bearing the small stigma in the centre of the disk or at the summit of the cone. Fruit a follicle, usually oblique with the ventral suture curved, either coriaceous and opening along the upper margin, or rarely woody and opening almost or quite in two valves. Seeds 1 or 2, flat orbicular or oblong, bordered all round by a membranous wing, or narrowly winged at the end or outer margin only or entirely wingless.—Shrubs or trees. Leaves alternate, very diversified in shape. Flowers in pairs along the rachis of a short and umbel-like or elongated raceme, rarely reduced to a single pair; the racemes either terminal or also axillary, rarely all axillary. The indumentum usually consists of closely appressed hairs attached by the centre, rarely of erect or spreading hairs, and then usually forked at the base or clustered.

With the exception of three or four New Caledonian species the genus is limited to Australia. In the distributing the numerous species of this beautiful genus into sections, I have been unable in all respects to follow Brown, and still less Meissner, especially as to the foliage or seeds, for the former is far too variable to serve for much beyond specific distinction, and the seeds are unknown in a large number of the species. The following sectional characters are derived chiefly from the inflorescence and flowers, and if less absolute than could have been wished, are the best I could devise. The first eight sections constitute Meissner's subgenus *Eugrevillea*, with the perianth revolute under the limb, and the stigmatic disk oblique or lateral, usually flat or convex, the tenth and eleventh proposed as subgenera by Meissner, have the perianth straight, and the stigmatic disk replaced by a straight cone, the intermediate ninth section, *Conogyne*, and most of the species of the sixth, with the perianth recurved or revolute at the top, as in the preceding ones, have the straight stigmatic cone of *Anadenia* and *Manglesia*. A very few of the species of the eighth section, *Lissostyles*, have also the stigmatic cone shaped as in the last sections, but very oblique. The absence of the hypogynous gland, one of the chief characters on which the genus *Anadenia* was founded, occurs also in a few species belonging to other sections of true *Grevilleas*. The peculiar style of *Manglesia* passes into that of *Anadenia* through *G. acrobotrya*, and *G. didymobotrya* closely connects *Conogyne* with *Anadenia*.

SECT. 1. *Eugrevillea*.—Racemes secund, and elongated, or few-flowered. Perianth-tube dilated below the middle and usually opening on the lower side, revolute under the limb. Torus small, straight or slightly oblique. Stigmatic disk lateral.

SERIES 1. *Leiogynæ*.—Ovary glabrous, stipitate. Torus sometimes oblique, but with the gland side the longest. Species all Western, one also in S. Australia.

Racemes sessile or nearly so on leafy branches. Leaves linear, undivided, obtuse.

Racemes loose, several-flowered. Stipes of the ovary thick and flattened.

Leaves narrow-linear 1. *G. pinaster*.
Leaves oblong-linear 2. *G. obtusifolia*.

Racemes mostly reduced to a single pair of flowers. Leaves very narrow-linear 3. *G. sparsiflora*.
(See also sect. *Lissostyles*, ser. *Puniceæ*.)

Racemes sessile, few-flowered. Leaves lobed or divided. Styles very long.

Leaves with 3 broad triangular pungent-pointed lobes 4. *G. macrostylis*.

Leaves with 3 or 5 narrow-linear divaricate rigid pungent-pointed segments 5. *G. tripartita*.

Racemes 2- or 4-flowered, usually several on a short leafless flexuose peduncle or branch.

Leaves once or twice 3-lobed with broad rigid lobes. Rachis very flat 6. *G. platypoda*.

Leaves once or twice ternately divided into narrow rigid divaricate pungent-pointed segments 7. *G. patentiloba*.

Leaves regularly pinnate with narrow rigid but not pungent segments 8. *G. pectinata*.

Racemes loose but short, several on long leafless peduncles or branches.

Leaves regularly pinnate with long narrow-linear rigid but not pungent segments 9. *G. plurijuga*,

Leaves simple, narrow-linear, often very long 10. *G. nudiflora*.

Racemes rather dense, many-flowered. Leaves pinnate with narrow-linear or filiform segments.

Leaves simply pinnate 11. *G. stenomera*.

Leaf-segments mostly again divided 12. *G. Thelemanniana*.

SERIES 2. *Hebegynæ*.—Ovary sessile or scarcely stipitate, densely villous. Torus sometimes but very rarely slightly oblique, with the gland side the shortest.

- Leaves obtuse or mucronate, not pungent.
 Leaves narrow-linear, rigid, mostly undivided, 1 to 2 in. long. Racemes short 13. *G. concinna*.
 Leaves mostly pinnate with narrow-linear rigid segments doubly grooved underneath.
 Leaf-segments 3 to 9, under 2 in. long. Racemes silky, $1\frac{1}{4}$ to 3 in. long.
 Leaves glabrous when full-grown 14. *G. Hookeriana*.
 Leaves silky on both sides 15. *G. Baxteri*.
 Leaf-segments few or leaves entire, 4 to 8 in. long. Racemes villous.
 Racemes 2 to 4 in. long. Perianth $\frac{1}{4}$ in. 16. *G. pterosperma*.
 Racemes dense, 3 to 6 in. long. Perianth $\frac{1}{2}$ in. long 17. *G. eriostachya*.
 Leaf-segments numerous, regular, under 2 in. long. Racemes densely villous, 2 to 4 in. 18. *G. thyrsoides*.
 Leaves pinnate with linear or lanceolate segments, glabrous above, silky underneath. Perianth villous.
 Leaf-segments very narrow, 4 to 8 in. long, often divided 19. *G. chrysodendron*.
 Leaf-segments few, linear lanceolate, 2 to 4 in. long 20. *G. Banksii*.
 Leaf-segments numerous, regular, linear-oblong, $\frac{3}{4}$ to $1\frac{1}{4}$ in. long 21. *G. Culeyi*.
 Leaves entire or pinnately-toothed or lobed, lanceolate to ovate.
 Leaves long, lanceolate. Perianth silky.
 Tall and erect. Racemes dense. Perianth-tube narrow 22. *G. asplenifolia*.
 Prostrate. Racemes loose. Perianth-tube broad, expanding into an orbicular disk 23. *G. cirsiifolia*.
 Leaves ovate or oblong, obtuse, entire, 2 to 5 in. long 24. *G. laurifolia*.
 Leaves oblong or lanceolate, acute, 6 to 10 in. long, entire or broadly pinnatifid 25. *G. Barlyana*.

Leaves or leaf-lobes pungent-pointed (the first five species all Eastern).

