

# Atriplex hollowayi

## COMMON NAME

Holloway's crystalwort

## SYNONYMS

None

## FAMILY

Amaranthaceae

## AUTHORITY

*Atriplex hollowayi* de Lange et D.A.Norton

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

## NVS CODE

ATRHOL

## CHROMOSOME NUMBER

$2n = 18$

## CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Critical | Qualifiers: CD, EF, OL

## PREVIOUS CONSERVATION STATUSES

2012 | Threatened – Nationally Critical | Qualifiers: CD, EF, OL

2009 | Threatened – Nationally Vulnerable | Qualifiers: CD, EF, Inc, OL

2004 | Threatened – Nationally Critical

## DISTRIBUTION

Endemic. North Island, formerly recorded from Te Pahi south and east to Hicks Bay, including Mayor (Tuhua) Island, with a disjunct southerly gathering made by Thomas Kirk in the 1800s from Lyall Bay, Wellington. Now known naturally only from Waikuku and Whareana Beaches, on the eastern side of Te Pahi.

## HABITAT

Sandy Beaches, at or just above the high water tide mark. Usually found at or in the vicinity of a fresh water stream draining across a beach



*Atriplex hollowayi* at Waikuku Beach. Photographer: Gillian M. Crowcroft, Licence: All rights reserved.



*Atriplex hollowayi* adult plant. Photographer: Lisa Forester, Licence: CC BY-SA.

## DETAILED DESCRIPTION

Annual, succulent, densely branched herb, forming circular 0.8 × 1.2 m mounds on sandy beaches just above mean annual high water tide mark. All exposed parts copiously covered in fine, sugar-like, deciduous, spherical, glistening, ball-like papillae. Branches 10–50 mm long, succulent, creamy yellow, rooting at nodes. Stems pale yellow. Leaves 2–12 × 1–6 mm, grey-green, margins distinctly but irregularly toothed. Plants monoecious. Male flowers axillary, in clusters of 2–4, rarely single; perianth lobes 5, green or pale-cream, 0.8–1 mm, elliptic-oblong; stamens 5, anthers yellow; female flowers minute, 0.8–1.2 mm, shortly stipitate, solitary or paired in leaf-axils. Perianth absent, bracteole fused for ½ length, lips triangular, obtuse, lacinate, fimbriate to entire; styles 2 not connate; stigmas 2, white, 0.7–1 mm. Fruits 2.8–4.0 × 1.5–2.3, straw-yellow, urceolate, papery. Seed circular, convex 0.9–2 mm diam., chestnut-brown maturing purple-brown.

## SIMILAR TAXA

*Atriplex billardierei* (Moq.) Hook.f., which can be distinguished by its smooth margined leaves, fused, paired stigma, larger fruits and seeds. *A. billardierei* appears to have never grown in *A. hollowayi* habitats, and was historically known in New Zealand only from Southland, Stewart Island and Chatham Island sand beaches. Currently it is only known in New Zealand from the Chatham Islands, where it is seasonally abundant.

## FLOWERING

October - February

## FLOWER COLOURS

Cream, Green

## FRUITING

December–April

## PROPAGATION TECHNIQUE

Easily grown from seed that has first been soaked in fresh water. Can be grown from softwood cuttings early in growing season.

## THREATS

At risk from trampling and/or browsing by livestock and palatable to most herbivores. There is some historical evidence suggesting that some of this species decline was caused by botanists collecting whole plants—which to an annual species can be a serious threat. Holloway's crystalwort is also threatened by competition from other introduced strand plants, summer cyclonic storms, human beach users—especially from the ever increasing use of all-terrain vehicles on sand beaches.

## ETYMOLOGY

**atriplex:** From an ancient Latin name whose derivation is uncertain, but a possible explanation is the name comes from the Greek a- 'without' and traphein 'nourishment' because many of these species grow in arid desert soils

## WHERE TO BUY

Not commercially available.

## CULTURAL USE/IMPORTANCE

Considerable conservation effort has been undertaken by the Department of Conservation following a recovery plan written specifically for this species in 2001. As a result Holloway's crystalwort has been successfully managed back from the brink of extinction. Plans are underway to reintroduce it to several more southerly locations that fit within its historic range.

## 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. nov. (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* 11(4): 285–309.

### **NZPCN FACT SHEET CITATION**

Please cite as: de Lange, P.J. (Year at time of access): *Atriplex hollowayi* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/atriplex-hollowayi/> (Date website was queried)

### **MORE INFORMATION**

<https://www.nzpcn.org.nz/flora/species/atriplex-hollowayi/>