

***Villarsia umbricola* (a plant, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, March 2021

Revised, June 2021

Web Version, 8/26/2021

Organism Type: Plant

Overall Risk Assessment Category: Uncertain



Photos: Russell Best. Licensed under CC-BY-NC 4.0 (Int). Available:
<https://biocache.ala.org.au/occurrences/d1aea68e-1721-4973-9f7b-788695922811> (March 2021)

1 Native Range and Status in the United States

Native Range

From POWO (2021):

“[...] its native range is SW. & SE. Australia.”

“Native to: New South Wales, South Australia, Tasmania, Victoria, Western Australia”

Status in the United States

Villarsia umbricola has not been reported as introduced or established in the wild in the United States. No evidence of this species in trade in the United States was found.

Means of Introductions in the United States

Villarsia umbricola has not been reported as introduced or established in the wild in the United States.

Remarks

According to WFO (2021), *Ornduffia umbricola* (Aston) Tippet & Les is a synonym for *V. umbricola*. The valid name of *Villarsia umbricola* and the accepted synonym *Ornduffia umbricola* were used to conduct information searches for this assessment. WFO (2021) also lists *Limnanthemum stygium* J.M.Black and *Nymphoides stygia* (J.M.Black) H.Eichler as synonyms.

From Tippet and Les (2009):

“Menyanthaceae species in Australia formerly belonging to the genus *Villarsia* Ventenat, which morphological and molecular data have shown to be paraphyletic, are provided with new combinations in *Liparophyllum* Hooker f. and the novel genus *Ornduffia* Tippet & Les: [...] *O. umbricola* (Aston) Tippet & Les.”

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to WFO (2021), *Villarsia umbricola* is the current accepted scientific name for this species.

From GBIF Secretariat (2021):

Kingdom Plantae
Phylum Tracheophyta
Class Magnoliopsida
Order Asterales
Family Menyanthaceae
Genus *Ornduffia*
Species *Ornduffia umbricola* (Aston) Tippet & Les
= *Villarsia umbricola* Aston

Size, Weight, and Age Range

From eFloraSA (2007):

“[...] 105 cm high but usually much less; [...] petioles of the basal leaves 2.5-43 cm long; leaf blades [...] 1-8 rarely 12 cm long.

[...] pedicels of the mature capsules 5-40 rarely to 62 mm long, recurved; calyx 6-9 sometimes only 3 mm long; corolla 11-31 (average 22) mm diam., [...]”

Capsule 5-11 mm long, usually longer than the calyx; seeds [...] many, 0.8-1.6 but usually 1-1.4 mm long, [...]"

Environment

From Tippery and Les (2009):

“Aquatic or wetland perennial herbs.”

From Wallis Creek Watergarden (2021):

“Well suited to shallow water and shady conditions.”

Climate

No information on climate was available.

Distribution Outside the United States

Native

From POWO (2021):

“[...] its native range is SW. & SE. Australia.”

“Native to: New South Wales, South Australia, Tasmania, Victoria, Western Australia”

Introduced

Villarsia umbricola has not been reported as introduced or established outside of its native range.

Means of Introduction Outside the United States

Villarsia umbricola has not been reported as introduced or established outside of its native range.

Short Description

From eFloraSA (2007):

“Slender tufted perennial or annual to 105 cm high but usually much less; stolons absent; petioles of the basal leaves 2.5-43 cm long; leaf blades aerial, erect, sometimes floating on plants in water but then not markedly dorsiventral, ovate to broad-ovate, entire, usually slightly to moderately cordate, 1-8 rarely 12 cm long.

Inflorescence a slender lax open panicle occupying much of the length of the flowering stem; pedicels of the mature capsules 5-40 rarely to 62 mm long, recurved; calyx 6-9 sometimes only 3 mm long; corolla 11-31 (average 22) mm diam., yellow; corolla lobes usually 5 sometimes 4 or 6, with broad entire to crenulate wings, not keeled; stigmas 2, fleshy and papillate.