- Leaves ovate or cuneate, with prickly teeth or lobes.
 Prostrate. Leaves ovate, undulate, shortly prickly-toothed. Torus slightly oblique 26. *G. repens*.
 Erect or spreading. Leaves ovate oblong or cuneate, irregularly lobed. Torus straight.
 Leaves usually villous, pinnately many-toothed or lobed. Stipes of the ovary very short 27. *G. aquifolium*.
 Leaves glabrous above or nearly so, silky underneath, cuneate with few lobes. Stipes of the ovary as long as the ovary 28. *G. ilicifolia*.
 Leaves glabrous, deeply pinnatifid, with broad prickly lobes. Leaf-lobes oblong or ovate, entire or rarely 2- or 3-lobed 29. *G. Gaudichaudii*.
 Leaf-lobes mostly cuneate, very rigid, 2- or 3-lobed. Racemes dense 30. *G. acanthifolia*.
 Leaf-lobes mostly again pinnatifid. Racemes loose. Western species 31. *G. bipinnatifida*.
 Leaves once or twice ternately divided into linear rigid divaricate segments. Western species.
 Racemes dense. Flowers numerous, about $\frac{1}{4}$ in. long, nearly sessile 32. *G. armigera*.
 Racemes loose. Flowers nearly $\frac{1}{2}$ in. long, on slender pedicels 33. *G. asparagoides*.

SECT. 2. *Ptychocarpa*.—Racemes short, often umbel-like. Perianth-tube dilated below the middle and usually opening on the lower side, revolute under the limb. Torus small, straight or nearly so. Ovary sessile or very shortly stipitate, densely villous or rarely with only a tuft of hairs at the base. Stigmatic disk lateral. Leaves entire. Species all Eastern.

- Perianth densely villous.
 Leaves ovate or oblong, mostly obtuse, the upper surface glabrous or minutely scabrous 34. *G. floribunda*.
 Leaves ovate to oblong-lanceolate, mucronate-acute, the upper surface scabrous-dotted 35. *G. cinerea*.
 (See also 39, *G. arenaria*.)
 Leaves oblong to linear, obtuse, pubescent or villous on both sides 36. *G. alpina*.
 Perianth sprinkled or silky with appressed hairs.
 Leaves oblong or lanceolate, obtuse or with a small callous point.
 Leaves glabrous or scabrous above, mostly narrow.
 Perianth-segments acuminate or acute 37. *G. montana*.
 Perianth-segments obtuse 38. *G. obtusiflora*.
 Leaves silky or minutely pubescent above, mostly rather broadly-oblong or cuneate. Perianth-segments acuminate, sometimes villous 39. *G. arenaria*.
 Leaves ovate or lanceolate, acutely acuminate or mucronate with a fine point. Perianth-segments obtuse 40. *G. mucronulata*.
 Perianth quite glabrous.
 Leaves ovate or lanceolate, nearly flat, glabrous as well as the branches, or slightly pubescent 41. *G. Baueri*.
 Leaves linear, obtuse, much revolute, villous or hirsute as well as the branches 42. *G. lanigera*.
 Leaves linear or linear-lanceolate, mostly acute and revolute, the upper surface glabrous, scabrous or slightly hirsute.
 Ovary villous. Spreading or diffuse shrub, usually villous 43. *G. ericifolia*.

- Ovary glabrous except a tuft of hairs at the base.
 Spreading shrub with linear-subulate leaves, mostly under 1 in. long 44. *G. divaricata*.
 Erect shrub with erect leaves mostly above 1 in. long 45. *G. rosmarinifolia*.

SECT. 3. **Plagiopoda**.—*Racemes various. Perianth-tube dilated below the middle and usually opening on the lower side, revolute under the limb. Torus very oblique, the gland-side the shortest. Ovary villous except in a few axillary-flowered species. Stigmatic disk very oblique or lateral.*

- Racemes terminal, erect, sometimes secund. Ovary densely villous. Style very long. Eastern species (except *G. Wilsoni*).
 Leaves oval-elliptical or oblong-lanceolate, large, entire 46. *G. Goodii*.
 Leaves mostly above 6 in. long, simple or pinnate with narrow-lanceolate obliquely penniveined lobes 47. *G. venusta*.
 Leaves linear, above 6 in. long, simple or pinnate with long-linear lobes.
 Racemes oblong, glabrous except the ovary 48. *G. longistyla*.
 Racemes usually paniculate, viscid-villous 49. *G. juncifolia*.
 Leaves ternately divided into narrow-linear rigid divaricate pungent-pointed segments. Western species 50. *G. Wilsoni*.
 (See also 73. *G. Huegelii*, with a glabrous ovary.)
 Racemes terminal, short, umbel-like. Style very long. Leaves linear or linear-lanceolate, acute, entire. Eastern species 51. *G. lavandulacea*.
 Racemes short, few-flowered, sessile, terminal and in the upper axils. Style short. Western species (except *G. aspera*).
 Leaves ovate, rigid, sinuate and prickly-toothed 52. *G. insignis*.
 (See also 71. *G. Cunninghamii*, with a glabrous ovary).
 Leaves entire, narrow or rarely ovate.
 Branches sparingly or shortly pubescent.
 Leaves ovate or lanceolate, $\frac{1}{2}$ to $\frac{3}{4}$ in. long or oblong and longer, obtuse 53. *G. Brownii*.
 Leaves linear or lanceolate, $\frac{1}{2}$ to 2 in. long. Flowers small.
 Leaves smooth or minutely scabrous above 54. *G. fasciculata*.
 Leaves veined and very scabrous above 55. *G. aspera*.
 Leaves linear or lanceolate, 2 to 4 in. long 56. *G. brachystylis*.
 Branches densely and softly villous. Perianth-tube broadly saccate at the base 57. *G. saccata*.
 Branches hirsute with long fine hairs. Perianth small, not saccate 58. *G. Drummondii*.
 Racemes reduced to 1 or 2 pairs of flowers mostly axillary. Torus sometimes less oblique. Leaves entire.
 Leaves narrow-linear. Ovary villous. Style long.
 Leaves angular-terete, $\frac{1}{2}$ to $\frac{3}{4}$ in. long 59. *G. disjuncta*.
 Leaves convex and smooth above, channelled underneath, $\frac{3}{4}$ to 1 $\frac{1}{2}$ in. long 60. *G. haplantha*.
 Leaves narrow-linear. Ovary villous. Style short 61. *G. pinifolia*.
 Leaves linear-subulate, pungent-pointed. Ovary glabrous. Style long 62. *G. acuaria*.
 Leaves ovate or orbicular, small, flat. Ovary glabrous. Style long 63. *G. singuliflora*.
 Leaves linear-cuneate or oblong, 1-nerved. Ovary glabrous. Fruit small 64. *G. pauciflora*.
 Leaves linear or linear-cuneate, thick, nerveless.
 Fruit 1 to 1 $\frac{1}{2}$ in. long. Flowers unknown. Eastern species 65. *G. Strangea*.
 Fruit 2 to 2 $\frac{1}{2}$ in. long. Ovary villous. Style short. Perianth unknown. Western species 66. *G. cynanchicarpa*.

