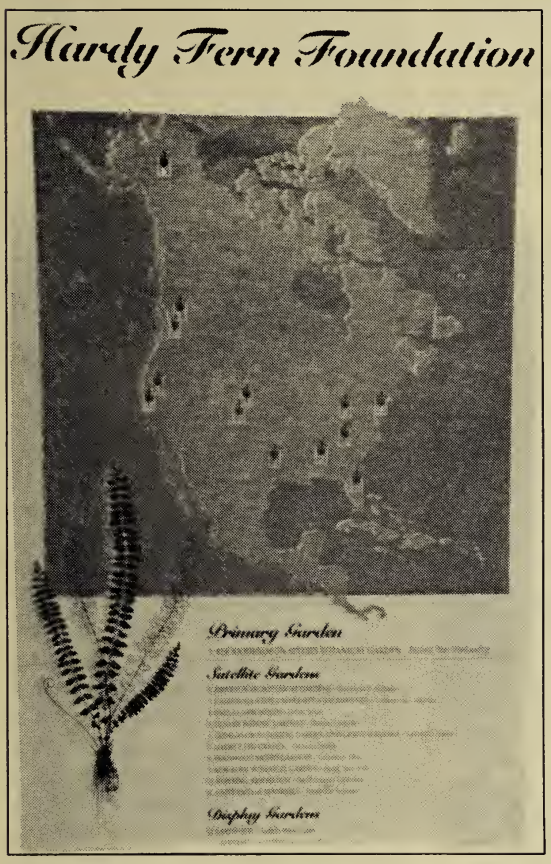
Hardy Fern Foundation NEWSLETTER

Editor Sue Olsen ■ VOLUME 5 NUMBER 4 ■ FALL 1995



HFF Poster

President's Message

Sylvia Duryee

Fall again - the culmination of spring work, summer care and growth. What a pleasure to see the juveniles growing on to full maturity. In my garden this may take three to four years. More successes than losses sparks the desire to grow more. And how are yours doing? We'd love to receive an evaluation.

We are enjoying our alloted space in the hoophouse at the Rhododendron Species Botanical Garden but we still have needs. We hope to amend our watering problems by helping to design and install a watering/misting system. This will make a large difference in our growing efforts.

We were pleased to be able to contribute to Steve Hootman's five week trip to China. He is collecting seeds and spores for the R.S.B.G. and the Hardy Fern Foundation. It will be an exciting time when he returns and starts opening boxes and envelopes. We all wish that Steve has a rewarding trip. For us and the R.S.B.G. the rewarding will come later with the growing.

Sue and Harry Olsen attended Pteridophytes '95 at Kew Gardens as did our scientific advisor Barbara Hoshizaki and husband Takashi as well as HFF members Catharine Guiles, Susan MacQueen and Nancy Swell Sue reports that the public response to our new poster which was on display was enthusiastically positive. It was nice to have an international audience. We hope to reproduce this poster in a smaller size for display at our satellite gardens.

We send all good wishes to our members and friends for a good holiday season along with hopes for a comfortable winter dormancy for all of our pteridophytes.

P.S. A reminder: We are looking forward to progress evaluations from our satellite gardens for publication in an upcoming newsletter.

Dryopteris Marginalis

James R. Horrocks
Salt Lake City, Utah

The species name "marginalis" refers to the position of the sori on the pinnules. They appear near the margins, and it is this feature that distinguishes this species from a score of other bipinnate members of this genus. It is commonly known by several names: Evergreen Wood Fern, Leather Wood Fern, and Marginal Shield Fern, the latter name being the more descriptive. The range of this North American species is from Newfoundland to Ontario south through the New England states to Georgia, then across to eastern Kansas up through the Great Lakes area. It is more abundant northward.

Dryopteris marginalis is mainly terrestrial in nature, although occasionally epipetric, that is, growing on rocks. It is found growing around talus, on rock ledges, and in the open ground in shade. It prefers rocky hillsides in rich woodlands but sometimes frequents somewhat sterile soils and is often found growing in proximity to the Christmas Fern, *Polystichum acrostichoides*. These two species often hold erosion in check on

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Before You Go

We strongly recommend a membership in The National Trust a British charity founded in 1895 to preserve places of historic interest or natural beauty. They currently oversee 1,000 ancient monuments, 200 historic houses, 160 gardens, 25 industrial monuments and protect over 590,000 acres of countryside including 550 miles of coastal property. Members receive a descriptive guidebook to these properties organized by county. They also receive free or reduced admission to these sites. We found it very worthwhile. For further information write to National Trust Membership Department, PO Box 39, Bromley, Kent BR1 3XL, England.

The Gardener's Guide to Britain by Patrick Taylor, Timber Press 1994 presents descriptions of "A personal selection of the best gardens, nurseries and specialist plant suppliers" and is immensely helpful. They too are organized by geographical area and are indexed by garden type and features i.e. ferns, herbs, alpines etc.

Someday we'll have an article on the British National Plant Collections program. For now, however, we recommend their book The National Plant Collection Directory published annually. There are an unbelieveable number national collections from hepatica and heuchera to the ferns, of course including polystichum, polypodiums, dryopteris etc. This little guide gives directions to the gardens as well as information on when the gardens are open, number of species and other pertinent details. This is published by the NCCPG, The Pines, Wisley Garden, Woking, Surrey GU23 6QB, England.

Finally, of course, fern books are in order and we particularly like The Ferns of Britain and Ireland by Chris Page, Cambridge University Press, London, New York 1982. Page's A Natural History of Britain's Ferns Collins, London, 1988 is especially useful for descriptions of habitats. Finally there is a more recent work, The Illustrated Field Guide to Ferns and Allied Plants of the British Isles by Clive Jermy and Josephine Camus, Natural History Museum Publications, London 1991 that has keys, descriptions and illustrations of the native material.

NOTE Travelers heading in the opposite direction to Southern Alpines '96 in Christchurch New Zealand in January might want to put Brownsey's and Smith-Dodsworth's excellent reference New Zealand Ferns and Allied Plants, David Bateman, Auckland, 1989 on their wish list!

On the Pteridophyte Trail in England

Sue Olsen, Bellevue, WA

Part One

The lure of an escorted post-conference tour to Devon and Cornwall led my husband Harry and me to return our registration forms for Pteridophytes '95 Kew practically by return mail. (We were so prompt that we were the first ones signed up!) Our experience at the BPS Centenary conference and tour in 1991 left us eager to once again see England's ferns in situ and also by extending our trip beyond the scheduled program to visit private and public gardens. We were not disappointed.

The England we visited in mid-July was suffering from record heat and the worst drought in 250 years. This was to follow us during our entire trip of six weeks. We will indeed vouch for the heat and it was a relief to leave London and head for a more maritime southwest climate under the leadership of Dr. Chris Page recently retired from The Royal Botanical Gardens at Edinburgh.

By Harry's suggestion and with the group's approval our first stop en route was at Stonehenge. Any thoughts of the stones being surrounded by ferns were gone in a glimpse, however we were glad to have the opportunity to visit the historic site. From there we made our way to Devon where after several wrong turns we found the Heron House Hotel which was to be our operation central for the next several days. The beachfront hotel faced the English Channel and provided wonderful early morning and evening scenic walking opportunities.

All the while views from our bus window perch promised good things to come. For starters there were unmistakably large stands of Phyllitis scolopendrium growing in **deep deep shade.** (They will show up later in full sun, but I don't think these lush communities ever saw "the light of day".) Our first foray was to the research center and surrounds at Slapton. Here overlooking the spectacular coastal scenery we saw woodlands of Polystichum setiferum as well as more and more Phyllitis scolopendrium. Dryopteris affinis was also prominent and these ferns were to be the common species encountered during our travels. Going down (and I might add back up) 147 steps deeper into the woods we found Dryopteris dilatata and Dryopteris filix-mas. The highlight of the day, however, was the village center where amongst thatched roofed homes Polypodium interjectum, Asplenium trichomanes and various daisy like plants were entangled on the old mortared walls. We entertained the locals by lining up, macro lenses in hand duly recording their walls. Later in the day we crossed over a promontory to the next beach in search of Asplenium adiantum-nigrum. The stand had long since been overwhelmed by blackberries but Barbara Hoshizaki managed to ferret out some specimens from under the brush.

The next morning we went to the Berry Pomeroy Castle which when last seen by Chris was covered with the lime loving Polypodium cambricum (formerly P. australe). Meanwhile the castle had recently been "cleaned up" and gone were the polypodiums!! (Ferns on castle walls have a way of disappearing like this.....we had a similar experience returning to "under restoration" Tintern Abbey.) There were a few species tucked in out of the way spots so we enjoyed them and left the rest to our imagination. The highlight of the day, however was a stop at the village of Chudleigh. Here the sunny walls of the town and especially the graveyard were covered once again with Asplenium trichomanes, this time in the company of Asplenium ruta-muraria, Phyllitis scolopendrium and Ceterach officinarum. These were exciting to see, but even more so was our discovery of a tombstone (for Betha and Ellen) beautifully carved to resemble an old wall with a fern frond growing out it. (If we foreigners looked strange photographing the wall in Slapton, you should have seen us on our knees at the tombstone!) It was hard to leave but the afternoon called for a visit to the Yarner Wood National Nature Reserve in Dartmoor National Park. Here under oaks and conifers we found

some of the acid loving ferns as we walked through the valley and along a natural stream. Dryopteris aemula with light green fronds, tall specimens of Oreopteris limbosperma, and Osmunda regalis, as well as Dryopteris expansa and the hybrid between Dryopteris expansa and Dryopteris dilatata were all studied and compared.

It was time to move on to Cornwall with several stops en route. Our first chance to risk life and limb was at Liskeard where Asplenium bilottii was growing on the shady banks of a narrow lane. The latter were quite standard and the bus backed up more than once during our trip to "yield" to oncoming traffic hidden deep in the hedge rows. Rose Murphy a retired school marm joined the tour at this point to assist for the next several days and was quick to point out the already familiar dryopteris at the afternoon stop in Lower Gurdon along with Equisetum fluviatale, Polypodium vulgare, Dryopteris carthusiana and Pteridium aquilinum var. atlanticum (Page). I have not mentioned Pteridium aquilinum (bracken) or Athyrium filix-femina (lady fern), but be assured they were everywhere. In fact the bracken appears to be slowly devouring the entire British Isles along with blackberries.!

