

References

- Esler, A.E. 1974: Plant cover of Auckland's Volcanic Cones. Report to Lands and Survey Dept. 25p. (Copy in Auckland Public Library)
- Esler, A.E. 1978: Botanical Features of Tiritiri Island, Hauraki Gulf, New Zealand. *New Zealand Journal of Botany* 16: 207–226.
- Esler, A.E. 2004: *Wild Plants in Auckland*. Auckland University Press, Auckland.
- Guthrie-Smith, H. 1921: *Tutira: the story of a New Zealand sheep station*. Blackwoods, Edinburgh.
- Kirk, T. 1870: On Grasses and other plants adapted for pasturage in the Province of Auckland, especially with regard to indigenous kinds. *Transactions N.Z. Institute* 2: 102–106.
- Kirk, T. 1871: On the flora of the Isthmus of Auckland and the Takapuna District. *Transactions N.Z. Institute* 3: 148–161.
- Rumball, P.J.; Esler, A.E. 1968: Pasture patterns on grazed slopes. *N.Z.J Agricultural Research* 11: 575–588.

Occurrence of *Blidingia* spp. (Chlorophyta, Ulvales: Kornmanniaceae) in Auckland

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Blidingia is a genus of green seaweeds in the family Kornmanniaceae known from cool temperate regions of the world. Seven species are currently recognised (Guiry & Guiry 2010), but the genus is little-known and rarely recorded in New Zealand (Adams 1994).

Two species of *Blidingia* have been found on Auckland seashores during recent investigations of high-tidal green algae. They both superficially resemble small, tubular species of *Ulva*, differing mainly by having the individual tubes emanating from a thickened pad of tissue, rather than being attached by rhizoids, and by having very small individual cells, generally <10µm in diameter.

Blidingia marginata (J.Agardh) P.J.L.Dang.

This is a green, tubular species similar in general appearance to *Ulva* (*Enteromorpha*), but very slender, flattened, and with cells in regular rows (Plate 1). The thalli vary considerably in width (70–250µm), but the broader ones have crisped margins. Most Auckland records are from the Manukau Harbour, where it grows on high-tidal, brackish sites, and forms a spectacular “green band” along the high tide mark of basalt sea walls at Mangere Bridge, and also on concrete, and on vegetation, including mangrove (*Avicennia marina*) pneumatophores and the stems of glasswort (*Sarcocornia quinqueflora*). It rapidly colonises new surfaces. It seems to be an estuarine species (Brodie et al. 2007), and in Australia it is also reported to be most common on *Sarcocornia* and mangroves (Womersley 1984).

Chapman (1956), under *Enteromorpha nana* var. *marginata*, (J.Agardh) V.J.Chapm., recorded *B. marginata* from Narrow Neck, Waiuku and Shoal Bay (on mangrove leaves), and illustrates individual cells with a diameter of 4–8 µm, notes that the cells are in

rows, especially at the margins, and that it adheres well to paper when pressed and dried.

Representative samples

- Manukau Harbour, Hillsborough, on concrete, *M.D.Wilcox* 2171, 28 Aug 2008, AK 308320;
- Manukau Harbour, Mangere Bridge, Kiwi Esplanade, on concrete, *M.D.Wilcox* 2172, 29 Aug 2008, AK 308311;
- Manukau Harbour, Favona, bank behind mangroves, *M.D.Wilcox* 4105, 27 Jul 2010, AK 315496;
- Manukau Harbour, Kiwi Esplanade, coating *Sarcocornia quinqueflora*, *M.D.Wilcox* 4187, 16 Aug 2010, AK 316154;
- Manukau Harbour, Mangere Bridge, Kiwi Esplanade, on basalt stone sea wall, *M.D.Wilcox* 4232, 29 Sep 2010, AK 317346;
- Manukau Harbour, Favona, coating on mangrove pneumatophores, *M.D.Wilcox* 4236, 6 Oct 2010, AK 317665.

Blidingia minima (Nägeli ex Kütz.) Kylin var. *minima*

It forms local but dense colonies on top of hard rocks such as greywacke and volcanic grit, in the upper intertidal “splash zone” of open coasts (Plate 2). The thallus is of several erect, usually unbranched tubes, and attached by a disc, without rhizoids. The unbranched individual tubes are a feature of var. *minima* (Abbott & Hollenberg 1976).

