

**Hardy Fern Foundation**  
**Quarterly**



**Summer 2022**

## THE HARDY FERN FOUNDATION

P.O. Box 3797  
Federal Way, WA 98063-3797  
Web site: www.hardyferns.org

**The Hardy Fern Foundation** was founded in 1989 to establish a comprehensive collection of the world's hardy ferns for display, testing, evaluation, public education and introduction to the gardening and horticultural community. Many rare and unusual species, hybrids and varieties are being propagated from spores and tested in selected environments for their different degrees of hardiness and ornamental garden value.

The primary fern display and test garden is located at, and in conjunction with, The Rhododendron Species Botanical Garden at the Weyerhaeuser Corporate Headquarters, in Federal Way, Washington.

### Affiliate fern gardens are at the

Bainbridge Island Library, Bainbridge Island, Washington;  
Bartlett Arboretum & Gardens in Stamford, Connecticut;  
Bellevue Botanical Garden, Bellevue, Washington;  
Birmingham Botanical Gardens, Birmingham, Alabama;  
Cornell Botanic Gardens, Ithaca, New York;  
Dallas Arboretum, Dallas, Texas;  
Denver Botanic Gardens, Denver, Colorado;  
Dixon Gallery and Gardens, Memphis, Tennessee;  
Ganna Walska Lotusland, Santa Barbara, California;  
Georgia State University Perimeter College Native Plant Botanical Garden, Decatur, Georgia;  
Heronswood, Kingston, Washington; **NEW 2021!**  
Inniswood Metro Gardens, Columbus, Ohio;  
Lakewold, Lakewood, Washington;  
Lewis Ginter Botanical Garden, Richmond, Virginia;  
Powell Gardens, Kingsville, Missouri;  
Rotary Gardens, Janesville, Wisconsin;  
Whitehall Historic Home and Garden, Louisville, Kentucky.

Hardy Fern Foundation members participate in a spore exchange, receive a quarterly newsletter and have first access to ferns as they are ready for distribution.

Cover design by Willanna Bradner

**HARDY FERN FOUNDATION QUARTERLY**

# THE HARDY FERN FOUNDATION QUARTERLY



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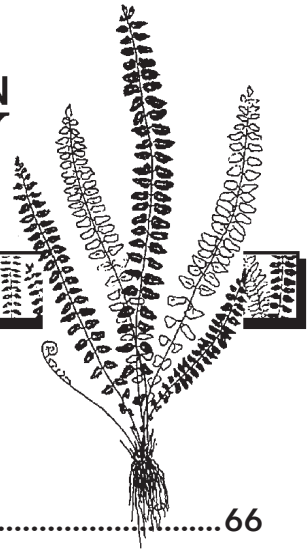
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# THE HARDY FERN FOUNDATION QUARTERLY

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# President's Message Summer 2022

## HFF Quarterly – Summer Issue

### Summer webinar lecture series

### Fall Plant Sale at the BBG

Summer is prime spore collecting season, and I am excited to see what we are able to add to the HFF spore list over the next few months. We are always on the lookout for spore of rarer ferns as well as to fulfill requests made by members for some of our Pacific Northwest natives. A few ferns that I am particularly watching for spore to ripen are our two plants of *Dryopteris yigongensis* as well as our plant of the lovely South African native *Polystichum dracomontanum*. These two ferns are extremely rare in cultivation and are very deserving of wider use in our gardens.

The HFF spore growing program, in cooperation with the Elisabeth C Miller Botanical Garden, is doing quite well. Many of the ferns sown in late fall and early winter last year are now being transplanted into flats, including the two species mentioned above. Nearly 50 different species were sown last fall and winter, and I can't wait to see what we are able to grow into a thriving young plant. These choice and interesting ferns will eventually be shared through our affiliate garden program which promotes and trials ferns in public gardens across the United States as well as offered through our member's distribution list which will arrive by email later this summer. Keep your eye out for some of these less common offerings and try something a little different in your own garden.

I also hope you have been enjoying our summer webinar series. As president, it has been a joy to share my love of ferns and gardening with ferns with our members. I am looking forward to more webinars in the future that will connect you to fern enthusiasts and experts from around the world. We are happy to partner with the Miller Garden again this year and share their upcoming Elisabeth C Miller Memorial Lecture with you. This free lecture will feature Rebecca McMackin, the former Director of Horticulture for Brooklyn Bridge Park. Her work in taking an ecological approach to the Park shows that our public and private gardens can be spaces where we can have a thriving ecosystem for wildlife, soil organisms and gardeners. This webinar will be sent by email in late September for you to enjoy.

Finally, I hope members in the Puget Sound area will be able to join us at our annual Fall Fern Plant Sale at the Bellevue Botanical Garden on September 10. It will be a fun time with some beautiful plants and a great way to support the HFF!

I hope everyone has a wonderful summer, and I hope to see you at one of our webinars or at fall events!

All the best,

**Richie Steffen**  
HFF President

# A Fragment of the Fern Craze: History of the Morris Arboretum Fernery

Article and Photos by Kyra Matin  
Philadelphia, PA

## “THE FINEST TRADE COLLECTION OF FERNS IN THE WORLD” W&J Birkenhead Fern Nursery Catalog (1899)



No one ever said plantsmen were known for being modest. The Birkenheads were no exception, but after reviewing the catalog quoted above I have little reason to doubt them. It lists a total of about 1200 varieties of ferns for sale, with around 250 exotic hardy ferns, including forty-seven varieties of *Asplenium scolopendrium*. When I worked in the HFF production hoop, the HFF had around 7 varieties of *Asplenium scolopendrium* in cultivation and I thought that was pretty impressive!

