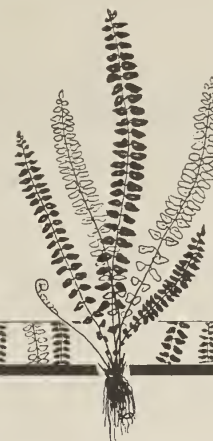


Hardy Fern Foundation NEWSLETTER



Breaking Ground at the Pond Area of the Rhododendron Species Foundation - Spring 1990.
l. - r. Marshall Majors, Mareen Kruckeberg, Guy Huntley, Jeanette Kunnen, Sue Olsen, Marti Williard

President's Message

SUE OLSEN

The Hardy Fern Foundation is reaching the conclusion of a very promising first year. Thank you all for your memberships and especially for your support of our project.

We are pleased to report that in January of this year the Northwest Horticultural Society gave us a grant in the amount of \$5,000 as seed money to make our proposals a reality. In addition, the IRS has granted us non-profit status, and we are now free to pursue other opportunities for donations and grants.

Our membership is approaching 250 and is truly national in distribution (see page 4). We are grateful for your letters of encouragement and certainly to those of you who contributed beyond the basic membership rate to assist us.

Requests to be considered for satellite garden status have been received from seven institutions representing a considerable divergence in climatic conditions. All are currently under consideration. As resources permit, we hope to make a modest beginning with research gardens at other sites possibly by the fall of 1991. We have also received from member James Horrocks a very informative account of fern cultivation in the Salt Lake City, Utah environment. We are publishing these observations in installments beginning with this newsletter. In addition, offers of cooperation have been received from as far away as Holland, Great Britain and the former East Germany. We also look forward to a positive response from contacts in Japan and China.

In cooperation with the Rhododendron Species Foundation, the Hardy Fern Foundation planting became a reality this past spring with an unofficial ground-breaking in June. 189 ferns representing 56 species and varieties were arranged by genus, country of origin and habitat preference in the Lower Study Garden and pond area. The plant material was generously donated by local growers, board members and our scientific advisor. A second work party in October

added 115 ferns to the planting including the entire research collection of Ed Alverson's Master's Degree studies on *Cryptogramma*. These are in the rock garden and/or adjacent to the site of a proposed alpine garden. Your Hardy Fern Foundation membership entitles you to reduced admission at the Rhododendron Species Foundation and we urge you to visit when you are in the area.

In addition to the reference garden at the Species Foundation the Hardy Fern Foundation has installed a display garden at Lakewold, the Tacoma estate and public garden of Mrs. Corydon Wagner. It is the intention of the planting to demonstrate how a diversity of ferns can be used in the landscape. The ferns are divided into two sections with North American natives on one side of a woodland path and exotics on the other with the total to complement the extensive fern collection already established in the garden. Lakewold is open to the public Tues., Thurs., and Sat. from April through October. To visit it is to see one of the most beautiful gardens in the U.S.

Our first spore list will be published in conjunction with the American Fern Society and will be mailed to members after the holidays. Anyone wishing to contribute spore should send their material to Mrs. Garrett Horder, 16813 Lemolo Shore Dr. N.E., Poulsbo, WA 98370

We regret that Joseph Beitel, one of our Scientific Advisors has resigned for personal reasons. We wish him well with his pursuits as well as a speedy recovery from his recent illness. We are pleased to announce that Barbara Joe Hoshizaki, author of *The Fern Grower's Manual*, will be serving as our new Scientific Advisor.

Thank you again for joining us. We look forward to your continued support.