Capsule 5-11 mm long, usually longer than the calyx; seeds ellipsoid to subglobular, somewhat laterally compressed, many, 0.8-1.6 but usually 1-1.4 mm long, pale-fawn to light-brown, smooth or tuberculate, without a caruncle.”

Biology

No information was available on the biology of *Villarsia umbricola*.

Human Uses

Wallis Creek Watergarden (2021) of Australia sells *Villarsia umbricola* by online mail order. *Villarsia umbricola* is listed under the categories of native water plants and pond plants.

Diseases

No information on diseases associated with *Villarsia umbricola* was found.

Threat to Humans

No information on threats to humans was found.

3 Impacts of Introductions

Villarsia umbricola has not been reported as introduced outside of its native range, therefore no impacts of introduction have been documented.

4 History of Invasiveness

The history of invasiveness is classified as No Known Nonnative Population. *Villarsia umbricola* has not been reported as introduced outside of its native range, therefore no impacts of introduction have been documented. This species is found for sale by online retailers within its native range, however substantial trade evidence was not found.

5 Global Distribution

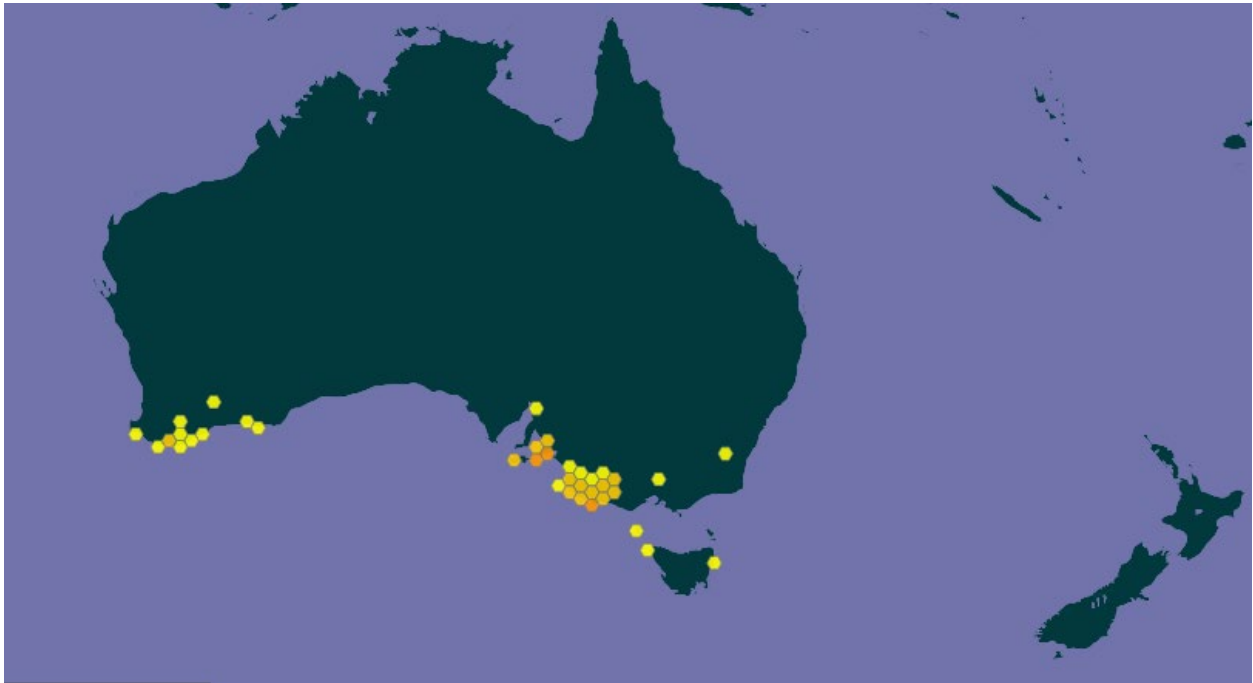


Figure 1. Known global distribution of *Villarsia umbricola*. Observations are reported from Southern Australia and Tasmania. Map from GBIF Secretariat (2021; under the synonym *Ornduffia umbricola*).

