

Aquatic Vascular Plants of Jasper Ridge - Preliminary List

Salviniaceae	<u>Azolla filiculoides</u> Lam
Typhaceae	<u>Typha angustifolia</u> L. <u>T. domingensis</u> Pers. <u>T. latifolia</u> L.
Sparganiaceae	<u>Sparganium eurycarpum</u> Engelm.
Potamogetonaceae	<u>Potamogeton foliosus</u> Raf. <u>P. pusillus</u> L. <u>P. illinoensis</u> Morong., <u>P. crispus</u> L.
Alismaceae	<u>Echinodorus berteroi</u> (Spreng.) F. S. Settt <u>Alisma plantago-aquatica</u> L.
Poaceae	<u>Polypogon interruptus</u> HBK. <u>P. monspeliensis</u> (L.) Desf. <u>Paspalum distichum</u> L.
Cyperaceae	<u>Cyperus eragrostis</u> Lam. <u>Scirpus acutus</u> Bigel.
Juncaceae	<u>Juncus occidentalis</u> (Cov.) Wieg. <u>J. patens</u> Meyer <u>J. bufonius</u> L.
Lemnaceae	<u>Lemna minor</u> L.
Iridaceae	<u>Iris pseudacorus</u> L.
Polygonaceae	<u>Polygonum coccineum</u> Willd. <u>P. lapathifolium</u> L. <u>P. punctatum</u> Ell
Portulacaceae	<u>Montia verna</u> Neck.
Brassicaceae	<u>Nasturtium officinale</u> R. Br. <u>Rorippa sinuata</u> (Nutt.) Hitchc. (?)
Callitrichaceae	<u>Callitriche marginata</u> Torr.
Lythraceae	<u>Lythrum hyssopifolia</u> L.
Haloragidaceae	<u>Myriophyllum brasiliense</u> Camb.
Apiaceae	<u>Oenanthe sargentosa</u> Presl
Gentianaceae	<u>Microcala quadrangularis</u> (Lam.) Griseb.
Lamiaceae	<u>Melissa officinalis</u> L. <u>Mentha arvensis</u> L. <u>M. pulegium</u> L.
Scrophulariaceae	<u>Mimulus guttatus</u> DC.

Asteraceae

Xanthium strumarium L.

Helenium puberulum DC.

Ceratophyllaceae

Ceratophyllum demersum L.

(Should come after Portulacaceae)

J. H. Thomas - 11 Dec. 1979

JASPER RIDGE BIOLOGICAL PRESERVE

Some plants to be found in the fresh-water marsh and lake in the area of Searsville Dam, in early April.

PAGE refers to the page no. in Flora of the Santa Cruz Mountains of California by John Hunter Thomas, Stanford University Press, Stanford, California, 1975

PAGE	BOTANICAL NOMENCLATURE	FAMILY	COMMON NAME
55	<i>Azolla filiculoides</i>	Salviniaceae	American Water Fern
108	<i>Cyperus eragrostis</i>	Cyperaceae	Tall Cyperus
129	<i>Iris pseudacorus</i>	Iridaceae	Yellow Iris
114	<i>Juncus patens</i>	Juncaceae	Common Rush
245	<i>Jussiaea repens peploides</i>	Onagraceae	Yellow Water Weed
112	<i>Lemna minima</i>	Lemnaceae	Least Duckweed
298	<i>Mentha pulegium</i>	Lamiaceae	Pennyroyal
252	<i>Myriophyllum brasiliense</i>	Haloragidaceae	Parrot Feather
182	<i>Nasturtium officinale</i>	Brassicaceae	Water Cress
147	<i>Polygonum coccineum</i>	Polygonaceae	Swamp Knotweed
110	<i>Scirpus acutus</i>	Cyperaceae	Common Tule
65	<i>Sparganium eurycarpum</i>	Sparganiaceae	Broad-fruited Burreed
64	<i>Typha</i> spp	Typhaceae	Cat-tail
365	<i>Xanthium strumarium</i>	Asteraceae	Cocklebur

*It is unclear if Carol Z. saw these or was making a list - anyway they are all on other lists.*

