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# Davidsonia

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# Davidsonia

## Editor

Iain E.P. Taylor  
UBC Botanical Garden and Centre for Plant Research  
University of British Columbia  
6804 Southwest Marine Drive  
Vancouver, British Columbia, Canada, V6T 1Z4

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Cover: Pendulous blooms of *Rhododendron cinnabarinum* var. *cinnabarinum*  
Photo: Douglas Justice  
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THE UNIVERSITY OF  
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# Editorial

## Collections

Davidsonia is emerging from its second hiatus, the second in its 40 year history. The journal has received a clear statement of support from the Botanical Garden, the publisher of the journal, and we plan to become an e-journal, with access through the UBC Botanical Garden web site, at <http://www.davidsonia.org/>. During the 10 years since I agreed to restart Davidsonia, 20 of the 52 papers included new data taken from chapters of PhD or MSc dissertations that were deemed unsuitable for the so-called ‘high-impact’ journals. The irony of this type of importance classification is that peer-reviewer’s comments for all of those papers noted that the work submitted was valuable, in some cases really important, to understanding biodiversity—a topic that is certainly not a low-impact field.

A major development in Canadian botanical gardens has been the proposal and funding by the Canadian Foundation for Innovation (CFI) to establish Canadensys, “to unlock the specimen information held by Canadian university-based biological collections and share this via a network of distributed databases, compatible with other biodiversity information networks like Canadian Biodiversity Information Facility (CBIF) and Global Biodiversity Information Facility (GBIF).” The rhododendron collections at UBC reported in the paper by Justice will be part of Canadensys. The paper by Taylor and Justice explains the choices of trail names that have been adopted in the David C. Lam Asian Garden and notes plants of particular interest on each trail. Like all city street names, there is a link between a name and history. In the Asian Garden the link is to collectors of Asian

Iain E.P. Taylor, Professor of Botany and Project Director,  
UBC Botanical Garden and Centre for Plant Research,  
6804 SW Marine Drive, Vancouver, BC, Canada, V6T 1Z4.  
[iain.taylor@ubc.ca](mailto:iain.taylor@ubc.ca)

plants, many of which are or are related to rhododendrons. But the hope in botanical garden collections is that they will have value for science. Hence a single, undocumented plant, even if it is correctly identified has little value as a subject for research. Replication is important and is commonly achieved by recording the site of collection and ensuring that several specimens are grown together to allow study of diversity within the collection as well as to provide some element of sample replication, in reality a pseudoreplication.

I hope that Davidsonia will continue to serve as one outlet for the recording of collection information. The massive undertaking that is Canadensys must keep connected to the real world of readers and field and garden researchers if it is to be on long-term value for the greater good, not all of whom are either taxonomically or computer-skilled high flyers.

## Rhododendrons at UBC Botanical Garden

The University of British Columbia Botanical Garden began in 1916. The garden's first director, John Davidson (1878-1970), was a Scottish-trained botanist who established British Columbia's first botanical garden at Essondale (now Riverview Hospital), east of Vancouver. He also established UBC's herbarium and founded the Vancouver Natural History Society. In the early days at UBC, the garden was located in what is now the centre of campus on Point Grey. The focus was more on BC's native plants, and there were significant collections of local alpenes, but also extensive plantings of exotic trees. A part of the original rock garden survives outside the Geography Department building on West Mall, but sadly, more and more of the historic plantings are being sacrificed as new buildings go up. A few of the trees that Davidson planted remain, most of which are in the Old Arboretum, adjacent to the First Nations House of Learning.

In 1951, when Davidson retired, the whole campus was designated a botanical garden under the direction of T. M. C. (Tommy) Taylor, head of the Department of Biology and Botany. New plant collections were developed throughout the campus, but their documentation, care and maintenance proved difficult. In 1968, the Board of Governors set aside 31 hectares (78 acres) to be operated by a new department, the Botanical Garden. Roy L. Taylor, a senior taxonomist at the Central Experimental Farm in Ottawa was appointed Director and re-established the garden with many of the same objectives as Professor Davidson. These included the development of plant collections for research, the teaching and training of students, the propagation of plants, and

Douglas Justice, Curator of Collections  
UBC Botanical Garden and Centre for Plant Research,  
6804 SW Marine Drive, Vancouver, BC, Canada, V6T 1Z4.

direct involvement with the horticulture industry. Rhododendrons were a high priority for the Botanical Garden and for the soon to be developed Asian Garden.

Roy Taylor determined the overall thrust of collections, and together with John Neill, professor of Horticulture and the supervisor of campus development, helped to shape a particular “look” for the Asian Garden. The firm of Justice and Webb Landscape Architects created a master plan for the whole garden and the Asian Garden design was a pleasingly informal hierarchy of major and intersecting minor pathways. Both Clive Justice and John Neill were well known for their considerable rhododendron expertise, but it was UBC’s association with the Rhododendron Species Foundation (RSF) and the skill of UBC propagator Evelyn Jack (now Evelyn Weesjes) that provided the firm foundation of rhododendrons for the new garden. The details of the relationship between UBC and the RSF have been documented elsewhere (a concise history can be found on the [RSF web site](#)). Beginning in 1964, Weesjes began propagating rhododendrons for both UBC and the RSF using cuttings from material that had been sent from gardens in the United Kingdom. American plant protection regulations prevented the direct shipping of British plants to the US; however, after two years on Canadian soil, the same plants, now rooted, were allowed to be transported south. A duplicate collection was held at the Botanical Garden Nursery in anticipation of the development of the Asian Garden.

In 1990, under director Bruce Macdonald, the garden’s entrance moved to its present location on the south side of Marine Drive, and the Asian Garden became known as the David C. Lam Asian Garden. The Honourable David Lam, philanthropist and former Lieutenant Governor of BC, provided initial funding for new buildings and other improvements. The Botanical Garden’s centre of gravity began to shift southwest from the Main Garden with its extraordinary native plant, alpine and food gardens, and its focus on horticulture. The less formal Asian Garden provided a dramatic backdrop for spectacular shrubs, Japanese maples,

woody climbers and exotic herbaceous perennials.

Under the leadership of Quentin Cronk, director from 2002 to 2008, the Botanical Garden turned to its role as a scientific institution. Dr. Cronk strengthened the link between the garden and the university through the Centre for Plant Research, facilitating access to collections for researchers and thus increasing the garden's relevance to the university's education and research mission. There were major efforts to increase the (already growing) proportion of wild-provenance collections throughout the garden, and to pay more serious attention to inventory management, labeling and interpretation of the garden's collections. These initiatives have had a positive, transformative effect on the garden and they continue to bear fruit. In 2009 the Botanical Garden took on two "bioinformatics" technicians whose work involves plant identification and verification, herbarium vouchering and tissue banking of all wild collected accessions at the garden<sup>1</sup>. This is no small task: the garden's wild-provenance rhododendrons alone include more than 300 different living collections. Coincident with this project is the updating of the garden's records and a switch to a web-based interface for the collections database. This means that when the project is completed, not only will the garden be able to provide more (and more accurate) information from our own database, but text information will be linked with images of living and pressed plants, and it will all be accessible via the Internet.

The UBC Botanical Garden site is at the western tip of Point Grey, about 100 m (330 ft) immediately above Georgia Strait. Temperatures normally dip below freezing in winter and reach the high 20s (around 80° F) in summer. The historic low for UBC is minus 18C (-1° F) and the high, 31C (88° F). The ample forest cover has a significant moderating influence on the climate and the Botanical Garden is generally spared such extremes. We consider ourselves to be a cool Zone 8 garden. Average yearly precipitation is approximately 1200 mm (48 in), most falling be-

<sup>1</sup> UBC Botanical Garden is a participant in the Canadian University Biodiversity Consortium (CUBC). CUBC is leading an effort to produce a cross-institution database of Canada's biological collections, including plants, fungi and insects. The initial phase of CUBC is funded by the Canadian Foundation for Innovation (CFI).



tween November and March when the roots of most exotics have little ability to absorb or otherwise deal with excess moisture. Hence, planting with an eye to increasing drainage is a basic, almost automatic response among local gardeners. We expect a few centimetres of snow between December and March. Mostly, this is heavy and wet, and generally doesn't linger, but occasional prolonged snowfall frequently breaks the branches of architecturally poorly-adapted evergreens. Fortunately, *Rhododendron* species are sturdy and almost never adversely affected by snow. While unrelenting winter rain and occasional snowfalls do take their toll, summer drought is at least as much of a challenge in the garden as winter conditions. We have two challenges; often dry conditions during late spring leaf emergence lead to a frustrating lack of moisture storage capacity in our thin, sandy soils, and there is little appreciable moisture between late June and mid- September. Irrigation is essential throughout in the garden.

