Atriplex buchananii

COMMON NAME
Buchanan's orache

SYNONYMS
Chenopodium buchananii Kirk, Atriplex buchananii var. tenuicaulis Petrie

FAMILY
Amaranthaceae

AUTHORITY
Atriplex buchananii (Kirk) Cheeseman

FLORA CATEGORY
Vascular – Native

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

STRUCTURAL CLASS
Herbs - Dicotyledons other than Composites

NVS CODE
ATRBUC

CHROMOSOME NUMBER
2n = 18

CURRENT CONSERVATION STATUS
2017 | Threatened – Nationally Vulnerable | Qualifiers: DP, RR, Sp

PREVIOUS CONSERVATION STATUSES
2012 | Threatened – Nationally Vulnerable | Qualifiers: DP, RR, Sp
2009 | At Risk – Naturally Uncommon
2004 | Sparse

DISTRIBUTION
Endemic. North, South, Stewart and Chatham Islands

HABITAT
An annual or short-lived perennial plant found in open, often heavily salt enriched, poorly draining clay or gravel/rock strewn ground. Atriplex buchananii is primarily a coastal species of open turfs or gravel field at or near the high tide mark. It is also frequently found on offshore islands growing in guano enriched soils or bare guano splattered rock. This species is also found inland in Central Otago on open ground usually within salt pans and slicks or on other salt enriched soils.

Plants growing in salt encrusted gravel just above high tide mark, Miramar Peninsula, north of Seatoun, Wellington. Photographer: Gillian M. Crowcroft, Date taken: 01/04/1991, Licence: All rights reserved.

Chatham Islands. Photographer: John Sawyer, Licence: CC BY-NC.

DETAILED DESCRIPTION
Annual or perennial, prostrate, procumbent to sub-erect creeping, mat-forming herb forming patches up 30 mm diameter. All parts initially covered in densely white to greyish farinose, mealy scales, these shedding on stems and old leaves with age. Stems much branched, fleshy at first becoming wiry and pliant with age, terete, very slender (appearing delicate), woody at base in perennial plants, with old stems covered in orange bark. Petioles 0-3 mm long, fleshy. Leaves 1-10(-20) x 0.5-6(-15) mm, white, whitish-grey, grey or white-green above, uniformly pale white-grey beneath, orbicular, broad-elliptic, broad-ovate, obovate to broadly lanceolate, margins entire; base subcordate to rounded or broad-cuneate; apices obtuse to acute. Flowers in leaf axils, solitary or in glomerules (clusters) of 2-10. Male flowers usually sub-terminal to terminal; perianth 1-1.5(-2) mm long, white, whitish-grey to grey; segments cut to ½ length of perianth tube. Stamens (3-)5, filaments and anthers sulphur-yellow. Female flowers 1 mm long, pale grey or whitish-grey, inconspicuous, style bearing 2 white, stigmas. Fruiting bracteoles rhombic-triangular, margins finely dentate. Fruit c. 1 mm diameter, circular to sub-circular; pericarp chartaceous and easily removed. Seed surface (testa) brown, red-brown to brownish-green

SIMILAR TAXA
Rather distinctive but it may be confused with Einadia Raf., particularly E. allanii (Aellen) Paul G. Wilson which may grow in similar habitats. From Einadia, Atriplex buchananii can be distinguished by its usually much smaller stature, whitish-grey, mealy stems and foliage (rather than glaucous green to brown-green stems and foliage), axillary (rather than terminal) flowering habit, with flowers solitary or in glomerules (never in terminal spikes).

FLOWERING
December - May

FLOWER COLOURS
Grey, White

FRUITING
January - August

LIFE CYCLE
Spongy nutlet dispersed by water and possibly also wind and granivory (Thorsen et al., 2009).

PROPAGATION TECHNIQUE
Easy from fresh seed and tip cuttings but fickle to maintain. Best grown in a pot placed in full sun. Can tolerate waterlogging but is best in free draining soil when in cultivation. Some of the larger forms found along the Otago and Southland coast come true from seed and are well worth growing as a ground cover in open clay soils.

THREATS
Generally uncommon and sporadic in its occurrences, though more common from Otago south to Stewart Island. Some populations are threatened by urban development and many by weeds

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
buchananii: Named after John Buchanan (13 October 1819-1898) who was a New Zealand botanist and scientific artist and fellow of the Linnean Society.

WHERE TO BUY
Not commercially available.

NOTES
Although there does not seem to be any sense in recognising as distinct var. tenuicaulis (which seems to represent one extreme of the species), A. buchananii is rather variable and very large-leaved forms have been found which come true from seed along parts of the Otago/Southland coast.

ATTRIBUTION
Fact sheet prepared by P.J. de Lange for NZPCN (1 June 2013)

REFERENCES AND FURTHER READING
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

NZPCN FACT SHEET CITATION

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MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/atriplex-buchananii/