6 Distribution Within the United States

No records of *Villarsia umbricola* within the United States were found.

7 Climate Matching

Summary of Climate Matching Analysis

The overall climate match for the contiguous United States was generally medium. High climate match was generally found in the West, along the Pacific Coast and inland Washington, with small patches of high match also being found within the inland Southeast and from coastal Massachusetts to Long Island Sound. Areas of low match were primarily found in the Central States, including a majority of the Midwest and Great Plains, along the coastal Southeast, in Maine, with small patches also found in Washington. All remaining areas had generally medium to medium-low climate matches. The overall Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for *Villarsia umbricola* was 0.031, medium. (Scores between 0.005 and 0.103, exclusive, are classified as medium.) The following States received high individual Climate 6 scores: California, Massachusetts, Virginia, Washington, and West Virginia. The following States received medium individual Climate 6 scores: Arizona, Georgia, Idaho, Indiana, North Carolina, Nevada, New York, Oregon, Rhode Island, Tennessee, and Utah. All remaining States received low individual Climate 6 scores.

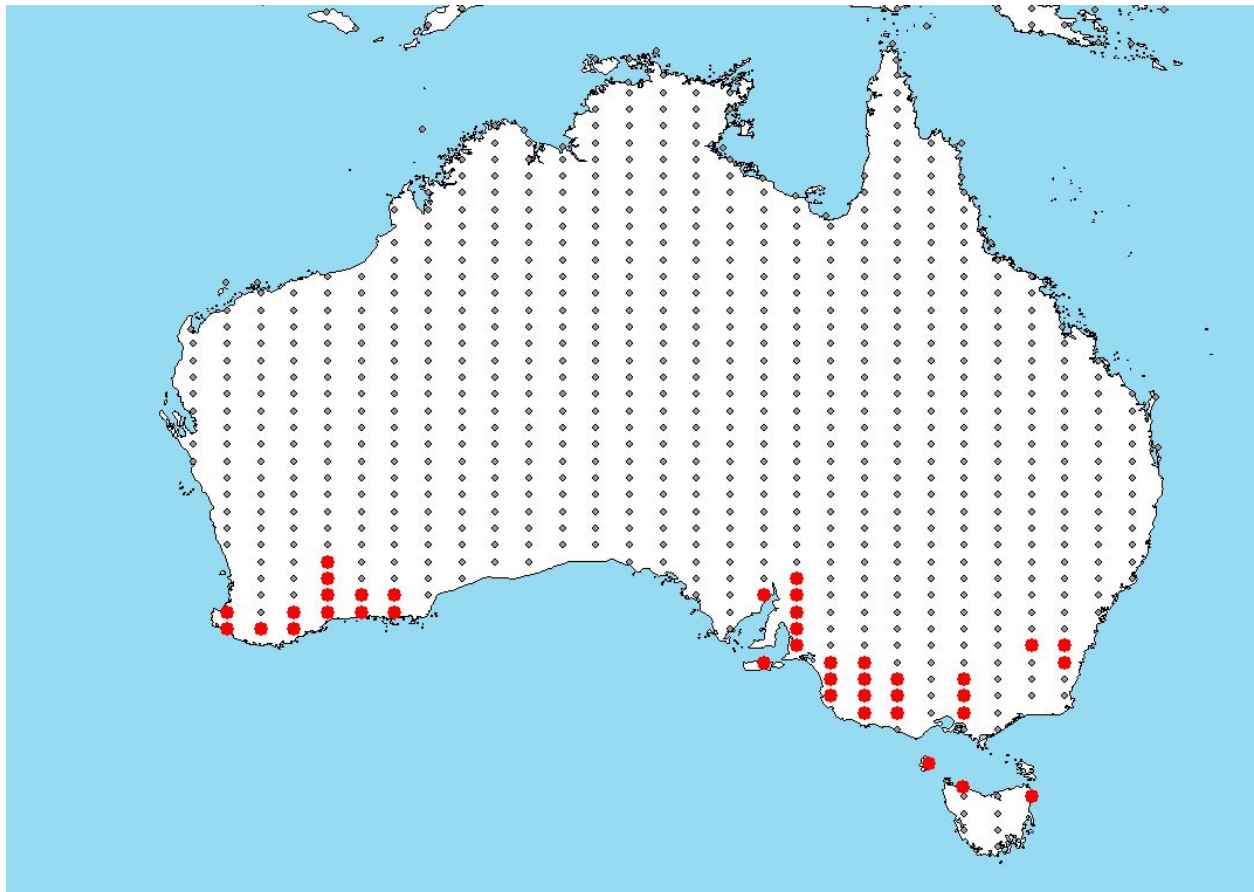


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Australia and Tasmania) and non-source locations (gray) for *Villarsia umbricola* climate matching. Source locations from GBIF Secretariat (2021). Selected source locations are within 100 km of one or more species occurrences, and do not necessarily represent the locations of occurrences themselves.