During what is known as the Victorian Fern Craze, an en masse lust for ferns swept the wealthy western world, especially England and its colonies. Beginning around 1820, this fascination with ferns coincided with a period of colonial expansion and scientific innovation. Initially, the Fern Craze emphasized collecting and identifying the ferns of the world, using new technology such as Wardian cases and steam-heated greenhouses to support their transport and growth. The latter part of the craze, from the 1870s to the early 1900s, was more focused on cultivation and display.

Catering to this trend, the Birkenhead's opened a nursery "with ferns a specialty" outside Manchester, UK in 1870. Not only did they sell a wide variety of ferns, they also distributed spore, published information about fern propagation and classification, sold greenhouse equipment (such as a patented cockroach trap!), and provided construction and consulting services for rockeries and ferneries. Distributing

ferns by steamer, they influenced gardens the world over. While some receipts tracing shipments to New Zealand and India exist, other evidence of their work is scant.

One vestige of the Birkenhead's business, and the primary focus of this article, is what is now known as the Dorrance H. Hamilton Fernery at the Morris Arboretum. The Birkenheads were consulted on the design of the Fernery, and it was stocked with ferns from their nursery. Located on the outskirts of Philadelphia, in the Chestnut Hill neighborhood, the Fernery is a piece of history that provides a window into the historic groundswell of fern appreciation during the Victorian era. It is also the last and only freestanding fernery in America.

Last October, I started managing the Fernery as part of my job as Plant Propagator for the Morris Arboretum. While the Morris Arboretum is not the oldest arboretum I've



worked at (shouts to the Dunedin Botanic Garden, founded 1863), it is the first one that has such a clear legacy of private ownership. It is a new experience for me to walk around this now-public garden imagining its initial form as a summer retreat for a brother and sister. On more than one occasion, the statues of John and Lydia Morris, nested at the edge of a lawn, have scared the bejesus out of me in the early morning. It's funny to think of them frozen in iron, watching over what has become of their country estate. In his will John Morris wrote of his desire for the property to become "a place where young men and possibly women may be taught practical gardening and horticulture," so I think he would not be disappointed.

We won't delve too deeply into the history of the Morris Arboretum (we're here to talk ferns, people!), but I will provide a little background. John Morris, a wealthy Quaker, bought the land for his country estate in 1887 and got right to designing gardens that balanced Victorian and Japanese elements. The Morrises were well traveled and took several trips to Asia between 1882 and 1900 that undoubtedly shaped their horticultural tastes. They also purchased artifacts during their travels to display throughout the garden.

John envisaged a fernery as a way to further enliven the 30 acre estate. In the spirit of the age, it was to incorporate Victorian elements along with cutting-edge design and engineering. As built, the structure has several unique features. Perhaps most notable is the curved glass edge of the roof, the fabrication of which required new glass cutting techniques and which sits upon an armature made by Hitchings & Co of New York. The curvature gives the outline a more organic look. More discreet are the chimneys and heat vents hidden in the turret-like entry passage. The overall impression is of a dew drop resting on the rolling grounds.



"The Fern Grotto at Chestnut Hill, PA", a 1901 article from *The American Florist*, does an excellent job of describing the layout of the Fernery:

"The entrance is through a glass passage leading from the doorway, which is of stone, the two sides projecting above the center part and giving a battlement effect. At the foot of the stairs a second pair of doors opens upon an elevated stone platform... To the left of the platform is a mound of rocks, through which the pathway runs in a tunnel, having a height of seven feet. Access to the top of the mound is had by natural stone steps. On the straight side of the mound several streams of water fall to a pond at the foot of the miniature precipice, thence into a second pond, a foot lower, thence a stream runs to and falls over rocks under the bridge, six feet into the pool at the bottom of the cave...The cave shown in the rear wall is ten feet wide, extending six feet back of the wall and is about six feet deeper than the level of the lowest path. There is a pond at the bottom and here amid the congenial surroundings of drippings cascades the moisture loving filmy ferns thrive luxuriantly."

Only by John's persistence, vision, and immense wealth were these dramatic and innovative features achieved. In correspondence from the time, we can see John

and the Birkenheads going back and forth on proposed designs. The Birkenhead's experience seemed vital in addressing some practical details, such as placement of heating pipes and width of paths. One Birkenhead brother writes: "We are afraid your paths are too narrow...It is important to have the paths wide enough for lady visitors to get about without fear of soiling their dresses." John must not have heeded this advice, as my dress is often soiled! In the end they agreed upon the more naturalistic design with water elements, ample light, and bold rockwork which can be seen today.

Morris hired Kushibiki & Arai, Japanese nurserymen and designers based out of Atlantic City, New Jersey, to design and install the rockwork. Over 100 tons of Wissahickon schist—none fresh quarried, all naturally weather-worn—was arranged and installed into the Fernery. Quite an undertaking, considering the Fernery's footprint is only 31 x 44 feet.