*Carol Zabel  
3-89*

**Jasper Ridge Biological Preserve  
Stanford University  
Stanford CA 94305-5020**

Fri, May 3, 1991

**Plants in Searsville Lake**

John Thomas suggests the following as a very rough list of plants to be found in Searsville Lake

**Native**

American Water Fern	<i>Azolla filiculoides</i>
Broad-leaved Cat-tail	<i>Typha latifolia</i>
Broad-fruited Burreed	<i>Sparganium eurycarpum</i>
Illinois Pondweed	<i>Potamogeton illinoensis</i>
Small Pondweed	<i>P. pusillus</i>
Leafy Pondweed	<i>P. foliosus</i>
Horned Pondweed	<i>Zannichellia palustris</i>
Common Water Nymph	<i>Naias guadalupensis</i>
Common Water Plantain	<i>Alisma plantago-aquatica</i>
Upright Burhead	<i>Echinodorus berteroi</i>
Common Tule	<i>Scirpus acutus</i>
Swamp Knotweed	<i>Polygonum coccineum</i>
Water Smartweed	<i>P. punctatum</i>
Willow Weed	<i>P. lapathifolium</i>
Pacific Oenanthe	<i>Oenanthe sarmentosa</i>

**Introduced**

Yellow Iris	<i>Iris pseudocorus</i>
Pacific Marsh Purslane	<i>Ludwigia palustris</i>
Parrot Feather	<i>Myriophyllum aquaticum</i> (brasiliense)

*Jasper Ridge Biological Preserve*

Mail Code 5020

Telephone 3-1589

Wed, Dec 2, 1992

TO: John Thomas  
FROM: Alan Grundmann  
SUBJECT: Aquatic Plant List

John, in March of this year I made a slide for a talk at the Aquatic Plant Management Society listing plants in Searsville Lake — both those which a year or so previously you had listed for me, and those that had been reported but not vouchered into the Dudley Herbarium.

In the past few months Winkie Lennihan and Woody Woodward have been collecting aquatic plants, and providing you with samples which, I gather, you identified (or confirmed their identification).

Now I must respond to a new request for an aquatic plant list, so I added Lennihan/Woodward observations to other plants on my previous list which were asterisked as "reported, no vouchers on file".

That turned the single-page slide into a 2-page list, enclosed is a copy.

I would appreciate it if you could examine this list and let me know of any errors.

Many thanks.

bcc: — w/copy of new list  
Winkie Lennihan  
Woody Woodward  
Monika Bjorkman  
Nona Chiariello

I am taking the month  
of Dec for an vacation.  
Happy Christmas.  
Alan

## Plants in Searsville Lake

<u>Native</u>	<i>Ceratophyllum demersum</i> <span style="margin-left: 20px;">Hernandez</span>	
	<i>Azolla filiculoides</i>	American Water Fern
	<i>Typha latifolia</i>	Broad-leaved Cat-tail
	* <i>T. angustifolia</i>	Narrow-leaved Cat-tail
	* <i>T. domingensis</i>	
	<i>Sparganium eurycarpum</i>	Broad-fruited Burreed
	<i>Potamogeton illinoensis</i>	Illinois Pondweed
	<i>P. pusillus</i>	Small Pondweed
	<i>P. foliosus</i>	Leafy Pondweed
	<i>Zannichellia palustris</i>	Horned Pondweed
	<i>Najas guadalupensis</i>	Common Water Nymph
	<i>Alisma plantago-aquatica</i>	Common Water Plantain
	<i>Echinodorus berteroi</i>	Upright Burhead
	<i>Scirpus acutus</i>	Common Tule
	* <i>S. mucrocarpus</i>	Panicled Bullrush
	* <i>S. robustus</i>	Prarie Bullrush
	<i>Polygonum <del>coccineum</del></i> <span style="margin-left: 20px;"><i>amphibium var. emersum</i></span>	Swamp Knotweed
	<i>P. punctatum</i>	Water Smartweed
	<i>Ludwigia <del>palustris</del></i> <span style="margin-left: 20px;"><i>peplurden</i></span>	Pacific Marsh Purslane
	* <i>Myriophyllum verticillatum</i>	Whorl-leaved Milfoil
	<i>Oenanthe sarmentosa</i>	Pacific Oenanthe

