



82 * TROPAEOLACEAE

AM Gray¹

Annual or perennial herbs, usually semi-succulent, mostly glabrous; often widely scrambling or climbing. Leaves alternate; stipules small or absent; petioles long, often coiling and aiding climbing; lamina peltate or palmate. Flowers showy, solitary, pedunculate, bisexual, zygomorphic. Sepals 5, free or shortly fused, the upper sepal extending backwards into a nectar producing spur. Petals 5, free, clawed, entire or lobed, the two upper (posterior) petals differing from the 3 lower (anterior) petals, the latter sometimes reduced or absent. Stamens 8, in two series of 4, all free; anthers basifixed, dehiscing by lateral longitudinal slits. Ovary superior, 3-locular; ovules 1 per locule, pendulous; style terminal, with 3 short stigmatic branches. Fruit separating into 3, 1-seeded, drupe-like or nut-like mericarps, or rarely a samara.

A monogeneric family of about 95 species, all occurring in the Americas, from Mexico to Chile and Argentina; 1 species sparingly naturalized in Australia. Tropaeolaceae is most closely related to Akaniaceae (includes Bretschneideraceae; China, Vietnam, Formosa, Qld, NSW) in the Brassicales (Andersson & Andersson 2000 & references cited therein).

Key references: Sparre & Andersson (1991); Andersson & Andersson (2000).

External resources: accepted names with synonymy & distribution in Australia (APC); author and publication abbreviations (IPNI); mapping (AVH, NVA); nomenclature (APNI, IPNI).

1 * TROPAEOLUM

Tropaeolum L., *Sp. Pl.* 1: 345 (1753).

Prostrate, scrambling or climbing plants. Leaves peltate, entire or shallowly lobed, with radiating main veins. Sepals shortly fused. Petals brightly coloured, red to yellow, often variously striated, posterior pair shorter than the 3 anterior and inserted at the orifice of the nectiferous spur. Fruit of 3 separating mericarps, dry or slightly fleshy.

Distributional and species data as for family.

1 * *Tropaeolum majus* L., *Sp. Pl.* 1: 345 (1753)

Nasturtium

Illustrations: Eichler, *Fl. S. Austral.* 2, edn 4: 724, fig. 391 (1986); Conn, *Fl. New South Wales* 3: 32 (1992); Walsh, *Fl. Victoria* 4: 243, fig. 46 (1999); Spencer, *Horticultural Flora of South-eastern Australia* 4: 40 (2002); Richardson *et al.*, *Weeds of the South-East, an Identification Guide for Australia* 398 (2006).

Vigorous annual, trailing or climbing, succulent herb with a strong, somewhat pungent smell; stems diffuse, 3 m or more long, prostrate but with the tips ascending, often climbing over plants. Leaves peltate; petioles to 20 cm long, slightly eccentrically attached; lamina circular or somewhat reniform, 3–13(–15) cm diam., with 8–10 main radiating veins, adaxial surface glabrous, abaxial surface sparsely pilose or glandular, margins irregularly and shallowly lobed. Flowers solitary, on peduncles about as long as the leaves, 2.5–7 cm diam. Calyx 1.2–2 cm long; sepaline spur 2.5–3.5 cm long, narrowly conical, often curved toward the peduncle. Petals red, yellow or orange, often variously streaked inside with darker lines; posterior pair glabrous, claw 25 mm long, inserted

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2 Tasmanian Herbarium, Tasmanian Museum & Art Gallery, Private Bag 4, Hobart, Tasmania 7001, Australia.

just below the sinus of the 3 posterior sepals, above the orifice of the spur; 3 anterior petals bearded at the base, claw narrow, 5–10 mm long, inserted at the base of the ovary. Style shorter than the stamens; stigmatic branches slightly divergent. Mericarps somewhat globose, slightly flattened on the inner surfaces, rounded dorsally, obtusely ribbed, green. Flowering mostly Sep-May; fruiting Oct.-May.

Tas. (BEL, FLI, KIN, TSE); also naturalized in WA, SA, Qld, NSW, Vic.; native of the Andes region of S America. In Tasmania, collections have been made in the north-west at Marrawah, the north-east at Bridport and Scottsdale, and in the south-east at Blackmans Bay, Kingston, and near Kingston. A fairly popular garden plant and often escaping from gardens and persisting locally in waste places, coastal areas and on roadside banks, often establishing from dumped garden-refuse; usually favouring damp situations, eg. coastal soaks, ditches and seepage areas on banks etc. Sparre and Andersson (1991) did not think that there are any known wild populations of *T. majus* and that it may be the result of a spontaneous hybridisation of *T. ferreyrae* Sparre and *T. minus* L.

All parts of the plant are edible; the leaves and flowers are occasionally used in salads and the fruit pickled and used as a substitute for the Caper (*Capparis spinosa* L., Capparaceae). All parts of the plants contain a mustard oil, as in the family Brassicaceae, hence the common name *Nasturtium* possibly referring to the genus *Nasturtium* R.Br. (Brassicaceae).

REFERENCES

- Andersson L, Andersson S (2000) A molecular phylogeny of Tropaeolaceae and its systematic implications. *Taxon* **49** 721–736.
- APC (Australian Plant Census) <http://www.chah.gov.au/apc/about-APC.html>
- APNI (Australian Plant Name Index) <http://www.anbg.gov.au/cgi-bin/apni>
- AVH (Australia's Virtual Herbarium) (Council of Heads of Australasian Herbaria). <http://www.anbg.gov.au/avh.html>
- IPNI (International Plant Name Index) <http://www.ipni.org/index.html> or <http://www.us.ipni.org/index.html>
- NVA (Natural Values Atlas) (Department of Primary Industries and Water: Hobart) <http://www.dpiw.tas.gov.au/inter.nsf/WebPages/LJEM-6TV6TV?open>
- Sparre B, Andersson L (1991) A taxonomic revision of the Tropaeolaceae. *Opera Botanica* **108** 1–139.
- NOTE: Web addresses can and do change: a list of current web addresses will be maintained on the *Flora of Tasmania Online* website [www.tmag.tas.gov.au/floratasmania].

INDEX

A		N	
Akaniaceae	1	Nasturtium	1, 2
B		<i>Nasturtium</i>	2
Brassicaceae	2	T	
Brassicales	1	Tropaeolaceae	1
Bretschneideraceae	1	<i>Tropaeolum</i>	1
C		<i>Tropaeolum ferreyrae</i>	2
Capparaceae	2	<i>Tropaeolum majus</i>	1
<i>Capparis spinosa</i>	2	<i>Tropaeolum minus</i>	2