SECT. 4. **Calothyrsus**.—*Racemes secund, usually many-flowered. Perianth-tube more or less dilated below the middle and usually opening on the lower side, revolute under the limb. Torus oblique, the gland-side the shortest. Ovary glabrous, stipitate. Species all tropical except G. quercifolia and G. Huegelii.*

- Leaves undivided, ovate or lanceolate, angular or prickly-toothed.
 Leaves petiolate or tapering at the base.
 Leaves glabrous, mostly sinuate-toothed.
 Racemes mostly terminal on long peduncles. Perianth bearded inside with very short hairs 67. *G. quercifolia*.
 Racemes axillary, shortly pedunculate. Perianth densely bearded inside with erect hairs 68. *G. angulata*.
 Leaves silky-pubescent at least when young, mostly angular. Racemes axillary. Perianth bearded inside with spreading or reflexed hairs.
 Perianth slightly dilated at the base as in *G. angulata* 69. *G. Wickhamii*.
 Perianth much dilated at the base as in *G. Cunninghamii* 70. *G. agrifolia*.
 Leaves sessile, deeply cordate with large stem-clasping auricles, sinuate and prickly-toothed 71. *G. Cunninghamii*.
 Leaves sessile, deeply and regularly pinnatifid with rigid pungent-pointed lobes 72. *G. pungens*.
 Leaves once or twice divided into short linear rigid divaricate segments. Racemes very short with long flowers. Desert species 73. *G. Huegelii*.
 Leaves not toothed, entire or divided into long narrow segments. Racemes usually paniculate.
 Leaves undivided, broadly falcate, longitudinally reticulate 74. *G. dimidiata*.
 Leaves mostly pinnate, the segments oblong-lanceolate, longitudinally reticulate 75. *G. heliosperma*.
 Leaves mostly pinnate, the segments oblong-lanceolate or linear, penniveined with numerous oblique parallel primary veins 76. *G. refracta*.
 Leaf-segments numerous, linear, obscurely veined above, 1-nerved underneath. Racemes long. Perianth above $\frac{1}{2}$ in. long 77. *G. Dryandri*.
 Leaf-segments not numerous, linear or lanceolate, obscurely veined above, 1-nerved underneath. Racemes dense. Perianth under $\frac{1}{2}$ in. long 78. *G. polystachya*.
 Leaves mostly bipinnatifid with lanceolate lobes or segments 79. *G. robusta*.

cont'd

SECT. 5. **Cycladenia**.—*Racemes many-flowered, paniculate (scarcely secund?) Perianth nearly of Cycloptera, but larger. Torus straight. Hypogynous gland annular (deficient on the lower side in all other sections). Ovary glabrous, stipitate. Western species.*

- Leaves divided into short rigid linear divaricate pungent-pointed segments 80. *G. annulifera*.
 Leaves divided into numerous very long narrow-linear segments 81. *G. leucopteris*.

SECT. 6. **Cycloptera**.—*Racemes dense, usually paniculate. Flowers small. Perianth-tube narrow, recurved or reflexed under the limb. Torus straight. Ovary glabrous, stipitate. Fruit usually broad. Seeds winged all round. Tropical or subtropical species.*

- Leaves longitudinally veined.
 Leaves mostly pinnate.
 Leaf-segments linear, very long and narrow 82. *G. leucadendron*.
 Leaf-segments linear-cuneate, obtuse, under 5 in. long 83. *G. pyramidalis*.
 Leaves undivided, very long, with 9 to 13 closely parallel veins 84. *G. striata*.

- Leaves undivided, falcate, longitudinally reticulate and irregularly several-veined 85. *G. mimosoides*.
 Leaves large, penniveined, ovate-lanceolate or oblong.
 Leaves entire or deeply pinnatifid, rather thin, glabrous above, silvery-silky underneath 86. *G. Hillii*.
 Leaves rather thick, entire, minutely pubescent on both sides 87. *G. gibbosa*.

SECT. 7. **Eriostylis**.—*Racemes umbel-like, sessile or nearly so. Flowers small, villous. Perianth-tube narrow or rather broad, revolute under the limb. Torus straight. Ovary shortly stipitate, villous as well as the style; stigmatic disk lateral. Leaves entire.*

- Hairy style produced into an appendage beyond the stigmatic disk. Eastern species.
 Leaves ovate to broadly lanceolate. Stigmatic disk orbicular, the hairy appendage reflexed 88. *G. luxifolia*.
 Leaves lanceolate or linear. Stigmatic disk oblong, the hairy appendage erect 89. *G. phyllicoides*.
 Hairy style not produced (or obscurely so in *G. sphaelata*), the disk orbicular or oval. Western species (except *G. sphaelata*).
 Leaves lanceolate or linear, scabrous-punctate. Young branches closely silky. Stigmatic disk oval.
 Stipes of the ovary much longer than the gland. Stigmatic disk not projecting beyond the hairy style 90. *G. sphaelata*.
 Stipes of the ovary very short. Stigmatic disk with a free glabrous margin 91. *G. occidentalis*.
 Young branches villous. Stigmatic disk thick, with an incurved turbinate glabrous back 94. *G. oxystigma*.
 Leaves narrow-linear, rarely lanceolate, smooth.
 Leaves linear-terete, pungent-pointed. Stigmatic disk oval, flat 92. *G. acerosa*.
 Leaves linear, not pungent. Stigmatic disk orbicular, flat 93. *G. umbellulata*.
 Leaves linear or lanceolate, not pungent. Stigmatic disk thick with an incurved turbinate glabrous back 94. *G. oxystigma*.
 Hairy style not produced beyond the base of the stigmatic disk which terminates in an oblong involute appendage.
 Leaves mostly lanceolate, smooth. Stigmatic disk glabrous on the back 95. *G. Candolleana*.
 Leaves mostly linear, scabrous-punctate. Stigmatic disk tomentose on the back 96. *G. scabra*.

SECT. 8. **Lissostylis**.—*Racemes short and dense (except G. Victoriae and G. trachytheca). Perianth-tube narrow, revolute or recurved under the limb. Torus straight. Ovary glabrous, stipitate. Stigmatic disk (or cone in the last two species) very oblique or lateral.*

SERIES 1. **Puniceæ**.—*Flowers not numerous or in a loose raceme, the perianth about ½ in. long. Leaves entire. Eastern species.*

- Leaves penniveined, ovate to broadly lanceolate. Racemes loose. Style not very long.
 Leaves oval or ovate-oblong (1½ to 2¼ in.), veinless above, penniveined underneath 97. *G. Miqueliana*.
 Leaves obovate or oval (¾ to 1¼ in.), veinless above, 1-nerved underneath 98. *G. brevifolia*.
 Leaves lanceolate (2 to 4 in.), penniveined above, 1-nerved underneath 99. *G. Victoriae*.

- Leaves penniveined, mostly lanceolate, the lateral nerves if present close to the margin. Style long.
 Leaves mostly under 1½ in. long. Racemes mostly terminal 100. *G. punicea*.
 Leaves mostly 2 to 4 in. long. Racemes mostly axillary 101. *G. oleoides*.
 Leaves narrow, rigid, pungent-pointed.
 Leaves linear or lanceolate, mostly 3-nerved 102. *G. trinervis*.
 Leaves linear-subulate, mostly 1-nerved 103. *G. juniperina*.
 (See also *Eugrevillea*, ser. *Leiogyne*.)

