

2: *Drosera adelae* F.Muell.

Fragmenta Phytographiae Australiae 4(30): 154, t. XXXIII. (1864)

Type: QUEENSLAND. "rivum Dalrymple's Creek sinui Rockingham Bay affluentem, nec non in locis scaturiginosis montium circumjacentium. Dallachy s.n." (iso: MEL).

A fleshy, hairy-rooted **perennial herb**, plants with a loose open rosette, leaves in the early stages of growth erect and circinate, unfurling to a semi-erect position, slowly becoming horizontal as they age, when spent resting in a hanging position at the basal portion of the major axis stem, 20–25 cm tall, major axis 1.5–2 mm in diameter. **Leaves** when juvenile obovate, subsequently narrowly elliptic, mature leaves lanceolate, semi-erect, generally set one above the other in a whorl-like arrangement along the erect major axis, forming a loose, open rosette. **Lamina** when mature narrowly lanceolate, 10–25 cm long, 7–10 mm wide, with a raised longitudinal midrib on both the adaxial and abaxial surfaces for the entire length of the lamina, adaxial surface slightly curved in section, adaxial surface with insect-catching glands positioned around the margins, smaller glands within, abaxial surface glabrous; **petiole** short or almost sessile, glabrous. **Stipules** bi-lobed, fimbriate, 5–6 mm long, attached to base of petiole on upper side and spreading outwards. **Inflorescence** a one-sided helicoid cyme, terminal, 25–35 cm long, many-flowered, provided good growing conditions prevail, peduncle and pedicels covered with scattered sessile glands and scattered pilose hairs; **pedicels** 5–6 mm long, semi-erect and lengthening in fruit. **Bracts** linear, 2–3 mm long, opposite and slightly below each pedicel. **Sepals** green, lanceolate, 2–2.5 mm long, 0.5–0.6 mm wide at the base, dilated to 0.8–0.9 mm wide near the centre, quickly narrowing to 0.3–0.4 mm wide and forming a long, narrowly acuminate apex, margins and apex entire, abaxial surface glabrous, sepal apices positioned within the corolla to form a perfect pentagon. **Petals** adaxial and abaxial surfaces red, reddish orange or cream, broadly lanceolate, 2.5–3.5 mm long, 0.3–0.4 mm wide at the base, dilated to 1.2–1.5 mm wide near the centre, narrowing abruptly to 0.5–0.6 mm wide and forming a narrowly acuminate apex, margins and apex entire, petals angled to form a perfect pentagon shape, and offset from the sepals to position each petal between the sepals. **Stamens** 5, 4–4.5 mm long; **filaments** white, bi-lobed and reddish at the apex; **anthers** white; **pollen** creamy white, yellow in the reddish flowered forms. **Ovary** green or reddish, subglobose, 0.9–1 mm long, 1–1.5 mm in diameter at anthesis; **carpels** 3, each carpel distinctly single lobed, glabrous. **Styles** 3 or 4, rust-orange at base, white at apex, 0.6–0.7 mm long, 0.1–0.15 mm in diameter, bi-lobed at apex to form a \pm T-shape configuration, with each free lobe curved along its length, 0.4–0.5 mm long. **Stigmas** white, simple at the tips of the free paired lobes, papillose, style-stigmas positioned horizontally from the apex of the ovary. **Seeds** black, \pm ellipsoidal, 0.45–0.5 mm long, 0.35–0.4 mm wide in the middle, funicle position proud of the basal pole, 0.05–0.06 mm long, 0.05–0.06 mm in diameter, apical pole slightly indented with a short, conical appendage arising from this depression a little way above the main body of the seed, 0.03–0.035 mm long, 0.03–0.035 mm in diameter at the base, surface sculpture deeply reticulate, forming honeycomb-like cells. **Chromosome number** $2n = 30$ *vide* Kondo (1976); Kondo & Olivier (1979); Kondo & Lavarack (1984); $2n = 28$ has been recorded for a cultivated cytotype of *Drosera adelae* (Kondo, 1976). The two chromosome numbers may represent different forms of this taxon, *vide* Rivadavia (2005). Figure 1.2.

Distribution: QLD – Rockingham Bay; Hinchinbrook Island; Cardwell; Abergowie.

Habitat: Endemic to Queensland. Grows in mountain areas among rocks in sandy banks along creeks, often growing in running water in rainforest.

Flowering: June–November. Retreating to its fleshy roots in locations that dry out during the dry season.

