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A Perfect Enthusiast

by Steven L. Shepherd

The legacy of David Douglas—who changed landscapes the world over—is preserved in the names of native trees, grasses, and flowers from California to Canada.

In mid-August, 1826, a ship rode at anchor off Fort Vancouver, principal post of the Hudson's Bay Company on the lower Columbia River, just across the water from present-day Portland, Oregon. Six hundred miles upriver, a young Scotsman named David Douglas had just received word of the ship's planned September 1 departure for London. He had been making his own plans, and he realized these would now best be served by delivering a package to the vessel before she left.

The Columbia river was then higher than the *voyageurs* of the Hudson's Bay Company had ever seen it; so full "of rapids, cascades, and whirlpools," wrote Douglas, that it was too dangerous for travel. So on the morning of August 19, Douglas left Fort Colville, near Kettle Falls, by land, with an Okanogan Indian guide and three horses; for provisions he had tea, sugar, dried buffalo meat, a shirt, blanket, tin pan, and a pistol. For three days he curved south of the Columbia, crossing the Huckleberry Mountains, the Spokane River, the "stony chasm" of the Grand Coulee, and the arid barrens of the Columbia Plateau, where he found sulphurous water and temperatures so hot he traveled mostly at night. On the 22nd—"parched like a cinder with heat and thirst"— he reached Fort Okanogan.

Here he acquired new guides and took to the water. But the river was still perilous—in a rapid just ten miles from the fort a wave swept away everything in the canoe but the meat. Fortunately, Douglas had first taken the precaution of getting out to walk; his package was saved, and despite the loss of almost all else he later wrote in his journal that "I considered myself happy."

On the 25th he reached Fort Walla Walla, near the confluence of the Snake and Columbia rivers, and he spent the night "so much reduced that I was too weak to eat." The next morning, though, he set out again. All day he and his guides paddled and glided, and they continued through the night, so as to get past an encampment of Indians with a reputation for piracy. By the 27th the canoe was well into the Columbia Gorge, where fierce headwinds, falls, and rapids made progress slow, and at noon on the last day of August, he waded ashore at Vancouver. He was wearing a shirt, deerskin pants, and "an old straw hat"; he'd lost or worn out all his other clothing—including shoes. Douglas spent the rest of that day packing a chest with the contents of the parcel he'd brought from Fort Colville plus material he'd stored earlier at Vancouver, and the following morning he gave over custody of the chest to the ship's captain, who within hours ordered sail set for England.

In the chest were dried plant specimens and the seeds of over 120 species new to science or not yet introduced to England. Among these were the first scientifically recognized peony in North America (*Paeonia brownii*, found on a trip to the Blue Mountains of eastern Oregon and Washington that had brought Douglas at one point to a small but fast-flowing river too deep to be forded on foot. To get across, he swam—on his back and holding his seeds and collection paper aloft in his hands, a process he later described as "difficult and tedious." And he did this twice—in 40-degree water while, "as if to render my labor fruitless, it hailed heavily"). Also in the chest were seeds of the yellow-flowering Sabin's lupine, Oregon grape, the broad-leafed and vine maples, and more. And all were in addition to a similar shipment he'd sent a year earlier that had included salal, penstemons, lupines, Clarkias, evening primroses, Mariposa lilies, gooseberries, currants, iris, California Poppy, rhododendron, sunflower, phlox, monkey flower, hyacinth, noble fir, Pacific silver fir, and the plant with which his name is most commonly associated, *Pseudotsuga menziesii*—Douglas-fir.

Not that this is the only plant to which his name is attached. Douglas was the first trained botanist to explore and collect in the Columbia River basin, as well as the first to make an extended stay in California, and from these and other places he visited he collected seeds and specimens from literally thousands of species, often providing both names and descriptions. Many of the plants he collected were new introductions of species already recognized but for which seeds had not yet been obtained; others were outright discoveries previously unknown to science. Acknowledging this contribution, fellow botanists have incorporated his name into that of perhaps more species than that of anyone else. One international database lists nearly 500 taxa named for Douglas, and the University of California's *CalFlora Species Database* lists 64 native California species and varieties whose names honor David Douglas, including the Douglas iris, coreopsis, nightshade, buckwheat, sedge, hawthorn, and violet (*Iris douglasiana*, *Coreopsis douglasii*, *Solanum douglasii*, *Eriogonum douglasii*, *Carex douglasii*, *Crataegus douglasii*, and *Viola douglasii*, respectively).