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SERIES 2. **Sericeae.**—Flowers numerous in a short dense raceme. Perianth-tube under 4 lines long. Leaves entire. Fruit usually smooth. Eastern species.

- Leaves oblong-lanceolate or almost linear, obtuse or with a small point, silky underneath.
Flowers silky-pubescent. Leaves rarely 1½ in. long . . . 104. *G. sericea*.
Flowers ferruginous-villous. Leaves mostly 1½ to 2 in. long . . . 105. *G. capitellata*.
Leaves oblong-lanceolate or linear, flat, green on both sides . . . 106. *G. leiophylla*.
Leaves mostly linear, very acute.
Leaves with the midrib very prominent underneath, doubly grooved when narrow.
Leaves open underneath between the midrib and margin.
Perianth-tube 2½ to 3 lines long . . . 107. *G. linearis*.
Leaves very rigid, doubly grooved underneath.
Perianth-tube 2½ to 3 lines long . . . 108. *G. confertifolia*.
Perianth-tube not 2 lines long . . . 109. *G. parviflora*.
Leaves (under 1 in.) with the midrib not prominent underneath, singly grooved when narrow. Perianth-tube about 2 lines long . . . 110. *G. australis*.

SERIES 3. **Occidentales.**—Flowers numerous in a dense raceme or head. Perianth-tube under 4 lines long. Leaves entire or divided. Fruit usually (but not always) rugose or tuberculate. Western species.

- Racemes short. Bracts none or minute and falling off early.
Stigmatic disk flat or convex.
Leaves rather thick, obtuse or mucronate, oblong-cuneate or linear, entire or divided.
Racemes ovate, on short peduncles. Perianth-tube about 2 lines long.
Leaves entire or rarely 2- or 3-toothed when broad . . . 111. *G. commutata*.
Leaves mostly pinnate with narrow linear segments . . . 112. *G. pinnatisecta*.
Racemes globular, on filiform peduncles. Perianth-tube about 1 line long . . . 113. *G. argyrophylla*.
Leaves rather thick, narrow-linear, all entire.
Leaves doubly grooved underneath. No hypogynous gland. Fruit smooth . . . 114. *G. brachystachya*.
Leaves long, 1-nerved underneath, concave and nerveless above. Gland pulvinate . . . 115. *G. Endlicheriana*.
Leaves not very thick, varying from broadly cuneate and acutely toothed or lobed to narrow-linear and very acute.
Leaves silky-pubescent underneath . . . 116. *G. manglesioides*.
Leaves glabrous on both sides . . . 117. *G. diversifolia*.
Leaves linear terete, singly or doubly grooved.
Leaves slender, entire or rarely 2- or 3-lobed. Flowers very small.
Leaves 4 to 6 in. long. Racemes axillary and terminal . . . 118. *G. filifolia*.
Leaves 1 to 2 in. long. Racemes axillary . . . 119. *G. hakeoides*.
Leaves ternately divided into rigid divaricate pungent-pointed segments . . . 120. *G. teretifolia*.

- Racemes short. Bracts membranous, broad, imbricate in the young racemes, persisting nearly to the flowering. Stigmatic disk flat or convex.
Racemes on long terminal leafless simple or branched peduncles.
Leaves large, glaucous, undulate, deeply pinnatifid, with obovate or oblong lobes . . . 121. *G. eryngioides*.
Leaves narrow-linear, rigid, entire or deeply trifid, doubly grooved underneath . . . 122. *G. bracteosa*.
Racemes dense, terminal. Stigmatic disk conical in the centre or replaced by an oblique cone.
Racemes short, sessile. Leaves short, crowded, with 3 or 5 narrow-linear segments . . . 123. *G. crithmifolia*.
Racemes elongated, cylindrical. Leaves narrow-linear, entire or 3-lobed . . . 124. *G. trachytheca*.

SECT. 9. **Conogyne.**—Racemes dense or rarely slender, short or cylindrical. Flowers small. Perianth-tube slender, recurved under the limb. Torus straight. Ovary stipitate. Style filiform, with an erect stigmatic cone.

- Hypogynous gland none or very obscure. Racemes short or rarely elongated and loose or cylindrical.
Ovary villous. Leaves ternately divided. Eastern species.
Leaf-segments narrow-linear, rigid, pungent-pointed . . . 125. *G. triternata*.
Leaf-segments oblong-cuneate or lanceolate, prickly-toothed . . . 126. *G. ramosissima*.
Ovary glabrous. Western species except *G. nematophylla*.
Leaves toothed or pinnatifid.
Leaves ovate, prickly-toothed, glabrous, glaucous . . . 127. *G. monticola*.
Leaves mostly linear-cuneate or lanceolate, toothed or pinnatifid, silky underneath . . . 128. *G. Muelleri*.
Leaves cuneate or linear, 3-fid or 3-toothed.
Racemes short and sessile. Entire base of the leaf short and broad or linear . . . 129. *G. trifida*.
Racemes oblong-cylindrical, pedunculate. Entire base of the leaf long and cuneate. Leaf very glaucous . . . 130. *G. synapheae*.
Leaves mostly pinnate with pinnatifid or pinnate pinnae.
Ultimate leaf-segments short and broad, rhachis flexuose. Racemes oblong-cylindrical, compact . . . 131. *G. flexuosa*.
Leaf-segments narrow, rhachis and stems very slender.
Racemes elongated, loose . . . 132. *G. leptobotrya*.
Leaves twice or thrice ternately divided into linear pungent-pointed segments.
Leaf-segments short. Racemes short and sessile . . . 133. *G. brevicuspis*.
Leaf-segments long. Racemes cylindrical elongated and loose . . . 134. *G. intricata*.
Leaves filiform, entire. Racemes cylindrical, paniculate . . . 135. *G. didymobotrya*.
Hypogynous gland semiannular. Racemes cylindrical, narrow, in a terminal leafless panicle.
Leaves flat, oblong or lanceolate. Ovary stipes very short . . . 136. *G. polybotrya*.
Leaves linear-terete, very long. Ovary stipes long . . . 137. *G. nematophylla*.

SECT. 10. *Anadenia*.—*Racemes dense, short or cylindrical. Flowers small. Perianth-tube slender, straight, limb erect. Torus straight. Style filiform or dilated upwards, not contracted under the erect stigmatic cone. Western species except G. anethifolia.*

Hypogynous gland semiannular. Leaves linear-terete, ternately divided.

Leaf-segments divaricate, under 1 in. long, pungent-pointed.
Racemes short, sessile. Style dilated and flattened . . . 138. *G. anethifolia*.

Racemes cylindrical, spike-like, sessile, the rhachis densely villous. Style long, filiform . . . 139. *G. paradoxa*.

Leaf-segments erect, above 1 in. long, not pungent. Racemes spike-like, pedunculate along a common leafless peduncle . . . 140. *G. petrophiloides*.

No hypogynous gland.

Leaves flat, pinnate, with 3-lobed or pinnatifid pinnae. Racemes rather short. Ovary stipitate.