Introduced

		<u>From</u>
* <i>Potamogeton crispus</i>	Curl-leaved Pondweed	Europe
<i>Iris pseudocorus</i>	Yellow Iris	Europe
* <i>Polygonum aviculare</i> <span style="margin-left: 20px;">(now <i>P. arenastrum</i>)</span>	Common Knotweed - Duncan	Eurasia
* <i>P. persicaria</i>	Lady's Thumb	Europe
<i>P. lapathifolium</i>	Willow Weed	Europe
<i>Myriophyllum aquaticum</i>	Parrot Feather	S. America

\* = reported, no vouchers on file

## PLANTS IN SEARSVILLE LAKE

### Native

✓ <i>Azolla filiculoides</i>	American Water Fern	
✓ <i>Typha latifolia</i>	Broad-leaved Cat-tail	
✓ * <i>T. angustifolia</i>	Narrow-leaved Cat-tail	
* <i>T. domingensis</i>		
✓ <i>Sparganium eurycarpum</i>	Broad-fruited Burreed	
✓ <i>Potamogeton illinoensis</i>	Illinois Pondweed	
✓ * <i>P. pectinatus</i>	Sago Pondweed	
<i>P. pusillus</i>	Small Pondweed	
✓ <i>P. foliosus</i>	Leafy Pondweed	
← <i>P. crispus</i> - next page		
<i>Zannichellia palustris</i>	Horned Pondweed	
<i>Najas guadalupensis</i>	Common Water Nymph	
✓ * <i>N. marina</i>	Water Nymph	
✓ <i>Alisma plantago-aquatica</i>	Common Water Plantain	
* ✓ <i>Echinodorus berteroi</i>	Upright Burhead	
✓ <i>Eleocharis macrostachya</i>	Common Spike Rush	
— <i>Scirpus acutus</i>	Common Tule	
✓ * <i>S. macrocarpus</i>	Panicled Bullrush	
* <i>S. robustus</i>	Prarie Bullrush	
* <i>Spirodela polyrhiza</i>	Greater Duckweed	
* <i>Lemna minor</i>	Smaller Duckweed	
✓ * <i>L. minima minima</i>	Least Duckweed	
✓ <i>Polygonum coccineum</i> <i>amphibium</i>	Swamp Knotweed	
<i>P. punctatum</i> <i>or emersum</i>	Water Smartweed	
✓ * <i>Ceratophyllum demersum</i>	Hornwort	
<i>Ludwigia palustris</i>	Pacific Marsh Purslane	
✓ * <i>Myriophyllum verticillatum</i>	Whorl-leaved Milfoil	
<i>Oenanthe sarmentosa</i>	Pacific Oenanthe	
* <i>Paspalum distichum</i>	Knot grass	Non-native
<i>Heterochaeta schoenoides</i>	Marsh grass	
<i>Cyperus</i>		

<u>Introduced</u>		<u>From</u>
✓ <i>*Potamogeton crispus</i>	Curl-leaved Pondweed	Europe
✓ <i>Iris pseudocorus</i>	Yellow Iris	Europe
<i>*Polygonum aviculare</i>	Common Knotweed	Eurasia
<i>*P. persicaria</i>	Lady's Thumb	Europe
<i>P. lapathifolium</i>	Willow Weed	Europe
✓ <i>Myriophyllum aquaticum</i>	Parrot Feather	S. America

\* = reported, no vouchers on file



2/13/92 ✓

NOTES ON OBSERVATIONS OF AQUATIC PLANTS IN OR ON SEARSVILLE LAKE

from Winkie Lennihan, 3/96

ink notes by R. Porter - 2/97

10/14/92 Woody (Dr. Sheldon) Woodward and Winkie Lennihan

Ceratophyllum demersum Hornwort  
Massive amount in main lake--most common plant, underwater.

Dicot  
F. Ceratophyllaceae

Echinodorus berteroi Upright burhead  
By launch ramp--bulldozed by maintenance and plant missing next year.