Born in Scotland in 1799, son of a stonemason, Douglas's study of plants began at the age of 11, when he entered a seven-year apprenticeship as a gardener at a nearby estate. By the time he was 20 he had earned a position at the Botanic Gardens in Glasgow, and here he met William Jackson Hooker, then professor of botany at Glasgow University and later to become, as Sir William, the highly influential first director of Kew Gardens. Just 35 at the time, Hooker was well on his way to establishing his reputation as one of the great scientists of the day; he was a prolific writer and a gifted speaker, and not only did Douglas begin to sit in on his lectures, but he soon became Hooker's favorite companion on rambles through the Scottish Highlands. Hooker recognized something special in Douglas, and later recalled that the young man's "great activity, undaunted courage, singular abstemiousness, and energetic zeal, at once pointed him out as an individual eminently calculated to do himself credit as a scientific traveler."

Having recognized this potential, it wasn't long before Hooker took measures to see it realized. Founded in 1804, the Horticultural Society of London (forerunner of today's Royal Horticultural Society) set for itself the task of enhancing British horticulture through the propagation and redistribution of plants gathered from throughout the world. To fulfill this goal, the Society bought a garden, started a publication program, organized a global network of "correspondents" who sent in seeds and specimens, and, early in the 1820s, began sending out its own collectors. The first of these was sent to India, the next to South Africa, the third to China; they performed admirably, sending home a wealth of new plants, but the risks were high and two of the first three died of tropical disease.

These were the circumstances when Hooker recommended Douglas to the Society for a position as Botanical Collector in 1823. Chagrined over the fate of its previous explorers, that spring the Society sent Douglas to the less exotic northeastern United States. (Though it was only a few years later that one Society official was moved to lament, upon forecasting the likely outcome of Douglas's journeys, "that so fine a fellow should be sacrificed.")

Charged with collecting new varieties of fruit and oak trees, Douglas spent four months traveling between New York, Philadelphia, Buffalo, and southern Ontario. He was in constant motion, switching from steamboat to stagecoach to canoe as the need arose. He visited every conceivable venue that might harbor a treasure, from farms and orchards, to swamps and bogs, to the produce markets of New York. He kept a detailed journal. And he was sensationally productive: on his return he brought home pears, plums, and apples; 21 varieties of peach and 19 of oak; plus scores of horticultural gems, including orchids, roses, evening primroses, honeysuckle, sunflowers, and goldenrod—many destined to become great favorites with gardeners. And he did it all with minimum expense. His employers could hardly have been more pleased: "This mission," declared the Society's *Transactions*, "was executed by Mr. Douglas with a success beyond expectations."

Within months of his arrival back in London, Douglas and the Society were engaged in preparations for a new trip, this time to the vast Pacific Northwest. The Society secured the support of the Hudson's Bay Company, including passage on the company's annual supply ship, and Douglas conferred with Archibald Menzies, naturalist on the *Discovery* during Vancouver's surveys off the coast of western North America in the 1790s.

On July 25, 1824—his 25th birthday—Douglas boarded the *William and Ann* "destined for the entrance of the River Columbia." As before, he kept a journal, and this, together with his extensive correspondence, forms the principal record of his activities. On Santiago Island, in the Galapagos, he was given just six hours on shore but still managed to collect 175 plant species and 45 birds; near constant rain in the following days, however, prevented the specimens' preservation and nearly all of them rotted. Still 11 years before Charles Darwin's visit, Douglas well recognized the importance of his lost collection. "Never did I experience greater mortification," he wrote. "The Galapagos have been so little visited by scientific persons, that everything becomes of interest which is brought from thence, and I have now little or nothing to show that I have been there!"

On April 7, 1825, after a "long and tedious voyage," the *William and Ann* entered the Columbia. Even before the ship dropped anchor, Douglas set to work. Rounding Cape Disappointment he noted the varied conifers on shore, and among them he thought he spied the towering *Pinus taxifolia*, known then to the scientific world only through the dried specimens brought back by Menzies. It wasn't until 1953 that Menzies' contribution was acknowledged through adoption of the tree's modern scientific name, *Pseudotsuga menziesii*, but as early as 1833 the seeds sent to England by Douglas (the trees from which can still be seen) had given rise to the common name of Douglas-fir.