After the impressive rockwork was installed, John Morris's head gardener, Frank Gould, installed over 523 varieties of fern and fern allies—apparently including 47 different selaginellas. The plant material for this project was almost exclusively ordered from W&J Birkenhead Fern Nursery, though ferns the Morrises collected on their travels may have been included as well. We don't have details, so are left wondering if the Birkenhead's signature variety *Adiantum* var. *Birkenheadii* made its way into the collection. The ferns were displayed according to botanical order, highlighting the Fern Craze interest in scientific understanding and classification of ferns. In fact, the fern collection was considered to be of such "irreplaceable and scholarly character" that during WWI coal rationing Lydia Morris appealed to Secretary of the Treasury William McAdoo and was given an exception to use coal to heat the Fernery.

The Fernery and grounds thrived for a period of time after both John and Lydia Morris died and their land was donated to the University of Pennsylvania. However, like many Victorian-style structures, by the 1950s the Fernery was in need of repair.

In 1957 the Fernery was restored, but with a straight, far less ornate roof. Visitors were able to enjoy the Fernery until the 1980s, when it was again deemed unsafe and only employees and volunteers could enter to perform maintenance. To quote Shelley Dillard, who served as the Morris Arboretum's Propagator for over 30 years, they "hoped someone would fall in love with it and help us to restore it-it was in really bad shape." That person ended up being Campbell Soup heiress Dorrance 'Dodo' Hamilton. Hamilton was the granddaughter of Dr. John Thompson Dorrance, who invented condensed soup.

During the 1993-94 restoration the team only had a few photographs that showed the locations of maidenhair and tree ferns; from there it was left to them to fill in the pieces. As a curious nerd I would love to have attempted to recreate the Fernery's original design and collection-which would be close to impossible anyway because many Victorian fern cultivars are no longer available. Shelley Dillard, who was extremely involved in the restoration, had the joyful take that no records meant "we got to do whatever we wanted to do-and it was so much fun!" The restored fernery re-opened in 1994.

Knock on wood, the Fernery today is, for the most part, problem free. From the start, heating has been a challenge-it seems the walls were constructed at only 8 feet as opposed to the 12 feet recommended by Birkenhead with this in mind. While a new heating system was installed in 2020, there still have been times when it struggles to maintain adequate temperatures during serious cold spells. My approach to this is to move towards growing more temperate/subtropical species. However, that can be challenging because the only cooling mechanisms in the Fernery are computer controlled vents and a ceiling fan. So, you could say it gets toasty in there with temps often exceeding 100° F in the summer!

Another challenge is pests. I have been corresponding with some colleagues who manage the Fernery at the Montréal Botanical Garden, and they take an organic approach, using lots of beneficial insects and doing manual removal and oil treatments. I hope to get there one day, but we have had some bad results using horticultural oil on ferns. Although we use beneficial insects extensively in our production rooms, my predecessor, Shelly Dillard, didn't have much luck with them in the Fernery. I want to give it a go at some point. We currently use a systemic pesticide to maintain low levels of scale and mealy bug populations. I'd prefer not to, but since the plants are inside and don't flower, it's not the worst thing. I am new to fernery management and hope to steadily reach out to other gardens with ferneries to build connections and exchange info!

As far as maintenance, we have a stellar volunteer named Kathy who comes in once a week to prune and tidy. Cursed angiosperm weeds occasionally do pop up, but for now it's all very under control (again, knock on wood). Depending on the weather, we water the Fernery for around 30 minutes a day, giving everything, including the walls, a good soak. When I first started working at the Morris I was surprised to learn there was no automatic irrigation in the Fernery. The prospect of mist has me dreaming of a return to filmy ferns in the grotto!!!

Over the winter I had a slight moment of panic and reached out to any and all moss experts I could think of (we need more of them!) because some of the moss was turning brown around the waterfall and in several other spots in the Fernery. While it's about the FERNS, not the moss, the moss is an important backdrop. Luckily, as winter took its sweet time transitioning to spring, most of the moss flushed green again and a wave of relief penetrated my being. Anyways! All in all the Fernery is a remarkably easy and rewarding space to maintain, likely thanks to its thoughtful design.

I don't know the details of who the Morrises entertained in their fernery while they were alive, but with their donation of their land to the University of Pennsylvania, this private magic space, once only accessible to the elite (and their gardeners), is now open to the public for everyone to enjoy.

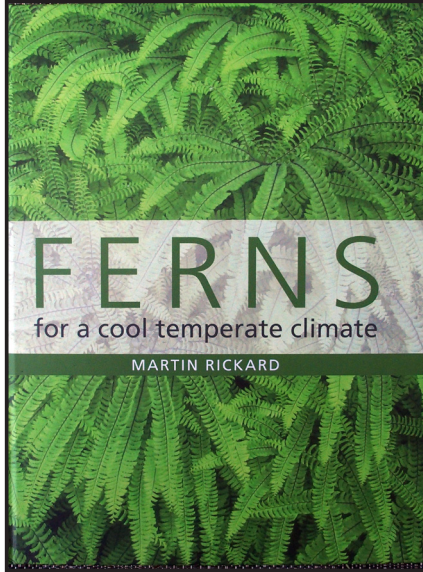
I've had the pleasure of leading several tours of local high school students around the Fernery. Sometimes they are shy and clearly not trying to learn about plant conservation or the Victorian Fern Craze—although sometimes they totally are. For the most part they pull out their phones and take pictures of each other in front of the ferns. They smile and enjoy their time in the space, so I call that a win. Recently some 10<sup>th</sup> graders from W.B. Saul High School were visiting and as I was talking about the history of the Fernery and other structures a youth exclaimed "You're telling me that glass is older than my Grandma?!" He was super enthusiastic and it was hilarious. I had to tell him the glass is not that old, but the bricks and rock structures are way older than his Grandma. Here's to hoping for a Gen Z fern craze!