Pinnae 3 or 5. Perianth 2½ lines long . . . 141. *G. tenuiflora*.

Pinnae 7 to 11. Perianth 1½ lines long . . . 142. *G. pulchella*.

Leaves entire or toothed at the end. Racemes cylindrical. Ovary nearly sessile.

Leaves narrow-cuneate, 3-lobed or 3-toothed at the end. Ovary villous . . . 143. *G. rudis*.

Leaves obovate-oblong or lanceolate, entire. Ovary glabrous.

Leaves glabrous . . . 144. *G. Shuttleworthiana*

Leaves more or less pubescent . . . 145. *G. integrifolia*.

Leaves narrow-linear. Ovary glabrous.
Fruit 3 or 4 times as long as broad . . . 146. *G. stenocarpa*.

SECT. 11. *Manglesia*.—*Racemes short, dense, axillary. Flowers small. Perianth-tube straight, slender or fusiform; limb erect. Torus straight. Ovary glabrous, stipitate. Style turgid in the middle or fusiform, constricted under the erect stigmatic cone. Western species.*

Hypogynous gland none. Style fusiform. Stem-leaves broadly cuneate; floral leaves with 3 linear pungent segments . . . 147. *G. acrobotrya*.

Hypogynous gland semiannular. Style turgid in the middle. Capsule very rugose. Leaves mostly above 1 in. long.

Leaves quite glabrous. Racemes branching.

Leaves broad, once or twice trifid with short lobes . . . 148. *G. glabrata*.

Leaves narrow, with 3 lanceolate lobes . . . 149. *G. ornithopoda*.

Leaves mostly biternate with terete pungent-pointed segments. Fruit erect . . . 150. *G. paniculata*.

Leaves more or less hoary, at least when young. Racemes simple.

Leaves mostly biternate with narrow pungent-pointed segments. Fruit transverse . . . 151. *G. biternata*.

Leaves linear-cuneate, simple or trifid, villous underneath . . . 152. *G. triloba*.

Capsule smooth. Leaves mostly under 1 in. long, with pungent-pointed lobes or segments or teeth.

Leaves broad, stem-clasping with large auricles, prickly-toothed . . . 153. *G. amplexans*.

Leaf lobes more or less dilated, showing the under surface . . . 154. *G. vestita*.

Leaf-segments narrow-linear, very rigid, doubly grooved underneath . . . 155. *G. tridentifera*.

Leaf-segments slender, terete, mostly 1-grooved . . . 156. *G. erinacea*.

G. berberifolia, *podocarpifolia* and *trifurcata*, Sweet, and *G. Flindersii* and *macro-nifolia*, A. Cunn., included in Steud. Nom. Bot. ed. 2, are garden names of unpublished species, which, if genuine *Grevilleae*, must be the same as some of those here described.

N18

PROTEACEAE

Grevillea erythroclada
Fitzg.

N 30

PROTEACEAE

Grevillea heteromera
w.v. Fitzg

NIB

PROTEACEA

Grevillea latifolia

c.A. Grand

NID

PROTEACEAE

Grevillea miniata
w. v. Fitzg.

NSB

PROTEACEAE

Grewia viscidula

C.A. GAR

7. *P. falcata*, R. Br. in *Trans. Linn. Soc.* x. 162, *Prod.* 373. Usually a small tree, glabrous or the young shoots minutely tomentose-pubescent. Leaves linear or lanceolate, falcate, 4 to 8 in. long, and very variable in width, obtuse or acuminate, contracted into a petiole, the midrib prominent, the margins usually nerve-like, the lateral veins obscure or fine and very oblique. Pedicels slender, $\frac{1}{4}$ to $\frac{1}{2}$ in. long, glabrous as well as the perianth or very minutely hoary-pubescent, sometimes all axillary, but more frequently forming a long raceme with the lower floral leaves reduced to bracts and growing out at the end into a leafy shoot. Ovary glabrous, of nearly uniform thickness with the short stipes and incurved style, the stigma oblique under the upper anther. Anthers all perfect, but the upper one usually smaller, the connective produced into a long

or short point.—Meissn. in DC. *Prod.* xiv. 331; *P. mimosoides*, A. Cunn. *Herb.*

N. Australia. Islands of the Gulf of Carpentaria, *R. Brown*; M'Adam Range, *F. Mueller*; Escape Cliff, *Hulls*; Victoria river, *Bynoe*; Cygnet Bay, N.W. coast, *A. Cunningham* (a narrow-leaved form, with the pedicels only remaining, but apparently rather this species than *P. longifolia*).

Queensland. Cape York, *Daemel*; Dayman's island, Endeavour Straits, *W. Hill*; Endeavour river, *A. Cunningham*, *W. Hill*; Estuary of the Burdekin, *Fitzalan*; Kennedy district, *Daintree*; Edgecombe and Rockingham Bays, *Dallachy*; Cape and Bowen rivers, *Bowman*.

SECT. 2. ACRANTHERA.—Style elongated beyond the anthers, with a terminal stigma. Anthers all perfect, the connective produced into an appendage beyond the cells.

27. STENOCARPUS, R. Br.

(Agnostus, A. Cunn.)

Flowers hermaphrodite. Perianth slightly irregular, the tube opening along the lower side, the limb nearly globular and recurved, the segments at length separating. Anthers broad, sessile within the concave laminae, the connective not produced beyond the cells. Hypogynous glands united in a short semiannular disk or cup or almost obsolete. Ovary stipitate, tapering into a long style dilated at the top into a flat oblique disk, stigmatic in the centre; ovules several, laterally attached at or near the top, imbricate downwards in 2 rows. Fruit a follicle, usually narrow, coriaceous; seeds produced at the lower end into a membranous wing.—Trees. Leaves alternate or scattered, entire or deeply pinnatifid with few lobes. Peduncles terminal or in the upper axils, sometimes several in an umbel or short raceme, each bearing an umbel of pedicellate red or yellow flowers. Bracts none or falling off at a very early stage.

The genus extends to New Caledonia, the Australian species are however all endemic.

Leaves 6 in. to 1 ft. long. Perianths above 1 in. long, the pedicels radiating in a single row round the disk-like end of the peduncle 1. *S. sinuatus*.

Leaves under 6 in. Perianths $\frac{1}{2}$ in. long or less, the pedicels irregularly crowded on the summit of the peduncle. 2. *S. salignus*.

Ovary usually pubescent 2. *S. salignus*.
Ovary quite glabrous 3. *S. Cunninghamii*.

3. **S. Cunninghamii**, *R. Br. Prot. Nov.* 34. A tall bushy shrub or small tree, glabrous or the inflorescence slightly pubescent, the specimens closely resembling those of *S. salignus* in which the leaves are rather narrow, thick and obscurely veined. Leaves oblong-lanceolate, obtuse or acuminate, varying in breadth, about 2 to 4 in. long, tapering into a short petiole, faintly tripli- or quintupli-nerved, the smaller veins rarely visible. Flowers precisely as in *S. salignus*, except that the ovary appears to be constantly quite glabrous.—Meissn. in DC. Prod. xiv. 451.

