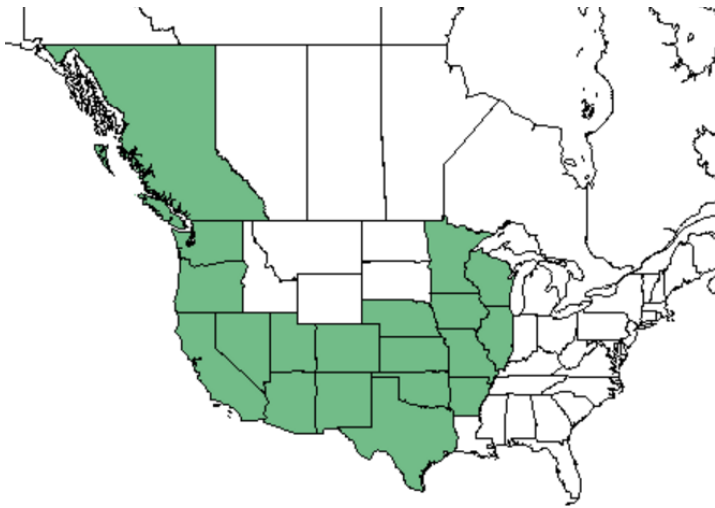




Plant Propagation Protocol for *Azolla Mexicana*

ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/AZMI.pdf>

TAXONOMY	
Plant Family	
Scientific Name	<i>Azolla Mexicana</i> ¹
Common Name	Mexican Mosquito Fern ¹
Species Scientific Name	
Scientific Name	<i>Azolla microphylla</i> Kaulf ¹
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	<i>Azolla Mexicana</i> Schtdl. & Cham. ex C. Presl ¹
Common Name(s)	Mexican Mosquito Fern ¹ Mexican Azolla ³
Species Code (as per USDA Plants database)	AZMI ¹
GENERAL INFORMATION	
Geographical range	
Ecological distribution	
Climate and elevation range	
Local habitat and abundance	

	 <p>Mosquito fern is found in distinct patches in North, Central and South America, as shown in the map above.¹</p>
Plant strategy type / successional stage	It is aquatic and grows in shallow, still waters ² , such as lake shores, ponds, and wet pastures. ³
Plant characteristics	 <p>It is an aquatic fern, and it is normally 1-2 cm in diameter with leaves that overlap. It has small structures in it that allow the plant to float, and reproduces by releasing spores into the water. It is distinguishable from other similar mosquito fern species by its small size.²</p>
PROPAGATION DETAILS	
Ecotype	

Propagation Goal	Other Propagules. It disperses spores that will eventually germinate into new plants. The spores may be transported by water currents, wind, or on animals. ⁴
Propagation Method	Seed ³
Product Type	Propagules ³
Stock Type	
Time to Grow	Varies, spores will not germinate until there are optimal conditions for growth. ⁴
Target Specifications	
Propagule Collection Instructions	
Propagule Processing/Propagule Characteristics	
Pre-Planting Propagule Treatments	
Growing Area Preparation / Annual Practices for Perennial Crops	The plant is sensitive to pH levels and requires low salinity. ²
Establishment Phase Details	
Length of Establishment Phase	
Active Growth Phase	
Length of Active Growth Phase	
Hardening Phase	
Length of Hardening Phase	
Harvesting, Storage and Shipping	
Length of Storage	
Guidelines for Outplanting / Performance on Typical Sites	

Other Comments	The species is listed as threatened but there are no protection measures in place. ¹
PROPAGATION DETAILS	
Ecotype	
Propagation Goal	Fragmentation. The plants grow in connected clusters, and can break apart and multiply separately. ²
Propagation Method	Vegetative ²
Product Type	
Stock Type	
Time to Grow	
Target Specifications	Typically 1-2 cm in diameter. ²
Propagule Collection Instructions	
Propagule Processing/Propagule Characteristics	
Pre-Planting Propagule Treatments	The plant is sensitive to pH levels and requires low salinity. ²
Growing Area Preparation / Annual Practices for Perennial Crops	
Establishment Phase Details	
Length of Establishment Phase	
Active Growth Phase	
Length of Active Growth Phase	
Hardening Phase	
Length of Hardening Phase	
Harvesting, Storage and Shipping	
Length of Storage	
Guidelines for	

Outplanting / Performance on Typical Sites	
Other Comments	
INFORMATION SOURCES	
References	<ol style="list-style-type: none"> 1. "Azolla Microphylla (Mexican Mosquito Fern)." <i>Plants Database</i>. USDA, n.d. Web. 24 May 2016. <http://plants.usda.gov/core/profile?symbol=AZME>. 2. "Mexican Mosquito-fern." <i>Species at Risk Public Registry</i>. Government of Canada, n.d. Web. 24 May 2016. <http://www.registrelep-sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=223>. 3. "Azolla Mexicana (Mexican Mosquito Fern, Mexican Mosquito Fern)." <i>Native Plant Database</i>. Evergreen, n.d. Web. 24 May 2016. <http://nativeplants.evergreen.ca/search/view-plant.php?ID=03051>. 4. "Recovery Strategy for the Mexican Mosquito Fern (Azolla Mexicana) in British Columbia." British Columbia Ministry of the Environment, July 2008. Web. 24 May 2016. <http://www.env.gov.bc.ca/wld/documents/recovery/rcvrystrat/mexican_mosquito_fern_rcvry_strat240708.pdf>.
Other Sources Consulted	<ul style="list-style-type: none"> • "Azolla Mexicana Schldl. & Cham. Ex C. Presl." <i>Electronic Atlas of the Flora of British Columbia</i>. Department of Geography UBC, n.d. Web. 24 May 2016. <http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Azolla+mexicana>. • "Mexican Mosquito Fern (Azolla Mexicana)." iNaturalist, n.d. Web. 24 May 2016. <http://www.inaturalist.org/taxa/159121-Azolla-mexicana>. • "Mexican Mosquito Fern." <i>CNPS Inventory Plant Detail</i>. California Native Plant Society, n.d. Web. 24 May 2016. <http://www.rareplants.cnps.org/detail/1585.html>. • "Mosquito Fern, Azolla." <i>Aquaplant</i>. Texas A&M, n.d. Web. 24 May 2016. <http://aquaplant.tamu.edu/plant-identification/alphabetical-index/mosquito-fern/>. • Government of Canada, n.d. Web. 24 May 2016. <">http://www.cosewic.gc.ca/eng/sct1/searchdetail_e.cfm?id=223&StartRow=221&boxStatus=All&boxTaxonomic=All&location=1&change=All&board.>> • "What We Got Here Is Yer Mexican Mosquito Fern." King County Parks, n.d. Web. 24 May 2016. <https%3A%2F%2Fkingcountyparks.org%2F2015%2F03%2F05%2Fwhat-we-got-here-is-yer-mexican-mosquito-fern%2F>.
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