If you are in Philadelphia, pop over to the Morris Arboretum and visit the Fernery! And while you're there, be sure to scour the rest of the garden for traces of the 200-plus hardy ferns purchased from the Birkenheads and trialed there in 1902.



# Book Review: Ferns for a Cool Temperate Climate, by Martin Rickard

Reviewed by Daniel Mount  
Carnation, WA



Who needs another fern book?

That's a question I ask myself often. I have many; I lost count. One whole shelf in my office library is shoulder to shoulder fern books, old and new. And I think there is one box, maybe two, full of fern books in the storage locker. I haven't looked in a while.

So, do I need another fern book?

That's what my partner asked when I came home with Martin Rickard's new book, "*Ferns for a Cool Temperate Climate*". I probably wouldn't have bought it if it weren't for Rickard's name on it. His decades of passion for ferns and fern books, both writing and collecting, led me to believe it would be a book worth having.

And it is.

Rickard opens with a concise and interesting history of ferns from the dawn of time to the dimming of the Victorian age and beyond. This sets a high tone for the book, which continues on with chapters on selection, propagation and uses of ferns including many novel ideas for growing ferns. Those chapters I glanced at feeling I know it all already, but those chapters would be great for the new fern enthusiast. I should probably get off my high horse and go back and read them.

Though the book opens strongly, it is the last two-thirds of this encyclopedic book you should buy it for. Rickard is very keen on cultivars and that is very evident here. There are no less than 48 *Polystichum setiferum* cultivars and 33 *Asplenium scolopendrium* cultivars. And that's just 2 species of hundreds. This is much appreciated. Though there are many fine garden ferns that are straight species, it is often the specially selected cultivars that make the most intriguing garden plants. It is always nice to see old favorites like *Osmunda regalis* 'Decomposita', *Dryopteris affinis* 'Pinderi' and *Polystichum setiferum* 'Dahlem' here. But as somebody who can't have enough ferns, as much as I can't have enough fern books, it's the ferns new to me that make this book so valuable.

Unfortunately the rarest ones are the ones I want the most. In that way Rickard is a tease to us Americans who don't have access to the innumerable cultivars available in Britain and Germany. *Polystichum setiferum* 'Crawfordsburn Fern' ("on the brink of extinction," Rickard writes) is now my unrequited love. And then there's *Athyrium filix-femina* 'Clarissima' with descriptives like "rare", "expensive" and "sterile" only making me want it more. I did get spore for *Dryopteris filix-mas* 'Succisa' from the British Pteridological Society spore exchange this year, ordering it without a picture. Now that I saw the picture in this book I'm not sure I want it; it's one of those "interesting" ferns.

This book is full of truly interesting ferns. What got me excited most weren't the new (to me) cultivars or new (to me) species, but the new to me genera. *Cystocarpium*, *Lophosoria* and *Oreopteris* are all on my list for further research and possible purchase if I can find them. Rickard includes places to buy ferns and is generous in including Australia, South Africa and the USA in a book that is heavily skewed for European and in particular British gardeners. (Maybe we just don't have enough fern nurseries in the States yet). He also includes quite a few pages of places to see ferns, which I will definitely refer to when making travel plans in the future.

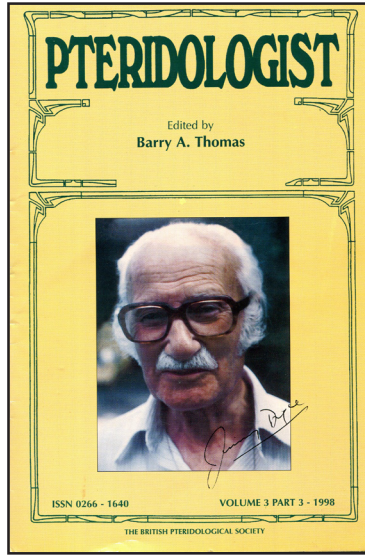
Of course, there are a few questions from this reader, but they are the same questions I ask of all fern books. What are Zone 9 and 10 ferns doing in a book about ferns for cool temperate climates? (I'm already dragging way too many ferns into protect every winter). Why can't all fern books have pictures of individual fronds like Rickard's 2002 book *The Plantfinder's Guide to Garden Ferns*? so helpful to those of us who are trying to learn to identify ferns, or identifying those tag-less ones in our gardens. And, why can't I have all these ferns? Rickard presents a treasure trove in his new book.

The book is big yet slim, almost the size of my laptop. Nearly every page is lushly verdant with tempting and inspiring imagery. It slipped cozily into my shelf of fern books. But I've pulled it out from that shelf a dozen times already in the last few weeks. Not just to write this review, but to seek Rickard's input.

I may not have wanted a new fern book, but I sure needed this one.