N. Australia. Vansittart's Bay, N.W. coast, *A. Cunningham* (with small flowers and a slightly pubescent inflorescence); sources of the Roper river, *F. Mueller* (with small flowers and a nearly glabrous inflorescence); Liverpool river, *Cudell's Expedition* (with rather larger flowers and the inflorescence quite glabrous). The whole should probably be considered as varieties of *S. salignus*.

2. *S. salignus*, R. Br. in *Trans. Linn. Soc.* x. 202, *Prod.* 391. A moderate-sized tree, glabrous or the inflorescence minutely pubescent.

Leaves in the typical form ovate-lanceolate or elliptical, acute acuminate or rarely obtuse, tapering into a short petiole, 2 to 4 in. long, varying from penniveined to triplinerved (the lower primary veins scarcely longer or much longer and thicker than the others), but the veins usually indistinct slightly prominent or almost immersed, a few leaves on young trees or barren branches larger and pinnatifid. Peduncles slender, terminal or in the upper axils, usually shorter than the leaves, bearing a single umbel of 10 to 20 flowers or in luxuriant specimens as many as 30 flowers. Pedicels $\frac{1}{4}$ to $\frac{1}{2}$ in. long, irregularly crowded on the summit of the peduncles. Perianth usually under $\frac{1}{2}$ in. long. Ovary slightly silky-pubescent or nearly glabrous. Ovules 6 to 8, not so closely imbricate nor so narrow and compressed as in *S. sinuatus*.—Meissn. in DC. *Prod.* 451; *Bot. Reg.* t. 441; *Hakea rubricaulis*, Colla, Hort. Ripul. App. i. 114, t. 3; *Embothrium rubricaulis*, Giord. Obs. 1837 (Meissn.); *Stenocarpus acacioides*, F. Muell. *Fragm.* i. 135.

Queensland. Warwick, *Nernst*.

N. S. Wales. Grose river, *R. Brown*; Blue Mountains, *A. and R. Cunningham*; Tweed river, *C. Moore*; Illawarra, *A. Cunningham*, *Shepherd*; Sydney woods, Paris Exhibition, 1855, *M'Arthur*, n. 187. Known under the name of "Silky Oak."

Var. *Moorei*. Leaves broader and usually more distinctly tripli- or quintupli-nerved, the ovary minutely pubescent.—*S. Moorei*, F. Muell. *Fragm.* i. 134, v. 154.—Rockingham Bay, *Dallachy*; Mount Lindsay, *W. Hill*; Illawarra, *C. Moore*; Mount Warning, *C. Moore* (with a few leaves deeply pinnatifid with 3 or 5 long narrow lobes).

Var. *concolor*. Leaves more prominently tripli- or rarely quintupli-nerved, the reticulations also more distinct. Flowers rather larger. Ovary glabrous or nearly so.—*S. concolor*, F. Muell. *Fragm.* iii. 147, v. 154.—Broad Sound and near Maryborough, *Bowman*.

70. **G. agrifolia**, *A. Cunn. in R. Br. Prot. Nov. 24*. A shrub of strong growth, the young shoots minutely silky-tomentose, often ferruginous and the old foliage scarcely glabrous. Leaves petiolate, obovate-cuneate, more or less undulate and angular or sinuate with prickly-pointed angles or teeth, tapering from the middle downwards,

1½ to 3 in. long, more obliquely penniveined than in *G. Wickhami*, the reticulations prominent on both sides. Racemes rather dense, secund, 1 to 1½ in. long, on short peduncles, axillary or terminating short branches. Pedicels 1 to 2 lines long, glabrous as well as the rachis. Perianth glabrous outside, densely bearded inside with reflexed hairs, the tube 3 or 4 lines long, scarcely dilated at the base, much revolute under the globular limb. Torus oblique. Gland large, horseshoe-shaped. Ovary glabrous, on a slender stipes, at the upper margin of the torus; style long, slender, glabrous; stigmatic disk lateral. Fruit obliquely globular, 7 or 8 lines diameter.—Meissn. in DC. Prod. xiv. 380.

N. Australia. Cape Pond, Sims's, Lacrosse, and Goulburn Islands, *A. Cunningham*; Nichol Bay, *F. Gregory's Expedition*; Gulf of Carpentaria, *F. Mueller*; in the interior, *M'Douall Stuart's Expedition*.

68. **G. angulata**, *R. Br. Prot. Nov. 24*. A shrub of 3 to 6 ft., quite glabrous and usually glaucous, or the young shoots scarcely pubescent. Leaves petiolate, ovate or oblong, cuneate at the base, more or less undulate and prickly-toothed, 1 to 2 in. long or rather more when narrow, reticulate on both sides. Racemes dense, secund, axillary and terminal, on peduncles of $\frac{1}{2}$ to 1 in., the rachis 6 to 8 lines long. Pedicels slender, $1\frac{1}{2}$ to 2 lines long. Perianth glabrous or pubescent with short appressed hairs outside, densely bearded inside with erect hairs, the tube nearly 4 lines long, not much dilated at the base, attenuate and much revolute under the globular limb. Torus oblique. Gland prominent, horseshoe-shaped. Ovary glabrous, stipitate on the upper margin of the torus; style rather long; stigmatic disk ovate, lateral. Fruit very obtuse with the base of the style lateral, 4 to 6 lines long.—Meissn. in DC. Prod. xiv. 380; *G. ilicifolia*, A. Cunn. Herb. not of R. Br.

N. Australia. Sims's Island, *A. Cunningham*; Victoria river, *Bynoe*, *F. Mueller*; Fitzmaurice river, *F. Mueller*.

Var. ? *lancifolia*, *F. Muell.* Leaves oblong-lanceolate, 2 to 3 in. long.—Stony ranges, Central Australia, *Herb. F. Mueller* (collector not named).

19. *G. chrysodendron*, *R. Br. in Trans. Linn. Soc. x. 176, Prod. 379*. A tree of 15 to 20 ft., the young branches tomentose. Leaves pinnate with numerous very narrow linear segments of 4 to 8 in. the lower ones sometimes forked, the rachis angular, 6 in. to 1 ft. long, the segments silky underneath, becoming glabrous above, rarely rather broader and veined, the margins revolute. Racemes erect, terminal or in the upper axils, rather dense, secund, 3 to 5 in. long. Flowers yellow. Pedicels 1 to 2 lines long, tomentose-villous as well as the rachis. Perianth pubescent or villous outside, glabrous inside, the tube not broad, scarcely 3 lines long, slightly contracted and much revolute under the globular limb. Torus straight. Gland almost or quite divided into two, broad and short. Ovary sessile, villous; style long, the stigmatic disk oblique or lateral, with a prominent central umbo. Fruit obliquely ovate-oblong, compressed, about $\frac{3}{4}$ in. long. Seedwing surrounding the nucleus, but narrow.—Meissn. in DC. Prod. xiv. 383; *G. pteridifolia* Knight, Prot. 121; *G. Mitchellii*, Hook. in Mitch. Trop. Austral. 265; Meissn. l.c.

