

AUSTRALIAN BIOLOGICAL RESOURCES STUDY



FLOODPLAIN FLORA

A flora of the coastal floodplains
of the Northern Territory, Australia

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Extract: Polygonaceae

POLYGONACEAE

Herbs, shrubs or lianes or very rarely trees. *Leaves* alternate, opposite or whorled, usually entire but sometimes palmately or pinnately cleft, petiolate or sessile, sometimes articulate; stipules usually well-developed, membranous or scarious, connate and forming an often 2-lobed or fringed sheath (ocrea) around the stem. *Flowers* bisexual or unisexual (if unisexual, plants usually dioecious), small, actinomorphic; inflorescences simple or branched and with flowers often in small involucre clusters, each flower commonly subtended by an ocreola; pedicels usually articulate and falling with the fruit. *Perianth* segments mostly 4–6, usually in more or less 2 whorls, basally connate and forming a small to conspicuous tube, sepaloid or petaloid, commonly persistent and sometimes enlarged in fruit. *Stamens* mostly 2–9, sometimes more, commonly 6 in 2 rows of 3; filaments distinct or basally connate, sometimes of 2 lengths, sometimes those of the inner series basally dilated; anthers tetrasporangiate and dithecal, opening by longitudinal slits. *Gynoecium* of (2) 3 (4) carpels united to form a superior, compound, unilocular ovary; ovary with a solitary basal ovule; styles 1–4, free or united. *Fruit* a nut or achene, often trigonous or lenticular. *Seed* with a straight or curved dicotyledonous embryo and well-developed endosperm.

A family of *c.* 45 genera and 1,000 species. In Australia ten genera (four native) and about 60 species. In NT seven genera and 16 species, with four taxa of *Persicaria* on the floodplains.

PERSICARIA Mill.

Annual or perennial, decumbent to erect *herbs*, sometimes rooting at nodes, occasionally rhizomatous. *Leaves* alternate, entire, more or less evenly distributed along stem, subsessile or petiolate, base of petiole lacking pit nectaries, not articulate; ocrea tubular, entire, membranous, commonly long-ciliate on upper margins. *Flowers* usually bisexual, in spike-like or capitate inflorescences, these usually forming panicle-like compound inflorescences. *Perianth* segments 4 or 5, usually petaloid, white, pink or green. *Stamens* 4–8; anthers versatile. *Styles* 2- or 3-fid; stigmas capitate and smooth. *Fruit* a lenticular, trigonous or subglobose nut enclosed in the persistent perianth.

A genus previously included in *Polygonum s. lat.* and containing *c.* 150 species. Sixteen species (12 native) are recorded for Australia. Six occur in NT.

Taxonomic reference: Wilson (1988).

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| 1 | Leaf-bearing branches densely hairy; ocrea pubescent, mainly membranous but with a green, non-membranous apex | P. orientalis |
| 1: | Leaf-bearing branches glabrous or with scattered hairs; ocrea glabrous or with appressed hairs, the apex membranous | 2 |
| 2 | Flowers few, in clusters less than 1.3 cm long (1:) | Persicaria (Bulkin Billabong entity) |
| 2: | Flowers many, in spike-like clusters mostly more than 3 cm long | 3 |
| 3 | Ocrea apically with no or usually few cilia; cilia if present less than 4 mm long; perianth segments 3–5 mm long (2:) | P. attenuata |
| 3: | Ocrea apically with prominent, coarse cilia to 20 mm long; perianth segments 2–3 mm long | P. barbata |

P. attenuata (R.Br.) Soják*Polygonum attenuatum* R.Br.

Perennial *herbs*, erect and *c.* 1 m tall when terrestrial, sometimes floating and decumbent with branches to *c.* 3 m long; branches glabrous or mostly so, rooting at nodes. *Leaves* with petiole often short or more or less absent but sometimes to 3 cm long; lamina narrowly ovate, somewhat falcate, (2) 5–20 (30) cm long, 1.5–4.5 cm wide, apex acuminate, both surfaces commonly with a somewhat dense indumentum of short, white, eglandular appressed hairs, at least the undersurface usually with conspicuous sessile glands, sometimes the white hairs mainly restricted to the margins and major veins. *Ocrea* striate, glabrous or with some appressed hairs, truncate, with cilia absent or to 4 mm long, disintegrating with age. *Inflorescence* of 2–4 dense pseudo-spikes, each spike 3–13 cm long; main axis with short appressed hairs and/or glandular hairs; ocreola with apical cilia absent or present. *Perianth* segments 3–5 mm long, white or partly greenish. *Nut* lenticular, 2.5–3 mm long, dark reddish brown, shiny. *Flowering & fruiting*: all months. Plate 19, Figs 3, 13 (*Madsen 14*).

