

# Deparia petersenii subsp. congrua

## SYNONYMS

Athyrium japonicum sensu Allan (1961); Deparia tenuifolia (Kirk) M.Kato; Diplazium congruum Brack.; Diplazium japonicum sensu Cheeseman; Athyrium congruum (Brack.) Copel.; Athyrium japonicum sensu Dobbie

## FAMILY

Athyriaceae

## AUTHORITY

Deparia petersenii subsp. congrua (Brack.) M.Kato

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

No

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Ferns

## NVS CODE

DEPPSC

## CHROMOSOME NUMBER

2n = 164

## CURRENT CONSERVATION STATUS

2017 | Not Threatened | Qualifiers: SO

## PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Indigenous. New Zealand: Kermadec Islands (Raoul Island), North Island (common from Te Pahi to the southern Waikato and Bay of Plenty, thence less common but evidently expanding its range southwards), South Island (current southern limit is in the vicinity of Westport). Also Australia (eastern Queensland, eastern New South Wales and eastern Victoria), Malaysia, Polynesia and Norfolk Island.

## HABITAT

Coastal to lowland (rarely montane). A weedy fern of river flats, disturbed forest, forest margins, rough pasture, willow car and urban situations. Prefers damp ground and/or semi-shade to heavy shade.

## WETLAND PLANT INDICATOR STATUS RATING

FAC: Facultative

Commonly occurs as either a hydrophyte or non-hydrophyte (non-wetlands).



Coromandel, January. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



Coromandel, January. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

## DETAILED DESCRIPTION

Terrestrial unpleasantly aromatic ferns. **Rhizome** long-creeping, c. 5 mm diameter, scaly; scales brown, basifixed, thin, broad, entire and acuminate. **Fronds** crowded. **Stipe** 20–500 mm long, base scaly and swollen, faintly winged. **Lamina** 150–500 × 60–250 mm, yellow-green to green, 2–3-pinnate, groove of rachis not open at junctions with grooves of pinna midribs, brittle, pinnatifid and tapered apically; lower pinnae stalked; upper pinnae sessile; longest pinnae central, 70–100 × 15–25 mm, lobed almost to the veins. Lobes elliptic to ovate, oblong or broadly obtuse; apical part of pinnae drawn out into a lobed, tapered cauda; main rachis with numerous septate hairs; lower surface scaly; veins simple or forked. **Sori** elongate, medial on the veins, often paired back to back; indusium thin, entire.

## SIMILAR TAXA

*Deparia petersenii* subsp. *congrua* is a distinctive and easily recognised fern which has little resemblance to other New Zealand ferns (indigenous and naturalised). The long creeping rhizomatous habit, brittle yellow-green to dark green scaly fronds, which have an unpleasant aroma when bruised and/or crushed are diagnostic. It is sometimes confused with *Diplazium australe*, with which it often grows, partly because both *Diplazium* and *Deparia* have sori arranged in a herringbone pattern, a pattern which may also lead to confusion with *Asplenium*. Both *Deparia* and *Diplazium* differ from *Asplenium* by the sori which are paired back-to-back along the veins. *Diplazium* differs from *Deparia* by its much larger, more divided, glabrous fronds and by the groove of the rachis which is open and confluent with the grooves of the pinna midribs (rather than not open at junctions with grooves of pinna midribs). *Deparia petersenii* is sometimes divided into two species, the indigenous *D. petersenii* subsp. *congrua* and endemic *D. tenuifolia*, the chief difference being that *D. tenuifolia* has a mostly tripinnate frond, primary pinnae which are ovate and secondary pinnae which are oblong and supposedly a darker green colour. However numerous gradations occur, including plants with bipinnate and tripinnate fronds on the same rhizome, and in cultivation *D. tenuifolia* type plants have provided unstable. On current evidence there seems no valid reason to maintain two species though some authors e.g., Brownsey & Smith-Dodsworth (2000) have retained both taxa.

## LIFE CYCLE

Minute spores are wind dispersed (Thorsen et al., 2009).

## PROPAGATION TECHNIQUE

An easily grown fern that is inclined to become weedy and aggressive in most garden situations. *Deparia* flourishes in a semi-shaded situation, planted in moist, fertile soil. However, it will tolerate a diversity of conditions. In cooler areas it has a semi deciduous habit, dying down in winter and resprouting in spring. It is very easily grown from the division of established plants and also by spore, and is often found as a natural arrival in suitable gardens—at least in the northern part of its New Zealand range.

## WHERE TO BUY

Occasionally available from mainline and specialist native plant nurseries. Often a nursery plant pot contaminant.

## NOTES

*Deparia petersenii* subsp. *congrua* is probably a relatively recent natural arrival that is still expanding its range. The common bipinnate form was first noted in the New Zealands flora in 1906 however the unstable tripinnate form, sometimes treated as a distinct species (*D. tenuifolia*) was first noted in New Zealand in the 1870s suggesting that there may have been two independent dispersal events, or that there is an endemic element to this species in New Zealand.

## ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (18 January 2012). Description adapted from Brownsey & Smith-Dodsworth (2000). Family follows Rothfels et al. (2012).

## REFERENCES AND FURTHER READING

- Brownsey PJ, Smith-Dodsworth JC. 2000. New Zealand Ferns and Allied Plants. David Bateman, Auckland, NZ. 168 p.
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- Rothfels CJ, Sundue MA, Kuo Li-Y, Larsson A, Kato M, Schuettpelz E, Pryer KM. 2012. A revised family-level classification for eupolypod II ferns (Polypodiidae: Polypodiales). *Taxon* 61(3): 515–533. <https://doi.org/10.1002/tax.613003>.
- Thorsen MJ, Dickinson KJM, Seddon PJ. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285–309. <https://doi.org/10.1016/j.ppees.2009.06.001>.

### **NZPCN FACT SHEET CITATION**

Please cite as: de Lange, P.J. (Year at time of access): *Deparia petersenii* subsp. *congrua* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network.

<https://www.nzpcn.org.nz/flora/species/deparia-petersenii-subsp-congrua/> (Date website was queried)

### **MORE INFORMATION**

<https://www.nzpcn.org.nz/flora/species/deparia-petersenii-subsp-congrua/>