In 1968, the Asian Garden—known then by staff as the Marine Drive Garden—was a 18 ha (43 acres) recovering second-growth forest, dominated by *Thuja plicata* (western red cedar), *Abies grandis* (grand fir) and *Tsuga heterophylla* (western hemlock), with pockets of *Acer macrophyllum* (bigleaf maple) and *Alnus rubra* (red alder) in the wetter areas and *Pseudotsuga menziesii* (Douglas fir) on the open, better drained sites. Other than a couple of huge, leaning, Douglas firs, untouched during previous logging, the age of most of the large trees on site was about 100 years when garden planning started. These stands of 20 to 40 m tall conifers were the ideal environment for cultivating rhododendrons and other natural under-storey plants. Clearing and planting began in the mid 1970s, about the same time that construction began on a new highway that split the Botanical Garden in two, and effectively separated the Asian Garden from previously developed areas.

The extensive Botanical Garden rhododendron collection includes approximately 450 *Rhododendron* taxa growing in the various areas throughout the Garden. All but two hardy subsections of subgenus *Hymenanthes* (*Venatora* and *Griersoniana*) are represented,

and there is a wide selection of lepidotes (subgenus *Rhododendron*) and azaleas (various subgenera). These collections are less complete, reflecting both the dearth of sunny, well-drained areas available and the somewhat traditional focus on larger rhododendrons for woodland planting. The collection is not particularly well-endowed with conventional hybrids, and most of these are in an area near the Botanical Garden Nursery, which is generally not accessible to garden visitors. There are a few exceptions, but this reflects the prevailing preference in botanical gardens for species and other naturally occurring taxa, and especially to collections of known wild provenance.

Planting areas were prepared by expanding the existing clearings, removing smaller trees and shrubs, then amending the thin, sandy soils with leaf mould to improve fertility and moisture holding capacity. Peter Wharton, a forestry graduate from the University of Wales, joined the garden staff in 1975, and was assigned to the development of the Asian Garden. Wharton slowly expanded the plantings eastward between SW Marine Drive on the north and “Old” Marine Drive to the south. The first collections came mainly from the then sizeable store of RSF rhododendrons at the Botanical Garden Nursery, but it wasn’t long before Wharton added plants from his Far Eastern seed collections and from our ever-expanding network of botanical gardens and collectors. Peter’s influence on the Asian Garden was profound. A thoughtful, talented gardener, he made a study of rhododendrons and was clearly struck by both their biology and beauty. His interest in field studies and seed collections of wild rhododendrons and their associates gave him significant insight into the ecology of plants in gardens and in nature. Peter spent more than 30 years developing the Asian Garden, and he led or participated in nine field expeditions to China, South Korea and northern Vietnam.

The numbers of taxa and overall beauty of the rhododendrons have made the Asian Garden the highlight for visitors. The predominant high, overhead shade ensures that the larger leafed and taller growing rhododendrons flourish. Some areas were initially



Figure 1. *Rhododendron luteiflorum*.

heavily planted with the smaller lepidotes, such as *R. impeditum*, *R. luteiflorum* (Figure 1) and the ground hugging *R. campylogynum* and their relatives, but the more exuberant growth of surrounding plants, not to mention Peter's tree planting proclivities, tended to crowd them out and reduce the number of areas in which these smaller plants could be grown. In the Asian Garden, rhododendrons are placed nearly seamlessly with the existing native flora, as well as many of their natural associates from the wilds of Japan, China, Korea and the Himalayas. The plants are not arranged as floristic assemblages; rather, they are planted where they are best adapted—shade, sun, moist, cool, protected, etc.—and in as pleasing and naturalistic a manner as possible.

The smaller-leaved, sun-loving rhododendrons flourish in the more open E. H. Lohbrunner Alpine Garden where visitors can also find several species from other parts of the world outside Asia. There are particularly fine examples of the purple *R. canadense* (Figure 2) and the perfect, aromatic miniature, *R. lapponicum*, in the North American area, *R. ferrugineum* in Europe, and a small

number of other non-Asian species. However, Asian rhododendrons, primarily species and selections from Japan, the Himalayas and the mountains of western China (Asia is where the genus reaches its greatest diversity), are among the real jewels here.

The range of rhododendron taxa cultivated in the garden includes those derived from the more familiar and stalwart groups, such as subsections *Fortunea*, *Saluenensia*, *Triflora* and *Pontica*, as well as examples of many less well-known groups—e.g., subgenus *Tsutsusi* section *Brachycalyx* (the so-called three-leaf azaleas) and subgenus *Hymenanthes* section *Pontica* subsection *Glischra* (including the unusual *R. glischrum* subsp. *rude* (Figure 3), *R. crinigerum* and the more familiar *R. recurvoides*). The garden has a few plants that are rare in cultivation, such as *R. fulgens*, *R. cyanocarpum*, *R. uvarifolium*, *R. haofui* (Figure 4), *R. ochraceum* and *R. yuefengense*, although thanks to the RSF, quite a number of “rare” species are no longer merely the purview of botanical garden collections.

British Columbia also has its share of *Rhododendron* species, the ranks of which have been increased to six by the taxo-



Figure 2. *Rhododendron canadense*.

nomie addition of three Labrador tea (*Ledum*) species. The BC Native Garden contains several specimens of *R. macrophyllum*, all three former *Ledum* species (*R. palustre*, *R. neoglandulosum* and *R. groenlandicum*), as well as the rotted and nearly forgotten remains of several plants of *R. albiflorum* (known locally as white azalea). This species is maddeningly common in the snow melt areas of the mountains near Vancouver, but it appears to be nearly impossible to grow close to sea-level (though we keep trying). The Carolinian Forest Garden, on the high ground at the west of the Main Garden, is a recently planted, developing arboretum that represents the diverse deciduous hardwood forests of eastern North America. Most of the wild-collected rhododendrons in this garden were collected as seed from the remarkably biodiverse southern Appalachian Mountains. Species include *R. catawbiense*, *R. maximum*, *R. minus*, and the deciduous *R. canescens*, *R. arborescens*, *R. vaseyi*, *R. prinophyllum* and *R. calendulaceum*.

Nitobe Memorial Garden, located a kilometre northwest on the UBC campus, is also home to a number of *Rhododendron* taxa, although these plants have never been part of the garden's collections database. Like the Asian Garden, Nitobe was carved out of a natural second-growth stand, here composed primarily of tightly spaced *Tsuga heterophylla* and *Pseudotsuga menziesii*. This forest of straight stems and dark green foliage is the background to a restful landscape where shrubs, including a number of evergreen azaleas, have been clipped into homogeneous undulating masses, in accordance with a Zen Buddhist garden design philosophy that eschews displays of exuberance by foundation plants, thus creating contemplative surrounding spaces on which to rest the eyes. Extensive expanses of monochromatic water, lawn, moss and softly rounded shrubs create a subtle textural foil for traditional human-built structures, rock arrangements, colourful flowers of cherry trees in spring and the brilliant but earthy tones of autumn maple leaves.

From the horticultural perspective, there are several locally significant plants in the garden (i.e., originating in the Pacific



Figure 3. *Rhododendron glischrum*.



Figure 4. *Rhododendron haofui*.

Northwest), such as the hybrids, *R.* ‘David Lam’<sup>2</sup> and *R.* ‘Olympic Lady’<sup>3</sup>, and *R. praeevernum* “Del James<sup>4</sup> selection.” Selections of species widely recognized as “superior” are also prominently displayed, such as *R. augustinii* ‘Barto Blue’, *R. parmulatum* ‘Ocelot’, *R. argyrophyllum* ‘Chinese Silver’ and a range of Japanese *R. indicum* and *R. keiusianum* cultivars. Debate about the legitimacy and value of horticultural versus botanical entities is common in botanical gardens, and UBC has had its share of discussions around these questions. This issue came to a head some years ago regarding an outstanding collection of deciduous azaleas, a gift from a renowned BC nurseryman. The plants had languished for many years at the Botanical Garden in conditions that were less than ideal. As a number were close to death, and without resources or appropriate space, we considered disposing of them. Fortunately, local rhododendron collector Don Martyn in Yarrow, BC, accepted the Botanical Garden plants to incorporate into a complementary collection where they have flourished under his specialist care. Ultimately, the garden’s rhododendron collection is less about accumulation and more about growing the widest range of plants that both hold some justifiable significance and suit the conditions in the garden. With new rhododendron acquisitions (and all other kinds of plants) the garden is increasingly only interested in wild seed collections of known provenance.