Another day and another woodland, Lamorran woods yielded more finds including several Dryopteris affinis subspecies and Blechnum spicant. The group lunched in the popular fishing village of St. Mawes where we had our only encounter with Adiantum capillus-veneris in the churchyard. We seemed to be hanging out in cemetaries and the afternoon was no exception at the charming church in St. Just-in-Roseland. The gravestones were surrounded by huge stands of Dryopteris affinis with an occasional specimen of D. a. subsp. robusta. In another portion of the garden were healthy swathes of a Blechnum sp.! (tabulare, chilense, magellanicum and cordatum were all suggested and discussed as correct names but there was no consensus...lovely plant though!) The dominant "companion" plants to all of these ferns throughout the countryside were hydrangias of all forms and colors and crocrosmia species and cultivars.

The next morning we visited Chris' beloved Penjerrick garden. This 25 acre estate has been developed by the Fox family over a period of 200 years and there, as promised, were the 200 year old tree ferns (Dicksonia antarctica) for which the garden is known. Several of the dicksonias are believed to be the oldest and largest in cultivation. Our moisture loving mystery blechnum appeared again colonizing along a stream bed along with huge specimens of gunnera and Osmunda regalis. (Someone should introduce O. cinnamomea!) The afternoon excursion by contrast was to Kynance Cove down at the tip of the Lizard Peninsula the southern most point in England. One has to think that Kodak film was developed for just such a spot with picturesque windswept cliffs and the turquoise/royal blue Atlantic Ocean rolling in to join the English Channel. The dominant plant in the area was spiny gorse....thank goodness we don't have to cope with that weed. Much of the point's rock is serpentine and our specific goal was to find the serpentine form of Asplenium adiantum-nigrum which indeed we did. A bonus at the end of the trail was the discovery of two plants of Asplenium marinum (more about this in Part Two) tucked in the rocks in deep shade. Each had only a few leathery fronds, but we were all pleased with the find. The hike while not strenuous was one of the high points of the trip and many wished we could continue along the coast.

Tombstone - Chudleigh. Photo by Harry Olsen.

On our last day we went to an abandoned mill where explosives were once made for the Cornish tin mining industry. The woods contained many of the ferns that had been enjoyed on the trip and it was a fitting summary and conclusion. The group abandoned ferns for the afternoon to enjoy sightseeing in Falmouth where many of us were entertained by fleets of sailboats participating in a popular local regatta. As a farewell celebration we spent the evening at a wine and cheese gala at the estate of Chris' sister-in-law'. It was a fitting ending to a very busy week. Chris wrote that he hoped we'd return with happy memories and many photos and we can say yes on both counts!

Part Two will explore fern gardens and habitats that we enjoyed after the tour including a return visit to some of the places described on the 1991 tour.

Hardy Fern Foundation

The Hardy Fern Foundation Newsletter is published quarterly by the Hardy Fern Foundation, P.O. Box 166, Medina, WA 98039-0166.

Articles, photos, fern and gardening questions, letters to the editor, and other contributions are welcomed!

Please send your submissions to Sue Olsen, 2003 128th Ave SE, Bellevue, WA, 98005.

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American Fern Society Fern Foray

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Carl Taylor,
Dan Palmer,
Wendy Born,
Mike Windham.

First Stop Barnhardt Canyon.

Friday, 7:03, Phoenix, August 4, 1995. 103° It's gonna be a scorcher. A normal summer day in this sun-beaten town...and I have a job to do. Who am I? Terry Dologist, Fern Detective.

A coupla weeks ago I got a hot tip (...and it is hot) about a coupla joes that can lead me to more ferns than I can shake a collecting bag at. My job bein' what it is, I couldn't stay away.

Friday, 7:59. 105° Pull up to the Super 8 Motel Phoenix Metro/Central. Already a motley crew of fern finders is gatherin' 'round a van that looks smaller than 11 people and their bags. After handshakes all around, we get on the road. Turns out the van is comfy and *air conditioned*.

The guys headin' up this expedition, Mike Windham and George Yatskievych, 'splain as to how, since the usual Arizona monsoon hasn't hit this year, we're gonna have to follow different leads. Ya gotta know the territory.

Friday, 10:30. Gila County, Mazatzal Mountains, lower Barnhardt Canyon. HOT. We're at 4100' and it's still hot. Lucky it's early. We pile out of the van like bloodhounds on a chase...sniffin' through the underbrush. Evergreen woodland with mostly oaks, junipers, and pines. The first cry goes up. A fern is spotted.

I seen a lot of ferns in my time. But this is a fern just like a fern you'd see that hadn't been watered for a long time. Curled, withered, scorched. "Oh," says Mike, "*Cheilanthes yavapensis.*" I believe him. Of course, with a fern in that condition, he coulda said *Cheilanthes* anything and no one would have known different. The next ferns are more recognizable...cliff-brakes...Wright's cliff-brake (*Pellaea wrightiana*). Next, the spiny cliff-brake (*P. truncata*)... and the hybrid *Pellaea* x "wagneri." Also, more lip ferns (*Cheilanthes*) with *C. covillei, C. fendleri*, and *C. lindheimeri*. Most are "crispy critters," but occasionally we see one with a coupla healthy fronds. Mike points out some plants that look like shriveled gold. These are goldback ferns (*Pentagramma triangularis* subsp. *maxonii*). We see both the triploid and tetraploid cytotypes. (Don't ya love it when I talk scientific?)

We move up to 4500 feet, into a riparian community. In plain talk, that's plants associated with water, usually a river or lake. Here, we find walnut, plane trees, hackberry, and a lady near a spring. The lady...is a lady fern. Arizona desert...*Athyrium filix-femina*. Go figure. Also stalked and found, bracken (*Pteridium aquilinum*) and giant chain fern (*Woodwardia fimbriata*). We wend our way back to the van, following a two-inch hose designed to bring spring water to grazing cattle a mile or so below. By the time we get to the van, water...or anything else wet and cold...sounds good to us.

The lava sits on top of ice caves which enable a cool wet wind to blow up though the lava . . .

Back in the van, heading for a lunch stop. We move out of cactus country, into yellow pine forest on the Mogollon Rim.

Friday, 1:00. 7245' Mid-80s. Practically frigid. We pull up to what's left of Baker Lake. Never much more than a big pond, in deep summer it seems mostly mud. Eleven guys and gals tromping through mucky mud looking at water clover. Mike tells 'bout how it used to be *Marsilea vestita*, but now it's *Marsilea mollis*. Finding ferns is fun. Keeping up with names is work. A little ways away we find more bracken. John Mickel and Dan Palmer talk about whether it's variety *pubescens*. No decision is reached. Our stomachs demand lunch. George and Mike lay out the sandwich spread and we dive in.

Friday, 2:00 7400' Still nice. Major stop 2 for today. We're at Dane Canyon and we hear there are ferns galore. This is a Montane Conifer Forest dominated by spruce, fir, and maple. We follow the fire roads down into the canyon. My well-honed detective sense leads me right to 'Cystopteris Rock." [Or was it luck? No matter.] This rock is just covered with brittle or bladder ferns, as *Cystopteris* are called. Here we fern hounds find the southwestern brittle fern (*Cystopteris reevesiana*), the Utah brittle fern (*C. utahensis*), and the very rare hybrid, *C. reevesiana* x C. *utahensis*. Under and around other rocks nearby, we find the western polypody (*Polypodium hesperium*) and the purple cliff-brake (*Pellaea atropurpurea*). After sliding...er, hiking further down the canyon, we find a stream bed lined with more *Cystopteris*, the northern holly fern (*Polystichum lonchitis*), the lady fern (*A. filix-femina*), and the male fern (*Dryopteris filix-mas*). On the way back out, Sue Hollis spots a lonely maidenhair spleenwort (*Asplenium trichomanes*) or two.

Friday, 6:00 Somewhere in the 90s and the 6000s. A quick stop at Mormon Lake just for the view. Orange, red, and purple tint the thunderheads to the west. To-

ward the horizon, rain, occasionally interrupted by lightning, streaks down but never reaches the ground.

Friday, 7:00 7500' High 70s. The gang settles into the Flagstaff Fairfield Suites. Dinner at 7:00 at a local Mexican restaurant...with live music...then back to our rooms to pore over the treasures gathered during the day. Did you know that if you put shriveled *Cheilanthes* fronds into a plastic bag with some water overnight, they look almost like real fronds in the morning?

Saturday, 7:00. Day two. Clear and bright. Everyone's eager to get back on the trail. After a continental breakfast, we beeline north for today's first stop, the south slope of Elden Mountain.

Saturday, 9:00. 95° Beginning to heat up again. This is no sissy stop. Through thickets. Up ravines. Over tall boulders clamber the super-sleuths in search of the wily ferns. Carl Taylor and Don Farrar lead the way. We see more *P. wrightiana*, then Eaton's lip fern (*C. eatonii*) with some actual live fronds, the ebony spleenwort (*A. platyneuron*), the black-stemmed spleenwort (*A. resiliens*), the western cliff fern (*Woodsia oregana*), and *Woodsia neomexicana*. About here I noticed that most of the ferns we are finding have "cliff" something in their names. They should also have had "hot" something... Back to the van and the cold drinks.

Saturday, 11:00. 100° A special added attraction. The Sunset Crater lava flows. Mike says "The tour leader's nightmare." Here we're tracking down a very elusive fern, the forked spleenwort (*A. septentrionale*). Faced with sharp, unstable glass-sharp lava, Sue Hollis proves to be the only person on the trip in her right mind and volunteers to patrol the perimeters. The other ten heat-stroke victims clamber out onto the lava. More surprises. The lava sits on top of ice caves which enable a cool wet wind to blow up though the lava. As a result, a variety of ferns grow in this nearly barren, hostile environment. As we spread out to corner *A. septentrionale*, we find lip ferns (*C. feei* and *C. fendleri*), cliff ferns (*W. oregana*, *W. neomexicana*, and *W. oregana* x *W. neomexicana*), the male fern (*D. filix-mas*), and a brittle fern (possibly *C. fragilis*), but no forked spleenwort. It almost feels like a snipe hunt. We all head back, saddened and enlivened at the same time. Just as most of us scramble out of the lava flow, "We found it." Alan Smith and Lisa Hooper burst out from between two huge cinderrocks carrying their one-frond prize. No one was ready to "go back in."

