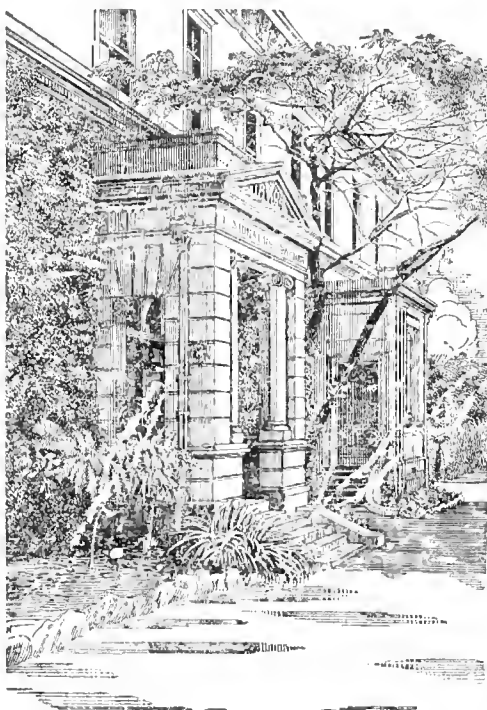


NEW SOUTH WALES
DEPARTMENT OF AGRICULTURE

CONTRIBUTIONS
FROM THE
NEW SOUTH WALES
NATIONAL HERBARIUM



Flora Series : Nos. 30-31

G 11497

CONSPECTUS OF FAMILIES OF VASCULAR PLANTS REPRESENTED IN THE FLORA OF NEW SOUTH WALES

(The account of each family, or consecutive group of families as issued, will appear with separate pagination; the names of those families that have been published to date are in italics.)

GYMNOSPERMAE

- | | |
|------------------------|-----------------------|
| 1 <i>Zamiaceae</i> | 4 <i>Pinaceae</i> |
| 2 <i>Podocarpaceae</i> | 5 <i>Cupressaceae</i> |
| 3 <i>Araucariaceae</i> | |

ANGIOSPERMAE—MONOCOTYLEDONES

- | | |
|-----------------------------|---|
| 6 <i>Typhaceae</i> | 28 <i>Eriocaulaceae</i> |
| 7 <i>Sparganiaceae</i> | 29 <i>Commelinaceae</i> |
| 8 <i>Pandanaceae</i> | 30 <i>Pontederiaceae</i> |
| 9 <i>Potamogetonaceae</i> | 31 <i>Philydraceae</i> |
| 10 <i>Ruppiaceae</i> | 32 <i>Juncaceae</i> |
| 11 <i>Zauichelliaceae</i> | 33 <i>Liliaceae</i> |
| 12 <i>Najadaceae</i> | 34 <i>Xanthorrhoeaceae</i> |
| 13 <i>Zosteraceae</i> | 35 <i>Agavaceae</i> |
| 14 <i>Aponogetonaceae</i> | 36 <i>Philesiaceae</i> |
| 15 <i>Posidoniaceae</i> | 37 <i>Smilacaceae</i> |
| 16 <i>Juncaginaceae</i> | 38 <i>Haemodoraceae</i> |
| 17 <i>Alismataceae</i> | 39 <i>Amaryllidaceae</i> |
| 18 <i>Hydrocharitaceae</i> | 40 <i>Hypoxidaceae</i> |
| 19 <i>Gramineae, Part I</i> | 41 <i>Alstroemeriaceae</i> |
| 20 <i>Cyperaceae</i> | 42 <i>Dioscoreaceae</i> |
| 21 <i>Palmae</i> | 43 <i>Petermanniaceae</i> |
| 22 <i>Araceae</i> | 44 <i>Iridaceae</i> |
| 23 <i>Lemnaceae</i> | 45 <i>Zingiberaceae</i> |
| 24 <i>Flagellariaceae</i> | 46 <i>Cannaceae</i> |
| 25 <i>Restionaceae</i> | 47 <i>Burmanniaceae</i> |
| 26 <i>Centrolepidaceae</i> | 48 <i>Orchidaceae. See H.M.R. Rupp: The
Orchids of New South Wales. 1943.</i> |
| 27 <i>Xyridaceae</i> | |