# In The Name of The Fern: *Dryopteris dilatata* 'Jimmy Dyce'

Article by Daniel Mount  
Carnation, WA



I planted the broad buckler fern 'Jimmy Dyce' in a client's garden some twenty years ago. I'm sure I chose it for the name. I was just beginning to unleash my inner fern-lover and knew few ferns and even fewer fern people, but I liked the name Jimmy Dyce. I didn't find out who he was until many years later traveling in Japan with the British Pteridological Society. They kept referring to some important fern enthusiast named Jimmy. Finally, remembering the name of the fern I planted so many years earlier, and wanting to seem like I was in-the-know, I asked, "Is this Jimmy Dyce you are speaking of?"

It was.

But why was a fern named after him?

James (Jimmy) W. Dyce was born in Petershead, Aberdeenshire, Scotland on May 27, 1905. Shortly after his birth his family moved from that coastal town to Aberlour in the mountainous interior, where his father had taken a job as an estate manager. His father had a keen interest in ferns and passed this on to his son who already had a natural curiosity for the botanical world. Jimmy's early first encounter with maidenhair spleenwort (*Asplenium trichomanes*) growing on a wall near his Scottish Highlands home was a "sensational find and it intensified my devotion to ferns", he recounted many years later.

Though you might think this early passion would have led to a career in botanical research, Jimmy's parents had other ideas. So he went into banking, eventually moving to London where his life-long mania (his word) for ferns took hold. There he joined the British Pteridological Society in 1936 where he found like-minded friends. The organization formed in 1891 on the tailwinds of the pteridomania that swept Victorian England, was faltering and Jimmy jumped in to help revive it. Serving as secretary for 30 years and as president from 1979-82, he is considered the single most important member of BPS in the 20th-century. His efforts and devotion to the organization helped the society reclaim its international importance.

But more than anything he was a fervent fern hunter.

In 1969 on one trip to the Isle of Arran in western Scotland, Jimmy, and two other BPS members, Fred Jackson and Martin Rickard (who Jimmy considered his protégé) discovered a rather unique specimen of *Dryopteris dilatata*. The broad buckler fern, as it is commonly known, is common in the British Isles and can form dense stands precluding all other herbaceous vegetation. This quite variable species can be found throughout Europe mostly occurring in the western and central areas, and less commonly in the south in mountainous regions, with some disjunct populations between the Caspian and Black Seas.

This rather unique find was uprooted and moved to Jimmy's garden in London where it grew for many years until in the early 1980s American fern grower Judith Jones took notice. She gathered spore and grew this fern back in her nursery in Washington State. After growing it for several years she thought it was worthy of introduction. She contacted Martin Rickard, who was there when it was found because she wanted to name it after Jimmy, who had also mentored her and had died just a few years prior in 1986. So in 1991 *Dryopteris dilatata* 'Jimmy Dyce' became available to gardeners in the Pacific Northwest. It is widely available in the United States now, but not in its country of origin. I am very fond of this tidy upright and very ruffled fern and have planted it many times, as I have many *Dryopteris*.

The name *Dryopteris* was coined by the first-century Greek botanist and physician Dioscorides. It means "oak" (dryas) and fern (pteris). Most likely it was given to a fern growing on or near an oak and has nothing to do with our modern concept of the genus. The specific epithet of the broad buckler fern, *dilatata*, is also from Greek and means enlarged or widened— think of the English word dilated. It refers to the large spaces between the pinnae and pinnules, which give this fern its airy appearance. A buckler, in case you were wondering, is a small shield held by a handle or worn on the wrist, and is a reference to the sori covering the sporangia.

Though Jimmy was certainly interested in all ferns, he had a special predilection for the genus *Polystichum* and in particular for the species *P. setiferum*, the soft shield fern (once again the shield here is referring to the shield-like sori covering the sporangia). He even penned a book on the many cultivars of this species.

*Polystichum*, meaning "many stitches" (referring to the arrangement of the sori), is

a genus that readily hybridizes both in the wild and under laboratory conditions. British pteridologist Anne Sleep created a synthetic hybrid in a laboratory at Leeds University in 1965 and named it *P xdycei* in honor of Jimmy. Created from spore of *P. proliferum* (mother shield fern) collected in the Blue Mountains of Australia and *P. braunii* (Braun's Holly fern) collected in Val d'Atabbi, Switzerland. Sleep working with these two ferns from such disparate parts of the world created a prized garden plant. Most *Polystichum* hybrids are sterile and never make it into cultivation. *P xdycei* on the other hand forms small bulbils on its fronds— a trait it picked up from mother shield fern— which can be removed and grown on.

There is no official registration of fern cultivar names, so a fern like *Dryopteris dilatata* 'Jimmy Dyce' was named by friends for a friend, albeit friends who are fern experts and know what they are talking about. On the other hand, *Polystichum xdycei* is a new species and thus described using botanical Latin and published in an accredited science journal, and went through a peer review without being challenged before it could be used. (I'll be giving a closer look at the process of fern naming, its pluses and minuses, in my next article.)

Another fern, *Equisetum xdycei* (Dyce's horsetail), a naturally occurring hybrid between *E. fluviatile* and *E. palustre*, was named in Jimmy's honor by pteridologist Chris Page a frequent travelling companion. Page had noted naming the horsetail to honor Jimmy Dyce "who has done so much, over many years to stimulate pteridophyte recording work in Britain." This horsetail is known from a small number of scattered populations in Scotland, and originally found on the Island of Harris in the Outer Hebrides in 1962. Some of Jimmy's favorite ferning territory.