Timor, New Guinea and Australia (WA, NT, SA, Qld, NSW). The indumentum of the leaves and inflorescences is highly variable. Grows on sand or clay, and in NT is a common species in billabongs, dams and floodplains. Localities include Arafura Swamp, Fogg Dam, McMinns Lagoon and floodplains of the Finniss and West Alligator rivers.

P. barbata (L.) H.Hara*Polygonum barbatum* L.

Perennial *herbs*, erect and to *c.* 1 m tall on land or longer if floating, glabrous or hairy, rooting at nodes. *Leaves* shortly petiolate; lamina narrowly elliptic or narrowly ovate, 5–15 (20) cm long, 1–3 cm wide; apex acuminate; rigid eglandular hairs present at least on lower midrib and margins. *Ocrea* membranous and striate, with appressed hairs, apically with coarse cilia 10–20 mm long. *Inflorescence* of 2–5 pseudo-spikes, each spike 3–7 cm long; main axis glabrous or with scattered, appressed, eglandular hairs; ocreola apically long-ciliate. *Perianth* segments 2–3 mm long, white or light green. *Nut* trigonous or sublenticular, *c.* 2–2.5 mm long, dark reddish brown or blackish, shiny. *Flowering & fruiting*: recorded Mar.–Nov. Fig. 13 (*Lazarides 8831*).

Ranges from Africa to Asia and Australia (WA, NT, Qld). In NT mainly restricted to the Top End, growing on sand or clay on floodplains, at billabongs, and near springs and permanent streams. Localities include Arafura Swamp and floodplains of the Finniss and Goromuru rivers.

P. orientalis (L.) Spach*Polygonum orientale* L.

Herbs, annual or perhaps perennial, to 2 m tall, densely hairy; hairs spreading to antrorse and to 1 mm long. *Leaves* with petiole 2–11 cm long; lamina ovate, 6–24 cm long, 3.5–8.5 (12) cm wide, with spreading to antrorse, somewhat rigid, eglandular hairs and sessile glands. *Ocrea* pubescent, mainly membranous and distinctly striate but with a green, non-membranous apex 1–7 mm long. *Inflorescence* of 1–several dense pseudo-spikes, each spike 4–17 cm long; main axis pubescent; ocreola hairy. *Perianth* segments 3–4.5 mm long, pale pink. *Styles* 2. *Nut* more or less lenticular, 2.6–3 mm long, dark reddish brown. *Flowering & fruiting*: recorded Mar.–Nov. Fig. 13 (*Dunlop 3082*).

Asia and Australia (NT, Qld, NSW). In NT confined to the Top End. Found in billabongs and floodplains, including those of the Daly, Mary and South Alligator rivers. Also recorded for Fogg Dam and Harrison Dam. Usually grows on clay soils.