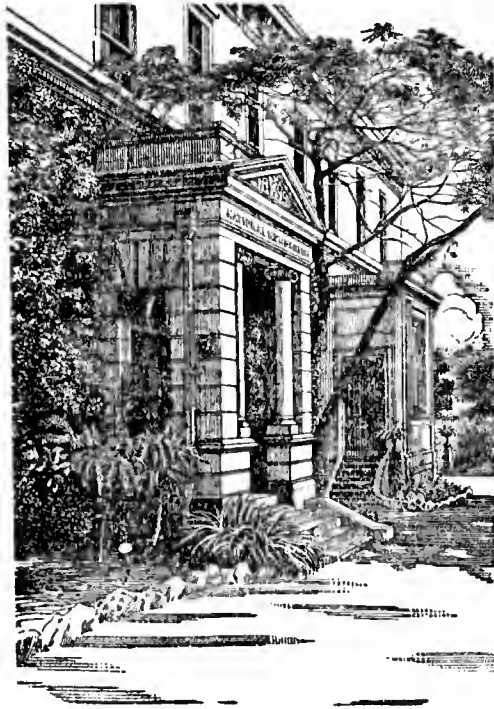
ANGIOSPERMAE—DICOTYLEDONES

- | | |
|----------------------------|----------------------------|
| 49 <i>Casuarinaceae</i> | 71 <i>Portulacaceae</i> |
| 50 <i>Piperaceae</i> | 72 <i>Basellaceae</i> |
| 51 <i>Salicaceae</i> | 73 <i>Caryophyllaceae</i> |
| 52 <i>Fagaceae</i> | 74 <i>Nymphaeaceae</i> |
| 53 <i>Ulmaceae</i> | 75 <i>Cabombaceae</i> |
| 54 <i>Moraceae</i> | 76 <i>Ceratophyllaceae</i> |
| 55 <i>Cannabiaceae</i> | 77 <i>Ranunculaceae</i> |
| 56 <i>Urticaceae</i> | 78 <i>Berberidaceae</i> |
| 57 <i>Proteaceae</i> | 79 <i>Menispermaceae</i> |
| 58 <i>Loranthaceae</i> | 80 <i>Winteraceae</i> |
| 59 <i>Santalaceae</i> | 81 <i>Annonaceae</i> |
| 60 <i>Olacaceae</i> | 82 <i>Eupomatiaceae</i> |
| 61 <i>Aristolochiaceae</i> | 83 <i>Trimeniaceae</i> |
| 62 <i>Polygonaceae</i> | 84 <i>Monimiaceae</i> |
| 63 <i>Chenopodiaceae</i> | 85 <i>Lauraceae</i> |
| 64 <i>Dysphaniaceae</i> | 86 <i>Cassythaceae</i> |
| 65 <i>Amaranthaceae</i> | 87 <i>Papaveraceae</i> |
| 66 <i>Nyctaginaceae</i> | 88 <i>Fumariaceae</i> |
| 67 <i>Phytolaccaceae</i> | 89 <i>Cruciferae</i> |
| 68 <i>Gyrostemonaceae</i> | 90 <i>Capparidaceae</i> |
| 69 <i>Molluginaceae</i> | 91 <i>Resedaceae</i> |
| 70 <i>Aizoaceae</i> | 92 <i>Droseraceae</i> |

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NEW SOUTH WALES
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NATIONAL HERBARIUM



Flora Series : Nos. 30-31

1966

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FLORA OF NEW SOUTH WALES

by

VARIOUS BOTANISTS

PRODUCED UNDER THE DIRECTION OF

K. MAIR

Director and Chief Botanist,
National Herbarium of New South Wales

No. 30 PONTEDERIACEAE

No. 31 PHILYDRACEAE

EDITOR: JOYCE W. VICKERY

Formerly produced under the direction of R. H. Anderson, 1961-1964

30. PONTEDERIACEAE

1

(By O. D. Evans)

Flowers hermaphrodite, actinomorphic or zygomorphic, mostly arranged in spikes, racemes or panicles, which are subtended by 1-2 spathe-like or tubular leaf-sheaths; bracts minute or absent. Perianth hypogynous, petaloid, 6-lobed, sub-biseriate, quickly withering after anthesis. Stamens 6 or 3, rarely 1, inserted on the perianth, sometimes unequal in length; filaments free from each other; anthers 2-locular, opening lengthwise by slits or rarely by pores. Ovary superior, sessile, either 3-locular with axile placentas or with one loculus only fertile and then with one pendulous ovule, or 1-locular with 3 parietal placentas; ovules anatropous, numerous to solitary; style 1, entire or minutely lobed. Fruit either a 3-valved loculicidal capsule or achene-like. Seeds longitudinally ribbed; endosperm copious; embryo cylindrical, straight. Perennial, rarely annual, erect or floating aquatic herbs. Leaves rosulate or alternate or solitary at the apex of the stem, emersed or submerged or floating; petioles sheathing at the base, with numerous air-chambers.