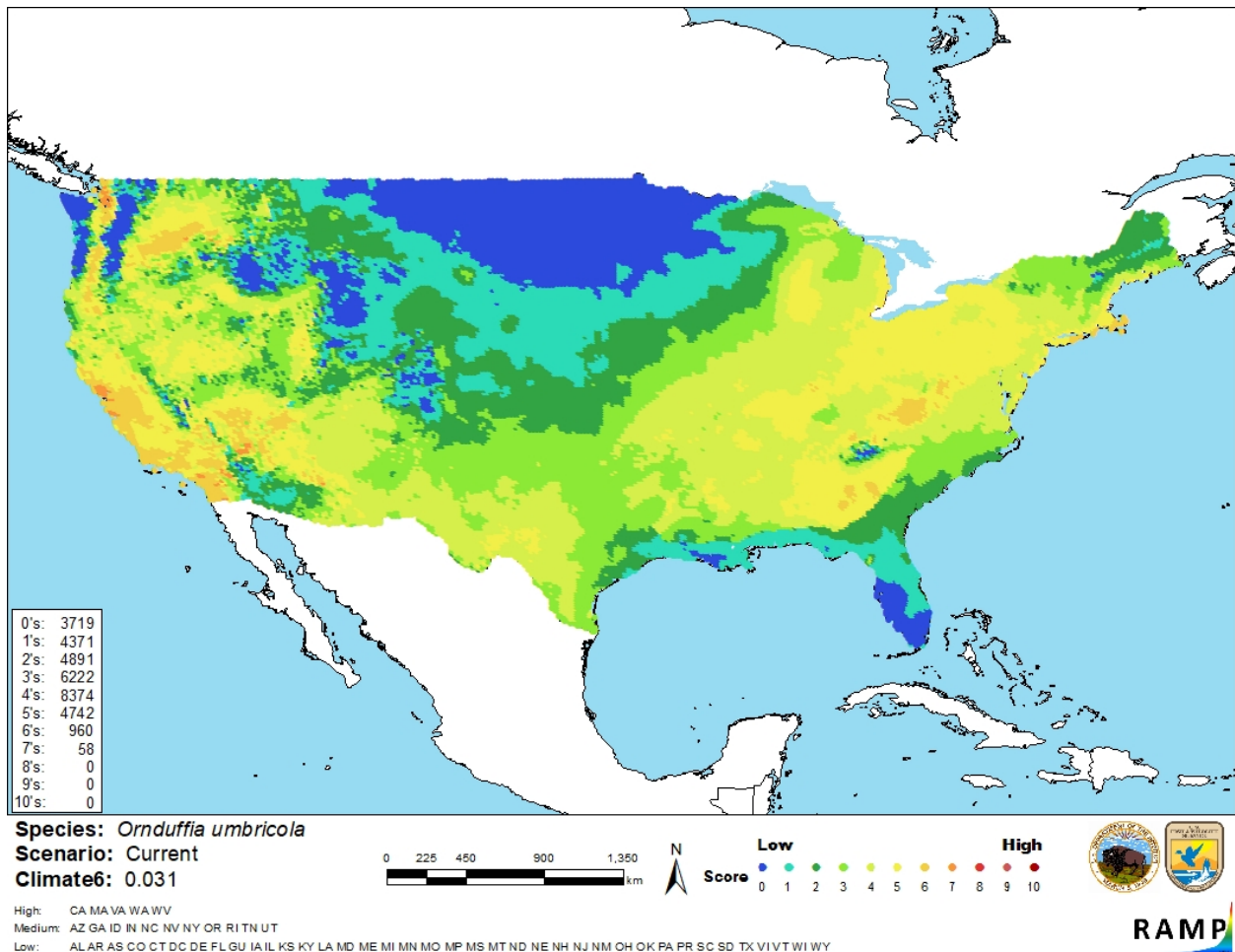


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Ornduffia umbricola* (an accepted synonym for *Villarsia umbricola* in use as the species name in the GBIF database) in the contiguous United States based on source locations reported by GBIF Secretariat (2021). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

Climate 6: (Count of target points with climate scores 6-10)/ (Count of all target points)	Overall Climate Match Category
$0.000 \leq X < 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

8 Certainty of Assessment

Very little information about *Villarsia umbricola* has been published in the scientific literature. There is reasonably complete information regarding species distribution of *Villarsia umbricola*.

However, little to no information was found on the biology or ecology of this species. This species has not been reported as introduced outside of its native range, therefore no information is available on impacts of introduction. Substantial trade information was unavailable. For these reasons, the certainty of this assessment is Low.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Villarsia umbricola is a marsh flower native to Southern Australia and Tasmania. This species has not been found in the wild or in trade within the United States. *V. umbricola* has been documented in trade for use as a pond plant within its native range of Australia. No substantial trade history was found. The history of invasiveness is classified as No Known Native Population. This species has not been reported as introduced or established outside of its native range, therefore no information on impacts of introduction is available. The overall climate match for *V. umbricola* in the contiguous United States is Medium, with a medium match throughout a majority of the county and a high match in the West, inland Southeast, and coastal southern New England. The certainty is Low due to lack of information. The overall risk assessment category for *Villarsia umbricola* is Uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 4): No Known Nonnative Population**