Douglas quickly established himself at Fort Vancouver and he set about exploring his new surroundings. In the months that followed he hewed to a demanding pace. By foot or canoe, traveling with the Hudson's Bay *voyageurs* or with his own Indian guides, he ranged the Columbia from the ocean to the Dalles. He grew familiar with the local fare, dining at one point on a 500-pound sturgeon. He noted how the sleeping accommodations differed from those in England—"Here each person takes his blanket and stretches himself, with all possible complacency, on the sand, or under a bush, as may happen, just as if he were going to bed." And first hints of the toll of his exertions would take became apparent. After one summer trek east of the Cascades he wrote of encountering

> nothing but extensive plains and barren hills, with the greater part of the herbage scorched and dead by the intense heat. I had to cross a plain 19 miles without a drop of water, of pure white sand, thermometer in the shade 97 degrees. I suffered much from the heat and reflection of the sun's rays; and scarcely can I tell the state of my feet in the evening from the heat in the dry sand; all the upper part of them were in one blister.

But above all, he collected. In late October Douglas sent home 16 bundles of dried plant specimens and a large chest of seeds. By one count, 500 species were represented in the bundles and 100 in the chest. To top it off, he also sent a chest of preserved animals and another of Indian artifacts. It was a extraordinary haul. And lucrative: so popular proved some of the plants in the shipment that sales from one species alone, the red flowering currant (*Ribes sanguineum*), recouped for the Horticultural Society the entire cost of Douglas's expedition.

Douglas spent much of the remainder of 1825 at Fort Vancouver recovering from an infected knee. Nonetheless, by the end of December he calculated that he had traveled 2,105 miles that year hunting plants in the basin of the lower Columbia. Little, though, did he find solace in his accomplishments; the end of the year, the confinement brought on by his injury, and the continual rains of the Pacific Northwest led him to the following rumination, recorded in his journal on January 1, 1826:

> Commencing a year in such a far removed corner of the earth, where I am nearly destitute of civilized society, there is some scope for reflection. In 1824, I was on the Atlantic on my way to England; 1825, between the island of Juan Fernandez and the Galapagos in the Pacific; I am now here, and God only knows where I may be the next. In all probability, if a change does not take place, I will shortly be consigned to the tomb. I can die satisfied with myself. I never have given cause for remonstrance or pain to an individual on earth. I am in my 27th year.

March of 1826 saw the departure from Fort Vancouver of the Hudson's Bay Company's annual overland express—this consisting of a handful of men who walked and boated to Hudson Bay, carrying letters and company communications. Douglas was supposed to go with them. But he decided there was so much still to explore and collect that he would defer his trip until the following year; if the Society objected, he would work the year for free. He did, however, send with the express a tin box of seeds.

That same spring Douglas wrote another letter to England first referring to a problem that would plague him till the end of his life. "My eyesight," he wrote, "which was always weak, is much impaired during the last few months." In the coming year the glare of mountain snowfields, the brightness of desert landscapes, and blowing sands would only make the problem worse.

Despite this handicap, 1826 proved another spectacular year. Including his mad dash from Forts Colville to Vancouver, Douglas traveled nearly 4,000 miles and expanded his operations in nearly every direction, reaching not just Kettle Falls to the north and the Blue Mountains to the east, but venturing to the south entirely outside the Columbia basin and into the watershed of the Umpqua River.

Douglas made his trip to the Umpqua in search of a tree the Indians called the *Natele*, and of which Douglas had seen a few imperfect seeds the year before. Known now as the sugar pine, in recognition of its sweetish crystallized resin, Douglas's search for *Pinus lambertiana*—the world's largest pine—says much about his doggedness. He left Fort Vancouver just two weeks after wading ashore in his frayed hat, pants, and shirt. Traveling up the Willamette in the company of a Hudson's Bay party, he was gone for two months, during which it rained almost nonstop and food was often scarce. Splitting off on his own, he encountered grizzlies, had an armed standoff with Indians, and once fell into a ravine and lay unconscious for five hours. But he found his tree. Near what is now Roseburg, Oregon, he gathered seed-bearing cones, wrote a detailed description, and measured one wind-fallen specimen as 18 feet in diameter and 245 feet long.