A family of 7-8 small genera and about 25 species, found only in fresh water in tropical, sub-tropical and warm temperate parts of the Old and New Worlds, except Europe. The family is represented in northern Queensland and the Northern Territory by a single native species, *Monochoria cyanea* (F. Muell.) F. Muell. Some species are grown for ornamental purposes; several have escaped from cultivation and have become serious pests on waterways.

1. Perianth lobes 3-4 cm. long; ovary 3-locular; ovules numerous. Plants normally floating *Eichhornia* 1.
- 1.* Perianth lobes 1 cm. long or less; ovary with one fertile loculus and one ovule. Plants attached to the soil *Pontederia* 2.

1. *EICHHORNIA Kunth

Aquatic herbs of sympodial structure, floating or creeping, rooting from the nodes; components of the sympodium annual or perennial. Leaves rosulate or alternate, usually broad, the petioles spongy, short or long, often inflated and acting as buoys. Inflorescence terminal, racemose, few- to many-flowered, erect during anthesis, afterwards deflexed. Perianth zygomorphic or subactinomorphic, funnel-shaped, with a long or short tube, 6-lobed. Stamens 6, inserted in the throat of the perianth or deeper, decurved, unequal, often trimorphous; anthers dorsifixed. Ovary 3-locular with axile placentas; ovules numerous; style filiform, the plants often heterostylous. Fruit a 3-valved, many-seeded capsule.

A genus of about 6 species found in South America, one extending to Africa. A single species is naturalised in Australia.

**E. crassipes* (Mart.) Solms in A. & C. DC., Monogr. Phanerog. IV (1883) 527; Schwartz in Engl. & Prantl, Naturl. Pflanzenf. XVa (1930) 187, fig. 70; Coeks in Spafford, Bull. Dept. Agric. S. Austral. (1939) 345, frontisp.; Allan, Bull. N.Z. Dep. Sci. Ind. (1940) 304, fig. 141A; Black, Fl. S. Austral., ed. 2, I (1943) 180; Backer, Fl. Males. ser. 1, 4, III (1951) 259; Meadly, Journ. Dept. Agric. W. Austral. ser. 3, III (1954), t. opp. p. 577; Everist, Common Weeds of Farm & Pasture (Qld. Dept. Agric., 1957) 21, fig. 2; Whittet, Weeds (N.S.W. Dept. Agric., 1958) 27, fig. 24; Willis, Handb. Pl. Vic. I (1963) 282; Bcadlc, Evans & Carolin, Handb.

Vasc. Pl. Syd. Distr. (1963) 439. For further references see Backer, loc. cit. Floating, or if in shallow water then sometimes rooting in the mud, propagating rapidly by stolons, 10–100 cm. high with a very short leafy main stem, and a large bunch of fibrous roots each with numerous filiform laterals. Leaves basal, rosulate; lamina very broadly ovate to rhomboid-orbicular, from 5 to 20 cm. in length and breadth, thick, glabrous and shining, very obtuse, finely and densely curviveined; margins entire, often somewhat undulate; petiole spongy, on small plants very much swollen at or below the middle, in larger plants tapering from the base, 2–60 cm. long or more, scarcely sheathing at the base. Inflorescence up to 15 cm. long, but often very much shorter; flowers from few to more than 30, expanding more or less simultaneously; peduncle erect, 10–40 cm. long, with two closely approximate, appressed bracts in the upper part, the lower with a tubular sheath and a small lamina, the upper tubular for much of its length and apiculate. Perianth segments lilac-blue, the outer 3 paler, 3–4 cm. long, ca. 1 cm. wide, the inner unequal with the posterior one erect, 3–4 cm. long, ca. 2 cm. wide with a bright yellow, blue-bordered median blotch, and 14–20 dark veins, and the other two shorter; perianth tube ca. 2 cm. long, slightly curved. Stamens inserted in the throat of the perianth, often 3 long and exserted, and 3 short and enclosed; filaments glandular-hairy; anthers 2 mm. long, bluish. Style 2.5 cm. long, glabrous in the lower part, glandular-hairy and bent upward towards the apex; stigma capitate; ovary glabrous, 6 mm. long, 3 mm. diam. Capsule not seen, described by other authors as small and ovoid. Chromosome number: $2n = 32$ (various authors, including Briggs in Contrib. N.S.W. Nat. Herb. IV (1966) 27, the last on Australian material). Fl. Summer. "Water Hyacinth". *E. speciosa* Kunth, Enum. Pl. IV (1843) 131; F. M. Bail., Queensl. Fl. V (1902) 1644; Ewart, Fl. Vic. (1931) 264. *Pontederia crassipes* Mart., Nov. Gen. Sp. (1823) 9, t. 4; incorrectly as "*P. azurea* Sw.". Hooker in Curtis Bot. Mag. LVI (1829) t. 2932. *Heteranthera formosa* Miq. in Linnaea V (1843) 61. *Piaropus crassipes* (Mart.) Britton in Ann. N.Y. Acad. Sc. VIII (1893) 241, ff. 2 & 3.