N. Australia. Islands of the Gulf of Carpentaria, *R. Brown*; Victoria river, *Bynoe, F. Mueller*; Port Essington, *Armstrong*; Port Darwin, *Schulz*; Melville island, *Fraser*, and other points of the N. coast, *A. Cunningham*, and others.

Queensland. Endeavour river, *R. Brown*; Rockingham Bay, *Dallachy*; Mistake Creek, *Fitzalan*; Cape river, *Bowman*; Brigalow scrub on the Belyando, *Mitchell*.

Meissner distinguishes two species amongst Mitchell's specimens, differing chiefly in the breadth of the perianth-tube and in the degree of obliquity of the stigmatic disk, differences which however I have failed to appreciate in the specimens quoted.

71. **G. Cunninghamii**, *R. Br. Prot. Nov.* 23. A glabrous and more or less glaucous shrub attaining 10 ft. Leaves sessile or nearly so, ovate, deeply cordate with broad stem-clasping auricles, undulate and prickly-toothed, 1 to 2 in. long and broad, prominently but finely reticulate on both sides. Racemes axillary, short and few-flowered, on slender peduncles of about $\frac{1}{2}$ in., the pedicels 1 to 2 lines long, all quite glabrous. Perianth glabrous outside, sparingly bearded inside about the middle, the tube scarcely 3 lines long, broad and very oblique below the middle, contracted and much revolute under the globular limb. Torus oblique. Gland horseshoe-shaped, large but slightly prominent. Ovary glabrous, shortly stipitate near the upper margin of the torus; style not very long, broad and flattened, stigmatic disk oval-oblong, lateral. Fruit oblique, very obtuse, 4 to 5 lines long.—Meissn. in DC. *Prod.* xiv. 379; *G. carduifolia*, A. Cunn. Herb.

N. Australia. Montague Sound, N.W. coast, A. Cunningham.

74. **G. dimidiata**, *F. Muell. Fragm.* iii. 146. A tree (?), quite glabrous with a glaucous foliage resembling in some respects *G. mimosoides*, but at once distinguished by the broad leaves and large differently shaped flowers. Leaves falcate, 6 to 10 in. long and 1 to 3 in. broad in the middle in the few specimens seen, tapering into a short petiole, flat, rather thick, with numerous almost longitudinal veins and reticulations, not very prominent but equally visible on both sides. Racemes rather loose, 2 to 4 in. long, pedunculate and collected several together in a loose terminal panicle. Pedicels 1 to 1½ lines long. Perianth quite glabrous as well as the whole inflorescence, the tube about 4 lines long, revolute under the globular limb. Torus very oblique, concave. Gland adnate, scarcely prominent. Ovary glabrous, on a long stipes on the upper part of the torus; style long, flattened; stigmatic disk oblique, shortly conical in the centre.

N. Australia. Careening Bay, A. *Cunningham* (leaves only); Victoria river, *F. Mueller*; Roper river, *M'Douall Stuart's Expedition*.

75. **G. heliosperma**, *R. Br. in Trans. Linn. Soc. x. 176, Prod.* 380. A small slender tree, the young shoots minutely silvery or fulvous-pubescent, the adult foliage glabrous and more or less glaucous. Leaves once or twice pinnate, the segments not very numerous, oblong-lanceolate, obtuse, flat, 3 to 4 in. long, tapering at the base and often petiolulate, triplinerved or penniveined with few almost longitudinal primary veins and numerous almost longitudinal reticulations conspicuous on both sides, the whole leaf 6 in. to 1 ft. long. Racemes very loose, secund, 2 to 4 in. long, terminal or lateral, often branched but shorter

than the leaves. Perianth glabrous outside as well as the whole inflorescence, bearded inside below the middle, the tube fully 4 lines long, dilated towards the base, somewhat contracted upwards and much revolute under the obliquely globular limb. Torus very oblique and narrow, 3 lines long. Gland adnate, scarcely prominent. Ovary glabrous, stipitate at the upper end of the torus; style very long; stigmatic disk very oblique or lateral, very convex. Fruit nearly globular, oblique, 1 in. diameter, with very thick hard valves. Seed broadly winged all round.—Meissn. in DC. Prod. xiv. 380.

N. Australia. N. coast, *R. Brown*; Port Raffles, *A. Cunningham*; Melville island, *Fraser*; Point Pearce, M'Adam Range, Roper river, *F. Mueller*; Port Darwin, *Schultz*; Caledon Bay and Liverpool river, *Gull*.

85. *G. mimosoides*, R. Br. in *Trans. Linn. Soc.* x. 177, *Prod.* 380, *Prot. Nov.* 25. A tree quite glabrous, but the foliage glaucous. Leaves undivided, lanceolate, falcate, 6 to 10 in. long, varying from under $\frac{1}{2}$ in. to above 1 in. in breadth, obtuse or with a callous point, tapering into a short petiole, flat, with several sometimes many longitudinal veins or nerves and very oblique almost longitudinal veinlets visible on both sides, but not very prominent. Flowers small, "pinkish white" in slender glabrous racemes of 3 or 4 in. shortly pedunculate and usually several in a terminal leafless panicle. Pedicels $\frac{1}{2}$ to 1 in. long. Perianth glabrous, the tube narrow, about 2 lines long, revolute under the globular limb. Torus small. Disk semiannular, scarcely prominent or very obscure. Ovary glabrous, on a long stipes; style long, with a short nearly straight stigmatic cone or conical disk. Fruit broad, very oblique, somewhat compressed, fully 1 in. long. Seed-wing narrow, coriaceous.—Meissn. in DC. *Prod.* xiv. 385.

N. Australia. Careening Bay, N.W. coast, *A. Cunningham*; Victoria river,

M'Adam Range, Fitzmaurice river, *F. Mueller*; islands of the Gulf of Carpentaria, *R. Brown*, *Henne*.

The leaves closely resemble those of some of the tropical phyllodinous *Acacia*; when broad they are also very nearly those of *G. dimidiata*, which has however very different flowers.

136. **G. polybotrya**, *Meissn. in DC. Prod.* xiv. 386. An erect probably tall shrub, the branches and inflorescence tomentose-pubescent, the young foliage sprinkled with silvery shining hairs, glabrous but pale when full grown. Leaves entire, oblong and obtuse or oblong-lanceolate and acute, contracted into a short petiole, $\frac{3}{4}$ to $1\frac{1}{2}$ in. long, flat and rather thick, veinless or the midrib and sometimes 2 lateral veins slightly prominent. Racemes or spikes shortly pedunculate, cylindrical, dense, $1\frac{1}{2}$ to 2 in. long, numerous in a large, dense leafless terminal panicle. Flowers nearly sessile. Perianth sprinkled with appressed hairs, slender, revolute, fully 2 lines long, the limb globular. Torus straight. Gland prominent, semiannular. Ovary glabrous or slightly viscid, very shortly stipitate; style long and filiform; stigmatic cone rather short, with a prominent margin. Fruit about $\frac{1}{2}$ in. long, compressed, apparently viscid.—*G. Martinii*, F. Muell. *Fragm.* iv. 129, t. 32; *G. polybotrya*, F. Muell. *Fragm.* vi. 208, but not the one described in Hook. *Kew Journ.* ix. 23.