Conditions worsened as Douglas and two *voyageurs* began their return to Fort Vancouver, and at one point the three became lost:

> Last night, after lying down to sleep, we began to dispute the road, I affirming we were two or three miles off our way, they that we were quite close to our former encampment; all tenacious of our opinions. The fact plainly this: all hungry and no means of cooking a little of our stocks; traveled 33 miles, drenched and bleached with rain and sleet, chilled with a piercing north wind; and then to finish the day experienced the cooling, comfortless consolation of lying down wet without supper or fire. On such occasions I am very liable to become fretful.

Eventually, they made it back. Eventually, too, Douglas's spirits revived, and by March 1827 he had packed and readied enough seeds and specimens for a four-box shipment to England by sea. Into another box he placed his journals and a duplicate set of seeds, and with these on his back he turned toward England with that year's express.

At first, this meant walking the banks of the Columbia and botanizing while the *voyageurs* paddled upriver. By April 27 the nine-man party had traveled a thousand miles, at which point they stowed their boats, strapped on snowshoes, and began the climb over the Canadian Rockies. The express reached the Continental Divide on May 2, and three weeks later they were in Fort Edmonton, where Douglas was given a young golden eagle, for which he had a cage made and then took with him. At Lake Winnipeg, Douglas took a month-long side trip up the Red River, collecting 288 species, and on August 28 he reached the Hudson Bay port of York Factory, where the *Prince of Wales* lay at anchor. So exhausted was he from this and his cumulative journeys that he spent the entire trans-Atlantic passage in bed.

In London, Douglas was wined, dined, and lionized. Already gardens were flowering with his earlier introductions, and he was made a fellow of the Linnean, Geological, and

Zoological Societies. He presented several scientific papers, including one on the California condor. But it wasn't long before his celebrity began to wear on Douglas; he felt uncomfortable in the social circles into which he was thrust and his behavior grew rude and impolitic. He began expressing a desire to return to North America, and others began wishing for him the same.

By the summer of 1829 the Horticultural Society completed plans for a new expedition. This time Douglas was to focus on California, and again the Hudson's Bay Company would supply transportation.

On June 3, 1830, after a seven-month voyage, he arrived back at the mouth of the Columbia. The physical costs of his labors were now readily apparent and though he was not yet 31 a newcomer at Fort Vancouver—taking in his "florid" and balding appearance—estimated his age at 48. Nonetheless, he set immediately to work. Because there was no ship then bound for California, Douglas first headed back to the Blue Mountains and by October he had gleanings enough to send home three chests of seeds, which included those of "100 new species, and perhaps some new genera." Finally, in late November he boarded the *Dryad* and on December 22, 1830, landed in Monterey, capital of Mexican California.

Douglas came quickly to an understanding of the differences between midcoastal California and the Pacific Northwest. Writing to Hooker in 1831, he noted that "Such parts of the country as I have seen are highly diversified by hills, covered with oaks, pines, chestnuts, and laurels, extensive plains, clothed with a rich sward of grass; but no large streams." The rapidity of summer's onset meant a short season for botanizing. And there was the matter of rain. "In no part of the world," he wrote, "have I experienced such a dryness in the atmosphere, nor can I call to my memory having read of greater. Even the deserts of Arabia and Egypt, … I mean the driest places on the globe, when satisfactory observations have been made, are more humid than California."

The dryness further irritated his eyes, and he felt compelled to ask Hooker's forbearance in reading his letters—"I can never read what I write, so do pardon my blunders." But dryness or no, he seems to have been greatly was stimulated by the realization that he was in an area of enormous floral diversity—and virtually surrounded by plants unknown to the wider world.

Douglas's first day botanizing in California yielded the hugely popular baby blue-eyes (*Nemophila menziesii*), nor was it long before he added to an already impressive list of scientifically new conifers with his collection and description of *Pinus sabiniana*, the gray pine. By the end of 1831 he wrote to Hooker that the size of his California collection for the year "may amount to 500 species, a little more or less." Of these, he thought 340 were new and that among them were representatives of 20 or more new

genera. Within eight months he had added another 150 new species, including the Santa Lucia fir (*Abies bracteata*) and the Monterey pine (*Pinus radiata*).

Douglas left Monterey in August 1832, bound for the Columbia with a stopover in Hawaii, where he sent home a shipment that included "nineteen large bundles of dry plants, in two chests, together with seeds, specimens of timber, etc." So rich was the transmittal that a century later Willis Linn Jepson wrote of Douglas's California collection, with its "hundreds of new species, our most familiar plants," that its study was still not exhausted. Unfortunately, this botanic trove and the accompanying letters he mailed to Hooker and others provide all that's known about his movements in California (which is that he explored the Coast Range from Santa Barbara to Fort Ross), for Douglas did not send copies of his journals and the originals were soon to be lost.