Saturday, 1:00 HOT! Hunger is setting in again. We take it on the lam to the relative cool of Oak Creek Canyon and lunch overlooking Oak Creek. Not much in the way of fernery, but great fixin's again. Thanks, George. A couple of horsetails (*Equisetum arvense*, *E. x ferrissii*) and some bracken later and we're back on the road.

Saturday, 3:00 103° Heading back toward Phoenix. Talking about a good coupla days and catching an early flight. Suddenly, George turns the van off the highway and starts down a bumpy, rocky, dusty, dirt road. This is cactus country. Mike calls it Sonoran Desert community featuring prickly pear, jojoba, ocotillo, palo verde, and cactus. We pull to a stop at a wash near a sign that says "Bumblebee 4." Is that a partial score? "Major stop 3 for today," explains Mike. He must take us for fools. There's a rush for the door. He's right.

Wendy Born heads the pack as we wander off down the wash. Mike leads us to a series of cheilanthoid fern and fern allies. Cloak ferns (*Notholaena californica* and *N. standleyi* subsp. "*mazatzalensis*"), lip ferns (*C. parryi* and *C. yavapensis*), *Astrolepis cochisensis* subsp. *arizonica* (one of very complex *A. sinuata* complex), and a pretty little Selaginella species (*S. arizonica*). I hunt fruitlessly for Parish's and Wright's lip ferns (*C. parishii* and *C. wrightii*). An hour later, George and Mike are trying to herd us, toasted but reluctant, back into the van.

Saturday, 5:00 104° Phoenix International Airport. Good byes to those not going on to San Diego and the AIBS conference. Making plans for next year. "Leave no fern before its time." Or something like that.

For Your Information

While at the conference at Kew we met Dr. Kunio Iwatzuki author of Ferns and Fern Allies of Japan. He advises that the English version of the book is still pending, however (and unfortunately) the magnificent photographs for which the book is acclaimed will not be included in the English edition.

Lee Moore "The Adventurer" has asked that I announce that he leads expeditions to the Peruvian Amazon. These safaris are limited to 15 people and last for 10 days. The price, inclusive from Miami, is $2,600. For further information write to Lee at P.O. Box 822, Miami, FL. 33156. Phone (305) 274-3980.

The A.I.B.S. (American Institute of Biological Sciences) meeting and American Fern Society annual meeting will be in Seattle next August 4 - 7 complete with pre-conference field trips. Your HFF is planning an excursion. There will be more information available as plans are firmed. If you are interested let us know.

In response to our request for garden reports, Catharine Guiles of Maine has written, "I fear I must report three deaths and one case of ill health. June and July 1994 were very dry, December 1994 was warmer than usual, and the snow cover for last winter was not heavy. All this placed stress on perennials, and I lost three ferns in my Blue Hill, Maine, garden, about which I wrote in 1992. These were: the Dwarf fimbriate Lady Fern (*Athyrium filix-femina* 'Fancy Fronds'), the Crested male fern (*Dryopteris filix-mas* 'Cristata the King') and the Fragile fern (*Cystoperis fragilis*). The first two never did thrive, though they lasted through the two previous winters. The third, I have concluded most likely died because of inadequate winter protection and perhaps because of stress from dry conditions during the growing season. After the winter of 1992-93, I lost the Bulblet fern (*Cystopteris bulbifera*); however, in the spring of 1994, it reappeared and it also survived last winter." Thanks for the report Catharine!

Dryopteris Marginalis
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barren shaded slopes. *Dryopteris marginalis*, more often than not, grows as a solitary plant and is quite striking by itself. As the common name implies, it is quite evergreen.

Description: The erect rhizome is among the largest of any in the genus Dryopteris, often rising two inches above the surface, clothed in chaffy brown scales. The rhizome does not branch or divide but remains solitary. The uncurling crosiers are covered rather heavily with coarse pale reddish-brown scales. The sori, although not yet quite mature, are quite well defined and easily observed near the margins of the pinnae as they unfurl. The fronds are twelve to thirty inches long, bipinnate, and change in color from light green to a gray-green or blue-green as the summer proceeds. The pinnules are crowded, oblong and somewhat scythe-shaped with rounded tips. The fertile fronds, which do not differ in outline from the sterile, are almost completely covered with sori which are spaced in a uniform manner near the margins of the lobes. The submarginal indusia are kidney-shaped and at first are nearly transparent to greenish-white, later seemingly changing color, being influenced by the ripening brown spores.

Culture: A very adaptable fern for the garden, at its best in deep, stony, slightly acid, humousy soil that is well drained but kept moist. The crown should be planted so as not to be covered with soil, but exposed. A top dressing of rotting leaves around the crown is beneficial. This fern will grow in full shade to open shade, taking some sun. Often thought of as a rather common fern, it can be used with great effect among boulders and even next to the exposed roots of large trees. It is probably more striking as an individual plant than in a colony. Several species of Dryopteris seem happier if grown as a single specimen. Besides *D. marginalis,* other examples of this solitary habit include such species as *D. atrata*, *D. lacera*, and *D. uniformis*, all exhibiting a single erect crown which seldom or never divides. The best rule of thumb is to observe how they grow in nature and then allow them the same freedom in the garden. *D. marginalis* is certainly one of the "old dependables" in any garden and should be in every collection of ferns.

The 1995 Spore Exchange

The exchange is alive and well again this year. We have had an increase in donations. This gives our members a greater diversity of ferns to choose from. On the other hand we had a decrease in the number or requests. Members are encouraged to get out there in their gardens agrowing ferns. Come ya'll git plantn'!!

Spore List Key for Growth Habits

1	Rare	R	Rocky Soil
2	New Listing	J	Epiphytic
3	Few Spores	B	Tree Fern
A	Alkaline Soil	C	Climber
Z	Acid Soil	G	Spreading Habits
D	Dry Soil	E	Easy to Grow
N	Normal Dampness	Q	Difficult to Grow
W	Wet Soil	$	Green Spored
L	Soil Specific	$$$	Green Spored with Fresh Donor

The other listings are:

Zone which lists the most northern zone that a fern has been reported to grow. If its zone is unknown I put 99

Size the largest size the fern will grow under ideal condition.

GROth habits the key above is self-explanatory.

Coll. Site is where the fern was collected if its is collected in the wild.

ORIGin is the ferns natural habitat.

Donor lists the donors of the various spores. It is listed with the year the spore was donated beginning with the most recent; then the donor number. There is a space between successive years.

If you want spore from a particular donor or collection site you must specify which one.

Much of the information in the List was collected through the hard work of Brian Aikins, and Robert Luis Muller. If any member has any reliable information that should be added to, or changed in, the list please forward that information with your spore donation or request. Many Thanks!

Another reminder we can always use more spores. This last year has been a good one for donations but the viability of the exchange depends on a constant flow of fresh spores from the membership. So please send in whatever you have time to collect. Thanks!

To order: Please print your selections clearly in alphabetical order using the Botanical name. Include 25 cents for each fern requested (check payable to the Hardy Fern Foundation) and a self-addressed stamped envelope. No charge for requests from overseas, but please enclose an International Postal Return Coupon to help with the cost of mailing the spores. Maximum order is 25 packets per year.

Mail Requests to:
Wayne "Bubba" Baxter
307 Riverdale Cir.
Stephenson, VA 22656
540-667-0139

Dryopteris marginalis. Photo by Kim N. Durrant, SLC, Utah.

DONOR LIST

Aikins	Brian	1
Minne	Claire	2
Baxter	Wayne	3
Born*	Wendy	4
Burkman	Mrs Alice J.	5
Davis	Anna Maria.	6
Duryee	Sylvia & Phil	7
Duthie	Leslie	8
Dwyer	Patrick	9
Entz	Sue&Hermn	10
Gaddis	Ins	11
Gassner	Wolfram	12
Goudy	Chris	13
Green	Eldred	14
Haines	Grag	15
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Thomson	William	49
Timm	Fred&Conni	50
Turney	Samuel	52
Turney	Dr. T.W.	53
VandeMoes	Dr. Cor	54
Vandermast	Mrs. Sandra	55
Visentin	Suzette	56
Vulcz	Les	57
Wakeman	Bruce	58
Weeks	Elmo	59
Kaye	Reginald	60
Adkins	John	62
Agostinelli	Don	63
Atterbury	Diane & Ken	64
Boyles	Roger	65
Byer	Dorothy	66
Cava	Edmund	67
Clause	Eileen	68
Concannon	Michael	69
Denkawitz	Lothar	70
Drfe	Don & Joyce	71
Ehlers	Joachim	72
Game	John	73
Gamlin	Robert	74
Kluge	Johan	75
Graber	Jean	76
Gustin	Laura	77
Hallman	Edward	78
Hughes	David	80

Kato	Yoshio	81
Kawabata	Shuzo	82
Knousa	John	83
Kuheana	Halyna Mrss	84
Lamb	Dorothy	85
Lellinger	Dr. David B.	86
Marley	John & Judy	87
Miyazaki	Hiroki	88
Moscetti	Pamela	89
Sauls	Craig	90
Sheffield	Dr.Elizabeth	91
Skula	Frank Mrs	93
Sonter	Val	94
Straney	Dr. David	95
Sullivan	Judith	96
Thompson	John	97
Wingard	Christian	98
Young	Dr Bruce	99
Baird	Marge	100
NimmoSmit	Margarat	101
Hirsch	E. MD	102
Pillar	Richard	103
Laughland	Bryan J.	105
White	Barry	106
Edney	Beverly	107
Guiles	Catherine	108
Bates	Phyllis P.	109
Halley	Bob	110
HFF		111
AFS/NYBG		112
Burnett	Naud	113
Punter	J. C.	114
Gould	Gretchen	115
Osorio	Rufina	116
Faely	Joan	117
Farrar	Dr. Donald	117
Thorut	Chanin	118