F. Alismaceae

✓ Paspalum distichum Knot Grass Common or edge

F. Poaceae

Potamogeton crispus Crispate leaved pondweed

F. Potamogetonaceae

Potamogeton illinoensis Illinois pondweed

"

Potamogeton pectinatus Fennel leaved pondweed  
Monica and Winkie took this plant to John Thomas for identification. The flowers are separated, and the leaf is attached to a sheath like stipule.

"

Spirodella polyrhiza Greater Duckweed  
I.D. Confirmed by Dr. Thomas

F. Lemnaceae

Lemna miniscula Least Duckweed

"

Lemna minor Smaller Duckweed

"

11/2/92 Woody and Winkie

Crypsis schoenoides Marsh grass or swamp timothy

F. Poaceae

Najas marina Ricefield water nymph, holly leaved water nymph

Monocot.  
F. Hydrocharitaceae

This plant was with P. crispus, out from the bathrooms, about 20' into the lake--under water. Approximately a 5' by 5' patch. This species is not in Thomas. We never found it again. We also never found Najas guadalupensis, on both Allan and Herb's lists, with a voucher on file.

5/18/93 Woody and Winkie

Eleocharis macrostachya Common spike rush  
Common on west side of Searsville. Bifid styles.

F. Cyperaceae

Azolla filiculoides American Water Fern

Fern & Fern Allies

My sample (Winkie) was collected on the sandbank at the end of the lake where it is often collected in wet years. This sample is very different from the common Azolla in Searsville Lake, which we saw every time we went out, tho often far commoner than other times.

F. Azollaceae

2 azolla in Seps.  
the 2nd azolla  
in central valley  
or pass. N. Sierra Nev.  
1

What other  
azolla?  
Variation in species?  
only 1 in Thomas

9/29/93

Woody and Winkie

Lemna minima (no spirodella)  
 Myriophyllum  
 Azolla  
 Echinodorus--in water other side of the bridge, a fair sized patch  
 Potamogeton illinoensis--by dock  
 P. pectinatus--a large amount  
 Ludwigia  
 Ceratophyllum--taking over the lake  
 Polygonum amphibium

6/6/94

Dexter Hake (kindly rowing!) and Winkie

Ludwigia  
 Potamogeton crispus  
 Ceratophyllum (nowhere near as much as 9/93--seems to increase over summer)  
 Azolla (incredibly increased--around bridge, swamp--seems to have taken over areas that had alot of lemna before)  
 Lemna--(decreased dramatically)  
 Myriophyllum  
 Polygonum

*Potamogeton* P. pectinatus (quite common, lake and marsh)  
 P. illinoensis (same small colony near dock)  
 Iris pseudacorus (by dam, increased)

- Oenanthe sarmentosa American Oenanthe  
 Near float on the west side of the lake, near my last transect for Phillippe's project. In water.

Potamogeton foliosus  
 Prob. var foliosus. No glands on base of leaves, leaves not threat like, about 1 mm. wide.

Again, no sign of Spirodella or Najas. Did not see the patch of Echinodorus, but did not really look.

10/6/94

Winkie with Bob Buell rowing. After one rain.

Ludwigia  
 Ceratophyllum, again lots  
 Polygonum ~~maritima~~ aquaticum (corrected by Winkie in memo to Nona)  
 Potamogeton illinoensis  
 P. crispus  
 P. pectinatus (very little)  
 Myriophyllum  
 Scirpus acutus  
 S. microcarpus  
 Sparganium  
 Alisma--a tiny bit, near the float in the cove  
 Lemna  
 Azolla

I think she means  
 P. amphibium v. emersum  
 There is no P. aquaticum in  
 any book including  
 Harold Mason.