Jimmy's wife Betty wrote after his death, "banking was never his cup of tea, and the sooner he could get home and into shorts and in the garden, the better he liked it." She went on to say his life began at retirement when he threw himself joyfully deeper into ferns turning a personal passion into selfless service.

Though I referred to Mr. Dyce as "Jimmy" throughout this article it was not out of familiarity; he died long before my interest in ferns was wakened. And it is in no way meant to be disrespectful. On the contrary, Jimmy is to ferns, as Cher is to pop music.

An icon.

Jimmy might not be famous enough to land on the cover of "People Magazine", or even warrant a Wikipedia page. And, even though, a Google search brings up a handful of James W. Dyces, not one of them devoted 50 years of his life to ferns.

Not one landed on the cover of the pteridologist.

And not one of them had 3 ferns named after him.



Normal view Darwin Core view

# BM000531679

## Classification

**Scientific name:** *Polystichum x dycei* Sleep  
**Author:** Sleep  
**Family:** Dryopteridaceae  
**Genus:** *Polystichum*  
**Species:** *x dycei*  
**Higher classification:** Dryopteridaceae

## Location

**Locality:** Leeds University Botanic Garden; Leeds  
**State province:** England  
**Country:** United Kingdom  
**Continent:** Europe  
**Higher geography:** Europe; United Kingdom; England; West Yorkshire

## Collection event

**Recorded by:** Anne Sleep  
**Record number:** AS/629(ii)  
**Collection date:** 30 / 9 / 1965



POLYSTICHUM XDYCEI

# **Polystichum xdycei - *Polystichum proliferum* x *P. braunii***

**James R. Horrocks  
Salt Lake City, UT**

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This beautiful and rather imposing hybrid is named after the late Jimmy Dyce, an avid researcher dealing with the classification of *Polystichum* cultivars and their many variations. This fern is a product of laboratory hybridization performed by the late Anne Sleep of Leeds University in Britain. Many of her hybrids included one parent that was bulbiferous such as *P. andersonii* or, in this case, *P. proliferum* from Australia which was crossed with *P. braunii* to give us *P. xdycei*. The bulbil-producing character persists in the subsequent progeny allowing for the ability to reproduce this otherwise sterile plant. *P. xdycei* is one of the largest polystichums in the nursery trade, comparable to the Pacific north-west *P. munitum*.

**Description:** The rhizome is represented as an "imposingly robust crown". The stipes are quite short and very scaly, the scales blackish-brown with a tannish outline. Pinnae appear almost to the ground as in the parent *P. braunii*. The bipinnate-pinnatifid fronds are lanceolate in outline and widest near the upper third. 20 to 30 pairs of mid to dark green pinnae are present. One to three bulbils are found on the underside of some fronds 2 to 4 inches from the apex. The pinnae between the bulbils and the apex are quite reduced. The bulbils, found in the notch near where the pinnae attach to the rachis, can form into small plants while still attached to the frond if conditions are humid enough. In dryer climates this is usually not the case. Spores are produced but are sterile. The sori are closer to the margins than the midrib.

**Culture:** Being a hybrid, this fern demonstrates considerable vigor as many hybrids do. It is at its best in a woodsy soil with plenty of leaf-mold, growing rapidly, producing 2 ½ to 3 ½ foot fronds that display a "giant horizontal wheel of foliage" as Sue Olsen puts it. It is magnificent in dappled shade under tall trees. The curious bulbils can be detached from late summer on into the fall and planted where the humidity is very high such as in a terrarium environment one would use to grow ferns from spores. *P. xdycei* is gradually becoming available in the U.S., having successfully survived winters in Great Britain and Europe. It is considered hardy to possibly Zone 6.

## **References:**

Olsen, Sue, 2007, Encyclopedia of Garden Ferns, Timber Press, Inc., Portland

Rickard, Martin, 2000, The Plantfinder's Guide to Garden Ferns, Timber Press, Portland

Steffen, Richie, & Olsen, Sue, 2015, The Plant Lover's Guide to Ferns, [In association with Kew Royal Botanical Gardens], Timber Press, Portland

# Ten ferns that are easy to grow in my Portland garden

Article and Photos by Loree Bohl  
Portland, Oregon

While I'm the gardener behind the blog "danger garden" and thus known as that crazy lady who grows agaves in Oregon, I am also a lover of ferns—or rather I've become one. I came late to this particular group of plants; in part because of over-exposure to the common Western sword fern (*Polystichum munitum*) at a young and impressionable age. I grew up on the dry side of Washington State, in Spokane, but we'd camp along the coast and up the Olympic Peninsula and my mom stopped to admire every sword fern we passed. I thought that was the only fern there was! However, once I discovered there were many more ferns—and let's face it, as my maturing garden became shadier and shadier—I was hooked. Now my trips to a plant sale, or one of our local specialty nurseries, usually result in a new fern or two, along with a choice agave or cactus. I shop both ends of the plant spectrum.

In writing this story for the HFF Quarterly I do feel like a bit of an imposter though, after all I've never grown ferns from spore. Another thing; I'm generally at ease with botanical Latin, but when it comes to fern names, forget it. Many of them are just too much for my brain to remember, let alone pronounce. A memorable moment of embarrassment occurred when Sue Olsen visited my garden as part of a tour and complimented a *Cheilanthes tomentosa* growing in my front garden. I had absolutely no idea what she was talking about. Looking at my blank face she understood and kindly elaborated.