*Rhododendrons* in the Asian Garden are loosely arranged taxonomically according to subsection, with some areas easily identifiable by these groups. For example, the Himalayan *R. arboreum*, its various subspecies, varieties and forms, and its close relatives (e.g., *R. niveum*, *R. lanigerum*) and the western Chinese *R. argyrophyllum* and its relatives (including *R. floribundum*, *R. denudatum*, *R. rirrei* and *R. thayerianum*) are primarily located near the garden entrance. Moving east, the triflorums, such as the richly violet-coloured *R. concinnum*, pink *R. davidsonianum* and the mauve, sapphire and sky-toned seedlings of *R. augustinii* (Figure 5), form elegant thickets,

2. (*R.* ‘Sunup-Sundown’ × *R.* ‘Lem’s Cameo’): Jack Lofthouse (1915-2005), Vancouver, BC.

3. (*R.* ‘Loderi King George’ × *R. williamsianum*): Endre Ostbo (1888-1958), Everett, WA.

4. Delbert W. James (1894-1963), Eugene, Oregon, rhododendron breeder.



Figure 5. *Rhododendron augustinii* on Cox Trail, below *R. augustinii* 'Peter Kerr'.

and are planted near large conifers. This garden is well known for its climbers, and a number, such as clematis, honeysuckles and members of the *Lardizabalaceae* (*Akebia*, *Holboellia*, etc.),



find the twiggy stems of these shrubs ideal for climbing and especially for launching into the branches of the overhanging conifers. The textural effect of rhododendron + conifer + climber is endlessly pleasing, and during flowering in springtime, the view can be spectacular, with successive waves of blossoms upwards as the season progresses.

Specimens in the subsection *Taliensia* are mostly located mid-garden along Upper Asian Way, in an open, mostly un-shaded area. Many people recognize the thickly fuzzy selections of *R. bureavii*, but taliensias are also often less 'teddy-bearish', with a number displaying unusual leaf arrangements and textures, such as the glaucous, convex-leaved *R. clementinae*, the bristly stems and narrow, rusty wool-backed leaves of *R. roxianum*, the weirdly



patchy indumentum of *R. aganniphum* var. *flavorufum*, or *R. wiltonii*, a reptilian delight with its glossy, bullate upper leaf surface. Many species are surprisingly glandular and aromatic, and the faint smells of camphor, licorice, peach and sandalwood mix and linger in the area. Standouts in this respect include *R. wasonii*, *R. trailianum* (Figure 6) and *R. faberi*, although not every visitor senses these subtle aromas. These shrubs are almost all so attractively shaped



Image: Douglas Justice

Figure 6. *Rhododendron trailianum* leaves showing the development of indumentum and flowers below.

and the leaves dressed in such handsome shades and textures of indumentum that one hardly cares if the plants produce a bloom; however, they mostly do, and those flowers are often delightful. One of their clan, *R. lacteum*, has flowers of such



Image: Daniel Mosquin

uncommon beauty that any number of faults in foliage or form could easily be excused. No need; the large rounded trusses of rich yellow flowers sit atop broad, waxy, rounded leaves on sturdy, spreading stems.

Aromatic rhododendrons are of course not limited to the taliensias. A number of lepidotes are notable for their various odorous emissions, including the triflorums and many of the small leaved species, but the cinnabarinums (Figure 7, front cover) take the prize for the most aromatic of the larger lepidotes. The Asian Garden has a small number of both wild collections and cultivated selections, including a spectacular planting of the waxy, grey-green-blue-leaved *R. cinnabarinum* subsp. *xanthocodon* Concatenans Group along Kingdon Ward Way. Given the extraordinary colour and texture of the foliage, one hardly requires flowers, but the lax, Dijon mustard-coloured bells of this rhododendron are improbably attractive. The smell of these plants and the other cinnabarinums nearby is a heady mixture of camphor and clove oil and can occasionally induce a headache in some people if they stay too long in the vicinity.

Large leaved rhododendrons are well represented in the Asian Garden. Some of the more notable with respect to size and number include the summer flowering, honeysuckle-scented *R. auriculatum* (subsection *Auriculata*), *R. kesangiae* (subsection *Grandia*) with its paddle-like, glossy, heavily textured leaves, the flashing, burnt orange undersides of *R. fulvum* (subsection *Fulva*), and the hardier species in subsection *Falconera*—*R. rex*, *R. arizelum*, *R. sinofalconeri*, *R. basilicum*, *R. hodgsonii*, and *R. falconeri* (Figure8)—all of which never fail to impress garden visitors with their out-sized leaves, huge flowers and tree-like stature. That *R. sinogrande*, the largest of the large leaved species, has never survived beyond five or six years in the garden (the species has been tried in many locations and numerous times), is an excellent indicator of our winter conditions.

There are of course many other interesting rhododendrons in the garden and far too many tales to tell. Interpretive signs



Image: Douglas Justice

Figure 8. *Rhododendron falconeri*.

and labels give some of the details, but visitors don't see all of the accumulated stories, personalities and data associated with the accessions. One of our oldest accessions, for example, is a collection of *R. niveum* seedlings, superlative performers since they were planted in the garden in the early 1970s. During the 2008-2009 winter, they all defoliated and nearly died in the bitter cold, but now seem to be recovering well. UBC received the seed of these plants from the Washington Park Arboretum, but it was Keshab C. Pradhan, who collected the seed in 1969 in his native Sikkim and sent it to Brian Mulligan, director of the Arboretum in Seattle. Pradhan is the former Chief Forester, then Chief Secretary and Advisor to the Government of Sikkim, India, now retired. He also holds an ARS Gold Medal and was the first president of the society's J. D. Hooker chapter. Six years after he sent the seeds, the independent Kingdom of Sikkim became India's 22<sup>nd</sup> state. That year Pradhan hosted a delegation of about 25 rhododendron experts and collectors, organized by Britt and Jean



Figure 8. The peeling bark of *Rhododendron thomsonii*.

Smith (ARS, Tacoma Chapter). Among the delegation were two Canadians: botanist Dr. L. Keith Wade, botanist and author of the indispensable *Phenology of Cultivated Rhododendrons*, and landscape architect Clive Justice, who brought back *R. thomsonii* (Figure 9) seed for the Botanical Garden. In Pradhan's memoir, *The Life and Times of a Plantsman in the Sikkim Himalayas* (2008), he relates how a number of young people were influenced by this visit of an unlikely, but eminent group of western North Americans to Sikkim. One student, now a minister in the state government is the "prime advocate of conservation of rhododendrons and other natural resources in Sikkim."

Taxa in the subsection *Fortunea* are among the most numerous in the garden, and are arguably some of the toughest and most rewarding large rhododendrons that can be grown in the Vancouver area. This group includes plants that are often moderately large leaved and large flowered, and that bloom over a long season. Few visitors walk away unimpressed by the arboreal grandeur of *R. diaprepes*, for example. Our specimens of 'Gargantua' are now well over 12 m tall and they tower above other huge rhododendrons. Likewise, the sweetly scented and opulent flowers of *R. griffithianum*, whose superlative genetics are famously displayed in the Loder hybrids, attract considerable attention. At the western end of Lower Asian Way, garden visitors are met with a wall of 6 m high *R. vernicosum* plants. Continuing eastward along this path, Wharton collections of *R. glandulosum* and *R. serotinum* are now clearly showing their tree-like inclinations. Older plants of *R. sutchuenense* and especially the many giant *R. calophytum* specimens in this area help define the southeastern reaches of the Asian Garden. Of the shrubbier species, *R. orbiculare* is a crowd favourite. Its ample rounded leaves and bulging, hot pink bells are extraordinarily handsome, alone, or particularly together. Another standout is *R. oreodoxa* var. *fargesii*, with its abundant lax trusses of softly ruffled, pink flowers.

Scattered about the garden are still more groupings, some related and others juxtaposed or separated for other reasons—shade,

drainage, ultimate size, flower colour or leaf shape. *Rhododendron barbatum* and its kin (including the aptly named *R. exasperatum*, which is maddeningly difficult to cultivate for some) are located in the cooler, more shaded parts of the Asian Garden, where summer temperatures are significantly moderated by marine air that filters up ravines from the ocean below. The beautiful *R. campanulatum* subsp. *aeruginosum* (Figure 10) is strategically located in an area that receives plenty of sunshine to help maintain its extraordinary blue leaf wax, and near to the path so that visitors can see and feel the wonderful indumentum on the undersides of its leaves, which one staff member likens to baby-beaver-pelt. Even more extraordinary, the developing indumentum of this rhododendron starts out pure white and with the texture of the inside of a marshmallow, before it gradually darkens to its final light salmon-brown. A number of accessions of the yellow-flowered, lance-leaved *R. lutescens* are planted throughout the Asian garden, displaying much of the range of flower size and colour, phenology (time of flowering), leaf shape and cold hardiness that



Image: Douglas Justice

Figure 10. *Rhododendron campanulatum* subsp. *aeruginosum*.

is inherent in this species. One of the most interesting plantings is near the garden entrance next to a large specimen of *Quercus* (*Cyclobalanopsis*) *myrsinifolia*, the bamboo-leaf oak, whose leaf shape is mirrored beautifully in those of the rhododendron. Various species of subsection *Thomsonia* are spread around the Asian Garden, among them the rare and beautiful *R. cyanocarpum*, and taking pride of place opposite the Moon Gate are three separate *R. thomsonii* accessions (from Nepal, Sikkim and Bhutan). At 2.5 m tall, these Himalayan beauties show manzanita-like peeling stems and rich scarlet flowers atop waxy rounded leaves.