Chiefly North and Central Coast, less commonly Western Slopes and Plains: Marthaguy Creek, "Haddon Rig" Station, near Warren, 4.1961 (59171); Taree, Town Clerk 4.1949 (59172); Richmond, Tindale 1.1949 (59173); Parramatta Park, Constable 2.1964 (74101); Cabramatta, Salasoo No. 2178, 11.1961 (59170); also reported from Richmond R., Clarccc R., Macleay R., Hunter R., Moree, Rylstone district, Deniliquin and Albury. Native in tropical America, naturalised also in other States of Australia, especially Queensland and Western Australia and sparingly in Victoria and South Australia as well as widely in warm regions of the world.

The species forms dense masses by vegetative spread in still or slow-moving water and is a serious pest of waterways, particularly on the coast. At present it is mostly under control but requires continual attention. "Water Hyacinth" is proclaimed as a noxious weed throughout the State. It is nevertheless sometimes found in garden ponds as an ornamental. Individual plants vary greatly in size according to conditions of growth. The masses of delicate lilac flowers are very striking when large patches are in full bloom.

The species is reported to be heterotristylous; if complementary forms are not present this may account for the apparent absence of fruits amongst Australian material. Fruits are reported to be scarce or absent in other countries where the species is introduced. There are, however, unconfirmed reports of seedlings from the Richmond River and Macleay River districts.

2. *PONTEDERIA L.

Marsh or aquatic perennial herbs with broad or narrow leaves. Inflorescence a contracted spike-like panicle on a long peduncle arising from the rhizome, bearing one leaf with an expanded lamina and above it a sheath without a lamina. Flowers blue or varying to white, the upper perianth lobe marked with yellow. Perianth funnel-shaped with a bilabiate limb, the 3 lower lobes nearly or quite free from each other, the upper lobes united for about half their length with the middle one broader than the laterals and marked with yellow. Stamens 6, unequal, inserted in the

throat of the corolla; anthers dorsifixed. Ovary 3-locular, one loculus only fertile, with one pendulous ovule, the other two loculi abortive and sterile. Fruit an achene-like body, enclosed within the accrescent perianth tube and beaked with the persistent style-base.

A genus of 3 species found in North and South America.

**P. lanceolata* Nutt., Gen. 1 (1918) 216; Fernald in *Rhodora* XXVII (1925) 81; Gleason in *Illustr. Fl. Northeastern U.S. and Adj. Canada*, 1 (1958) 383. Rhizome creeping, roots fibrous. Stem erect or nearly so, up to 100 cm. high. Basal leaves and lower stem-leaf similar, erect, broad-lanceolate, ca. 15 cm. long, 6 cm. wide, finely parallel-veined, petiolate, with sheathing bases; margins entire, often undulate, at least when dry. Spathe loosely sheathing, 3-6 cm. long. Inflorescence crowded, 5-15 cm. long. Perianth externally glandular-hairy, 1.5-2 cm. long, violet-blue, the tube 5-7 mm. long, the lobes 7-10 mm. long. Filaments pubescent. Fruit 7-10 mm. long. Fl. Summer. *P. cordata* L. var. *lanceolata* (Nutt.) Griseb., *Cat. Pl. Cub.* (1866) 252. For further synonymy see Fernald, loc. cit.