Link	Elva C.	119
Birkrem	Dr Alf	120
Sasashi	Mrs Hiroko	122
Feuerstein	Betsy	123
Garrett	Michael	124
HFFLakewol		125
Ney	Jason	126
Evers	Ted	127
Rollins	James A.	128
HEIM	MICHAEL	129
Barton	Loyd & Vera	130
Muller	Robert	131
Constantino	Sandra	134
Tavernier	Wim	135
Batten	D.J.	136
Farden	Cynthia	138
Schieber	Jack	139
Smith	Alan	140
Perry	Jesse	142
Reed Jr	Wally	143
Lundberg	Jean	144
Mandeville	Sue	146
Hinde	Dr. Howard	147
Tonsing	Mary Ellen	148
Quattrochi	Judy	149
Nielson	Jens Henrik	150
Fairbourne	Marlena	151
Huge	Mogens	152
Hammerbar	Owen	153
Nash	Brian E.	155
McGill	Peggy	156
Coppins	Stephen	157
Minne	Claira	158
Sherlock	Nancy	159
Hoskova	Stanislava	160
Sliger	Dean	161
Yansura	Daniel	162
Hemington	Ann	163

HFF	GENUS	SPECIES	CVR	COM. NAME	PK	Z	SZE	GRO	COLL.SITE	ORIG	DONOR
1	Adiantum	aleuticum		Aleutian ,westrn	25	4	12	TKGEL	Wa.	PacNW Jap	95/10 94/97
2	Adiantum	aleuticum	serpentina ecotype	aleutian ,westrn	10	2	12	GJTEL	cascade mts	alaska,nw usa	92/25
3	Adiantum	pedatum		AmerMaidenhairFiveFinger	70	2	20	ENSZK		US Jap	94/18
4	Adiantum 1	aleuticum	subpumilum	DwarfMaidenhairAleutian,	3	4	12	ZSNEG		NW N.hem	94/20
5	Adiantum 1	Pedatum	Subpumilum	Maidenhair Fern	10	3		NSZ		US	
6	Adiantum 3	capillus-veneris		Venus,SouthernMaidnhair	4	7	24	EASNH		Pantrop	94/9
7	Allantodia	Australis			8	7	48	BTWK	Mt Garret, Tasmania	AusNZ Tasm	
8	Arachniodes	aristata		EastIndianHolly,PricklyShield	4	6	36	SDKNT		Easia, aust.	94/156 93/9
9	Arachniodes	aristata	variegata	EastIndianHolly,PricklyShield	20	6	36	SZND		Easia, Aust.	94/10
10	Arachniodes	cavalerii			2	5	40			JapChTaiw	92/36
11	Arachniodes	miqualiana			8	5	24	GK		Easia	95/12 92/43
12	Arachniodes	simplicior			10	6	30	EKTZ		Easia	95/160
13	Arachniodes	simplicior	vanegata		5	7	30	SNE		Easia	94/145
14	Aspidium	aculeatum			5	6					94/9
15	Aspidotis	densa		Indians draam	1	4	8	DZSUJ	Wa.,Eagl creek	Wusa	95/1 93/7,97
16	Asplenium	adiantum-nigrum		Black spleanwort	50	6	14	RANT	Hawaii,Switz	Eur.NA.Af	95/9 94/45
17	Asplenium	adulterinum			14	5	8	RAD	Bohem.	EurTibet	94/9,12,45
18	Asplenium	billotii		LanceolatumSpleanwort	10	5	10	QZTK		Eur	95/10 94/9
19	Asplenium	bulbiferum		mother spleenwort	2	6	36	NJZHE		Aus,NZ	95/9 94/141
20	Asplenium	castanaum			4	7	10	NK		Mex	94/34
21	Asplenium	ceterach		Rusty back fern	2	6	8	DKANT		Eur,india,Af	94/9 92/9
22	Asplenium	cuneifolium			16	6		R	Bohem,CzechSwtz	Eur	94/45
23	Asplenium	fissum			6	6	8	RAN	Germ	Wasia	94/9,45
24	Asplanium	flabellifolium		nacklace farn	6	7	12	GSNKJ	Victoria,Aus	Aus NZ	95/53
25	Asplenium	fontanum		SmoothRockSpleenwt.	8	5	5	ZNRSG		Eur	94/9,45,97
26	Asplenium	Hybridum			2	7	10	ZK		Medit.	
27	Asplenium	incisum			5	4	10	ZYK		NE Asia	94/45
28	Asplanium	marinum		sea spleenwort	4	6	10	QNTR		EurAf	94/9
29	Asplenium	obovatum		Lanceolate spleenwort	5	7	12	ATNH		EurMadStHelna	92/104
30	Asplenium	obovatum	lanceolatum	Lanceolatum spleenwot	10	7	6	ATNH	Switz	Eur	95/9 94/154
31	Asplenium	platyneuron		Ebony spleanwort	15	4	18	DAENT	N.Va,NJ,Me	E USA	94/9,147,97
32	Asplenium	pseudofontanum			3	4	9	SRT		Eurasia	94/45
33	Asplenium	rhizophyllum		walking fern	2	4	6	ANTKO		NAm	94/9,8
34	Asplenium	ruta-murana		Wall-rue	50	4	5	QANU	Wales,Eng,Switz	N. Hem	95/9
35	Asplenium	scolopendrium		harts-tongue, scollies	8	6	12	ANSKO		NHem	94/150,152,97
36	Asplenium	Scolopendrium	Supra marginatum	Harts Tongua fm	10	6	12	ANSKO		NHam	94/155
37	Asplanium	trichomanes		Maidanhair spleenwort	50	2	9	ANTKO	Me,	Cosmo	94/9,38,97
38	Asplenium	trichomanes	Cristatum	Maidenhair spleenwort	1	2	9	ANTKO			94/45 93/7,36
39	Asplenium	trichomanes	Incisum	Incised Maidenhair	20	2	9	ANTE			94/36,45
40	Asplenium	trichomanes	quadrivalens ,	Maidenhair spleenwort	15	2	9	ANTE	Switz	Eur	95/9 94/45,154
41	Asplenium	trichomanes	trichomanes	Maidenhair spleenwort	4	2	9	ANTE	Switz	Eur	94/45
42	Asplenium	viride		Green spleenwort	20	4	6	QARNK	AlpsAus	N. Hem	95/2 94/9,45