Hardy Fern Foundation Fern Planting through October, 1990

Rhododendron Species Foundation

Adiantum aleuticum
Adiantum pedatum
Adiantum pedatum var. *subpumilum*
Adiantum venustum
Adiantum Green Mt. Maidenhair - to be published spring '91 in Rhodora
Arachniodes simplicior var. *major*
Asplenium trichomanes
Athyrium filix-femina var. *angustum*
Athyrium filix-femina 'Bornholmiense'
Athyrium filix-femina 'Minutissimum'
Athyrium mesosorum
Athyrium niponicum
Athyrium niponicum var. *pictum*
Athyrium pycnocarpon
Athyrium thelypteroides
Athyrium vidalii
Blechnum niponicum
Blechnum penna-marina
Blechnum spicant
Blechnum spicant 'Serratum Rickard'
Cryptogramma acrostichoides
Cryptogramma acrostichoides x *sitchensis*
Cryptogramma alpestris
Cryptogramma sitchensis
Cyrtomium caryotideum x *falcatum*
Cyrtomium macrophyllum
Cystopteris bulbifera
Cystopteris protrusa
Cystopteris tennesseensis
Dennstaedtia punctilobula
Dryopteris aemula
Dryopteris affinis x *filix-mas* 'Robust' (in the trade as *D. f-m* 'Undulata Robusta')
Dryopteris affinis 'Crispa'
Dryopteris championii
Dryopteris clintoniana x *goldiana*
Dryopteris cycadina
Dryopteris cystolepidota (syn. *D. nipponensis*)
Dryopteris decipiens
Dryopteris dilitata
Dryopteris dilitata 'Lepidota cristata'
Dryopteris dilitata 'Recurvata'
Dryopteris erythrosora
Dryopteris erythrosora var. *prolifera*
Dryopteris filix-mas

Dryopteris filix-mas 'Linearis polydactyla'
Dryopteris gymosora
Dryopteris lacera
Dryopteris ludoviciana
Dryopteris polylepis
Dryopteris pseudo filix-mas
Dryopteris sieboldii
Dryopteris varia var. *setosa* (syn. *D. bissetiana*)
Dryopteris wallichiana
Equisetum hyemale
Gymnocarpium dryopteris
Gymnocarpium dryopteris 'Plumosum'
Hypolepis rugolosa
Lygodium japonicum
Matteuccia struthiopteris (Asian)
Matteuccia struthiopteris (NA)
Osmunda claytoniana
Osmunda regalis var. *regalis*
Osmunda regalis var. *spectabilis*
Pellaea atropurpurea
Pellaea ovata
Phegopteris connectilis (syn. *Thelypteris phegopteris*)
Phegopteris decursive-pinnata (syn. *Thelypteris decursive-pinnata*)
Phegopteris hexagonoptera (syn. *Thelypteris hexagonoptera*)
Phyllitis scolopendrium
Polypodium amorphum
Polypodium scoleri
Polypodium vulgare 'Cornubiense'
Polystichum acrostichoides
Polystichum aculeatum
Polystichum braunii
Polystichum californicum
Polystichum x illyricum
Polystichum lonchitis
Polystichum polyblepharum
Polystichum retroso-paleaceum
Polystichum setiferum 'Congestum'
Polystichum setiferum 'Divisilobum'
Polystichum setiferum 'Rotundatum cristatum'
Polystichum setiferum 'Thompsoniae'
Polystichum sp. (unidentified China)
Polystichum sp. (unidentified Japan)
Polystichum squarrosum
Polystichum tripteron
Polystichum tsus-simense
Polystichum yaemonse
Selaginella moellendorffii

Selaginella moellendorffii
Thelypteris noveboracensis
Woodsia obtusa
Woodwardia areolata
Woodwardia fimbriata

Lakewold Planting

North American Natives
Adiantum pedatum
Adiantum pedatum var. *subpumilum*
Blechnum spicant
Dryopteris clintoniana x *goldiana*
Dryopteris filix-mas
Matteuccia struthiopteris
Onoclea sensibilis
Osmunda cinnamomea
Osmunda regalis var. *spectabilis*
Phegopteris connectilis (syn. *Thelypteris phegopteris*)
Polypodium glycyrrhiza
Polypodium scoleri
Polystichum acrostichoides
Polystichum braunii
Polystichum lemmonii
Polystichum munitum
Polystichum scopulinum
Woodwardia fimbriata