Southwestern Slopes, sparingly naturalised in standing water. Woomargama Lake, S of Holbrook, McBarron 1.1947 (59169). Native from eastern North America to tropical and South America.

In 1954 Mr. McBarron reported that this species was naturalised and spreading at the Woomargama locality.

Gleason, loc. cit., states that this plant exhibits the same range of variation in leaf-shape as *P. cordata* and should possibly be combined with it. In the present treatment it is distinguished chiefly by the glandular hairs of the perianth.



31. PHILYDRACEAE

(By O. D. Evans and L. A. S. Johnson)

Flowers hermaphrodite, zygomorphic, few or numerous in spikes or panicles, each flower solitary in the axil of a spatheous bract. Perianth corolline; tepals 4 in 2 whorls, free or united at the base, the outer whorl antero-posterior, the inner more or less lateral. Stamen 1, inserted at the base of the abaxial segment; anther 2-locular; loculi straight or twisted, opening lengthwise by slits; pollen grains single or in tetrads. Ovary superior, either 3-locular with axile placentas or 1-locular with parietal placentas; ovules numerous, anatropous; style simple. Fruit a 3-valved loculicidal capsule or a berry with a leathery pericarp. Seeds numerous; embryo straight; endosperm copious. Erect perennial rhizomatous herbs. Leaves linear, ensiform, basal or crowded near the stem-base, distichous, equitant, parallel-veined.

A family of only 3 genera and 5 species; one genus, *Philydrella*, endemic in south-west Australia, one in eastern Australia and New Guinea, and the third extending from Australia to Malesia and South-east Asia. Two genera and two species in New South Wales. In wet situations, at the margins of ponds, streams and swamps, one genus confined to rainforest.

A family of no particular economic importance.

Skottsberg (in Engl. Bot. Jahrb. LXV (1933) 253–273) discusses the morphology of the family. It seems probable that the two-keeled adaxial (apparent) tepal of the outer whorl is a compound structure of two fused tepals. On this interpretation the adaxial tepal of the inner whorl is missing. The solitary stamen would thus be the abaxial member of the outer whorl of the androecium.

1. Inflorescence a simple, elongated spike, often with 1 to several branches at the base. Anther loculi spirally twisted; pollen in tetrads *Philydrum* 1.
 1.* Inflorescence a much-branched panicle. Anther erect, not twisted; pollen grains single *Helmholtzia* 2

1. *Philydrum* Banks et Soland. ex Gaertn.

Erect perennial herbs with a short rhizome and fibrous roots. Leaves mostly basal, ensiform, distichous with equitant sheathing bases. Inflorescence a long terminal spike. Outer tepals free, reflexed and much larger than the inner; inner more or less united at the base with the filament. Stamen inserted at the base of the abaxial tepal; filament flattened; anther loculi parallel near the base at their insertion, the remainder divergent and spirally twisted in opposite directions; pollen grains in tetrads. Ovary imperfectly 3-locular with axile placentation; ovules numerous. Fruit a 3-valved capsule. Seeds numerous, the testa spirally striate.

A single species.