HFF	GENUS	SPECIES	CVR	COM. NAME	PK	Z	SZE	GRO	COLL.SITE	ORIG	DONOR
43	Asplenium 1	Dahlhousia			2	7	10	RK		Azores	
44	Asplenium 1	onopteris		Acute-leaved Speenwort	35	6	8	RZKNT		Eur	94/9,45,154
45	Asplenium 1	septentrionale		forked splaenwort	70	4	6	QZDTK	Switz,Italy	NHem	94/9,45,152,15
46	Asplenium 1	septentrionale	septentnonale	forked spleenwort	1	4	5	QZDT		N. HEM	95/9
47	Asplenium 1	Trichomanes	Hastatum	Maidenhair spleenwort	3	2	9	ANTE	Switz	Switz	94/45
48	Asplenium 1	x ebenoides		Scotts spleenwort	10	5	12	ANRK		E. USA	95/163,1 93/97
49	Asplenium 1 3	trichomanes	Pachyrachis	Maidenhair spleenwort	6	2	9	ANTE		Czech	94/45
50	Asplenium 1 3	x alternifolium			3	5	3	R	Germ	Eur,WVa.	94/45
51	Asplenium 1 3	x lusaticum			1	5			Germ	Germ	94/45
52	Asplenium 1 3	x poscharskyanm			3	5			Germ	Germ	94/45
53	Asplenium 2	Platyneuron	Incisum	Ebony Spleenwort	5	4	18	DAENT		E.US	94/131
54	Asplenium 3	ruta-murana	dolomiticum	Wall rue	1	4	5	QANU		N.Italy	94/45
55	Asplenium 3	trichomanes	lucanum	Maidenhair spleenwort	3	2	9	ANTE			92/45
56	Astrolepsis	sinuata			5	6	10	AUDK		TexMex	95/11
57	Athyrium	angustum	rubellum	Nothern lady fern	3	3	48	ZNTKE		N.Hem	94/141
58	Athyrium	asplenioides		Southern Lady Fern	20	4	48	EKNZS		SE USA	94/9 93/9 92/9
59	Athyrium	crenulato-serrulatum		CrenateLady fm	1	5	24	SNKG		Easia	92/12
60	Athynum	deltoidofrons			5	6	24	TK		Jap,Ch,Kor	93/45 92/88
61	Athyrium	distentifolium		alpine lady fern	8	3	24	RTVK	Germ.,Austria 1800m	far N Hem	95/12
62	Athyrium	filix-femina		Lady Fern,	40	3	48	ZNTKE	N.Va,SW Mich	N. HEM	94/144,149,97
63	Athyrium	filix-femina	Bornholmiense	lady fern	10	3	48	ZNTKE		NE N. Hem	
64	Athyrium	filix-femina	cristatum	lady fern	15	3	48	ZNTKE		N. HEM	95/141 94/18
65	Athyrium	filix-femina	Curtum cristata	lady fern	3	3	48	ZNTKO		N. HEM	94/45
66	Athyrium	filix-femina	Cyclosorum	norhtwestern lady	10	3	48	ZNTKE	Oreg	NW N Hem.	93/97 92/9,26
67	Athynum	filix-femina	Frizelliae	Tatting fem,Lady farn	10	3	48	ZNTKE		N. HEM	95/2 93/7,97
68	Athyrium	filix-femina	Minutissimum	lady fern	20	3	48	ZNTKO		N. HEM	95/2
69	Athyrium	Filix-famina	multifidum	Lady fam	3	3	48	ZNTKO		N.Hem	94/141
70	Athyrium	filix-femina	redstipes	lady fern	5	3	48	ZNTKE	Hamburg,Germ	N. HEM	93/12
71	Athynum	filix-femina	rubellum	Red stemmed Lady Fern	50	3	48	ZNTKE	N.Va,Me	N. HEM	94/5 93/3
72	Athyrium	Filix-temina	Rubnpes	Red stemmed lady fern	8	3	60	ZNTKO			94/148
73	Athynum	filix-femina	Sitchense	lady fern	4	3	48	ZNTKE		N. HEM	
74	Athynum	filix-femina	Vernoniaa cristata	lady fern	20	3	36	ZNTKE		N. HEM	92/49,103,113
75	Athyrium	japonicum		Black Lady fern	2	6	24	EVATN		Asia	94/9
76	Athynum	niponicum			10	4	18	ZNTV		Easia	94/9 93/18
77	Athynum	niponicum	Pictum	Japanese Painted Fern	60	4	18	ZNTVE	SW Mich	Easia	94/18
78	Athynum	niponicum	Subpulim		10	4	18	ZNTV		Easia	
79	Athyrium	otophorum		aunculate lady fern	20	4	24	SKENT		Easia	93/3,10,100
80	Athyrium	otophorum	okanum	Aunculate,Eared lady fern	5	4	20	SKENT		Easia	95/141
81	Athynum	pycnocarpon		Amencan Glade Fern	20	4	48	ANTVK		N Am	94/52,5,120
82	Athynum	Thelypteroides		Silvery Glade Fern, Silvery	20	4	36	TWZV	Me	NHemIndia	94/5,120 93/9
83	Athynum	vidalii			20	5	24	TKE	Jap	Ko,Jp,Tai	94/45 92/9,88
84	Athynum	yokoscense			4	4	10	K		Kuriles,Easia	94/45 93/36,45
85	Athyrium 2 3	iseanum	angustisectum		1	6	24	SK		Ja,Tai	94/9
86	Athyrium 3	alpestra		alpine lady fern	3	4	24	QRSKV		EurN.AM.	95/1 94/9
87	Athyrium 3	filix-femina	Corymbiferum	lady fern	6	3	48	ZNTKO		N. HEM	94/45
88	Athyrium 3	Filix-temina	Polydactylus Darley Dale	Lady fem	3	4	48	ZNTKO		NHem	94/45
89	Athyrium 3	filix-femina	Victoriae	Queen of Green,Lady farn	1	3	48	ZNTKE		N. HEM	95/141 94/10
90	Athyrium 3	iseanum			3	6	24	SK		Ja,Tai	94/9 92/36
91	Athyrium 3	rubripes			1	6				Sibena	94/45 93/9
92	Athyrium 3	spinulosum		Spinulosa Lady frn	4	4	24	SNKE		EAsia	94/45
93	Blechnum	discolor		crown farn	20	7	38	WTKN	NZ	NZ	95/9
94	Blechnum	minus		Soft Water frn	20	6	40	WOTK	AukNz	Aus, NZ	95/9,106 94/37
95	Blechnum	minus x wattsii		Hybnd Water Fern	5	6	12	WUK	Vict Aus	AusNZ	
96	Blechnum	penna-manna		AlpineWaterfern,LittleHard	10	5	9	GUOW		NZ	93/9,38,97
97	Blechnum	penna-manna	Cristatum	alpine water fern, little hard	5	5	9	GUWR		NZ	94/4
98	Blechnum	spicant		Ladderfrn,Deer,Hardfrn	30	5	28	ZESWY	Wash.	N. Hem.Pac nw	95/9
99	Blechnum	spicant	large torm, 3'	Ladderfrn,Deer,Hardfrn	1	5	36	ZESO		N. Hem	94/36 92/36
100	Blechnum	spicant	Redwood giant	giant ladder fern	10	4	30	NTYK		N.Calif	94/4
101	Blechnum	vulcanicum		wedge water fern	8	6	30	SWQK	NatPkNz,Tasm	Aus,NZ	93/53
102	Blechnum 3	spicant	Rickard's serrata	rich, serrate deer fern,	1	5	24	ZESWY		N. Hem	93/36,97
103	Botrychium	dissectum	obliquum	grape fern	55	4	8	QLZTN	N.Va	N.Am	93/120
104	Botrychium 2 $$$	Virginianum		Rattlesnaka fern	1	4	16	QZVSK	Maina	NAm.	95/8
105	Ceterach	officinarum		Rusty-backfrn,ScalySpleen	3	5	6	ADU		India,Af,Eur	94/9,154
106	Ceterach 3	officinarum	officianarum	see asplen ceterach	2	5	6	ADU		India,Af,Eur	95/9 94/45
107	Cheilanthes	alabamensis		Alabama Lipfrern	8	6	18	DUAK		S.US,C Am,W	92/104
108	Cheilanthes	distans		WoollyCloakfrnBristlyLipfern	2	7	7	DTZK		Aus,NZ	92/104
109	Cheilanthes	Eatonii		Eatons lip tern	8	4	10	DUAR		SW US	94/20,145,146
110	Cheilanthes	lanosa		Wooly ,or Hairy lipfern	25	5	12	NSZK	Ma	Se N. Am	94/9,18 93/8,9
111	Cheilanthes	tomentosa		woolly lip fern	5	6	12	DUAEK		S. US, Mex	
112	Cheilanthes 3	notholaena	marantae		2	6		DU	Cauc.	Caucasia	94/45
113	Coniogramme	intermedia			11	7	36	GWTZ		EasiaIndia	95/106
114	Coniogramme	japonica		Bamboo fern	1	7	48	NSK		E. asia	95/15793/9
115	Comopteris	crenulatoserrulata			15	6	36	SNK		Easia	95/12
116	Cryptogramma	acrostichoides		Parsleyfrn,Am.Rock Brake	50	2	10	ZURDA	RamonaFlls,eagl crk	W US	94/1 92/97
117	Cryptogramma	Cnspa		Parsleyfrn,AsiaticRock Brk	25	6	8	NUAK	Norway	EurWasiaAf	94/9,12,45
118	Ctenopteris $$$	heterophylla			10	7	10	YMJ	VictAusl	AusNZ	95/53
119	Currania 3	dryopteris			1	6	9	GNSK		NHem	92/9
120	Cyathea	Kermadacensis			8	7	120	BUHNK		Kermadc is,NZ	93/87 92/87
121	Cyrtomium	caryotideum		Dwarf holly fern	10	6	24	ZNTKE		India,Easia,Hawai	94/156
122	Cyrtomium	falcatum		JapaneseHolly fern	50	6	24	RTNEK	Azores	E&Sasia	95/9,157
123	Cyrtomium	falcatum	Crested	CrestedJapaneseHolly fern	17	6	24	RTNEK		E&Sasia	95/163
124	Cyrtomium	falcatum	Rochfordianum	Japanese Holly Fern	40	6	20	RSNEK		Jp,ChKor	93/36 92/7,97
125	Cyrtomium	fortunei			50	5	24	ZNTKE	Wakayama,Jp.	JpChKor	94/9,12,82,156
126	Cyrtomium	fortunei	intermedium		15	5	16	ZNTKO		JpChKor	94/135 93/43
127	Cyrtomium	macrophyllum		Large-leafedHolly fern,Big	15	5	24	ZSNO	Wakayama,Jp.	E&Sasia	94/82
128	Cystopteris	dickieana		bladder fern	25	5	10	NTAVR		EurNAm	94/12,45,97
129	Cystopteris	fragilis		BrittleBladderFern,Fragile	50	4	12	ZNTVK	Oreg,Germ.,eagle	Cosmo	94/9,12,97,154
130	Cystopteris	fragilis	Fine Form	BrittleBladderFern,Fragile	9	2	12	EZNTV	Germ.,eagle crk.	Cosmo	94/24
131	Cystopteris	fragilis	much divided type	BrittleBladderFern,Fragile	3	2	12	EZNTV	Germ Alps 1300 m	EurNAm	95/12