I'm a frequent user of the hashtag #fernsarethenewsucculents on Instagram, my fun way of pointing out the growing popularity of ferns. I'll never forget the reaction of a Southern California friend who pointed out that ferns will never take the place of succulents, as not everyone can grow them. Hmm, I think she missed the point.

## My garden and it's growing conditions

I've gardened in NE Portland since 2005. My small urban garden measures roughly 45ft x 111ft, and is located about two and a quarter miles from the Columbia River, which separates Western Oregon from Washington. The Columbia River Gorge sends cold winter winds through my part of town, and winter ice storms hit this area more frequently than the rest of Portland. My USDA Zone 8 garden sits at an elevation of 150 ft. Summers have been warming, both the daytime temperatures (lots of 80s and 90s) and the nighttime, as the city isn't cooling off the way it used to. Winters are erratic. There have been years I haven't experienced a killing frost until after Christmas and others when it happens in November. The temperature extremes I've recorded here are a low 12F just once, and 14F a couple of times, with several stretches where it remained below freezing day and night for days. Thanks to the Heat Dome of summer 2021 a new high of 108 was set, then 112 and finally 116F.

The soil I started with was clay, although I've added a lot of compost over the years. Winters are wet (with the occasional heavy wet, and thus damaging, snow that thankfully doesn't stick around long) and summers are dry. I do not have any irrigation in place, any summer water that "falls" in my garden is delivered by hand and hose. Pests in my garden include slugs, root weevils, cutworms, raccoons, the occasional rabbit—and sometimes an errant ball from a neighboring yard. My only control efforts are sending the slugs, root weevil larva and cutworms on an all-expenses paid vacation in the yard waste bin (picked up weekly by the city) and aiming the hose at the rabbits.

A complete list of the ferns I grow can be found on the "my plants" page of my blog, danger garden ([thedangergarden.com/p/my-plants-list.html](http://thedangergarden.com/p/my-plants-list.html)). My plant listings are alphabetical; however, you'll find the ferns all grouped together.



ADIANTUM VENUSTUM, ADIANTUM ALEUTICUM AND ONOCLEA SENSIBILIS

## Ten ferns that do well in my garden

***Adiantum aleuticum* 5. Western maidenhair fern.** I inherited this fern from the previous owner of the garden. Once exposed (it was languishing behind a mass of overgrown sword ferns) it has thrived. Over the summer I have to be sure water reaches the back of the planting bed where it grows, as it wants water! Grown on the north side of our garage in full shade.

***Adiantum venustum* 5. Himalayan maidenhair fern.** This is an indispensable green carpet that helps me achieve the illusion that bromeliads "grow" in my garden year-round. It's perfect for disguising their pots when I drop them in place once the weather warms. I've read that it can be cut back hard in the spring but I've never done so, instead just letting the underlayers naturally decompose. A friend once said "I see you're suffering the scourge too", pointing at this fern—as it does have a tendency to spread. One gardener's trash is another gardener's treasure! Grown on the north side of our garage and receives a little late afternoon sun.

***Arachniodes simplicior* 'Variegata' 5. Variegated East Indian holly fern.** Everyone who visits my garden remarks on this fern, I'm convinced it's not more widely grown because it doesn't look great in a nursery pot. I do trim off the older fronds periodically, as the variegated stripe can start to turn a brassy gold that I don't care for. Grown as a foundation plant on the west side of our house—morning shade and afternoon sun, although shaded in the hottest part of the day.

***Asplenium trichomanes* 5. Maidenhair spleenwort.** Simply the perfect little fern for tucking in everywhere. I've seen it growing happily in a rock crevice, in my fern bowl (similar to a fern table) and of course in the ground in my garden. I can't say specifically where this one is growing, as it's all around the garden.

***Athyrium otophorum* 5. Eared lady fern.** I sometimes forget about this fern, as it appears a little later in the spring than others in my garden. Once it does finally show up, it positively glows. Grow in part shade and soil that tends to be a little on the dry side.



ATHYRIUM OTOPHORUM



POLYSTICHUM SETIFERUM DIVISIO-  
LOBUM GROUP, PYRROSIA POLYDAC-  
TYLA AND BLECHNUM CHILENSE

***Blechnum chilense*/*Parablechnum cordatum* 5. Chilean hard fern.** Such dramatic arching fronds! I started with this plant in a large planter, as I'd been warned of its tendency to spread when happy. Since its march has been slow, I've since planted it in the ground as well, with no problems—well, other than when a rabbit decided it was nice to munch on. Grown in part shade/part sun with regular water.

***Blechnum penna-marina*/*Austroblechnum penna-marina* 5. Alpine water fern.** Speaking of a tendency to spread! I appreciate the free plants though, and find the colorful new growth especially lovely. Plants I'd newly planted out just prior to the Heat Dome last June looked like they were dead come August, but they're coming

back this year. Grown in several places, the ones that receive the most sun are also the most colorful.

***Coniogramme gracilis* 5. Narrow-leaf bamboo fern.** This is the most robust of the coniogramme I grow. I have two in containers and they've bulked up quickly and are the earliest coniogramme to emerge in the springtime. Grown in containers in mostly shade.