P. lanuginosum Banks et Soland. ex Gaertn., Fruct. 1 (1788) 62, t. 16, fig. 10; Curtis, Bot. Mag. XX (1804) t. 783; R. Br., Prodr. (1810) 265; Benth., Fl. Austral. VII (1878) 74; Caruel in A. & C. DC., Monogr. Phanerog. III (1881) 3; Moore & Betche, Handb. Fl. N.S.W. (1893) 435; F.M. Bail., Qld. Fl. V (1902) 1646; Domin in Bibl. Bot. XX (1915) 512; Maiden & Betche, Census N.S.W. Pl. (1916) 39; Skottsberg in Engl. Bot. Jahrb. LXV (1933) 266, fig. 50–54; Skottsberg in Fl. Males. Ser. 1, IV, pt. 1 (1948) 5, fig. 1; Willis, Handb. Pl. Vic. I (1962) 282; Beadle, Evans & Carolin, Handb. Vasc. Pl. Syd. Distr. (1963) 451. Erect perennial herb, 50–120 cm. high at time of flowering. Leaves 20–60 cm. long, 0.5–1.5 cm. wide, evenly pluriveined, glabrous, with entire margins, mostly basal, those on the flowering stem few and soon reduced to bracts of the inflorescence. Flowering stem erect, simple or with a few erect branches, each a simple spike 20–60 cm. long and more or less clothed with soft, white, woolly hairs. Bracts ovate, stem-clasping, abruptly acuminate and subulate, enclosing the buds, reflexed at anthesis, but again embracing the fruit. Flowers up to 25 in the spike, solitary or rarely 2 together, sessile in the axils of the bracts. Tepals yellow, hairy, the 2 outer 1.0–1.5 cm. long and up to 1 cm. wide, acute, the 2 inner spatulate, up to 0.8 cm. long and 0.2–0.3 cm. wide. Stamen 9 mm. long; filament flattened; anther loculi strongly spirally twisted in opposite directions, forming a globular mass 1.5 mm. across at maturity. Ovary ellipsoid, densely hairy; style simple, 3–5 mm. long; stigma capitate. Capsule oblong-elliptical, ca. 1 cm. long, more or less hairy. Seeds very numerous, shining brown to dark reddish, bulb-shaped, spirally striate, minutely tuberculate, coronate at each end, ca. 1 mm. long over all. Chromosome number: $2n = 16$ (Briggs in Contrib. N.S.W. Nat. Herb. IV (1966) 27). Fl. Summer.

Coast, lower parts of Northern and Central Tablelands, and Central Western Slopes, in stagnant water, roadside ditches and ground liable to flooding. Acacia Creek, Dunn 3.1908 (59203); Tenterfield to Jennings, Gray No. 3725, 3.1956 (59192); Marshall Falls, Alstonville, Constable 10.1961 (66195); Alstonville district, Tomlins, before 1917 (59204); Lismore, Bäuerlein 2.1891 (59191); Lismore district 11.1896 (59205); Angourie, McComish 11.1941 (59183);

Angourie, Rodway 1.1950 (59186); Brushgrove, South Arm, Hadley 11.1915 (59193); Orara R., S of Ramornie, Blakely & Shiress 7.1922 (59194); Hat Head, E of Kempsey, Constable 1.1953 (22212); near Wingham, Salasoo No. 2806, 1.1964 (68156); foot of Mt. Bulahdelah, Garden 10.1951 (59195); Tea Gardens, Briggs 8.1964 (64619); Nelson Bay, Port Stephens, Lithgow 2.1965 (77965); E of Raymond Terrace, Lazarides 8.1960 (59182); Upper Cudjoe R., E of Olinda, McKee 1.1953 (59196); Howe's Valley, Constable 4.1963 (66196); Mellong Range, N of Grassy Hill, Johnson 4.1953 (59197); Somersby, Cox 3.1946 (1343); SE of Valley Heights, Constable 1.1963 (58993), 2.1964 (68295); Mitchell's Pass, Glenbrook, Constable 7.1951 (59208); Hornsby-Dural, Johnson 2.1946 (59188); Manly, Betche 1.1889 (59189); Port Jackson, before 1910 (59190); Botany Bay, Betche 1.1896 (59207); Botany Bay, Wilson 3.1957 (59206); Fairy Meadow-Wollongong, McBarron 11.1949 (59209); Bowral to Welby, Strugnell 3.1955 (59198); Paddy's R., de Beuzeville 2.1932 (59210); Berry, Rodway 1.1940 (59185); 4 miles S of Nowra, Rodway 1.1931 (59181); Jervis Bay, Rodway 1.1918 (59180); Huskisson, Rodway 1.1934 (59184). No Western Slopes specimens are listed, but the species has recently been reported to occur at Munghorn, NE of Mudgee, by E. F. Constable. Also in Queensland, Victoria and the Northern Territory, as well as New Guinea and from Malaya to southern China.

Skottsberg (loc. cit. p. 266, fig. 51, 52) illustrates forms with some difference in inner tepal and filament shape, from Australia and South-east Asia respectively, but any difference between the forms found in these two apparently disjunct areas does not appear to be of a high order, though a detailed study of material from the whole range may reveal some consistent intraspecific character differences.

2. *Helmholtzia* F. Muell.