HFF	GENUS	SPECIES	CVR	COM. NAME	PK	Z	SZE	GRO	COLL.SITE	ORIG	DONOR
132	Cystopteris	sudetica			16	6	10	GK		Eur,Easia	94/12,45 93/9
133	Cystopteris 1	montana		mountain bladder fern	8	2	12	ANTR		Cosmo	95/12
134	Cystopteris 3	fragilis	anthriscifolia	BrittleBladderFern,Fragile	5	2	16	ZNTEK		Cosmo,	94/45
135	Dennstaedtia	hirsuta			10	6	16	KENT	Wakayama,Jp	Easia	94/82
136	Dicksonia $$$ 1	fibrosa		RoughTreefrn,WhekiPonga	10	7	120	BEONU	Nt Prk NZ,Aukind	NZ	95/9 94/25
137	Diphasiastrum34	Complanatum		Northern running pine	2	2	8			N NAm	94/9
138	Diplazium	pycnocarpon		NarrowLeafedGladefn,Glade	0	3	32	WS		E. N.A.	94/8 93/9
139	Doodia	Aspera		Prickly rasp fern	15	6	15	UNG	SE Aus.	Aus,NZ,Norf is	95/9,157 94/94
140	Doodia	media		Common Rasp Fern	20	7	10	TWNZR	E Aus	AusNZ Nrfolk Island	95/9 94/94,135
141	Doodia	media	Cairns	Common Rasp Fern	20	7	10	TWNZR	E Aus	AusNZ Nrfolk Island	94/94 93/1,109
142	Dryopteris	abbreviata			8	5					94/45
143	Dryopteris	aemula		Hay-scanted Woodfern	2	6	20	SNKEH		Eur	
144	Dryopteris	affinis		GoldenScaledMalefrn,scaly	8	4	48	SNTKE		Eur SWasia	95/12
145	Dryopteris	affinis	affinis	GoldenScaledMalefrn,scaly	12	4	48	SNTKE		Eur SWasia	95/9
146	Dryopteris	affinis	borreri	scaly male fern, golden	20	4	48	SNK		Eur SWasia	94/135
147	Dryopteris	affinis	borrari,Pseudodisjunta		20	4		SNTKE	Switz		94/45
148	Dryopteris	affinis	borreri robusta	scaly male fern, golden	20	4	48	SNK		Eur SWasia	94/135
149	Dryopteris	affinis	cambrensis	crisped golden scaled male	20	4	36	SNVTK		Eur SWasia	94/25 92/45
150	Dryopteris	affinis	Coriacea	male fern	1	4	24	SNTK		Iran	94/45
151	Dryopteris	affinis	Crispa	crisped golden scaled male	4	4	48	SNTKE		Eur SWasia	94/20
152	Dryopteris	affinis	Crispa gracilis	crisped dwarf golden scaled	1	4	16	SNTKE		Eur SWasia	93/36
153	Dryopteris	affinis	Cnspa stablen	NarrwCrspdGoldenScaled	5	4	48	SNTKE		Eur SWasia,Eng	94/25 93/36
154	Dryopteris	affinis	Cristata "The King"	TheKingofMalefrns,scaly	3	4	48	SNTKE	Victona,Aus	Eur SWasia,Aus	94/45,97
155	Dryopteris	affinis	disjuncta	scaly male fern, golden	6	4	48	SNTKE		Eur SWasia	94/45
156	Dryopteris	affinis	Persica	scaly male fern, golden	30	4	48	SNTKE		Eur SWasia	92/26,45
157	Dryopteris	affinis	Pinden	scaly male fern, golden	4	4	48	SNTK		Eur SWasia	94/150
158	Dryopteris	affinis	Polydactyla Dadds	dadds long fingrd golden	3	4	48	SNTKE		Eur SWasia	93/125
159	Dryopteris	affinis	psaudodisjuncta	scaly male fern, golden	5	4	48	SNTKE		Eur SWasia	92/9
160	Dryopteris	affinis	punctata	scaly male fern, golden	4	4	48	SNTKE	SWITZ	Eur SWasia	94/45 92/9,26
161	Dryopteris	affinis	robusta	scaly male fern, golden	8	4	48	SNTKE		Eur SWasia	93/100 92/9
162	Dryopteris	affinis	stilluppensis	scaly male fern, golden	4	4	48	SNTKE		Eur SWasia	
163	Dryopteris	affinis	The King	scaly male fern, golden	6	4	48	SNTKE		Eur SWasia	94/141
164	Dryoptaris	atrata		shaggy shield fern	30	6	18	NTK		N Hem	94/9,156
165	Dryopteris	austriaca	spinulosa	Spinulose Wood Fern	2	3	48	OSNK		N. Hem	92/9
166	Dryopteris	Barnsii			2	5			Me		
167	Dryopteris	bissetiana		BeadedWoodfern	20	5	24	SZKEN		Jp	93/34,45,97
168	Dryopteris	blanfordii			20	3	36	K		N. Hem	95/12 94/45
169	Dryopteris	Borren	cristata	Crested Scaly Male fern	2	4	48			Eur,SWAsia	94/9
170	Dryopteris	Borrari	pinden	Scaly male fern	2	4	48			Eur,SWAsia	94/9
171	Dryopteris	cambrensis			7	6			CumbriaEng	Eng	92/24,26
172	Dryopteris	carthusiana		SpinuloseWoodfrn,Toothed	10	2	30	TZWKE		Europe, N Am	94/9
173	Dryopteris	caucasica			20	5	34			Caucasian mt	95/12 94/45,24
174	Dryopteris	championii		Champion'sWoodfrn	25	5	24	OKNT		Easia	94/10 93/7
175	Dryopteris	chinensis			3	5	20	EKNT		Easia	94/9 93/38
176	Dryopteris	clintoniana		Clintons woodfern	25	3	40	WSKE		E NA	95/141 92/26
177	Dryopteris	crassirhizoma		Thick-stemmedWoodfrn	90	5	36	TVKE	JapanFiji,mtNan.Jp	Ko,Ch,Jp	94/45 93/9,34
178	Dryopteris	crassirhizoma	nakai	Thick-stemmedWoodfrn	10	5	36	TVK	Japan	Japan	
179	Dryopteris	cristata		CrestedShieldfern,NarrowS	60	3	36	ZWSKE	N.H.,Mich	N. HEM	95/141,108
180	Dryopteris	cycadina		ShaggyShieldfrn,Blackwood	40	5	30	NUKE		N Hem	94/45,97 93/3
181	Dryopteris	cystolepidota			15	7	10	NSK		JapCh	94/38
182	Dryoptaris	dickinsii			15	7	24			Ch,Jp	95/12 93/9,45
183	Dryopteris	dilatata		BroadBucklerfrn,BroadWood	25	4	40	WTOS	Walas,Germ	NHem,GreenInd	95/12
184	Dryopteris	dilatata	Crispa Whiteside	crisped broad buckler fern	26	4	36	WTOSK		N Hem	94/25 92/113
185	Dryopteris	dilatata	Grandiceps	BroadBucklerfrn,BroadWood	0	4	36	WTOS		N Hem	
186	Dryopteris	dilatata	Jimmy Dyca	JimmyDycesUprightBroadB	47	4	20	WTOS		GBrit.	94/36 93/36,7
187	Dryopteris	dilatata	Lepodota cristata	LacyCrestedBroadBuckler	15	4	18	WTOS		N Hem	94/25 92/97
188	Dryopteris	dilatata	Recurvata	RecurvedBroadBucklerfrn,B	10	4	36	WTOS		N Hem	93/25,113
189	Dryopteris	arythrosora		Autumn fern	35	5	16	TNKO		ChJpKr	95/1
190	Dryoptaris	arythrosora	Prolifica	Prolific autumn fern	5	5	16	TNKO		ChJpKr	94/156 93/97
191	Dryopteris	erythrosora	white sori form	autumn fern	5	5	16	TNKO		ChJpKr	92/25
192	Dryopteris	expansa		ArchingWoodfernSpreading	30	3	30	RTNE	NWWisc	NW N.Am	94/9,36,20,45
193	Dryopteris	filix-mas		Male Fern	90	3	60	ZSNVE	Mich	N Hem	94/9,27,135,97
194	Dryopteris	filix-mas	Barnasii	barnes narrw Male Frn	10	3	36	ZSNVE		N Hem	95/141
195	Dryopteris	filix-mas	Cristata	Male Fern	60	3	48	ZSNVE		N Hem	93/120,131
196	Dryopteris	filix-mas	cristata martindale	Male fern	7	4	48	ZSNOK		N.Hem	95/141 ,25
197	Dryoptaris	filix-mas	CristataFilmy type	Male Fern	20	3	60	ZSNV		N Hem	93
198	Dryoptaris	filix-mas	Grandiceps	grandicapital crested Male	15	3	36	ZSNVE		N Ham	94/9,25
199	Dryopteris	filix-mas	lineanis	Slender Male frn	17	4	36	ZSNOK		N.Ham	95/141 94/12
200	Dryopteris	Filix-mas	Linearis Plumosa		1	4	60	ZSNOK		N.Hem	94/12,141
201	Dryopteris	filix-mas	Lineanis polydactyla	Slender crested Male Fern	30	3	48	ZSNVE		N Hem	94/148,45,97
202	Dryopteris	Filix-mas	Martindala	male fern	7	4	48	ZSNOK		N.Hem	94/141
203	Dryopteris	filix-mas	polydactyla	Male farn	5	4	48	ZSNOK		N.Hem	94/141
204	Dryopteris	filix-mas	small erect type	Male Fern	14	3	48	ZSNVE	Germ	N Hem	94/12 93/12
205	Dryopteris	filix-mas	sublineans	Male fern	11	4	48	ZSNOK		N.Hem	94/141
206	Dryoptaris	filix-mas	undulata robusta	Male Fern	25	3	60	ZSNVE	Me	N Hem	95/108 94/97
207	Dryopteris	fragrans		fragrant woodfern	30	2	10	RSN	Mong,Irkukst	NA,AsiaGreenId	94/45
208	Dryopteris	goldiana		Goldie'sfern,GiantWoodfrn	15	3	48	TNVKE	Mich	N Am	94/141,36,39
209	Dryopteris	goldiana hyb. ?	x D. clintonia ?	Goldia's Fern	7	3	48	SN	CT	CT	94/39
210	Dryopteris	intermedia		EvergreenWoodfrn,Glandula	10	3	34	ZSNOE		E N America,	94/9,12
211	Dryopteris	juxtaposita			6	7				India	94/45 93/9
212	Dryopteris	lacera			50	5	24	NTKE	Wakayama,Jp.	EasiaIndia	95/12 94/82,45
213	Dryopteris	Lepidota		Sunset frn	10	5	20	ZNEK		NIndiaCh Eur	94/45
214	Dryopteris	ludoviciana	x Hybrid	SouthnWoodfrn,SouthnShield	10	6	46	ASEW	NE NC.	SE US	94/2,9
215	Dryopteris	marginalis		LeatherWoodfrn, Marginal	50	2	25	ESNOK	Pa,Me	NE N. Am	95/108
216	Dryopteris	nigropaleacea			4	7					93/9
217	Dryopteris	nipponensis			3	6	24	NSKE		ChJp	94/148
218	Dryopteris	oreades		MountainMalefrn,DwarfMale	30	4	20	NSVKE	ElbrusCaucusus	Eur	95/12
219	Dryopteris	polyepis		ScalyWoodfrn	29	6	24	EKNT		Jap	94/18,97 93/43
220	Dryopteris	pseudo-filix mas		MexicanMalefrn,Mex.Wood	15	5	46	NSKE		MexCalif	95/9 94/10