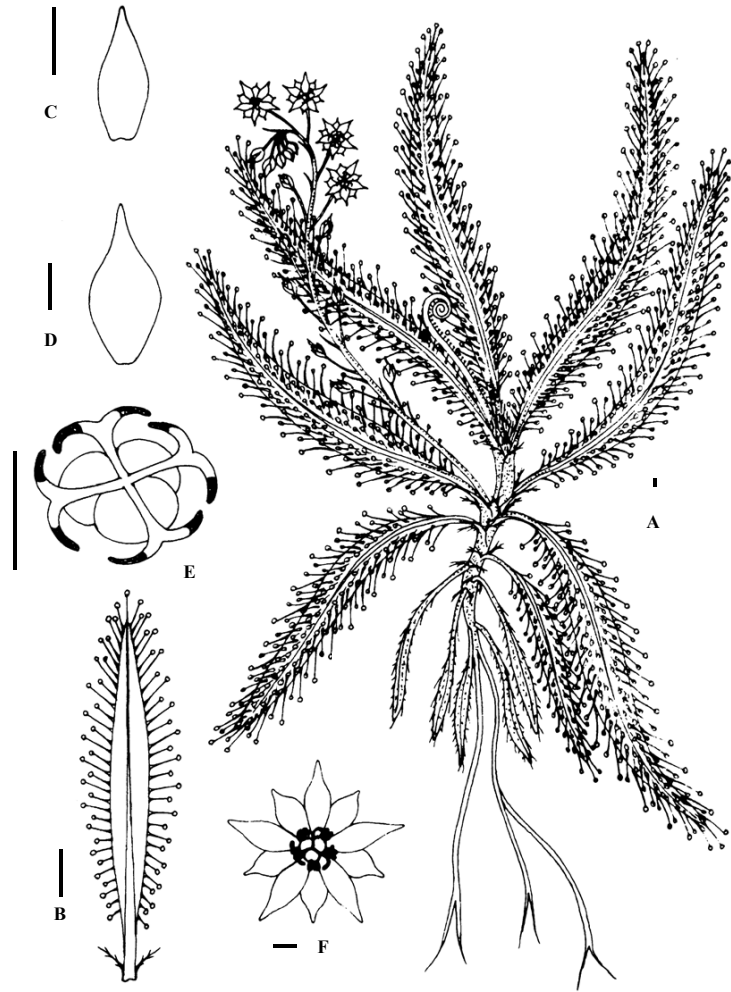
Etymology: The epithet *adelae* is apparently a noun in apposition, from "Adelae de L'Arbre". Alternatively, it is the genitive singular of Adela, a Latinised form of Adele. The identity of the lady in question is obscure. This information is derived from an Australian Plant Census (APC) comment, a database endorsed by the Council of Heads of Australian Herbaria (CHAH).

Affinities: *Drosera adelae* is a distinctive species that is easily distinguished from its closest relatives, *D. schizandra* and *D. prolifera*, which have similar floral parts; chromosome counts of $2n = 30$; as well as similar seedling characteristics that indicate a close relationship. These three perennial species do not inhabit the same localities, but can be easily distinguished from each other by their mature leaf shape alone:

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|------------------------------------|-------------------|
| 1: <i>Drosera adelae</i> | leaves lanceolate |
| 2: <i>Drosera prolifera</i> | leaves reniform |
| 3: <i>Drosera schizandra</i> | leaves obovate |

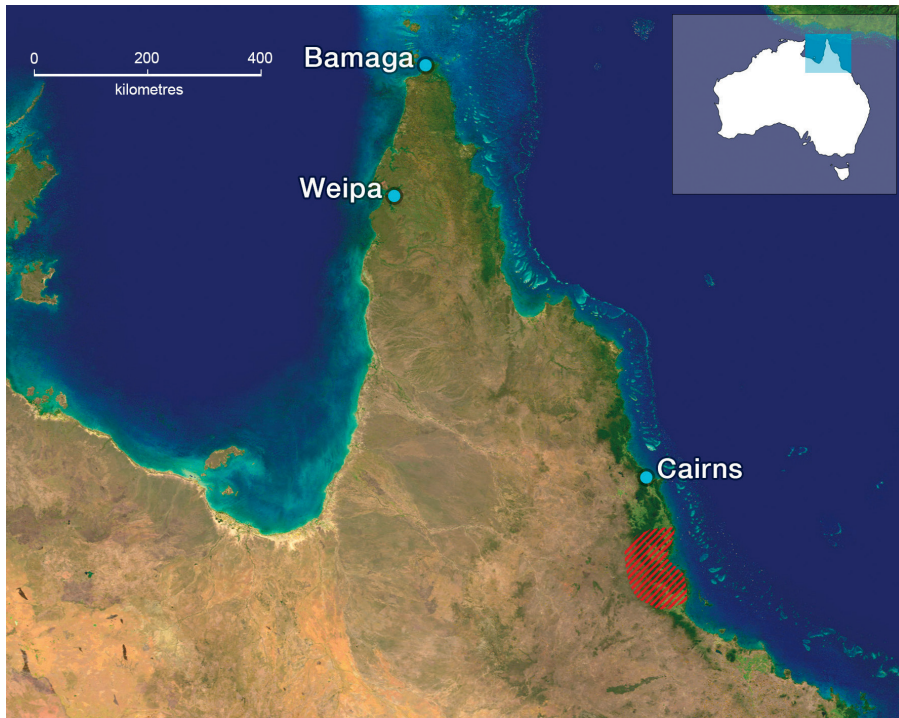
Notes. *Drosera adelae*, *D. schizandra* and *D. prolifera* appear to have evolved from a common ancestor. Their seedling and flowering characteristics are remarkably similar.

It is interesting that *Drosera schizandra* and *D. prolifera* are endemic to the cloud forests in the immediate vicinities of Mount Bartle Frere and Thornton Peak respectively. *Drosera adelae*, by contrast, is a comparatively widespread species of the lowlands.



Drosera adelae

Figure 1.2 A – plant; B – lamina; C – sepal; D – petal; E – ovary-styles & stigmas; F – flower. Scale bar for all parts = 1 mm. Drawn from live material from Hinchinbrook Island, Queensland by A. Lowrie 1989.



A map demonstrating the known geographical range of *Drosera adelae* in Queensland.

Key to the images of *Drosera adelae* (facing page)

- A. Circinate inflorescence of *Drosera adelae* (Photo: Allen Lowrie).
- B. Profile view of a cultivated *Drosera adelae* (Photo: Allen Lowrie).
- C. *Drosera adelae* in the wild (Photo: Greg Bourke).
- D. Portrait view of the flowers (Photo: Allen Lowrie).
- E. Close up of the circinate juvenile leaf (Photo: Allen Lowrie).

Photographs by Allen Lowrie were taken from specimens collected in Abergowie, Queensland.