There are comparatively few herbaceous plants cultivated in this garden, other than in a few high profile areas. Our records reflect many attempted introductions of fascinating and often spectacular herbaceous species, such as species of *Hedychium*, *Podopyllum* and *Meconopsis*. Our inability to maintain a diverse herbaceous element over a wide area of the garden is a function of the quality of shade provided by our native evergreen conifers, excessive winter wet, droughty summer conditions and most critically, the lack of available labour to keep the garden weeded and slug free. Native ferns, primarily *Athyrium felix-femina* (lady fern), *Polystichum munitum* (western sword fern) and *Dryopteris expansa* (spiny wood fern), and shrubby *Sambucus racemosa* subsp. *pubens* var. *arborescens* (Pacific red elder), *Rubus spectabilis* (salmonberry), *R. parviflorus* (thimbleberry), *R. ursinus* (trailing blackberry) and *Vaccinium parvifolium* (red huckleberry) handily fill the gaps and dominate the understorey around plantings. We have found that trees and shrubs, including rhododendrons, are a better long term investment than most exotic herbaceous plants in this garden. To that end, we have accumulated a number of noteworthy, complementary collections of plants, including species of Magnoliaceae, Styracaceae, Actinidiaceae, Lardizabalaceae, *Sorbus*, *Acer*, *Rosa* and *Cornus*.

Plantings in the Asian Garden are being expanded eastward as irrigation is installed, although the practice of amending the soil for planting has mostly stopped. Over the last few years, we

have come to the conclusion that the forest is infinitely better able to support both native and exotic trees and shrubs when the soil's micro-flora and fauna are left intact. Peter Wharton contended that even minor herbicide use and the application of organic matter or fertilizers was creating the wrong conditions for both the establishment and long term health of plants in the garden. Indeed, we think we have seen a higher rate of success when plantings are carried out with minimal soil disturbance and little disruption to the existing community of native plants, and better disease resistance and drought tolerance, compared with plants that had been established using traditional techniques. For example, near the recently installed Greenheart Canopy Walkway are rhododendron plantings that for a decade have only been watered on rare occasions by hand (our irrigation does not stretch this far), and despite the privation, these plants appear to be thriving.

It's not enough for any garden to stand still, but for a university botanical garden, the active acquisition of plants, their study and interpretation in both the garden and the field is fundamental. Over the years, the garden's mission has deviated little. The words may have changed (the 1980s seems to have encouraged particularly long-winded mission statements), but the paramount objectives remain: community engagement, education and research. We are more than ever committed to effective collections management in support of those goals, including the employment of exemplary horticultural practices, labeling, record keeping, interpretive signage and other forms of interpretation and extension. Today, the value of every plant in the garden must be rationalized in terms of our mission. Whether an accession is derived from a wild or cultivated source, its provenance and pedigree have become measures of its importance, along with beauty, conservation value and botanical interest. Conservation concerns are obvious when considering extinction and loss of wild habitat—and critically important when considering the fates of wild rhododendrons locally and in Asia—but the conservation



challenges regarding the loss of cultivars are less obvious. The garden is committed to integrating conservation and biodiversity education, as well as recognizing “significance to horticulture” into its curatorial philosophy and programming. None of this matters, of course, if the plants can’t be grown, and the garden is committed to maintaining its reputation and stature as a place that people want to visit. Our audience includes researchers, educators and students, as well as a diverse, non-academic community whose constituents appreciate gardens for a multitude of other reasons, including the appreciation of great rhododendrons.

## Bibliography and Links

- The Encyclopedia of Rhododendron Species. Peter A. Cox & Kenneth N.E. Cox. Glendoick Publishing. Perth, Scotland. 1997.
- The Life and Times of a Plantsman in the Sikkim Himalayas: A Memoir. Keshab C. Pradhan. K.C. Pradhan, Tadong, Sikkim, India. 2008.
- The Rhododendron Handbook; Rhododendron Species in Cultivation. Royal Horticultural Society. London.1997.
- Rhododendron Hybrids; A Guide to Their Origins. Homer E. Salley & Harold E. Greer. Timber Press, Portland Oregon. 1986.
- Rhododendron in Flora of China: [http://www.efloras.org/florataxon.aspx?flora\\_id=2&taxon\\_id=128386](http://www.efloras.org/florataxon.aspx?flora_id=2&taxon_id=128386)
- Rhododendron Species Foundation History: <http://www.rhodygarden.org/history.html/>
- UBC Botanical Garden and Centre for Plant Research Living Collections: <http://www.ubcbotanicalgarden.org/collections/>
- Cox, Peter A. & Cox, Kenneth N. E. 1997. The Encyclopedia of Rhododendron Species. Perth/Scotland: Glendoick Publishing.
- Pradhan, Keshab C. 2008. The Life and Times of a Plantsman in the Sikkim Himalayas: A Memoir. Tadong, Sikkim, India: K.C. Pradhan.
- Royal Horticultural Society. 1997. The Rhododendron Handbook; Rhododendron Species in Cultivation. London: Royal Horticultural Society.
- Salley, Homer E. and Greer, Harold E. 1986. Rhododendron Hybrids; A Guide to Their Origins. Portland, Oregon: Timber Press.
- Rhododendron in Flora of China: [http://www.efloras.org/florataxon.aspx?flora\\_id=2&taxon\\_id=128386](http://www.efloras.org/florataxon.aspx?flora_id=2&taxon_id=128386)
- Rhododendron Species Foundation History: <http://www.rhodygarden.org/history.html>
- UBC Botanical Garden and Centre for Plant Research Living Collections: <http://www.ubcbotanicalgarden.org/collections/>

# Botanical history through the names of paths, trails and beds in the University of British Columbia Botanical Garden: a case study

## Introduction

Some years ago the BC Native Garden had a huge network of trails, as it was one of the main centres of activity in the Botanical Garden. Those trail names reflected the history of plant exploration on North America's Pacific coast, but the passage of time, neglect and unimpeded tree growth in that part of the garden has obliterated the majority of the original trails. The Carolinian Forest Garden, on the other hand, is one of the Botanical Garden's more recent developments and has named beds, not labeled trails. The Carolinian planting beds or "groves" are named for early eastern North American plant explorers. In the David C. Lam Asian Garden, the network of trails is extensive and growing. The names here reflect significant contributors to the collection and introduction of Asian plants into western gardens (Figure 1).

## Sargent

Charles Sprague Sargent (1841-1927) graduated from Harvard in 1862 and was commissioned in the US army during the Civil War. He returned to Harvard where he directed the first forest census of the USA. By 1873, he had become a Professor of Horticulture, Director of the Harvard Botanical Garden in Cambridge, and had created and become Director of the Arnold

Iain E.P. Taylor, Professor of Botany and Project Director,  
Douglas Justice, Curator of Collections  
UBC Botanical Garden and Centre for Plant Research,  
6804 SW Marine Drive, Vancouver, BC, Canada, V6T 1Z4.



Figure 1. Trail in the David C. Lam Asian Garden are named for botanical explorers, noted for their Asian plant introductions..

Arboretum-to-be. He later became the first Arnold Professor of Arboriculture. Sargent directed the Arnold for 54 years and used the influence of his position and his enormous energy to support botanical exploration, particularly to make a 'horticultural hero' of Ernest (Chinese) Wilson. Sargent organized Wilson's 1907 trip to China, several later trips to China and Asia, and his eventual employment at the Arboretum.

He wrote a *Forest Flora of Japan* (1894) and a *Silva of North America*, which was followed by *Manual of the Trees of North America, exclusive of Mexico*, in 1905. At the time of his death he was working on a catalogue of the plants growing in the Arboretum.

**Plants named for Sargent include:**

*Sargentia* = *Casimiroa* (Rutaceae), *Sargentodoxa* (Lardizabalaceae), and *Sargentiella*, a sub-group of *Prunus*.

**Plants of note on the Sargent Trail:**

*Rhododendron* (natural hybrid *calophytum* × *coeloneurum*), *Castanopsis orthacantha*, *Quercus oxyodon*.

## Cox

Euan Hillhouse Methven Cox, (1893-1977), Scottish plant collector and horticulturist, collected in Burma and its border with China from 1919-1920; published his book: *Plant Hunting in China: A History of Botanical Exploration in China and the Tibetan Marches*. (1945); and a paper, *The Honourable East India Company and China*, in the Proceedings of the Linnean Society 156: 5-8 (1944).

