



Piper excelsum subsp. *delangei*

Common Name(s):

de Lange's kawakawa, de Lange's pepper

Current Threat Status (2012):

Naturally Uncommon

Distribution:

Endemic. Three Kings Islands: Manawa Tawhi (Great Island), South West and North East Islands

Habitat:

Coastal forest where it is often an important component of the shrub layer. On South West Island it is sympatric with, and forms hybrids with *Piper melchior*.

Features*:

Shrub or small tree to at least 3 m tall; stems ± erect, not notably lenticellate, new shoots green (without reddish colouring), taste oily-aromatic and extremely 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× stem diameter, and remaining intact in the largest trunks. Prophyll a collar to 0.5(-2.0) mm high. Leaf blades coriaceous, fleshy ± 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× as long as blade, the sheath 0.3-1.0(-2)× 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 1 cm 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 ± 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) × 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 × 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 × 1.5 dark brown, with (3-)4-5(-7) broad longitudinal furrows.

Flowering:

August - December

Fruiting:

September - May

Threats:

Not Threatened. Listed because it is a narrow range endemic confined to a small geographic area

*Attribution:

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

References and further reading:

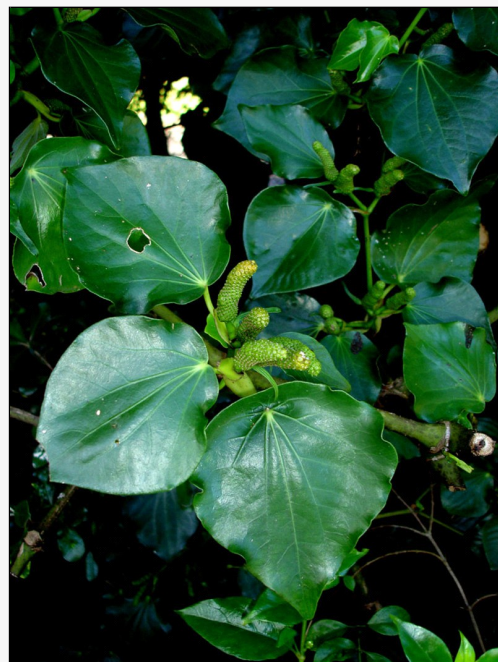
de Lange, P.J. 2012: Taxonomic notes on the New Zealand flora: new names in *Piper* (Piperaceae). *New Zealand Journal of Botany* DOI:10.1080/0028825X.2012.708904

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=578



Caption: *Macropiper excelsum* subsp. *peltatum* f. *delangei*

Photographer: Peter de Lange



Caption: *Macropiper excelsum* subsp. *peltatum* f. *delangei*

Photographer: Peter de Lange