Exotics

Adiantum venustum
Arachniodes aristata 'Variegatum'
Arachniodes simplicior var. *major*
Arachniodes standishii
Cyrtomium falcatum 'Rochfordianum'
Dryopteris championii
Dryopteris decipiens
Dryopteris dilitata 'Crispa Whiteside'
Dryopteris erythrosora
Dryopteris lacera
Dryopteris sieboldii
Dryopteris wallichiana
Hypolepis rugosula
Phyllitis scolopendrium (European form)
Polystichum aculeatum
Polystichum makinoi
Polystichum neolobatum
Polystichum polyblepharum
Polystichum retroso-paleaceum
Polystichum rigens

Fern Cultivation in Northern Utah

Part one by James R. Horrocks

Northern Utah, with its semi-arid climate, presents some real challenges to growing ferns. In fact, a fern garden in the valleys is really quite unique. Several factors limit the number of species that can actually be cultivated with any degree of success. First of all, the relative humidity is quite low during the summer months. Secondly, semi-arid climates, more often than not, produce rather alkaline soils. Consequently, the size of the fern gardens and the variety of ferns cultivated are quite reduced. A microclimate must be maintained and ferns are mostly grown in the shade with very little sun.

What follows is a listing of species that the author has personally grown or attempted to grow with notes as to possible reasons for their success or failure. Obviously, ferns requiring high humidity and those needing acidic soils have not fared well, if at all, but there have been some interesting surprises.

Adiantum capillus-junonis - I attempted these once but they were young plants and I could not get them established. I would like to try them again. I suspect they may need rather high humidity.

Adiantum hispidulum - Has survived cold winters here with protection but ultimately died out. Low humidity most likely a factor.

Adiantum monochlamys - Attempted but unable to establish.

Adiantum pedatum - I have both the eastern variety and the western var. *aleuticum*. They seem to do fairly well here despite the low humidity. *A.P.* var. *subpumilum* attempted but failed. Low humidity most likely the problem.

Adiantum venustum - Difficult to establish but if it takes hold - watch out. This is my best *Adiantum*, spreading among the larger rocks and remaining very fresh and green. Evergreen through the winter here if covered with snow.

Arachniodes - Many of these are cold hardy but seem to require high humidity. They also grow so slowly here that they have not thrived. Slugs and snails are particularly troublesome. Species attempted with generally the same disappointing results are:

Arachniodes aristatum 'Variegatum' - (Several authors have alluded to the

"white" stripe down the middle of the pinnae. For me, it has always been light green in color, never white.)

Arachniodes standishii

Arachniodes simplicior

Arachniodes maximowiczii

Arachniodes cavalerii - I am presently experimenting with this one. It has by far been the strongest grower and is very easy from spore.

Aspidotis densa - Known as "Indian's Dream" and native to the alpine regions of Utah. I suspect it should remain in an alpine environment, since it dwindled and died out in my garden.

Asplenium - Most of these seem in need of relatively high humidity. Even *A. platyneuron*, which I expected to thrive here, failed. Slugs and snails are a major nuisance. Species attempted with disappointing results are:

Asplenium platyneuron

Asplenium trichomanes

Athyrium filix-femina - Native to the mountains of Utah, this fern responds quite well in the garden but tends to look rather dilapidated by late August. Variants grown include:

Athyrium filix-femina 'Fieldii'

Athyrium filix-femina 'Victoriae'

Athyrium filix-femina 'Minutissimum'

Athyrium filix-femina 'Cristata'

I am confident many other varieties of this species would probably do well here in Utah.

Athyrium mesosorum - Hardy here but only producing two or three fronds per season. Very susceptible to slugs and snails.

Athyrium niponicum var. *pictum* - I acquired this as *A. goeringianum* var. *pictum*. It has done surprisingly well here.