**Plants named for Cox include:**

*Berberis coxii*, *Sorbus coxii*.

**Plants of note on the Cox Trail:**

*Rhododendron yunnanese*, *Rhododendron thayerianum*, *Akebia trifoliata*, *Corylopsis spicata*, *Acer miyabei*.

## Rehder

Alfred Rehder (1863-1949) grew up in Germany and began as a newspaper writer before working as a laborer at the Arnold Arboretum. His expertise in horticulture and taxonomy led to his 1919 appointment with Charles Sprague Sargent as co-editor of the *Journal of the Arnold Arboretum*. Rehder produced a new edition of Sargent's *Manual of Cultivated Trees and Shrubs*, wrote the *Bibliography of Cultivated Trees and Shrubs* and *The Bradley bibliography*, and co-authored *Plantae Wilsonianae* and *A Monograph of Azaleas*. Rehder created the first U.S. system that related average winter minimum temperatures to plant hardiness that is part of all the climate zone maps in use today.

### **Plants named for Rehder include:**

*Rehderodendron* (Styracaceae), *Berberis rehderiana*, *Quercus rehderiana*, *Ostrya rehderiana*, *Pterocarya* × *rehderiana*, *Clematis rehderiana* and many more.

### **Plants of note on the Rehder Trail:**

*Magnolia zenii*, *Carpinus fangiana*, *Lilium sargentii*, *Cercidiphyllum japonicum* 'Morioka Weeping'.

## Straley

Gerald Bane Straley (1945-1997) was born in Virginia, USA and graduated in Ornamental Horticulture (Virginia Polytechnic Institute and State University, Blacksburg, 1968), M.Sc. in Botany (Ohio University, Athens, 1974), and Ph.D. in Botany (UBC, 1980). After 2 years as Education Coordinator at the VanDusen Botanical Garden, he became Curator of Collections at UBC Botanical Garden, Director of the UBC Herbarium and was an Adjunct Professor in the Plant Science Department. He published extensively and was the author of several books, including *An Illustrated Flora of the University Endowment Lands*, *The Rare Vascular Plants of British Columbia*, and *The Vascular Plants of British Colum-*

bia. *His Trees of Vancouver* was awarded the 1992 Vancouver Book Award for the book best promoting Vancouver.

### Plants of note on the Straley Trail:

*Rehderodendron macrocarpum*,  
*Rodgersia sambucifolia*,  
*Pterostyrax corymbosa*, *Acer*  
*laxiflorum*, *Ruscus hypoglossum*,  
*Impatiens omiense*.

### Stearn

William Stearn, (1911-2001) (Figure 2) was largely self taught and began work

as Librarian for the Royal Horticultural Society and the Natural History Museum. His influences on systematic botany have been compared to those of Robert Brown, Darwin and the Hookers. He wrote almost 500 books, articles and monographs on all aspects of taxonomic botany. His most important works probably were *Botanical Latin* (1966), an essential guide to the subject and an inexhaustible reference source for botanists and bibliographers, and *Dictionary of Plant Names for Gardeners* (first published in 1972). He prepared the *Code of Nomenclature for Cultivated Plants*, and first used the terms "cultivar" (for a variety either raised or maintained in cultivation) and "grex" (for a group of hybrids of common parentage).

He wrote monographs on *Epimedium* and *Vancouveria* (1938), as well as works for which he was not given proper attribution including *Lilies of the World* (1935), a monograph ostensibly by Drysdale Woodcock and John Coutts, but which was largely written by Stearn, and in 1950, *The Art of Botanical Illustration* was published in the Collins New Naturalist series, with Wilfrid Blunt's name on the title page with Stearn's contribution acknowledged in the



Figure 2. William Stearn.

preface. Stearn's role was belatedly recognized in 1994 when he revised it for a new edition. He took over preparation of a new *RHS Dictionary of Gardening* after the original author Frederick Chittenden died in 1950.

In 1953, he left the RHS for the Botany Department of the Natural History Museum, where he worked for the next 14 years. After his retirement, he wrote *The National History Museum at South Kensington* (1981), a comprehensive history of the Museum from the 1750s to 1980. In 1976, Stearn took up the post of editor for the Greek botanical journal *Annales Musei Goulandris*, a job he continued to perform until the age of 88. In the same year, he was awarded the Linnean Society's Gold Medal for services to taxonomic botany and for his 170-page introduction to the facsimile of Linnaeus's *Species Plantarum* (1957-9). No other botanist, it was said, had the knowledge of botanical history and the linguistic ability in Latin, German, Dutch and Swedish needed to write it, and the preface has become a classic study of the great naturalist.

In recognition of his work on Linnaeus, he was appointed Commander of the Swedish Order of the Star of the North in 1980. He was appointed CBE in 1997.

### **Plants named for Stearn include:**

*Berberis stearnii*, *Allium stearnii*.

### **Plants of note on the Stearn Trail:**

*Epimedium pinnatum* subsp. *colchicum*, *Bergenia omeiensis*, *Rhododendron pseudochrysanthum*, *Astilboides tabularis*, *Adiantum venustum*.

## **Farges**

Père Paul Guillaume Farges (1844-1912), a French missionary and naturalist, was born at Monclar-de-Quercy, Tarn-et-Garonne. He started work in north-east Sichuan, China, in 1867 but only began serious collection of herbarium specimens in 1892. He



collected and preserved over 4,000 specimens in the eleven years before he moved to Chongqing in 1903, where he worked until his death. In 1897, he sent a shipment of seed to M Maurice L. de Vilmorin who had been collecting seed and raising trees from China for years on his large estate. Farges' parcel contained 37 seeds from an unusual tree. M. de Vilmorin thought that the seed was dead, as nothing grew for more than a year, but finally a small sprout appeared in 1899, just as E.H. Wilson landed in Hong Kong on his mission to rediscover that very same tree—*Davidia involucrata*. Wilson would go on to collect and introduce many of the species Père Farges had originally collected and recorded, many of which were ornamental and would prove popular in western gardens.

**Plants named for Farges include:**

*Fargesia* (Poaceae, Bambuseae), *Abies fargesii*, *Catalpa fargesii*, *Clematis fargesii*, *Cypripedium fargesii*, *Decaisnea fargesii*, *Paris fargesii* and many more.

**Plants of note on the Farges Trail:**

*Stachyurus salicifolius*, *Rhododendron rirei*, *Carpinus turczaninowii*, *Metapanax davidii*, *Ribes sanguineum* 'White Icicles'.

## Siebold

Philipp Franz von Siebold was active as a physician on the island Deshima in the harbor of Nagasaki between 1823 and 1829. His role in introducing western medical knowledge in Japan brought him great fame. During his stay, he collected extensively and especially during the traditional court journey to the Shogun in Edo (the present Tokyo). He made one of the earliest herbarium collections from Japan, which was an important source for newly described Japanese species (Figure 3, back cover), and is now housed at the National Herbarium of the Netherlands (Leiden). Von Siebold and his pupils also sent living plant specimens to the Netherlands. Many of those are well known garden

species now. Fifteen of the original specimens are still flowering in the Hortus Botanicus (Leiden).

**Plants named for Siebold include:**

*Hosta sieboldiana*, *Primula sieboldii*, *Magnolia sieboldii*, *Tsuga sieboldii* and many more.

**Plants of note on the Siebold Trail:**

*Acer tegmentosum*, *Rhododendron* ‘Rosevallon’, *Magnolia sprengeri* ‘Diva’, *Osmanthus* × *fortunei*, *Daphniphyllum macropodum*.

## Staunton

Sir George Leonard Staunton, 1<sup>st</sup> Baronet (1737-1801) was a botanist who worked for the East India Company in the late eighteenth century. In 1793, he became Secretary of the British mission to the Chinese Imperial Court, led by Lord George Macartney. Staunton was charged with producing the official account of the expedition after their return. His botanical collections were deposited in several herbaria, including the British Museum, Kew, Oxford and Florence.

**Plants named for Staunton include:**

*Stauntonia* (Lardizabalaceae), *Elsholtzia stauntonii*, *Vincetoxicum stauntonii*.

**Plants of note on the Staunton Trail:**

*Stauntonia hexaphylla*, *Magnolia globosa*, *Lindera praecox*, *Lysichiton camtschatcensis*, *Acer mandschuricum*, *Cyrtomium fortunei*.

## Forrest

George Forrest, (1873-1932) was a Scottish plant collector who made seven trips to west Yunnan, China between 1904 and 1932, and trained local people to collect specimens, seeds and seedlings for Europe as well as the United States. His specimens

are mainly in Edinburgh. His work is recorded in *George Forrest*, published by the Scottish Rock Garden Club in 1935, and in *The Journeys and Plant Introduction of George Forrest* edited by J. M. Cown in 1952.