9/20/95

Winkic/lake, not marsh

Azolla--(a large amount)  
Myriophyllum (tremendously increasing)  
Lemna miniscula  
Ceratophyllum (masses)  
Potamogeton pectinatus (low, under water, masses, no fruit)  
P. foliosus (no fruit)  
P. illinoensis (by boat dock only)  
Scirpus  
Polygonum (around edges of lake)  
Ludwigia peploides (huge amounts)

9/30/95

Winkic/mainly marsh

Lemna miniscula (under bridge and in swamp/also small isolated bits on the lake side of the bridge)  
Azolla (alot)  
Potamogeton pectinatus (probably--no fruit, stipules att. to leaf)  
P. foliosus (probably, also no fruit--stipules not att. to leaf)  
Myriophyllum  
Ludwigia (tons)  
Ceratophyllum (tons)

Note: Did not see any P. crispus

Other aquatic plants that I have recorded having seen in my Thomas field guide:

Alisma plantago-aquaticum (Scarsville, 6/27/79)	Common water plantain
Sparganium eurycarpum (5/81, common)	Broad fruited burreed
→ Marsilea vestita (M. mucronata in Mason--marked in my Thomas with no date.)	
Typha latifolia	
T. angustifolia (Note: Woody and I took Herb Dengler out with us one day to discuss species of Typha, and he persuaded us that it is very difficult to i.d. typhas, and our supposition that we also have T. domingensis was questionable)	
Oenanthe sarmentosa	Pacific or Amer. Oenanthe
Polygonum punctatum (edge of marsh, 7/17/93)	Water Smartweed
Scirpus acutus	Common Tule
S. microcarpus	Panicled Bullrush
Iris pseudocorus (by dam)	Yellow Iris

Plants not seen but listed by Alan Grundman, on list given me in 92:

Typha domingensis (no voucher on file)  
Zannichellia palustris (voucher on file; not on Herb's list)  
Naias guadalupensis (voucher on file, on Herb's list)  
Scirpus robustus (no voucher on file, not on Herb's list)  
Polygonum aviculare (now arenastrum), P. persicaria, P. lapathifolium: (we really did not look at polygonums except P. punctatum and P. amphibium)

Sources: Munz (before Jepson), Thomas, Herb Dengler's list, and Mason, Flora of the Marshes.

**AQUATICS SPECIES LIST SEARSVILLE LAKE 7-16-2013**

Teri Barry, Alice Cummings, Ann Lambrecht, Diane Renshaw

This was an informal rowboat survey of conspicuous and dominant plants. Plant species diversity and water level were both low at the time of the survey. Dominance trends noted by Winkie Lennihan in her notes from the mid-1990s are consistent with our observations: *Ceratophyllum demersum* (Lennihan: "masses," "tons") forms dense mats all around the lake; other very common taxa include *Myriophyllum aquaticum* (Lennihan, 1995: "tremendously increasing") and *Ludwigia peploides* ssp. *peploides* (Lennihan, 1995: "huge amounts," "tons").

**FERNS**

## AZOLLACEAE

*Azolla filiculoides*

American water fern

**ANGIOSPERMS*****CERATOPHYLLALES***

## CERATOPHYLLACEAE

*Ceratophyllum demersum*

hornwort

***EUDICOTS***

## ALISMATACEAE

*Alisma triviale*

common water plantain

## ASTERACEAE

*Helenium puberulum*

sneezeweed

## HALORAGACEAE

*Myriophyllum aquaticum*

parrot's feather

## LAMIACEAE

*Mentha pulegium*

pennyroyal

## ONAGRACEAE

*Ludwigia peploides* ssp. *peploides*

yellow water primrose

## POLYGONACEAE

*Persicaria amphibia*

water smartweed

*Persicaria maculosa*

lady's thumb

*Persicaria punctata*  
*Rumex crispus*

water knotweed  
curly dock

**MONOCOTS**

**CYPERACEAE**

*Cyperus eragrostis*  
*Schoenoplectus acutus* var. *occidentalis*

tall cyperus  
common tule

**IRIDACEAE**

*Iris pseudacorus*

yellow iris

**POTAMOGETONACEAE**

*Stuckenia pectinata*

fennel-leaf pondweed

**SALICACEAE**

*Salix exigua* var. *hindsiana*  
*Salix lasiandra* var. *lasiandra*

Hind's or narrow-leaved willow  
Pacific willow

**TYPHACEAE**

*Typha* sp.

cattail