



Atriplex billardierei

Common Name(s):

crystalwort

Current Threat Status (2012):

At Risk - Relict

Distribution:

Indigenous to New Zealand, Formerly present in the Foveaux Strait area and on Stewart Island, Last seen in that area in 1982. Present on the Chatham Islands. Also in Australia where it is apparently extinct except in Tasmania.

Habitat:

It is generally found in the strand zone on open beaches and sandy banks through the build up of sand where it forms low sandy mounds.

Features*:

Decumbent, sprawling, lightly branched, succulent, leafy, monoecious, annual herb, forming circular mats or low mounds within sand, to 2 or 3 m diameter. Branches 20-150 mm long, succulent, cream or yellow, rooting at nodes; exposed surfaces coated with deciduous, watery, spherical, glistening papillae. Leaves 5-20 x 2-7 mm, oblong-obovate, ovate, elliptic, or lanceolate, green to glaucous-green, succulent. Petioles short, 0.5-1 mm. Leaf surface sparsely to densely covered in deciduous watery, spherical, glistening papillae; apex and base obtuse; margin entire, very rarely within one or two lobes. Male flowers axillary, in clusters of 3-4, rarely single; occasionally with rudimentary stigma; perianth lobes 5, green or pale cream, 1.2 mm long. Elliptic-oblong, apex inflexed, cucullate, margins laciniate-crenate, abaxial surface covered in watery papillae; stamens 5, filaments 0.6 mm long, white, anthers 0.2 mm long, oblong, basifixed, pollen sulphur yellow. Female flowers minute, 1-2 mm, shortly stipitate, borne in leaf axils, either solitary, or in pairs, usually accompanied by a short shoot with one pair of reduced leaves. Peduncles minute, 0.25 mm long. Perianth absent; bracteoles fused for $\frac{3}{4}$ quarter of their length, lips entire; external bracteole surfaces glistening, papillae 0.2-0.3 mm diameter; style connate, stigmas 2.1-1.3 mm, white, half exerted, tapering-terete, 0.1-0.2 mm diameter, exerted portion with antrorse papillae, Ovary flattened at right angles to lips, 0.5 mm diameter, sessile or almost so. Fruiting bracteoles 3.3-9.5 x 2.2-6.0 mm, light brown or tan, subsessile or shortly stipitate; urceolate, valves rigidly fused for $\frac{3}{4}$ of their length, swollen toward base, corky, otherwise coriaceous with an entire margin, apex usually entire, rarely finely crenate, or fimbriate; surface densely coated in watery papillae 0.2-0.3 mm diameter. Seed circular in outline, convex, 1.8-4.0 mm diameter, testa chesnut-brown, maturing purple-brown, fading to black in dried specimens, surface matt, \pm smooth. or finely rugose; radicle lateral, erect.

Flowering:

November to February

Fruiting:

December to April

Threats:

Possibly very vulnerable to human disturbance. Wide-scale coastal erosion and storm inundation are probably the greatest natural threats. It is occasionally browsed by sheep and cattle and horses. There is evidence from Australia and New Zealand that it is susceptible to competition from other introduced strand plants. Plants are easily killed by trampling and by vehicles using beaches. In much of its former range it has also suffered from collection of specimens for museums.

*Attribution:

Description based on de Lange et al. (2000).

References and further reading:

de Lange, P.J. ; Norton, D.A.; Crowcroft, G.M. 2000: Taxonomy, ecology, and conservation of *Atriplex billardierei* and *A. hollowayi* sp. novp. (Chenopodiaceae) in Australasia. *New Zealand Journal of Botany* 38: 551-567.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=372



Caption: Kaingaroa Beach, Chatham (Rekohu) Islands

Photographer: John Sawyer



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