Wolffia australiana

COMMON NAMES
water-meal

BIOSTATUS
Native

CURRENT CONSERVATION STATUS
2023 | Not Threatened | Qualifiers: SO
Jump to previous conservation statuses

CATEGORY
Vascular

STRUCTURAL CLASS
Herbs - Monocots

DETAILED DESCRIPTION
Bright green, minute aquatic summer-green herb without roots. Platelets 0.3-1 mm long, bearing one vegetative bud per platelet, ellipsoidal, dorsal surface weakly convex, the central green part merging into a colourless rounded shoulder; submerged portion much larger than that above water, pale, loosely cellular, more or less semi-circular in side view but laterally compressed. Inflorescence in a cavity opening on upper platelet surface; bearing one male and one female flower united without spathe. Ovule 1. Fruit spherical. Seed smooth with prominent operculum.

SIMILAR TAXA
None. Could be confused with Lemna and Landlotia from which it differs by its much smaller size, absence of roots, uniformly green colour without red or purple pigmentation, and by the platelets bearing only one vegetative bud

DISTRIBUTION
Indigenous. North, South and Chatham Islands. Found throughout the Southern Hemisphere but exact distribution not clear

HABITAT
Coastal to lower montane (up to 400 m a.s.l.) in still, fertile, water in sunny situations. Often found in association with Lemna minor L., Landoltia punctata (G.Mey.) Les et D.J.Crawford, Azolla filiculoides Lam., Ricciocarpos natans (L.) Corda and Riccia fluitans L. Easily overlooked.

GENUS
Wolffia

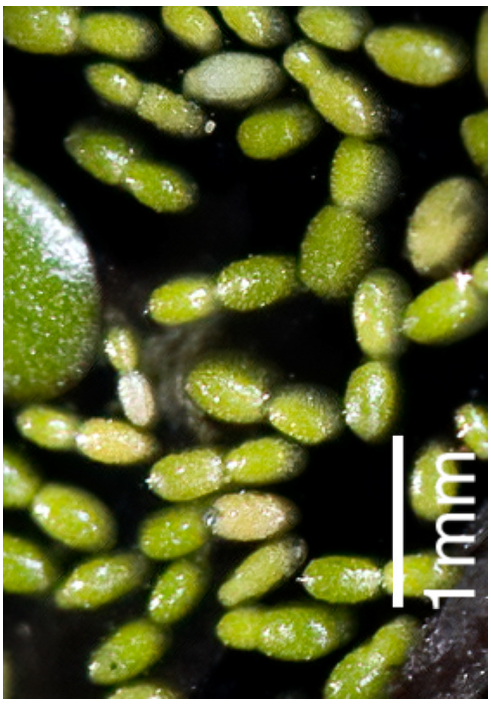
FAMILY
Araceae

AUTHORITY
Wolffia australiana (Benth.) Hartog et Plas

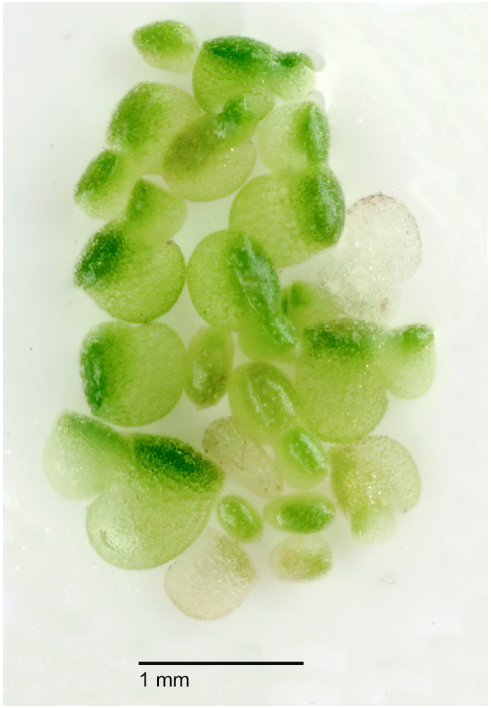
SYNONYMS
Wolffia arrhiza var. australiana Benth.

ENDEMIC TAXON
No

ENDEMIC GENUS
No



The “large” leaf on left is Lemna sp. Waimeha Lagoon, Waikanae. Photographer: Jeremy R. Rolfe, Date taken: 23/04/2007, Licence: CC BY.



Lateral view showing submerged parts below green platelets that float on the water surface. Waimeha Lagoon, Waikanae. Photographer: Jeremy R. Rolfe, Date taken: 23/04/2007, Licence: CC BY.

ENDEMIC FAMILY
No

FLOWERING
November - February

FRUITING
December - April

PROPAGATION TECHNIQUE
Easily grown in a suitable pond, pool or aquarium. During winter it sinks to the bottom sediment, and becomes dormant, returning to surface during warmer weather in late spring and summer.

WETLAND PLANT INDICATOR STATUS RATING
OBL: Obligate Wetland
Almost always is a hydrophyte, rarely in uplands (non-wetlands).

ETYMOLOGY
wolffia: Named after Johann Friedrich Wolff, 18th century German botanist and physician
australiana: From the Latin australis meaning southern

NVS CODE
WOLAUS

CHROMOSOME NUMBER
2n = 20, 40

PREVIOUS CONSERVATION STATUSES
2017 | Not Threatened | Qualifiers: SO
2012 | Not Threatened
2009 | Not Threatened
2004 | Not Threatened
Jump to current conservation status

REGIONAL CONSERVATION STATUSES
Auckland: 2025 | Regionally Not Threatened Help
Current regional threat status assessments prepared according to Crisp et al. (2025) are displayed when available. The Auckland conservation status information is sourced from the "Conservation status of vascular plant species in Tāmaki Makaurau / Auckland" Simpkins E et al. (2025) report.
Otago: 2025 | Regionally Not Threatened Help
Current regional threat status assessments prepared according to Crisp et al. (2025) are displayed when available. The Otago conservation status information is sourced from the "Conservation Status of Indigenous Vascular Plants in Otago, 2025" Jarvie S et al. (2025) report.
Northland: 2026 | Regionally Not Threatened Help
Current regional threat status assessments prepared according to Crisp et al. (2025) are displayed when available. The Northland conservation status information is sourced from the "Conservation status of indigenous vascular plants in Northland | Taitokerau" Ford et al. 2026 report.

REFERENCES AND FURTHER READING
Petterson, J., Rolfe, J. 2008. Wolffia australiana - mealweed. Wellington Botanical Society Bulletin, 51: 64-65
Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

ATTRIBUTION
Description adapted from Moore and Edgar (1997).

MORE INFORMATION
https://www.nzpcn.org.nz/flora/species/wolffia-australiana/

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02 October 2026