**Plants named for Forrest include:**

*Rhododendron forrestii*, *Tsuga forrestii*, *Gaultheria forrestii*, *Acer forrestii*, *Pieris formosa* var. *forrestii* and many more.

**Plants of note on the Forrest Trail:**

*Petasites japonicus*, *Tilia intonsa*, *Photinia serratifolia*, *Maackia amurensis*, *Rosa roxburgii*.

## Decaisne

Joseph Decaisne (1807-1882) was born in Brussels. He moved to the Jardin des Plantes in Paris in 1824 and in 1832 became the assistant naturalist for rural botany under A. de Jussieu. By 1847 we was a member of the Academy of Sciences, held the chair of Statistical Agriculture in the College de France, and in 1850 was professor of "Culture" in the Museum. He was afterwards President of the Academy of Sciences and Director of the Jardin des Plantes. He was a founding member of the Botanical Society of France.

**Plants named for Decaisne include:**

The genera *Decaisnea* Hook.f. & Thomson (Lardizabalaceae), *Plantago decaisnei*.

**Plants of note on the Decaisne Trail:**

*Decaisnea insignis*, *Camellia euryoides* var. *nokoensis*, *Halesia macgregori*, *Sorbus glabriuscula*.

## Rock

Joseph Francis Charles Rock (1884-1962) was born in Vienna and moved to Hawaii in 1907. He was a self-taught botanist, but

he became the Territory's first official botanist and also began work for the US Department of Agriculture. His Asian work began with a search for the Chaulmoogra tree (*Hydnocarpus kurzii*) in Burma, Thailand and Assam. Between 1922 and 1949 he studied the flora, peoples and languages of southwest China, mainly in Yunnan, Sichuan, southwest Gansu and eastern Tibet. Many of his collections from these areas are at the Arnold Arboretum. Some of his many articles for the National Geographic are said to have inspired the novel *Lost Horizon* by James Hilton

**Plants named for Rock include:**

*Sorbus* 'Joseph Rock', *Rhododendron rockii*, *Paeonia rockii*, *Primula rockii*, *Malus rockii* and many more.

**Plants of note on the Rock Trail:**

*Acer davidii*, *Osmanthus serrata*, *Magnolia campbellii* 'Ethel Hillier', *Rhododendron denudatum*, *Rosa filipes* 'Kiftsgate'.

## Wilson

Ernest Henry Wilson, (1876-1930) (Figure 3), was a famous English plant collector for Veitch Nursery in England and later for Arnold Arboretum. He made five trips to China between 1899 and 1918, and wrote several books on his botanical travels. Alfred Rehder produced the authoritative biography *Ernest H. Wilson, Plant Hunter*, shortly after his death

**Plants named for Wilson include:**

*Sinowilsonia* (Hamamelidaceae), *Magnolia wilsonii*, *Berberis wilsonii*, *Syringa wilsonii*, *Meconopsis wilsonii*, *Picea wilsonii*, *Populus wilsonii* and many more.

**Plants of note on the Wilson Trail/Wilson Glade:**

*Stewartia sinensis*, *Phyllostachys nigra* var. *henonensis*, *Rhododendron lacteum*, *Rhododendron aberconwayi* 'His Lordship', *Acer shirasawanum* 'Palmatifolium', *Magnolia sargentiana* 'Alba'.



Image: Public Domain, Courtesy of PlantExporets.com

Figure 4. Ernest Henry Wilson.

## Perny

Paul-Hubert Perny (1818-1907) was a missionary and naturalist and the first western botanical and zoological collector in Kuei-chou (Guizhou). In 1850, Perny sent 500 living cocoons of the Chinese tussah silk moth to the entomologist Félix Édouard Guérin-Mèneville at the Muséum d'histoire naturelle de Lyon where they hatched out the following winter. Guérin-Mèneville later described it as *Bombyx* (now *Antheraea*) *pernyi*. Although Perny sent thousands of botanical specimens from Guizhou and Sichuan to the Museum National d'Histoire Naturelle in Paris, many of his specimens and much of the accompanying material, including herbarium labels with Chinese names and other information, were evidently thrown away or lost.

### Plants named for Perny include:

*Teucrium pernyi*, *Ilex pernyi*.

### Plants of note on the Perny Trail:

*Lonicera henryi*, *Osmanthus delavayi*, *Pseudotsuga sinensis* var. *wilsoniana*.

### Kingdon-Ward

Frank Kingdon Ward (1885-1958) (Figure 5) was an English plant explorer who collected seeds and specimens in southwest of China, Burma, India, and the Eastern Himalayas between 1909 and 1956. He also wrote extensively about his travels and collections - *The Land of the Blue Poppy* (1913), *The Mystery Rivers of Tibet* (1923), *Plant Hunting on the Edge of the World* (1930).

### Plants named for Kingdon-Ward include:

*Rhododendron wardii*, *Sorbus wardii*, *Cotoneaster wardii*, *Hedychium wardii*.

### Plants of note on the Kingdon-Ward Way:

*Rhododendron cinnabarinum*, *Lithocarpus cleistocarpus*,  
*Actinidia eriantha*,  
*Viburnum chingii*,  
*Magnolia sieboldii*.

### Henry

Augustine Henry (1857-1930) was an Irish physician and plant collector who worked for the Maritime Customs Service in China from 1880 to 1900. He collected many plant specimens and seeds in Yichang



Image: Public Domain, Courtesy of PlantExpo.net.com

Figure 5. Frank Kingdon-Ward.

(Hubei) and Szemao (Yunnan) as well as Taiwan and sent them to Kew. Many of these were introduced into cultivation by E. H. Wilson and others.

### **Plants named for Henry include:**

*Rubus henryi*, *Viburnum henryi*, *Parthenocissus henryi*, *Acer henryi*, *Lonicera henryi*, *Rhododendron henryi*, *Lilium henryi*, *Rhododendron augustinii* and many more.

### **Plants of note on the Henry Trail:**

*Trochodendron aralioides*, *Schizophragma hydrangeoides*, *Pileostegia viburnoides*, *Zanthoxylum oxyphyllum*, *Acer morifolium*, *Rhododendron schlippenbachii*, *Glyptostrobus pensilis*, *Davidia involucrata*, *Magnolia insignis*.

## **Delavay**

Père Jean Marie Delavay (1834-1895) was a missionary for Missions Etrangères de Paris (Foreign Missions of Paris). In 1867 he began work in Hui-chou, east of Canton (Guangzhou), where he explored the surrounding regions and traveled as far afield as north-west Yunnan. He returned to France in 1881 where he met with Père Armand David and was persuaded to collect for Adrien Franchet at the Museum National d'Histoire Naturelle.

Franchet had no way of knowing what an incredible plant explorer Delavay would prove to be. When Delavay returned to China in 1882 he based his explorations around Tapintze in the mountains of north-west Yunnan—one of the most botanically rich areas in the world. Alone on foot he traversed the mountain ranges seeking alpine species he hoped would be adaptable to western gardens. His dedication resulted in one of the largest collections ever made, constituting a staggering 200,000 specimens representing over 4000 species of mainly alpine flora, of which 1500 were new discoveries.

Adrien Franchet praised Delavay's collections, and his meticulous notes on every aspect of the materials collected, as among the finest he had ever seen. He published *Plantae Delavayanae*

(1889-90) forever securing Père Jean Marie Delavay's position in botanical history. In spite of contracting bubonic plague in 1888, he continued his collecting and added another 1550 plants to his already impressive total before his death in Yunnan.

**Plants named for Delavay include:**

*Aster delavayi*, *Osmanthus delavayi* and *Incarvillea delavayi*.

**Plants of note on the Delavay Trail:**

*Clethra barbinervis*, *Actinidia deliciosa*, *Enkianthus campanulatus*, *Lonicera tragophylla*, *Ostrya japonica*, *Paeonia rockii*.

## Farrer

Reginald John Farrer (1880–1920) was a well-qualified field botanist at the age of 10 and built his own rock garden at age 14. After graduating from Oxford in 1902, where he helped to build the St. John's College rock garden, he traveled to China, Korea and Japan and collected a variety of plants, many of which he planted near his home in North Yorkshire. Farrer was attracted by the horticultural possibilities of the introduction of new hardy rock plants to the British gardening public. With this in mind, he founded the Craven Nursery in Clapham, which specialized in Asian alpiners, an enterprise which unfortunately foundered in the economic decline of the 1920's. In 1914, he traveled with William Purdom to Tibet and Kansu and found numerous hardy specimens which today enrich British gardens. Farrer drew many illustrations often painted in the most uncomfortable of circumstances, often tormented by flies. His illustrations, together with the field notes, botanical specimens and seeds which he collected, provided valuable information to the Royal Botanic Garden Edinburgh where Sir Isaac Bayley Balfour took a special interest in Sino-Himalayan plants. Farrer's interest in sending back attractive new plants with horticultural potential, however, was sometimes at odds with Balfour's desire for a comprehensive



inventory of all the plants of the region. Farrer died alone in 1920, probably of diphtheria, in the remote Minshan mountains of Upper Burma at the early age of 40. Rhododendrons planted by Reginald Farrer are still growing in woods above Clapham. He tried to find plants that could be grown in a naturalistic style—not just by the rich who could afford expensive hothouses and personal gardeners. "He brought rock-gardening into the hearts of the British people."