Tall, perennial, stoutly rhizomatous herbs with fibrous roots. Leaves basal or nearly so, ensiform, erect, distichous with equitant sheathing bases. Inflorescence a tall, erect, terminal panicle. Tepals either free or united at the base to form a short cupular tube, the posterior one with 2 prominent veins near the margin, the inner ones smaller, free or more or less connate with the filament of the anther. Filament short to very short; anther straight; pollen grains single. Ovary perfectly or imperfectly 3-locular. Fruit a 3-valved capsule, or berry-like and tardily dehiscent. Seeds numerous, with or without a long funicle, the testa longitudinally striate.

A genus of 3 species, one in New Guinea, one in North Queensland, and the following.

Skottsberg (in Engl. Bot. Jahrb. LXV (1933) 253-274) separates the New South Wales species as a distinct genus, *Orthothylax* Skotts., on the basis of the free inner tepals and the incompletely 3-locular ovary. However, in habit, leaf-form, inflorescence, other flower characters and seeds, this and the other two species of *Helmholtzia* correspond so closely that it seems more appropriate to retain them in a single, apparently very natural genus, which is clearly demarcated from the remaining two, much more dissimilar, genera of the family; furthermore, the chromosome number is the same in *H. glaberrima* (*Orthothylax*) as in *H. acorifolia* F. Muell. (*Helmholtzia* sensu stricto) but differs from that of *Philydrum* (Briggs in Contrib. N.S.W. Nat. Herb. IV (1966) 27). Although Erdtman (Pollen Morphology & Plant Taxonomy, Angiosperms (1952) 319) describes the pollen grains of *H. acorifolia* as "probably 3-sulcate or zonisulcate" and those of *H. glaberrima* as 1-sulcate, the grains examined by us appear to be 1-sulcate in both species and are very similar in general appearance.

H. glaberrima (*Hook. f.*) *Caruel* in A. & C. DC., *Mongr. Phanerog.* III (1881) 6; F. M. Bail., *Synops. Qld. Fl.* (1883) 554; F. Muell., *Sec. Census Austr. Pl.* (1889) 205; Moore & Betche, *Handb. Fl. N.S.W.* (1893) 435; F. M. Bail., *Qld. Fl.* V (1902) 1646; Domin in *Bibl. Bot.* XX (1915) 513; Maiden & Betche, *Census N.S.W. Pl.*

(1916) 39. Perennial herb up to 150 cm. high. Rhizomes much-branched, stout, 2-5 cm. diam., ascending to become shortly erect, covered in the upper part by leaf sheaths. Roots coarse, fibrous, 2-3 mm. diam. when dry. Leaves basal or nearly so, ensiform, acuminate, coriaceous, up to 50 cm. long and 6 cm. broad, with a median vein or group of veins prominent on each surface, the primary and secondary veins linked by fine, very oblique, transverse veins; margins entire. Flowering stem erect, exceeding the leaves, terete, leafy. Panicle up to 60 cm. long, with erect whitish to pink branches, glabrous or the axis and branches softly hairy; subtending bracts ensiform, acuminate, leafy, the upper gradually reduced in size and white or pink in colour. Flowers numerous, sessile, glabrous in all parts. Outer tepals lanceolate, recurved, white to pink, 5-10 mm. long; inner tepals lanceolate, 2-5 mm. long. Stamen with a very short, stout filament; anther 3 mm. long, obtuse, with parallel contiguous loculi and an orange-coloured connective at the back. Ovary sessile, globose, ca. 1.5 mm. long, 3-locular below and 1-locular above; style filiform, ca. 4 mm. long; stigma minute, capitate. Capsule ellipsoid, 3-furrowed, 6-8 mm. long, opening loculicidally into 3 valves. Seeds ca. 5 mm. long and 0.4 mm. thick. Chromosome number: $2n = 34$ (Briggs in Contrib. N.S.W. Nat. Herb. IV (1966) 27). *Philydrum glaberrimum* Hook. f., Curtis Bot. Mag. XCIX (1873) t. 6056. *Orthothylax glaberrimus* (Hook. f.) Skottsb. in Engl. Bot. Jahrb. LXV (1933) 265.