N. Australia. Glenelg river, N.W. coast, *Martin*.

W. Australia, *Drummond*, n. 90, 162, 4th coll. n. 279.

78. *G. polystachya*, R. Br. in *Trans. Linn. Soc.* x. 177, *Prod.* 380. A tall shrub or small tree, attaining about 30 ft., the branches minutely silky-pubescent or hoary when young. Leaves linear or linear-lanceolate and undivided, or dilated upwards and irregularly divided into 2 to 6 long linear-lanceolate segments, the whole leaf 6 to 10 in. long, acuminate, tapering into a petiole, glabrous above, more or less silky-pubescent underneath, with the midrib and often longitudinal lateral veins prominent. Racemes rather dense, secund, 3 to 4 in. long, glabrous, usually several in a short terminal panicle. Pedicels 1 to 2 lines long. Perianth white, glabrous outside, shortly bearded inside, the tube about 4 lines long, not much dilated at the base, narrow and revolute under the globular limb. Torus oblique but not very much so. Gland semicircular. Ovary glabrous, stipitate; style rather long, shortly thickened under the very oblique stigmatic disk. Fruit woody, obliquely orbicular, $\frac{3}{4}$ to 1 in. diameter. Seeds broadly winged.—Meissn. in DC. *Prod.* xiv. 384; *G. parallela*, Knight, *Prot.* 121; *G. polybotrya*, F. Muell. in Hook. *Kew Journ.* ix. 23; Meissn. l.c. 698, not of Meissn. l.c. 386.

N. Australia. Macadam Range and S. Alligator river, F. Mueller.

Queensland. Shoalbay passage, R. Brown; Gilbert river, F. Mueller; Edgcombe and Rockingham Bays, Dallachy; Port Denison, Fitzalan; Broad Sound, Flinders and Bowen rivers, Bowman; Liverpool river, Gulliver; Port Mackay, Nerst.

Var. *hebestachya*. Racemes minutely hoary-pubescent. Flowers rather smaller.—Cape York, Daemel; Dayman's island, W. Hill. Some of the Rockingham Bay specimens are intermediate between these and the typical form.

G. angustata, R. Br. *Prot.* Nov. 24; Meissn. in DC. *Prod.* xiv. 384, described from specimens in leaf only from Cape Cleveland, A. Cunningham, is probably only a very narrow leaved form of *G. polystachya*.

83. **G. pyramidalis**, *A. Cunn. in R. Br. Prot. Nov. 25*. A tall shrub or small tree, the adult foliage glabrous and glaucous. Leaves once or twice pinnate, the segments not numerous, linear-cuneate or oblanceolate, obtuse, 3 to 5 in. long, tapering at the base and often petiolulate, flat, rather thick, longitudinally but irregularly veined on both sides. Flowers very small, in paniculate glabrous racemes like those of *G. leucadendron*, and agreeing precisely in structure and proportions with that species, of which *G. pyramidalis* may prove to be a short-leaved variety.—Meissn. in DC. Prod. xiv. 381.

N. Australia. Regent's river, N.W. coast, *A. Cunningham*.

76. *G. refracta*, R. Br. in *Trans. Linn. Soc.* x. 176, *Prod.* 380. A tall shrub or small tree, the young branches tomentose. Leaves mostly pinnate with 3 to 11 segments 2 to 5 in. long; linear-lanceolate or the terminal one broader, or sometimes reduced to a single oblong-cuneate leaf, the segments acute or obtuse when broad, tapering at the base and sometimes petiolulate, the margins usually recurved, nearly glabrous above and penniveined with numerous very oblique and nearly parallel primary veins, densely silky-pubescent underneath with the midrib alone prominent. Racemes short, secund, nearly sessile, usually several together in a small sessile terminal panicle, the rhachis of each raceme rarely above 1 in. long, the pedicels 2 to 3 lines, hoary-tomentose. Perianth silky-pubescent outside, bearded inside about the middle, the tube 4 to 5 lines long, dilated towards the base, contracted upwards and much revolute under the obliquely globular limb. Torus very oblique. Gland very prominent, half cup-shaped, 2-lobed. Ovary glabrous, stipitate on the upper margin of the torus; style thick, not very long; stigmatic disk lateral. Fruit very hard, nearly globular, about 1 in. diameter. Seed broadly winged.—Meissn. in DC. *Prod.* xiv. 382.

N. Australia. Islands of the Gulf of Carpentaria, *R. Brown*; Cambridge Gulf, N.W. coast, *A. Cunningham*; Cygnet Bay, *Wickham*; Victoria river, *Bynoe*, *F. Mueller*; Sea Range and Fitzmaurice river, *F. Mueller*; Short's Range, Newcastle water, *Rilliart's springs*, *M'Douall Stuart's Expedition*.

Var. *ceratophylla*. Leaf-segments often rather broader and several of the leaves undivided, the primary veins more conspicuous underneath.—*G. ceratophylla*, R. Br. in *Trans. Linn. Soc.* x. 177, *Prod.* 380; Meissn. in DC. *Prod.* xiv. 382; *G. heterophylla*, A. Cunn. in R. Br. *Prot.* Nov. 24; Meissn. l.c. 381.—Islands of the Gulf of Carpentaria, *R. Brown*; N.W. coast, *A. Cunningham*.

Var. *velutina*, Meissn. Segments of the leaves all broad and densely silky-ferruginous on both sides.—*G. velutina*, A. Cunn. *Herb.*—Greville island, Regout's river, *A. Cunningham*; Glenelg river, *Martin*.

69. **G. Wickhami**, *Meissn. in DC. Prod.* xiv. 380. A shrub of 4 to 6 ft. or a small tree, the young branches and foliage minutely silky-pubescent, the older leaves nearly glabrous. Leaves petiolate, ovate, angular or sinuate, with prickly-pointed angles or teeth, cuneate at the base, 1 to 1½ in. long, reticulate as in *G. angulata*, or thicker with the reticulations less conspicuous. Racemes secund, ¾ to 2 in. long, on short axillary peduncles or terminating short branches. Pedicels 1 to 2 lines long, glabrous as well as the rachis. Perianth glabrous outside, bearded inside about the middle, the tube scarcely 3 lines long, broad and very oblique at the base, contracted and much revolute under the globular limb. Torus oblique. Gland horseshoe-shaped, large but not very prominent. Ovary glabrous, stipitate on the upper margin of the torus; style glabrous or minutely papillose-pubescent, with a large lateral stigmatic disk. Fruit very obtuse, 4 to 5 lines long.

N. Australia. Osborne's Harbour, N.W. coast, *Wickham*; Roebuck Bay, *Martin*; King's Sound and Collier Bay, *Chapman*; Port Darwin, *Schultz*; Gulf of Carpentaria, *F. Mueller*.