Athyrium otophorum - Hardy but rather cautious in its growth. Plants grown in a large cold-frame did very well. Humidity most likely a factor.

Athyrium pycnocarpon - I am surprised that this fern is not offered in more listings. It has always been a strong grower for me, needing only adequate moisture and protection from late frosts and wind. The once-pinnate fronds are unique among North American deciduous ferns. My colony is over twenty years old.

Blechnum spicant - Did fairly well here but ultimately died out, the soil probably not being acid enough.

Blechnum penna-marina - Rather disappointing results. This fern seemed to require high acidity and humidity. I could never get it started even after several tries.

Camptosorum rhizophyllum (*Asplenium rhizophyllum*) - Failed slugs and snails probably responsible.

Ceterach officinarum (*Asplenium ceterach*) - Unsuccessful.

Cheilanthes dalhousiae - Failed utterly.

Coniogramme - I attempted both *C. intermedia* and *C. japonica*. Unfortunately the slugs ate them to the ground before winter arrived. Hardiness questionable here.

Cryptogramma - Mostly alpine plants with which I have never had success. *C. acrostichoides*, the Parsley Fern, which is native in Utah, is a so-called "lime-hater" and did miserably in my garden. I have never attempted *C. stelleri*, which is known in Utah from only one locale.

Cyclosorus parasitica - A notorious contaminant of spore cultures and a greenhouse weed. Believe it or not, I actually have one that has survived three cold winters with some protection.

Cyrtomium - Some of these ferns are a great deal hardier than imagined.

Cyrtomium falcatum - Grown here for fourteen years. They have thrived, looking their best by late August and September.

Cyrtomium fortunei - Most likely the hardiest of the *Cyrtomiums*, these like to be nestled up against large rocks.

Cyrtomium macrophyllum - Another surprise, establishing itself rather well in the garden.

Cyrtomium caryotidum *x falcatum* - Has done quite well nestled against a large boulder.

Cyrtomium caryotideum - Marginal performance. This one did much better when I moved it into the cold-frame. Perhaps it was too small for the open garden.

I have always wanted to try *C. balansae* but have never been able to acquire it.

Look for part two in our next newsletter

The Hardy Fern Foundation wishes to sincerely thank the following members who have contributed above and beyond the basic membership classifications. Your support sustains our existence.

Grants:

Northwest Horticultural Society

Patrons:

Mrs. Hugh Baird
Mrs. Phil Duryee
Mrs. Garrett Horder

Contributing:

American Rock Garden Society, NW Chapter
Mrs. Esther Berry
Mrs. Leonard Eshom
Guy Huntley
Charles Lamade
Marshall Majors
Mrs. Pendleton Miller
Mary Clay Muller
Paul Penfield Jr.
Mr. & Mrs. Cal Shorts
Ben Sims

Charles Smith
Christine Spindel
Dr. and Mrs. Warren H. Wagner Jr.

Endowment Fund

Contributions:

Julia Bounds
Frank Cabot
Michael Cocannon
Mr. & Mrs. Thomas Dalby
Steven Gilbert
Thomas Gillies
Bill Horder
Mrs. Garrett Horder
Mr. & Mrs. Charles Hyde
Mr. & Mrs. Harry Olsen
John W. Platt
Leonard Richard

**Hardy Fern Foundation
Membership Distribution**

Number of Members	State(s) & Countries
76	WA
20	NY
19	CA, OR
13	MA
10	PA
8	CT, VA
7	MD, NJ
5	Canada, GA
3	IN, MI, MN, NC, TN, WI
2	AL, IL, MO, OH, SC, TX
1	AK, AR, HI, ME, MS, MT, UT, VT, WV

Hardy Fern Foundation
P.O. Box 60034
Richmond Beach, WA 98160-0034

NON-PROFIT
US POSTAGE
PAID
SEATTLE, WA
PERMIT NO. 4875