HFF	GENUS	SPECIES	CVR	COM. NAME	PK	Z	SZE	GRO	COLL.SITE	ORIG	DONOR
221	Dryopteris	pseudo-mas		see d. affins	6	4	24	NSOK			94/148 93/38
222	Dryopteris	pseudo-mas	Cristata	see d. affins	10	4	24	NSOK			93/38
223	Dryopteris	pycnopteroides			50	6	24	KENTO		SikkimJap	94/97
224	Dryopteris	ramosa			1	6					93/9
225	Dryopteris	sieboldii		Siebold'sWoodfrn	4	6	24	ZSENK		Easia	94/156 92/111
226	Dryopteris	sieboldii	Cvenata		5	6	20	ZSNKE		Easia	92/111
227	Dryopteris	sieboldii	Incisum	Siebold'sWoodfrn	6	6	24	ZSNK		Easia	94/10
228	Dryopteris	spinulosa	amercana	Toothed wood fern	15	4	24	ZN	Deepik	N.A,Jp	93/3,9,97
229	Dryopteris	sublacera			20	7	20				94/24,25 92/41
230	Dryopteris	submontana		RigidBucklerfrn,LimestoneW	5	6	20	EANK	Huttnroof Camb Eng	Eur, N. Af	94/104
231	Dryopteris	tokyoensis		TokyoWoodfrn	10	5	30	EZSRN		Jp,Kor	95/141 94/153
232	Dryopteris	uniformis			50	5	30	ZNKOE	Jp	Easia	93/9,10,12,43
233	Dryopteris	varia		see d. bissetiana	1	6	24	ZSNK		Sasia,Philipin	94/45
234	Dryopteris	varia	setosa	see d. bissetiana	10	6	24	ZSNK		Sasia,Philipin	92/111
235	Dryopteris	villarii			20	5			PiriuBausko Bulg	Eur	95/12 94/45
236	Dryopteris	wallichiana		Wallich's wood fern	60	5	40	SNKB		Pantropic	94/45 93/97
237	Dryopteris	x bootii		Boots Woodfern	3	3	30	WTKE	Wisc	NA	93/24
238	Dryopteris	X complexa	complexa	hybrid robust male frn	4	4	36	ETNK	Rum	Europe	
239	Dryopteris	X complexa	critica	hybrid robust male frn	12	4	36	ETVNK	Germ	Europe	94/45
240	Dryopteris	x tavelii			43	5					95/12 92/9
241	Dryopteris 1	amurensis		Amur woodfern	15	4	24	SWKE		Jp	94/12
242	Dryopteris 1	celsa		Log Fern	60	4	40	ZTWO	NwarkNJ	E US	94/2,9,38,156
243	Dryopteris 1	remota			25	4	36	KNTE		Eur	94/45,153,97
244	Dryopteris 2	Expansa ?	small asian		8	5		k		Asia	95/12
245	Dryopteris 2	filix-mas	Lux-lunae polydacytia	Male fern	10	4	60	ZSNOK		N.Hem	95/159
246	Dryopteris 3	filix-mas	Cristata Jackson	Male Fern	3	3	48	ZESNO		N Hem	94/45
247	Dryopteris 3	Namegatae			5	7				Jap	94/45
248	Dryopteris 3	x australis		Dixie Woodfrn	4	5	60				
249	Equisetum $	telmateia		Giant Horsetail	10	7	70	QGWU		NW N.A.	95/9,162
250	Equisetum $ 1	palustre		marsh horsetail	7	2	18	WU		cosmo	95/9
251	Equisetum $ 1	Ramosissimum			10	7	60	WUK		Eur, SE US	95/9
252	Grammitis $$$	billardieri			10	7	5	WTYJ		Pantrop	95/53
253	Gymnocarpium	dryopteris		Oak Fern	70	2	12	ERSGV	B.C.	NHem	94/12,18,97
254	Gymnocarpium	dryopteris	Plumosa	Plumosa Oak Fern	20	2	12	RSGV	Me	NHem	95/108,1,12
255	Gymnocarpium 1	robertianum		LimestonOakfrnRobert'sOak	40	2	16	ASEGN		NHem	94/9,12,45,97
256	Hypolepis	millefolia		Thousand-leavedfrnDissecte	4	7	22	TGVME		NZ	
257	Leptoptens 3	Hymenophylloides		crepe fern	1	7	30	QWHS		NZ	95/9
258	Lunathyrium	japonicum		Japanese lady fern	10	6	22	EANTK		S&SE&E asia	94/45 93/36
259	Lycopodium	Annotinum		running pine	5	3	3	QLTZN		Cosmo	
260	Lycopodium	dendroideum		PricklyTreeClubMssPrincess	2	2	9	QLZW		Nor.N.A.NEasia	92/117
261	Lycopodium	tristachyum		blue ground cedar	3	3	6	QLTNZ		NE N. Am	93/9
262	Lygodium	japonicum		Japanese climbing frn	20	7	72	CNUK	SW Miss,TX	S&SEasia,Aus	95/52,163
263	Lygodium 1	palmatum		AmericanFn,HartfordfnClim	3	3	60	CWZT		E.NAm	94/8
264	Matteuccia	orientalis		Oriental ostrich frn	40	5	30	EZN		far east	
265	Matteuccia $	struthiopteris		OstrichFernShuttlecockfrn	60	2	60	ZWSE		N. Hem	95/9 93/120
266	Matteuccia $	struthiopteris	asian form		20	3	60	ZWSE		Asia	
267	Matteuccia $$$	struthiopteris	Pennsylvanica	Ostrich Fern	40	2	60	ZWSE	Ma	E. US	95/8 94/120
268	Nephrolepis	Obliterata	Kimberly Queens		20	7	36		NW Aus	Aus	94/94
269	Notholaena	sinuata	sinuata	cloak fern	12	7	24	QUDA		SwUs,C&S am	92/104
270	Onoclea $	sensibilis		Sensitive Fern.	60	2	24	WUGZ	Va	NHemAsia	94/9
271	Oreoptens (Thelyptens)	limbosperma		mountain fern	10	4	40	ZSNK	Scotland	Eur N.A.	94/45
272	Osmunda $$$	cinnamomea		Cinnamon Fern	10	3	60	WZVEK		Cosmo	95/8 94/150
273	Osmunda $$$	claytoniana		Interrupted Fern	5	2	60	ZWSV	Me	Cosmo	95/8
274	Osmunda $$$	regalis		RoyalFern,FloweringFern	20	3	90	ZWSO		Cosmo	95/8,163,108
275	Osmunda $$$	regalis	Cnspa	Crested royal fern	10	3	72	ZWSVK		Cosmo	95/25 94/25
276	Osmunda $$$	regalis	Cristata	crested royal fern	10	3	72	ZWSVK		Cosmo	94/25
277	Osmunda $$$	regalis	gracilis	RoyalFern,FloweringFern	1	4	48	ZWSVK		N. Hem	94/5
278	Osmunda $$$	regalis	Japonica(Dimorphic)	RoyalFern,FloweringFern	1	4	48	ZWSVK		N. Hem	94/5
279	Osmunda $$$	regalis	purpurescens	purple stemmed royal frn	10	3	72	ZWSVK		Cosmo	94/25,150 92/7
280	Osmunda $$$	Regalis	regalis	RoyalFern,FlowaringFern	10	3	90	ZWSVK		Cosmo	94/25
281	Osmunda $$$	regalis	regalis Purpurascans	PurpleRoyalFern,Flowering	10	3	90	ZWSVK		Cosmo	95/110 94/25
282	Osmunda $$$	regalis	spectabilis	RoyalFarn,FloweringFern	10	3	90	ZWSVK		Cosmo	95/25 93/9,150
283	Osmunda $$$	regalis	Undulatum	RoyalFern,FlowaringFern	1	4	48	ZWSVK		N. Hem	94/5
284	Osmunda 2 3 $$$	Japonica		RoyalFern,FloweringFern	20	6	32	EYZW		E&SAsia,Philipp.	95/110
285	Pellaea	atropurpurea		Purpla Cliffbraka	5	3	16	UADEK	Mexico	C&N.A.	95/1 94/140,8
286	Pellaea	rotundifolia		button fern	13	7	6	DTZK		NZ	95/9,1
287	Phanerophlebia	falcata			4	7					
288	Phanerophlebia	fortunei			5	7					
289	Phegopteris	connectilis		beech fern	40	5	16	SNGVK	Wisc,Scotland	N.Hem	93/129
290	Phyllitis	scolopendrium			50	4	24	ARNSK	Ma	N.Hem	95/9,157 94/45
291	Phyllitis	scolopendrium	Angustifolia	Harts tongue fern	6	4	24	ARNSK		N Hem	95/2 94/9
292	Phyllitis	scolopendrium	Kayes Lacerate		1	4	12	ARNKO		N.Hem	
293	Phyllitis	scolopendrium	marginata	Harts tongue fern	2	4	24	ARNSO		N Hem	94/9
294	Phyllitis	scolopendrium	scolopendrium	Hart's-tongue Fern	3	4	24	ARNSK		N.Hem	94/9,154
295	Phyllitis	scolopendrium	undulata	Undulating Harts tongue fern	2	4	20	ARENS		N Hem	94/9
296	Phyllitis	scolopendrium	wikl-Italy		6	4	24	ARNSK		N.Hem	94/9
297	Phyllitis 2	scolopendrium	Crispum Muricatum		3	4	24	ARNSK		N.Hem	95/2
298	Phyllitis 2	scolopendrium	Digitatum		3	4	24	ARNSK		N.Hem	95/2
299	Phyllitis 2	scolopendrium	Rhodesian crested		10	4	24	ARNSK		N.Hem	95/157
300	Phyllitis 2	scolopendrium	Sagittatum cristatum		3	4	24	ARNSK		N.Hem	95/2
301	Polypodium	Australa	Cristatum old form	southern polypody	8	6	18			Eur	92/41
302	Polypodium	australe	Dentatum	southern polypody	5	6	18	JNT		Eur	92/41
303	Polypodium	australe	omnilcaerum oxford	southern polypody	2	6	18	JNT		England	92/41
304	Polypodium	australe	SemilacerumFalcatum	southam polypody	6	6	18	JNT		Eur	92/41
305	Polypodium	australeSemilacerum	falcatum O'kelly	southern polypody	8	6	18	JNT		England	92/41
306	Polypodium	australeSemilacerum	robustum	southern polypody	5	6	18	JNT		England	92/41
307	Polypodium	cambricum	cambricum	WelshPolypody,SouthernPo	6	6	10	TNK		sw Calif	94/9
308	Polypodium	cambricum	serrulatum	welsh polypody	5	3	8	TN		sw Calif	95/9 94/154
309	Polypodium	ellipticum			1	7	30	GNSK		E asia	92/9