Douglas's return to Fort Vancouver in the fall of 1832 was made with the aim of beginning a trip he had contemplated even before he left England. His plan was audacious in the extreme, but if it could be done at all Douglas was the person to do it: he meant to work his way to Sitka, Alaska, from whence the Russian government had promised passage to the Siberian port of Okhotsk, and from there to walk across the entire Eurasian continent, botanizing his way back to London.

With this in mind, in March 1833 he set off once again with the Hudson's Bay express. He and a companion separated from the express at the Okanogan river and proceeded north from there by horseback and canoe. By June 6 the pair reached Stuart Lake, having traveled over 1,100 miles from Fort Vancouver. But Sitka was still 800 miles away and the country ahead both rugged and poorly mapped. Moreover, Douglas's vision was continuing to decline and the sight in his right eye by then was "utterly gone … dark as midnight." Disappointing as it was, the wisest course was to turn back. Five days later, his disappointment was magnified countless times over when his canoe was caught in rapids on the Fraser river and "dashed to atoms." Douglas was thrown about in the water for an hour and forty minutes and lost both food and bedding. But by far the greater loss was that of his journals—"What I may call, my all! … as this is what can never be replaced."

The event, he confided to Hooker, "has much broken my strength and spirits."

Slowly, Douglas made his way back to Fort Vancouver, resigned now to returning to England at the first opportunity. In October he sailed for Honolulu, hoping there to catch a ship home. While waiting, Douglas resumed botanizing with his old fervor, rapidly building a collection of over 300 species of ferns and mosses. But of equal interest to him now were the islands' mountains. The beauty of the volcanoes captivated him completely, and on the big island of Hawaii he climbed Mauna Kea, Kilauea, and Mauna Loa. On Mauna Loa in January he pitched his tent for the night just 20 yards from the crater's edge, then watched transfixed as the silver light of a full moon fell on "the fiery

lake, roaring and boiling in fearful majesty." "One day there," he wrote, "is worth one year of common existence."

But he was now paying a hefty price for such days. Descending Mauna Loa the day after his climb, the combination of glare, altitude, and dry air brought on an acute attack of ocular pain and inflammation, followed by "a slight discharge of blood from both eyes"—which he treated with drops of opium.

Douglas spent the next several months traveling among the islands, and July 12, 1834, found him back on the flanks of Mauna Kea, hiking a trail to Hilo. Here he breakfasted with a local cattle hunter, whose method was to trap animals in camouflaged pits and who warned him of three such traps a few miles down the trail. Douglas, though, may never have seen the enclosures, and that morning he had the doubly bad luck not only to fall into a pit, but to do so in one that already contained a bull. Just two weeks shy of his 35th birthday, he was gored and trampled to death.

It is hard to overstate the importance of Douglas's contributions. Many of the ornamentals he collected are now mainstays of gardens around the world, and the annuals he sent back enabled the practice of massed color carpet bedding, first made fashionable by the Victorians. More than a few of these introductions have escaped their garden bounds and become naturalized members of the landscape—salal, for instance, is a now considered an invasive weed in Britain, and the musk monkey flower has established itself throughout Europe, Chile, and the northeastern United States.

Commercially, Douglas's most enduring legacy lies in the many timber trees he introduced to the world beyond California and the Pacific Northwest. Sitka spruce is Britain's most important source of lumber. Douglas-fir, which thrives in both Britain and Continental Europe, has been called the twentieth century's most important source of timber. And Monterey pine, whose total natural distribution consisted of an estimated 12,000 acres in five isolated locales when Douglas first found it, now grows in plantations covering more than 10 million acres across the southern hemisphere.

Many tributes were paid Douglas after his death, and they came from many quarters. But perhaps the most encompassing came from George Barnston, a Hudson's Bay employee who spent a winter with Douglas and went on to become president of the Natural History Society of Montreal. "In all that pertained to nature and science," wrote Barnston, "he was a perfect enthusiast."■

NOTE: Published by *California Wild* with the mouthful of a title "Trials of an Intrepid Botanist," the preceding is the original submitted text (and title) before its subjection to editorial whackings and hackings. You can read *California Wild*'s full-color, but slow-to-load version here.