Farrer himself wrote, "You're on an uncharted mountainside and you have to first of all find the plant in the summer on the way up the mountain...Then in the autumn, you have to find the same plant—if it hasn't been eaten or trodden on—hope it's set seed and that the seeds haven't fallen yet—and this is just the start."

His lasting legacy is a spectacular display of plants from the Himalayas, which are today growing in a wild display around Ingleborough. Himalayan rhododendron, bamboo and other unusual plants such as *Lonicera syringantha* and *Rodgersia aesculifolia* can be seen amongst Farrer's Ingleborough display whilst in Clapham village itself, *Viburnum farreri* and *Potentilla fruticosa* flourish.

#### **Plants named for Farrer include:**

*Allium farreri*, *Amitostigma farreri*, *Bulbophyllum farreri*, *Codonopsis farreri*, *Cypripedium farreri*, *Gentiana farreri*, *Geranium farreri*, *Picea farreri*, *Viburnum farreri*.

#### **Plants of note on the Farrer Trail:**

*Cotoneaster perpusillus*, *Styrax hemsleyi*, *Illicium anisatum*, *Syringa sweginzowii* 'Superba', *Viburnum cinnamomifolium*, *Callicarpa dichotoma*.

### **Purdom**

William Purdom (1880–1921) was a British plant explorer sent by Veitch Nursery and the Arnold Arboretum to the northern provinces of China in 1909. He collected and photographed

plants for the Arboretum along China's Yellow River for three years, 1909–1911. He was appointed Inspector of Forests to the Chinese Government. He and Belgian horticulturist, J. Hers, planned to edit *Flora of China*, but the plan was halted by the dismissal of the department. Later, Hers wrote *Directory of Longhai Area Plants*.

In 1914 he traveled with Reginald Farrer to Tibet and Kansu in north-west China. Together they found several plants that were to become established favorites in British gardens.

**Plants named for Purdom include:**

*Rhododendron purdomii*, *Populus purdomii*, *Aster purdomii*.

**Plants of note on the Purdom Trail:**

*Rhododendron auriculatum*, *Schefflera delavayi*, *Gaultheria forrestii*, *Sorbus aronioides*.

## Ludlow

Frank Ludlow (1885-1972) studied at Cambridge under Marshal Ward, the father of Frank Kingdon Ward. He worked as a schoolteacher in northern India and Tibet, and in 1929 began a 20 year botanical collaboration with George Sherriff. Together they collected over much of Tibet, Bhutan and southwest China. They undertook 7 major journeys over 30 years starting from the Trashiyangse valley in eastern Bhutan, where they rediscovered *Meconopsis superba*, and progressing to the Tsangpo Gorge. Ludlow left Asia in 1950 and continued to work on his collections at the British Museum until his death.

**Plants named for Ludlow include:**

*Rhododendron ludlowii*, *Cypripedium ludlowii*, *Primula ludlowii*, *Paeonia ludlowii*.

**Plants of note on the Ludlow Trail:**

*Hydrangea anomala* var. *petiolaris*, *Cornus chinensis*, *Catalpa fargesii* var. *duclouxii*, *Styrax tonkinensis*, *Rhododendron decorum*.

**Fortune**

Robert Fortune (1812-1880) was a Scottish plant collector who made four trips to China from 1843 to 1861 to collect seeds and seedlings for the Royal Horticultural Society and East India Company. He may have been the first person to be sent to China specifically to introduce useful and ornamental plants. His major task was to investigate tea cultivation and processing; and he is reputed to be largely responsible for the tea industry as it is in India today.

**Plants named for Fortune include:**

*Rhododendron fortunei*, *Trachycarpus fortunei*, *Cyrtomium fortunei*, *Saxifraga fortunei*, and many more.

**Plants of note on the Fortune Trail:**

*Sciadopitys verticillata*, *Cornus controversa*, *Meliiodendron xylocarpum*, *Wisteria brachybotrys* 'Shiro-Kapitan', *Cunninghamia lanceolata* f. *glauca*.

**Fang**

Fang Wen-Pei (1899-1983), was an expert on rhododendrons and on the maple family. He worked at the Institute of Botany of the Chinese Academy of Sciences, the University of Edinburgh (Ph.D. 1937) and was a biology professor at Sichuan University until his death. He named more than 40 of the more than 100 species that he discovered and identified. He published 8 monographs and was honoured as "one of the most distinguished Chinese botanists".

**Plants named for Fang include:**

*Carpinus fangiana*, *Asplenium fangii*, *Athyrium fangii*, *Eurya fangii*.

### Plants of note on the Fang Trail:

*Rhododendron rex* subsp. *fictolacteum*, *Sorbus caloneura*, *Acer shirasamanum* 'Aureum', *Sorbus thibetica* 'John Mitchell', *Rhododendron augustinii*.

### Hooker

Joseph Dalton Hooker (1817-1911) the eldest son of William Jackson Hooker, Professor of Botany at Glasgow University, was a naval officer who sailed with Captain Ross's Antarctic expedition (1839-1843). He worked at Kew for the next five years after which, through the patronage of the First Lord of the Admiralty, Lord Auckland, he left for India travelling in the same ship his Kew friend, Hugh Falconer, who was to be the director of the Saharanpur Botanic Garden. He named three rhododendron species, which he collected, after Falconer and Lord and Lady Dalhousie: *Rhododendron aucklandii* (now known as *R. griffithianum*), *R. dalhousiae* (after Lady Dalhousie) and *R. falconeri*. Hooker travelled north to Sikkim and spent two years there exploring in the hills, based in Darjeeling. Again he named species after people who helped him in his work: *Rhododendron hodgsonii*, *Magnolia campbellii* and *Rhododendron campbelliae*. Joseph Hooker's expedition is immortalized in his *Rhododendrons of the Sikkim Himalaya* published in three parts between 1849 and 1851, with thirty coloured plates, edited by Hooker's father. Before 1848, only thirty-three species of rhododendron were in cultivation; Hooker collected, sketched and described 43 species of which 36 are still recognised as distinct. Seed from his collections was grown on at Kew and seedlings were sent to friends in the west of Scotland, Wales and southwest England. These formed the basis for the good quality hybrids that were made in Cornwall in the latter part of the 19<sup>th</sup> century, such as 'Shilsonii', 'Beauty of Tremough', 'Penjerrick', 'Barciayi', 'Cornish Cross' and 'Sir Charles Lemon' (usually regarded as a natural hybrid of *R. arboreum* and *R. campanulatum*.)

**Plants named for Hooker include:**

*Acer hookeri*, *Rhododendron hookeri*, *Inula hookeri*, *Berberis hookeri*, *Gaultheria hookeri*, *Gentiana hookeri*, *Primula hookeri*, *Symplocos hookeri*, *Arisaema hookerianum*, *Sarcococca hookeriana*.

**Plants of note on the J.D. Hooker Trail:**

*Rhododendron calophytum*, *Paris polyphylla*, *Elaeagnus glabra*, *Acer pectinatum*, *Magnolia campbellii* subsp. *mollicomata* 'Lanarth', *Lindera obtusiloba*.

**Hemsley**

William Botting Hemsley (1843–1924) was a British botanist and taxonomist who worked as an assistant in the Kew Herbarium, but his work ranged from Sweden to China. He wrote the Botanical Report of the 1872 Challenger Expedition. His *Handbook of Hardy Trees, Shrubs, and Herbaceous Plants* provided important details for the cultivation of ornamentals. He was a major contributor to the *Enumeration of all the plants from China proper*, published in the Journal of the Linnaean Society between 1886 and 1888. He was awarded the 1909 Victoria Medal of Honour, recognizing his major contributions to horticulture.

**Plants named for Hemsley include:**

*Styrax hemsleyi*, *Clematoclethra hemsleyi*, *Cornus hemsleyi*, *Aconitum hemsleyanum*, *Rhododendron hemsleyanum*.

**Plants of note on the Hemsley Trail:**

*Carrierea calycina*, *Rebderodendron indochinense*, *Acer campbellii*.

