Piper excelsum subsp. excelsum

COMMON NAME kawakawa, pepper tree

SYNONYMS Macropiper excelsum (G.Forst.) Miq. subsp. excelsum

FAMILY Piperaceae

AUTHORITY Piper excelsum G.Forst.

FLORA CATEGORY Vascular – Native

ENDEMIC TAXON Yes

ENDEMIC GENUS No

ENDEMIC FAMILY No

STRUCTURAL CLASS Trees & Shrubs - Dicotyledons

NVS CODE PIPESE

CHROMOSOME NUMBER 2n = 26

CURRENT CONSERVATION STATUS 2012 | Not Threatened | Qualifiers: Sp

PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened 2004 | Not Threatened

BRIEF DESCRIPTION

Fleshy shrub with jointed dark twigs bearing large dark green glossy heart-shaped leaves with hard green flower spikes inhabiting south to Banks Peninsula. Leaves to 120mm wide, veins radiating from middle, peppery to taste, often with insect holes. Fruit orange.

DISTRIBUTION

Endemic. North and South Islands. Common from te Paki south to about Okarito, North Canterbury and Banks Peninsula.

HABITAT

Coastal to lowland (extending up 500 m a.s.l. in warmer parts of the country). Usually an important understorey species in coastal forest.





Male inflorescence. Silverstream, Upper Hutt. Photographer: Jeremy Rolfe



Kawakawa. Photographer: Wayne Bennett

FEATURES

Small tree to at least 5 m tall; stems erect (occasionally layering), not notably lenticellate, new shoots red-green or green (leaf nerves, petioles and new sterns with reddish colouring), taste peppery; pith of axes (including rachis of spike) without a mucilage core. Prophyll a collar to 0.3 (-2.2) mm high. Leaf blades submembranous, orbicular, suborbicular, at vegetative nodes to 100(-120) mm diameter, usually with 5-8 principal nerves, cordate at base, with a very narrow or closed sinus, occasionally basal lobes overlapping, 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 4.0 mm diameter. 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 ± 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.

SIMILAR TAXA

Distinguished from the other subspecies by the wine-red to purple-black stems and petioles, and by the leaves which are never peltate, though on some of the Hauraki Gulf Islands, Tuhua (Mayor Island) and Chatham Islands plants often have overlapping leaf bases.

FLOWERING August - November

FRUITING Throughout the year

PROPAGATION TECHNIQUE

Easily grown from semi-hardwood cuttings and fresh seed. An attractive small tree that does best in dappled light, within a free draining but permanently moist soil. Very shade tolerant. Cold sensitive and will not tolerate frost.

ETYMOLOGY piper: Pepper excelsum: Tall

CULTURAL USE/IMPORTANCE

Kawakawa is a member of the pepper family related to kava - used as a drink in the Pacific. The fruit and leaves are aromatic and Maori used leaves as poultices to treat bruises, and as a sign of mourning.

FORAGING FOR KAWAKAWA

Click on the Radio New Zealand National logo to listen to This Way Up. Simon Morton interviews Johanna Knox about foraging for kawakawa (duration: 12'13")

TAXONOMIC NOTES

The generic distinction between Macropiper and Piper has always been tenuous. Recently Jaramillo et al. (2008) have shown that Macropiper should be merged in Piper. However, they did not effect the full transfer of the New Zealand taxa to Piper. This action was taken by de Lange (2012) for Macropiper excelsum subsp. psittacorum, Macropiper excelsum subsp. peltatum f. peltatum and f. delangei.

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.

CITATION

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https://www.nzpcn.org.nz/flora/species/piper-excelsum-subsp-excelsum/ (Date website was queried)

MORE INFORMATION

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