***Polystichum setiferum* 'Divisilobum Group' 5. Soft shield fern.** This one is super easy-going and adds such an interesting texture. Grown in dappled shade.

***Woodwardia unigemmata* 4.** While the fronds on my **jeweled chain fern** aren't as large as others I've seen, I don't care. That color and form is welcome at whatever size they achieve. I have a couple growing in almost full morning sun, several others in almost full shade—they're all lovely. I think they'd be happier with more water, but I am fairly stingy with that resource.

### **Five ferns that didn't do well in my garden**

***Asplenium scolopendrium* 2. Hart's-tongue fern.** I've tried this little fern in several spots, it just sits there and does nothing, I've read that adding lime to the soil might help, but that sounds like more work than I'm willing to do when so many other ferns grow hassle-free.

***Dicksonia antarctica* 1.** I know, tree ferns aren't necessarily supposed to grow here in the PNW, but when I see them at the Amazon Spheres, and now at Heronswood—well, I want them here too. Truth be told I do have one that's been "surviving" in a container for years, but every attempt I make to plant one in the ground fails. Recently I heard Monty Don on Gardeners World say: "if it hasn't rained for about 3 or 4 days, make sure that the air around them is damp, and the trunk has a good soak". It can go 3 or 4 weeks without raining here in the summertime, perhaps winter temperatures aren't my only issue.

***Dryopteris sieboldii* 2. Siebold's wood fern.** I'm trying a fourth spot in the garden for this fern that I am aching to have thrive here. So far, it's the best performing, but I feel like I've cursed them now by writing about it.

***Matteuccia struthiopteris* 1. Ostrich fern.** Every time I read a warning about this fern's tendency to spread I sigh. The ones I've tried in the ground die, it's just too dry in the summer and I don't lavish them with enough supplemental irrigation. A couple did well in containers for a few years, but they finally gave up too. I love this fern because it looks a little like a tree fern, at least when it's really healthy and thriving. This year I'm trying a trio in a large stock tank, wish me luck.

***Onoclea sensibilis* 2. The sensitive fern** wants more water than I am willing to give it (are you sensing a theme?). It starts out stunning in the spring—I love the brown outline on the early fronds—but by mid-summer is flagging and by late August it looks so bad I cut it back.

## Five ferns that are rare or prized possessions

***Bommeria hispida*, copper fern.** Whenever I share a photo of this small desert fern on Instagram people go a little crazy. It's rare, and I've been told it's hard to grow. Mine came to me (as so many of my plants have) as a gift from Sean Hogan and Cistus Nursery. I do nothing special to keep it alive, other than shower it with appreciative glances.



**BOMMERIA HISPIDA**

***Cheilanthes argentea*, silver cloak fern.** I spotted this at a small family-owned nursery and couldn't grab it fast enough. It has low water requirements, bright green new growth and white undersides to the fronds—now if I can just keep it happy over our wet winters as it's a dryland fern that needs good drainage.

***Lemmaphyllum microphyllum*, Japanese bean fern,** I came across this epiphytic fern at the Pat Calvert Greenhouse in the Washington Park Arboretum, Seattle. I have a soft spot for epiphytes and fell in love. It's done well for me growing on a piece of bark with a bit of moss.

***Pyrrosia polydactyla*.** It was extremely difficult to narrow it down to just two from the sixteen+ pyrrisia that I grow. This unusual felt fern came to me from Secret Garden Growers here in Oregon. I have a pair, one of which features a black midrib, while the other is green. It's the shape of the fronds that gets me, they look like little green paws.

***Pyrrosia shearerii*, Shearer's felt fern.** The granddaddy of pyrrisia if large fronds are what you're after—plus the new fronds are fuzzy white as they begin to unfurl. Every one of the plants in my (surprisingly) growing collection of this species has been a gift or at least picked up for me by a friend. That too makes them special. Of course, I want to write about my variegated pyrrisia, the crested form, the thin ruffly one, all the fabulous pyrrisia! Maybe another time...

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# Ferns of Summer!

Photos by Dave Gibson  
Bainbridge Island, WA



**DRYOPTERIS WALLICHIANA JURASSIC GOLD**



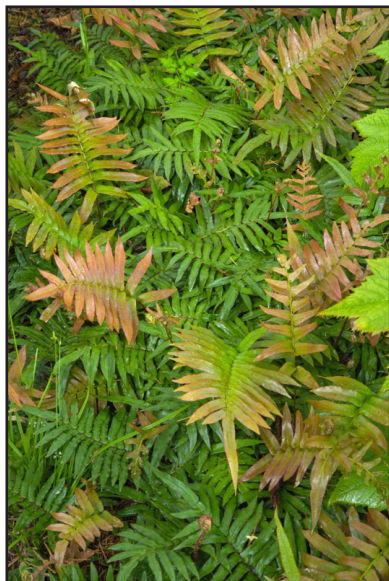
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# Hardy Fern Foundation Save-the-Date

**Fall Plant Sale**  
**Saturday, September 10th, 2022**  
**Location: Bellevue Botanical Garden**

**Annual Meeting**  
**Saturday, October 22nd, 2022**

**You will receive an email with information about registration  
for this free event closer to the date.**

**Please check the HFF Website under Events for updates.**