**David**

Père David - Jean Pierre Armand David (1826-1900) was a Vincentian priest who was sent to China to convert the populace to Roman Catholicism, but soon found a greater calling in

the nature of this vast country. Born in Espelette near Bayonne in the French Pyrenees, Jean Pierre was one of three boys in a successful local family. His father, Fructueux, was a magistrate and doctor who had a strong love of nature and an inquisitive mind, traits that Jean Pierre inherited and embraced—which was a good thing, since his older brother inherited everything else. Père David taught science at Savona College on the Italian Riviera for ten years, and enthusiastically involved his students, by imbuing them with his own enthusiasm and love of nature. He was deeply missed when he was finally given the assignment he had wanted for so many years—China. News of his departure reached the scientific community back home in France, and he was allowed to collect specimens for the Musée d’Histoire Naturelle in Paris, he received amended orders when he left in 1862. His early collections were so much more than expected - the quality and number of specimens was overwhelming, and his careful documentation made his contributions to the Museum so valuable. He was allowed to pursue his collections full time and led his first expedition into Mongolia.

#### **Plants named for David include:**

*Davidia involucrata* (Nyssaceae), *Acer davidii*, *Metapanax davidii*, *Photinia davidiana*, *Populus davidiana*, *Pinus armandii*, *Clematis armandii* and many more.

#### **Plants of note on the David Trail:**

*Acer elegantulum*, *Hydrangea integrifolia*, *Rubus henryi* var. *bambusarum*, *Emmenopterys henryi*.

### **Handel-Mazzetti**

Heinrich Handel-Mazzetti (1882-1940) was a notable Austrian collector during the First World War. In 1914 he went to China under the auspices of the Vienna Academy of Sciences, and due to the outbreak of hostilities was not able to return to Europe until 1919. He was active in Yunnan, especially the area where the

Salween, the Yangtze and the Mekong rivers carve deep gorges out of the mountains. His botanical specimens are in Vienna Natural History Museum.

**Plants named for Handel-Mazzetti include:**

*Corydalis handel-mazzettii*, *Cotoneaster handel-mazzettii*, *Arisaema handelii*.

**Plants of note on the Handel-Mazzetti Trail:**

*Rhododendron coriaceum*, *Sorbus zahlbruckneri*, *Pterostyrax psilophyllus*.

## Soulie

Jean Andre Soulie (1858-1905) was a botanist colleague and compatriot of Delavay, and a medical missionary in China. While there, he collected in the botanically very rich area on the Chinese - Tibetan border. He was captured, tortured and shot by fanatical Tibetan lamas.

**Plants named for Soulie include:**

*Rhododendron souliei*, *Gentiana souliei*, *Nomocharis souliei*, *Daphne souliei*, *Pedicularis souliei*.

**Plants of note on the Soulie Trail:**

*Rhododendron arizelum*, *Pseudotsuga menziesii*, *Neolitsia sericea*, *Liriodendron chinensis*, *Parrotia persica*, *Rhododendron sinofalconeri*.

## Wharton

A. Peter Wharton (1950–2008) graduated in Forestry from Bangor University, North Wales. He developed the David C. Lam Asian Garden at UBC and was curator for 30 years. He led or participated in nine field expeditions to China, South Korea and northern Vietnam and was active in efforts to conserve the uniquely bio-diverse forests of southern Yunnan and border areas of Vietnam and Burma. His particular interests were in

field studies and wild seed collections of *Magnolia*, *Styracaceae*, *Acer*, *Sorbus*, *Hydrangeaceae*, *Araliaceae*, *Lauraceae* and of course, *Rhododendron*. Over the years, he collected much seed, which was distributed to many gardens. Much of his expertise is documented in his contributions to *The Jade Garden: new and notable plants from Asia*, published for the UBC Botanical Garden by Timber Press in 2005.

**Plants of note on the Wharton Trail:**

*Tetracentron sinense*, *Fagus longipetiolata*, *Rhododendron sutchuenense*, *Phyllostachys vivax*, *Malus sieboldii*, *Magnolia aromatica*, *Picrasma quassioides*, *Aristolochia mandschurica*.

## Tschonoski

Tschonoski Sugawa (Chonosuke Sugawa) (1841-1925) worked extensively in his native Japan and was a major collaborator with the Russian, Carl Johann Maximowicz. Together they explored various parts of Kyushu including Kûjû-dake, the Aso caldera and Kumamoto. Sugawa continued the collaboration by sending material to Maximowicz, and encouraging other Japanese botanists to do likewise. He was a contributor to the *Plantae Novae Japonicae* published in 1865-66 and to the *Transactions of the Sapporo Natural History Society*.

**Plants named for Tschonoski include:**

*Acer tschonoskii*, *Rhododendron tschonoskii*, *Carpinus tschonoskii*, *Malus tschonoskii*, *Prunus tschonoskii*.

**Plants of note on the Tschonoski Trail:**

*Rhododendron decorum* subsp. *diaprepes* 'Gargantua', *Rhododendron kesangiae*, *Persea ichangensis*.



## Hu

Hsen Hsu Hu (1894-1968), referred to as the founder of modern plant taxonomy in China, was among the first generation of Chinese botanists who went to Harvard for graduate training. He collected around Nanjing and more extensively in Jiangxi and Zhejiang, and sent many specimens to C.S. Sargent who was Director of the Arnold Arboretum. He obtained a Ph.D. from the Bussey Institution for Applied Biology in 1925. His dissertation was proclaimed as providing a basis for future work on the flora of China. Hu was very active in keeping botanical exploration active during the 1930s, especially through a 5 year project in Yunnan. He established the Lushan Arboretum and Botanical Garden at Guling, and later the Botanical Institute in Kunming. In the west, he is probably best remembered for facilitating the collection of *Metasequoia glyptostroboides* seeds and their distribution to gardens around the world in 1948, shortly before the bamboo curtain fell.

### Plants named for Hu include:

*Huodendron Rehder* (Styracaceae), *Rhododendron huianum*, *Pleione hui*, *Rehderodendron hui*, *Lithocarpus hui*.

### Plants of note on the Hu Trail:

*Cinnamomum japonicum*, *Magnolia martini*, *Magnolia cylindrica*, *Lithocarpus variolosus*, *Castanopsis orthacantha*.

## Maximowicz

Karl Ivanovich Maximowicz (1827-1891), was a Baltic-German who changed his name to Carl Johann Maximowicz, for his scientific work. Most of his career was at the Saint Petersburg Botanical Garden, where he became Director in 1869. He traveled widely in China, Korea and Japan. He did a great deal of work on the flora of Japan, and his study of the flora of Tibet

led him to recognize the importance of immigrant species from Mongolia and the Himalaya.

**Plants named for Maximowicz include:**

*Acer maximowiczii*, *Betula maximowiczii*, *Crataegus maximowiczii*,  
*Pleioblastus maximowiczii*, *Prunus maximowiczii*, *Tilia maximowiczii*,  
*Primula maximowiczii*.

**Plants of note on the Maximowicz Trail:**

*Rhododendron basilicum*, *Acer taronense*, *Acer rubescens*.

**Meyer**

Frans Nicholas Meijer (1875-1918) was born in the Netherlands and changed his name to Frank Meyer in 1901 when he began work at the United States Department of Agriculture's Plant Introduction Station in Santa Ana, California. He made expeditions to China, Europe, Japan and Russia between 1905 and 1918. He died when he fell overboard from a Japanese river boat on his way down the Yangtze river to Shanghai. His body was recovered, but the circumstances of his death will always remain a mystery and source of speculation. Honoured the world over for his contributions as a plant explorer, Frank Meyer's work touches us all everyday. From apricots to wild pears, his introductions number over 2,500.

**Plants named for Meyer include:**

*Syringa meyeri*, *Cornus meyeri*, *Albizia meyeri*, *Picea meyeri*, *Phyllostachys meyeri*.

**Plants of note in the Meyer Glade:**

*Melioidendron xylocarpum*, *Betula albo-sinensis*, *Nyssa sinensis*,  
*Filipendula kamschatica*, *Alangium platanifolium*.

## Acknowledgements

The thumb-nail sketches were assembled from a wide range of resources, including a *Guides Guide to the Asian Garden* prepared by the Friends of the UBC Botanical Garden. We relied heavily on a wide range of published and unpublished documents, the Internet and our own long memories. We have verified as much as possible from the published literature.

## Trail Names (alphabetic)

Cox	Maximowicz
David	Meyer (Glade)
Decaisne	Perny
Delavay	Purdom
Fang	Rehder
Farges	Rock
Farrer	Sargent
Forrest	Siebold
Fortune	Soulie
Handel-Mazzetti	Staunton
Hemsley	Stearn
Henry	Straley
Hu	Tschonoski
J. D. Hooker	Upper Asian Way
Kingdon-Ward	Wharton
Lower Asian Way	Wilson
Ludlow	