- **Overall Climate Match Category (Sec. 7): Medium**
- **Certainty of Assessment (Sec. 8): Low**
- **Remarks/Important additional information:** No additional remarks.
- **Overall Risk Assessment Category: Uncertain**

10 Literature Cited

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 11.

eFloraSA. 2007. *Villarsia umbricola*. Electronic Flora of South Australia. Available: http://flora.sa.gov.au/cgi-bin/speciesfacts_display.cgi?form=speciesfacts&name=Villarsia_umbricola (May 2021).

GBIF Secretariat 2021. GBIF backbone taxonomy: *Ornduffia umbricola* (Aston) Tippet & Les. Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/7930478> (February 2021).

[POWO] Plants of the World Online. 2021. *Ornduffia umbricola* (Aston) Tippet & Les. Available: <http://www.plantsoftheworldonline.org/taxon/urn:lsid:ipni.org:names:77105271-1> (May 2021).

Sanders S, Castiglione C, Hoff M. 2018. Risk Assessment Mapping Program: RAMP. Version 3.1. U.S. Fish and Wildlife Service.

Tippary NP, Les DH. 2009. A new genus and new combinations in Australian *Villarsia* (Menyanthaceae). *A Journal for Botanical Nomenclature* 19(3):404–411.

Wallis Creek Watergarden. 2021. *Vilarsia umbricola*. Available: <https://www.walliscreekwatergarden.com.au/product/villarsia-umbricola/> (March 2021).

World Flora Online 2021. *Villarsia umbricola* Ashton. World Flora Online— a project of the World Flora Online Consortium. Available: <http://www.worldfloraonline.org/taxon/wfo-0000418530> (March 2021).

11 Literature Cited in Quoted Material

Note: The following references are cited within quoted text within this ERSS, but were not accessed for its preparation. They are included here to provide the reader with more information.

No references in this section.