Representative samples

- Rangitoto Island, *M.D.Wilcox* 2221, 19 Sep 2007, AK 317669;
- Tawharanui, Cigar Reef near Pukenihihi Point, *M.D.Wilcox* 4172, 11 Aug 2010, AK 315972;
- Waitemata Harbour, Beach Haven, *M.D.Wilcox* 4201, 21 Aug 2010, AK 316517;
- Waitemata Harbour, North Head, *M.D.Wilcox* 4221, 31 Aug 2010, AK 316814;
- Maraetai, Te Rere Reserve, *M.D.Wilcox* 4272, 10 Oct 2010, AK 317668.

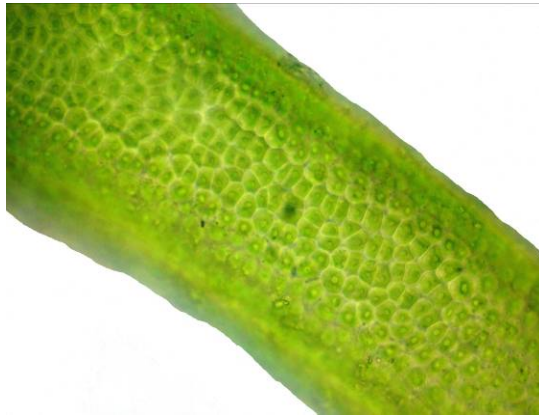
References

- Abbott, I.A.; Hollenberg, G.J. 1976: *Marine algae of California*. Stanford University Press.
- Adams, N. M. 1994: *Seaweeds of New Zealand*. Canterbury University Press.
- Brodie, J.; Maggs, C.A.; John, D.M. (eds.) 2007: *Green seaweeds of Britain and Ireland*. British Phycological Society.
- Chapman, V.J. 1956: The marine algae of New Zealand. Part 1. Myxophyceae and Chlorophyceae. *Journal of the Linnean Society of London* 55(360): 333–501.
- Guiry, M.D.; Guiry, G.M. 2010: *AlgaeBase*. World-wide electronic publication, National University of Ireland, Galway. Available at <http://www.algaebase.org> (accessed on 12 October 2010).
- Womersley, H.B.S. 1984: *The marine benthic flora of southern Australia Part I*. Adelaide: South Australian Government Printing Division.

Plate 1: *Blidingia marginata*



Forming a high-tide green band on a newly-built sea wall, Kiwi Esplanade, Mangere Bridge, Manukau Harbour, 12 Oct 2010.



Mangere Bridge on *Sarcocornia*, showing cellular arrangement, 16 Aug 2010. Thallus 70 μm wide.



Growing on the leaves of a mangrove seedling, Favona, Manukau Harbour, 6 Oct 2010.



Mangere Bridge, Manukau Harbour, 29 Sep 2010. Thalli 70-250 μm wide.

Plate 2: *Blidingia minima*



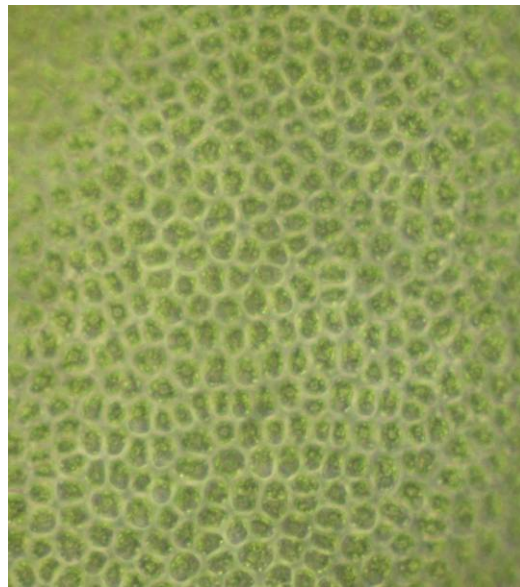
On hard volcanic tuff, North Head, Waitemata Harbour, 31 Aug 2010.



On hard volcanic tuff, North Head, Waitemata Harbour, 31 Aug 2010.



Blidingia minima, Maraetai, 10 Oct 2010. Whole plant 6mm tall.



Magnified surface view showing individual cells, 8 μ m in diameter, North Head, 31 Aug 2010.