HFF	GENUS	SPECIES	CVR	COM. NAME	PK	Z	SZE	GRO	COLL.SITE	ORIG	DONOR
310	Polypodium	interjectum		see microsorum punctatum	22	6	20	UWRA		Eur	95/9
311	Polypodium	interjectum	Glomertum Mullins		5	6	20	UWRA		Eur	92/41
312	Polypodium	polypodiodes		Resurrectionfern,GrayPolyp	1	6	8	DRZGE		C&SAm,S.AfWIndi	94/9
313	Polypodium	scoulen		leather polypody	10	7	14	TNJR	Wash.	N.Am	95/10,27,1
314	Polypodium	virginianum		Am.Wallfern,Rockpolypody	5	2	14	RDTON	Wisc,Me	N.Am	94/9,8 93/129
315	Polypodium	vulgare		Common Polypody	10	5	12	NTJK	Switz, Me	N Hem	94/9 93/9,38
316	Polypodium	vulgare	prionodes	common polypody	1	4	14	NTJK		Cosmo	94/9
317	Polypodium 1	amorphum		IrregularpolypodMountainRo	20	6	12	R	Oreg,ColumRvr	Pacific NW	94/97
318	Polypodium 3	australe	Grandiceps Forster	southern polypody	2	6	18	JNT		Eur	92/41
319	Polystichum	acrostichoides		Christmas Fern	40	3	28	SNOK	Me,Mich,Wa,Va,Wisc	N.Am	95/161,52,108
320	Polystichum	acrostichoides	multifidum		1	4	30	SNOK		N.Am	95/141 93/136
321	Polystichum	aculeatum		Hard Sheild Fern	30	4	30	EASRG		Eur, N India	94/9,36,45,120
322	Polystichum	aculeatum	Bornim	Hard Sheild Fern	1	4	24	ASRNG		Eur, N India	94/45,104,97
323	Polystichum	aculeatum	Nrrw,split form	Hard Sheild Fern	10	4	24	ASRNG		Eur, N India	
324	Polystichum	braunii		Braun's holly frn	60	3	28	SNOKE	Wisc,Mich	N. Hem	95/141,108,12
325	Polystichum	californicum		Cal.HollyfernCal.Swordfern	22	7	30	RNT	N. Calif,SonomaC	California	94/4,1
326	Polystichum	falcinellum			20	7	24		Is Of Madiera	S.EurMadg	93/12 92/12
327	Polystichum	imbricans		ImbricantSwordfrn,DwarfW	30	3	24	SNK		W NAm	94/97 93/7
328	Polystichum	lemmoni		Shasta Holly fern	20	6	12	TNLK	Wa	W NAm-	93/28,132
329	Polystichum	lepidocaulon			2	7	24			Easia	93/43
330	Polystichum	lobatum			30	6	12			Ch	93/9 93/12
331	Polystichum	lonchitis		Northen Holly fern	30	3	18	ASWO		N Hem	94/9,45,104
332	Polystichum	makinoi		Makino's holly fern	20	5	24	EKNOT		CH, Jap	95/2,12 94/45
333	Polystichum	mayebarae			5	6	18	TNK		ChJap	94/36 93/36
334	Polystichum	mohriodes		p.lemmoni	30	5	14	R		Ch,W NAm	93/12 92/12
335	Polystichum	mohriodes	Elegans		4	5	12	R		Ch,W N.Am	95/12 92/9
336	Polystichum	munitum		WeeternSword Fern	60	5	58	SNOK		W N.Am	94/12 93/38
337	Polystichum	Munitum	Twisted Pinna	Sword Fern	20	5	36	SNKO		W N.Am	94/25
338	Polystichum	neolobetum		Long-eared holly fern	28	5	24	ENOKS		JpChNep Him	93/7,36,45,25
339	Polystichum	polyblepharum		TasselfrnJapaneseLacefrn	25	5	24	SZEK	Jap	JpChKor	94/9,156
340	Polystichum	polyblepharum	Bornim	TasselfrnJapaneseLacefrn	3	5	24	SZEK	Jap	JpChKor	94/9
341	Polystichum	proliferum		Mother sheild fern	15	5	36	NTEK		Aus	94/97
342	Polystichum	retroso-paleaceum			30	5	36	SNEKO		JpChKor	94/36,45,38
343	Polystichum	ngens		Rigid Holly frn	15	5	24	KNT		JpChKor	93/9,26
344	Polystichum	setiferum		Soft Shield Fern	99	5	40	TNKE	Fr,Switz,Cauc,Wales	Europe	95/9,12
345	Polystichum	Setiferum	Acutilobum	Soft Shield Fern	5	5	40	TNK		Europe	92/45
346	Polystichum	setiferum	Congestum	Soft Shield Fern	15	5	40	TNK		Europe	95/2 94/150
347	Polystichum	setiferum	Cristata Bouchert	Soft Shield Fern	3	5	40	TNK		Europe	93/97
348	Polystichum	setiferum	dahlem	soft shield fern	18	5	40	TN		Eur	94/12,45
349	Polystichum	setiferum	divisilobum cristatum	Soft Shield Fern	5	6	40	TN		Europe	94/97
350	Polystichum	Setiferum	foliosum	soft sheild fern	2	6	36	TN		Eur	94/9
351	Polystichum	setiferum	Herrenhausen	Soft Shield Fern	6	5	40	TNK		Europe	
352	Polystichum	setiferum	Linearis type	Soft Shield Fern	6	5	40	TNK		Europe	
353	Polystichum	setiferum	Perserretum	Soft Shield Fern	5	5	40	TNK		Europe	92/101
354	Polystichum	setiferum	proliferum	Soft shield fern	3	5	40	TN		Eur	94/9
355	Polystichum	setiferum	proliferumWollastonii	soft shield fern	2	6	40	NT		Eur	94/9
356	Polystichum	setiferum	RotundCristatum	Crested Soft Shield Fern	5	5	40	TNK		Europe	94/20
357	Polystichum	squarrosum			20	7	18	NTK		EurIndiaHimalaya	94/36 93/97
358	Polystichum	tripteron		Trifid Holly fern	25	5	24	NTE	Wakayama,Jp.	Easia	95/12 94/82
359	Polystichum	tsus-simense		KoreanRockfrn,Tsu-simaHly	15	6	18	ZSNKE		Ch Jp Kor	95/106,1
360	Polystichum	vestitum		Prickly shield fern	15	6	36	TSKE	TaupoNZ	AusNZ	95/9 92/55
361	Polystichum	woronowii			4	7					
362	Polystichum	x illyricum			40	5				SEur	94/45,97 93/9
363	Polystichum	Xiphophyllum		sword leef fern	2	7	20			Chin, Twaiwan	
364	Polystichum 1	andersonii		andersons holly fern	40	6	36	WSRK	Mt	NW N.Am	95/1 94/97
365	Polystichum 1	dudleyi		dudley's holly fern	8	6	36	TNK		Calif.	92/36
366	Polystichum 1	setigerum		AlaskaSwordfern,AlaskHoly	70	2	48	SNK		NW NAm	94/12
367	Polystichum 2	Richardii		Richards Holly fern	10	6	24	KN		NZ	95/9
368	Polystichum 3	setiferum	Conspiculobum	Soft Shield Fern	3	6	40	TN		Europe	94/45
369	Polystichum 3	setiferum	Conspicupinnulum	Soft Shield Fern	4	6	40	TN		Europe	94/45
370	Polystichum 3	setiferum	divisilobum angustatum	Soft Shield Fern	3	6	40	TN		Europe	94/45
371	Polystichum 3	setiferum	Mrs Hughes	Soft Shield Fern	3	6	40	TN		Europe	94/45
372	Polystichum 3	setiferum	Rotundatum	crested Soft Shield Fern	5	6	40	TN		Europe	95/141 94/45
373	Pteris	multifida		SpiderBrake,ChineseBrake	4	6	20	NTREA		JapCh	95/9 93/109
374	Pyrrosia 3	lingua		Tongue fn,Jep felt fern	9	6	10	DUZGJ		E&SE Asie	95/9 94/27
375	Selaginella 3	Kraussiana		Krauss's spikemoss	1	6	1/2	KGW		Af,Azores	94/143
376	Thelypteris	decursive-pinnata		WingedBeech,JapanesBeec	7	4	24	ENT		EurS&Easia	95/141 94/150
377	Thelypteris	hexagonoptera		BroadBeechFern,Southern	20	4	20	SZNEQ	Va,Me	E NAm	93/9,126 92/8
378	Thelypteris	kunthii		DecidSouthShieldfern,River	30	7	36	GNRET		SE US	95/27 94/9,156
379	Thelypteris	limbosperma		Lemon-scentedfrn,SweetMo	25	4	40	ZRUN		Eur,NAm	95/1,12 92/9
380	Thelypteris	nevadensis		Nevadamarshfern,NevadaW	20	4	25	TWEK		NW N Am	94/97
381	Thelypteris	noveboracensis		NewYorkFern,Tepenngfrn	28	4	18	ZTNEG	Va	N.Am	93/9,126
382	Thelypteris	palustris		Marsh fern	8	2	30	WZSK		Eur,N.Am	95/9 92/3
383	Thelypteris	palustris	palustris	marsh fern	15	4	18	WZGS	SuffkEng	Eur,N.Am	92/24
384	Thelypteris	palustris	pubescens	marsh fern	6	4	30	WZGS		Eur,N.Am	92/9
385	Thelypteris	phegopteris		NarrowBeechfern,Northern	25	2	24	SNZOK	lavaBeds Wa	Eur,N.Am	94/12,97
386	Thelypteris	simulata		Massechusettsfern,Bogfern	30	4	24	WZT		NE N.Am	95/141 93/9
387	Thelypteris 1	Dentata		DownyMaiden,BlueStemfrn	3	6	20	AHTKN		Pantrop	94/156 93/1
388	Woodsia	fragilis			30	5	14	TK	Georg,Cauc	CAm	95/12
389	Woodsia	ilvensis		Rusty Woodsia	13	2	6	ERTNZ	Bohem	EasiaNAmEur	94/12,45,150,1
390	Woodsia	intermedia			8	5	6			EAsia	94/9,45 93/45
391	Woodsia	obtusa		Blunt lobed Wood Fern	10	3	14	RTNEA		N.Am	94/9,97,120
392	Woodsia	plummerae		Plummer'sCliff.fern,Plumme	8	7	14	RNT		MexSW US	94/97
393	Woodsia	polystichoides		Holly-fern Woodsia	8	4	10	RUZEN		EAsia	94/9,45 92/7
394	Woodsia	scopulina		RockyMountainWoodsia	25	2	10	NTR	Chnook Ps Wa	NW N.Am	94/9 93/7,97
395	Woodwerdie	areolata		DimorphicChainFern,Netted	2	3	24	ZWUE		NAm	94/9
396	Woodwardia	fimbriata		Giant chain fern	40	7	80	TWUEK	Ca	CalifMex	93/7,25,97
397	Woodwardia	radicans		EuropeanChain fern	10	7	60	NUEK		Eurasia	94/9,135

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