Pacific Island Ecosystems at Risk (PIER)

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Solanum betaceum

Cav., Solanaceae









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Present on Pacific Islands? yes

Primarily a threat at high elevations? no

Risk assessment results: High risk, score: 7 (Go to the risk assessment)

Other Latin names: Cyphomandra betacea (Cav.) Sendtn.

Common name(s): [more details]

English: tamarillo, tree tomato

French: arbre à tomates, tomate de La Paz, tomate en arbre

Spanish: tamarillo, tomate de árbol, tomate serrano

Habit: tree

Description: "Small tree, 2-7 m tall. **Branches** densely puberulent. **Leaf** blades simple, unlobed, chartaceous, acuminate at apex, moderately puberulent adaxially, more densely so on veins, densely puberulent abaxially; petioles densely puberulent. Trunk leaves simple, unlobed, the blade ovate, 25-40 cm long, 20-35 cm wide, length: width ratio ca. 1-1.5:1, the base cordate to auriculate with basal lobes 3-6 cm long; petioles 15-25 cm long. Crown leaves (3-) 4 per sympodial unit, simple, unlobed, the blade ovate, 7-20 cm long, 6-15 cm wide, length: width ratio ca. 1.5:1, the base cordate to auriculate with basal lobes 1.5-3 cm long; petioles 3-10 cm long. **Inflorescence** (unbranched or) branched, 10-50-flowered, 2.5-15 cm long; peduncle 1.5-9 cm long; rachises 2-8 cm long; pedicels 10-20 mm long, 15-50 mm long in fruit, 3-10 mm apart, articulated above the base, leaving pedicellar remnants 1-3 mm long; peduncle, rachises, and pedicels moderately to densely puberulent. Flower buds ellipsoidal to ovoid, obtuse to acuminate at apex. calvx fleshy, sparsely to densely puberulent, the radius 3-5 mm, the lobes 1-2 mm long, 2-3 mm wide, obtuse to truncate, apiculate. Corolla pinkish white, subcoriaceous to fleshy, stellate, the radius 10-15 mm, the tube 2-3 mm long, the lobes narrowly triangular, 7-12 mm long, 2.5-4 mm wide, glabrous abaxially and adaxially, the margin tomentose, the apex acute. Antherthecae pale yellow, lanceolate, 5-6 mm long, 2-2.5 mm wide, the pores directed adaxially and distally; connective bright lemon-yellow, narrowly triangular, 4.5-5 mm long, 1-2 mm wide, abaxially slightly shorter than thecae at apex, equal to or slightly shorter than them at base, adaxially absent. Ovary glabrous, style glabrous, cylindrical, not dilated distally, 5-6 mm long, 0.5-1 mm in diameter, exserted 1-2.5 mm beyond stamens; stigma truncate, 0.5-1 mm in diameter. Fruit ellipsoidal or ovoid, obtuse or acute at apex, 4-10 cm long, 3-5 cm in diameter, glabrous, yellow to orange, red, or purple, often with darker longitudinal stripes; mesocarp with stone cell aggregates; seeds 3-4 mm long, 3.5-4 mm wide, densely pubescent" (Bohs, 1994; pp. 50-57).

Habitat/ecology: "Cultivated throughout the Andes in subtropical climates, 1000-3000 m in elevation," introduced elsewhere (Bohs, 1994; pp. 50-57).

Propagation: Seed

Native range: Bolivia, Argentina (GRIN).

Presence:

Pacific					
Country/Terr./St. & Island group	Location	Cited status & Cited as invasive & Cited as cultivated & Cited as aboriginal introduction?	Reference & Comments		
Ecuador (Galápagos Islands) Floreana Group	Floreana Island	introduced cultivated	Charles Darwin Foundation (2008)		
Ecuador (Galápagos Islands) Isabela Group	Isabela Island	introduced cultivated	<u>Charles Darwin Foundation (2008)</u> Observed in survey, no herbarium record.		
Ecuador (Galápagos Islands) San Cristóbal Group	San Cristóbal Island	introduced cultivated	Charles Darwin Foundation (2008)		
Ecuador (Galápagos Islands) Santa Cruz Group	Santa Cruz Island	introduced cultivated	Charles Darwin Foundation (2008)		
Pacific Rim					
Country/Terr./St. & Island group	Location	Cited status & Cited as invasive & Cited as cultivated & Cited as aboriginal introduction?	Reference & Comments		
Australia Australia (continental)	Australia (continental)	introduced cultivated	Bohs, Lynn (1994) (p. 54)		
Chile (continental) Chile	Chile (Republic of)	introduced cultivated	Bohs, Lynn (1994) (p. 56)		
Colombia Colombia	Colombia (Republic of)	introduced cultivated	Bohs, Lynn (1994) (p. 55)		
Costa Rica Costa Rica	Costa Rica (Republic of)	introduced cultivated	Bohs, Lynn (1994) (p. 54)		
Ecuador (Mainland) Ecuador	Ecuador (Republic of) (continental)	introduced cultivated	Bohs, Lynn (1994) (p. 55)		
Guatemala	Guatemala	introduced	Bohs, Lynn (1994) (p. 54)		

Guatemala	(Republic of)	cultivated	
Honduras Honduras	Honduras (Republic of)	introduced cultivated	Bohs, Lynn (1994) (p. 54)
Mexico Mexico	Mexico (United Mexican States)	introduced cultivated	Bohs, Lynn (1994) (p. 52)
New Zealand New Zealand	New Zealand (country)	introduced invasive cultivated	Webb, C. J./Sykes, W. R./Garnock-Jones, P. J. (1988) (p. 1223) "Waste places, rubbish dumps, forest clearings or margins near dwellings".
New Zealand New Zealand	New Zealand (country)	introduced cultivated	Bohs, Lynn (1994) (p. 54)
Perú Perú	Perú (Republic of)	introduced cultivated	Bohs, Lynn (1994) (p. 55)

Additional information:

Morton, J. 1987. Tree Tomato. p. 437-440. In: Fruits of warm climates. Information from Solanaceae Source.

Additional online information about <u>Solanum betaceum</u> is available from the <u>Hawaiian Ecosystems</u> at <u>Risk project (HEAR)</u>.

<u>Information about Solanum betaceum</u> as a weed (worldwide references) may be available from the Global Compendium of Weeds (GCW).

<u>Taxonomic information about Solanum betaceum</u> may be available from the <u>Germplasm Resources</u> Information Network (GRIN).

References:

Bohs, Lynn. 1994. Cyphomandra (Solanaceae). Flora Neotropica, Monograph 63. 175 pp.

<u>Charles Darwin Foundation. 2008.</u> Database inventory of introduced plant species in the rural and urban zones of Galapagos. Charles Darwin Foundation, Galapagos, Ecuador.

<u>Charles Darwin Research Station. 2005.</u> CDRS Herbarium records.

<u>U.S. Dept. Agr., Agr. Res. Serv. 2013.</u> National Genetic Resources Program. Germplasm Resources Information Network (GRIN). Online searchable database.

Webb, C. J./Sykes, W. R./Garnock-Jones, P. J. 1988. Flora of New Zealand, Volume IV: Naturalised pteridophytes, gymnosperms, dicotyledons. Botany Division, DSIR, Christchurch. 1365 pp.

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