



Piper excelsum subsp. *peltatum*

Common Name(s):

kawakawa, pepper tree

Current Threat Status (2012):

Naturally Uncommon

Distribution:

Endemic. New Zealand: Poor Knights, Mokohinau Islands, Hen (Taranga), Great Barrier (Pitokuku Island), and also from Hauturu (Clark Island) near Whangamata

Habitat:

Offshore islands in coastal forest.

Features*:

Shrub or small tree to at least 3 m tall; stems \pm erect (occasionally layering), not notably lenticellate, new shoots green (leaf nerves, petioles and new stems without reddish colouring), taste oily-aromatic and very peppery; pith of axes (including rachis of spike) usually without a mucilage core (but this sometimes present in sucker shoots), in older (leafless, secondarily thickened) stems the pith not more than 0.5 \times stem diameter, and remaining intact in the largest trunks. Prophyll a collar to 0.5(-2.0) mm high. Leaf blades submembranous to firmly fleshy \pm suborbicular, at vegetative nodes to 100(-160) mm diameter, usually with 7 or 9 principal nerves, cordate at base, with a very narrow or closed sinus, occasionally basal lobes overlapping, or sometimes the blade peltate with the petiole inserted up to 5(-20) mm inside blade margin, upper surface of blade not bullate; petiole to 40(-60) mm long, c.0.4 \times as long as blade, the sheath 0.3-1.0(-2) \times as long as non-sheathing part, truncate-rounded at apex and not produced there, the non-sheathing part of petiole to 3.5 mm diam. Inflorescences solitary or 2-3 together on a short (rarely more than 10 mm long) axillary shoot, and (usually solitary) on the adjacent terminal shoot (occasionally this shoot not fertile); reduced leaf at apex of fertile shoot with a glabrous petiole and usually with a green oblong lamina at least 5 mm long, but lamina often \pm lacking, especially on terminal fertile shoot. Female inflorescence erect in flowering and remaining so into fruit, peduncle to c. 1.5 cm long, spike to 60(-100) \times c.6 mm diameter, with uniseriate usually 5-10-cellular hairs to 0.15 mm long on lower part of bract stalks and sparingly on rachis, these hairs not obvious on the peduncle just below the lowermost bracts; bracts peltate, bract heads 0.40-0.75 mm diameter; flowers at full emergence centred c.1.3 mm apart, emergent part of ovary ovoid; stigmas 3-4(-5), together c. 1.2 mm diameter. Male inflorescence erect, spike to c.110 mm long, proximally c.6 mm diameter, bracts and hairs as in female inflorescence; staminal filaments c. 0.25 mm long, anthers c.1.00 \times 0.75 mm wide. Ripe infructescence c.10 mm diameter; fruitlets coalescent, sunken apically about the persistent dark stigmas, exocarp and mesocarp orange; seed oblong to slightly obovoid, apiculate at apex, c.2.0 \times 1.5 dark brown, with (3-)4-5(-7) broad longitudinal furrows.

Flowering:

September - December

Fruiting:

October - August

Threats:

Not Threatened. Listed because it is a narrow range offshore island endemic

*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange 30 August 2005. Description based on Gardner (1997).

References and further reading:

de Lange, P.J. 2012: Taxonomic notes on the New Zealand flora: new names in *Piper* (Piperaceae). *New Zealand Journal of Botany* DOI:10.1080/0028825X.2012.708904

Gardner, R.O. 1997: *Macropiper* (Piperaceae) in the south-west Pacific. *New Zealand Journal of Botany* 35: 293-307.

Jaramillo, M.A.; Callejas, R.; Davidson, C.; Smith, J.F.; Stevens, A.C.; Tepe, E.J. 2008: A phylogeny of the tropical genus *Piper* using ITS and the chloroplast intron psbJ-petA. *Systematic Botany* 33: 647-660.

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=579



Caption: Aorangi Island, September 1998

Photographer: G. M. Crowcroft



Caption: *Macropiper excelsum* subsp. *peltatum* f. *peltatum* on Aorangi Island

Photographer: Gillian M. Crowcroft, October 1995