Far North Coast in dense or thin but wet rainforest (chiefly in mountainous country) and in wet gullies, on margins of streams and near waterfalls. Wiangarie State Forest, S of McPherson Range, Constable 1.1953 (22483); sources of Tweed R., Collins & Taylor 1895 (MEL 3447); Wight's Gap Mt., Tweed R. (MEL 3454); Tweed R. district, Campbell 1901 (59166); Murwillumbah district, Bäuerlen 11.1892 (59168); Peach Mtn., Whian Whian State Forest, 15 miles N of Lismore, Constable 5.1964 (64861, 65595); Minyon Falls N of Lismore, Cheel 9.1926 (59160, 59165); Richmond R., Wilcox 1875 (MEL 3448). Also in southern Queensland.

Material of this species from New South Wales and southern Queensland has sometimes been referred to *H. acorifolia* F. Muell., but this was due to misidentification; *H. acorifolia* is confined to north Queensland. *H. glaberrima* forms very conspicuous dense communities around waterfalls in the McPherson and nearby ranges. It has been grown successfully under garden conditions in the Sydney district, having the habit of the larger species of *Iris*.

93	Crassulaceae	143	Melastomataceae
94	Esealloniaceae	144	Onagraceae
95	Pittosporaceae	145	Haloragiaceae
96	Cunoniaceae	146	Araliaceae
97	Davidsoniaceae	147	Umbelliferae
98	Rosaceae	148	Alangiaceae
99	Mimosaceae	149	Ericaceae
100	Cacsalpiniaceae	150	Epacridaceae
101	<i>Papilionaceae, Part I</i>	151	Myrsinaceae
102	Geraniaceae	152	Primulaceae
103	Oxalidaceae	153	Plumbaginaceae
104	Linaceae	154	Sapotaceae
105	Erythroxylaceae	155	Ebenaceae
106	Zygophyllaceae	156	Symplocaceae
107	Rutaceae	157	Oleaceae
108	Simaroubaceae	158	Loganiaceae
109	Burseraceae	159	Gentianaceae
110	Meliaceae	160	Menyanthaceae
111	Tremandraceae	161	Apocynaceae
112	Polygalaceae	162	Asclepiadaceae
113	Euphorbiaceae	163	Convolvulaceae
114	Callitrichaceae	164	Polemoniaceae
115	Anaeardiaceae	165	Hydrophyllaceae
116	Aquifoliaceae	166	Boraginaceae
117	Celastraceae	167	Verbenaceae
118	Siphonodontaceae	168	Avicenniaceae
119	Hippocrateaceae	169	Labiatae
120	Stackhousiaceae	170	Solanaceae
121	Icacinaceae	171	Scrophulariaceae
122	Sapindaceae	172	Selaginaceae
123	Akaniaceae	173	Bignoniaceae
124	Rhamnaceae	174	Pedaliaceae
125	Vitaceae	175	Martyniaceae
126	Elaeocarpaceae	176	Orobanchaceae
127	Tiliaceae	177	Gesneriaceae
128	Malvaceae	178	Lentibulariaceae
129	Sterculiaceae	179	Acanthaceae
130	Dilleniaceae	180	Myoporaceae
131	Eucryphiaceae	181	Plantaginaceae
132	Hypericaceae	182	Rubiaceae
133	Elatinaceae	183	Caprifoliaceae
134	Frankeniaceae	184	Dipsacaceae
135	Violaceae	185	Cucurbitaceae
136	<i>Flacourtiaceae</i>	186	Campanulaceae
137	Passifloraceae	187	Lobeliaceae
138	Cactaceae	188	Goodeniaceae
139	Thymelaeaceae	189	Brunoniaceae
140	Lythraceae	190	Sytlidiaceae
141	Rhizophoraceae	191	Compositae
142	Myrtaceae		

PTERIDOPHYTA

192	Lycopodiaceae	205	Pteridaceae
193	Selaginellaceae	206	Adiantaceae
194	Isoetaceae	207	Vittariaceae
195	Psilotaceae	208	<i>Davalliaceae</i>
196	Ophioglossaceae	209	<i>Grammitidaceae</i>
197	Marattiaceae	210	<i>Polypodiaceae</i>
198	Osmundaceae	211	<i>Aspidiaceae</i>
199	Schizaceae	212	Thelypteridaceae
200	Gleicheniaceae	213	Aspleniaceae
201	<i>Hymenophyllaceae</i>	214	Blechnaceae
202	Cyatheaceae	215	Marsileaceae
203	Dicksoniaceae	216	Azollaceae
204	Lindsaeaceae	217	Salviniaceae