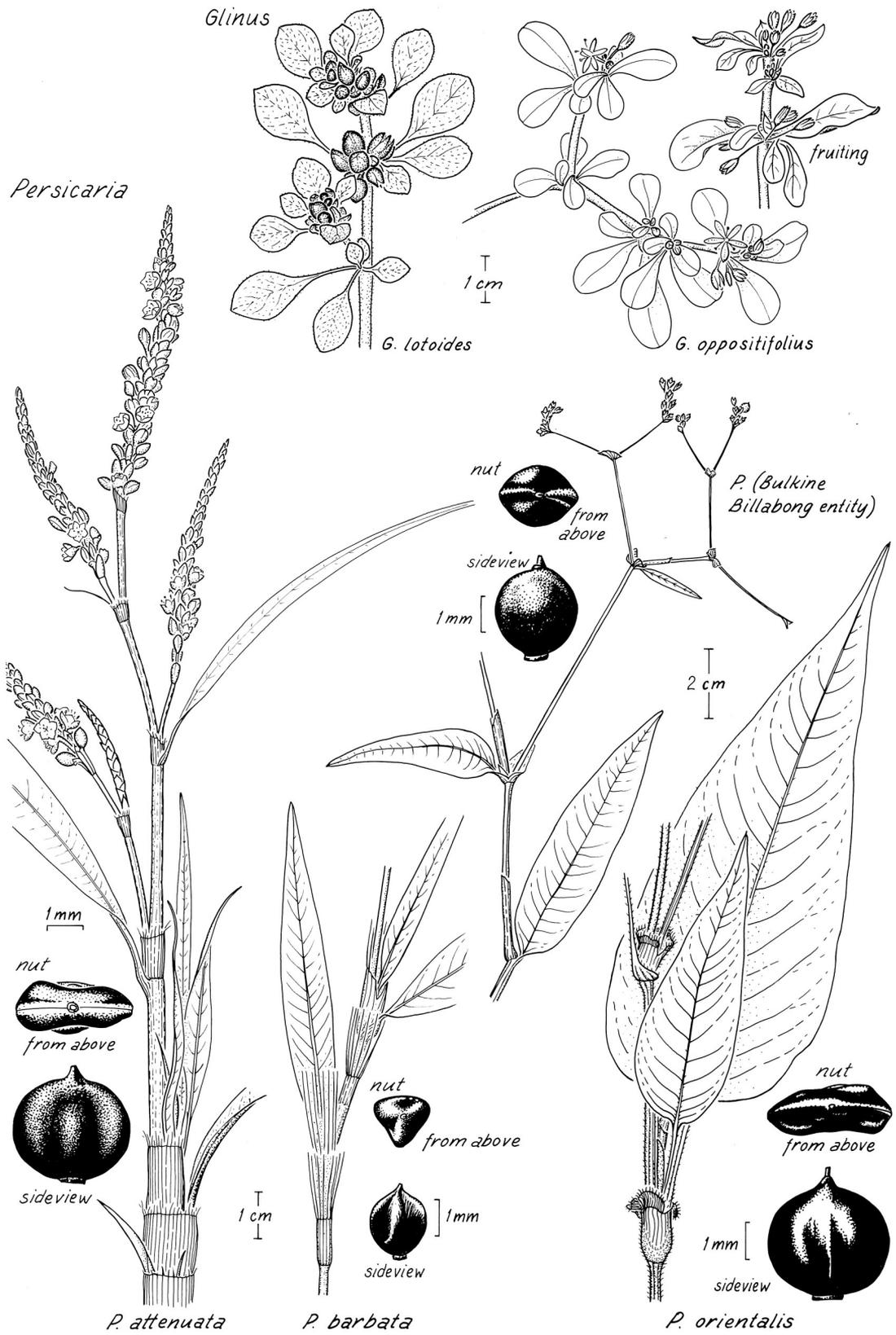


FIGURE 13

Persicaria (Bulkine Billabong entity)

Herbs, branches weakly decumbent, mostly glabrous. *Leaves* with petiole 0.2–1 cm long; lamina narrowly ovate to lanceolate, (2) 6–12.5 cm long, (0.25) 1.5–2.2 cm wide, surface glabrous; margins minutely and antrorsely scabrous-ciliate. *Ocrea* glabrous, membranous, truncate, distinctly striate; apex with or without a few short cilia *c.* 1 mm long. *Inflorescences* 2- or 3-branched; flowers several to 10 in very short clusters; clusters to *c.* 12 mm long; main axes reddish, glabrous and ridged; ocreola glabrous and not apically ciliate. *Perianth* segments *c.* 3–4 mm long. *Nut* lenticular, reddish brown, *c.* 2.7 mm long, shiny. *Flowering & fruiting*: Apr. Fig. 13 (*Dunlop 5911*).

Only known from the above cited collection from Bulkine Billabong, Wagait Reserve, where it was growing on floating grass mats.