

DOUGLAS, DAVID, scientist; b. 25 June 1799 in Scone, Scotland, son of John Douglas, stonemason, and Jean Drummond; d. unmarried 12 July 1834 near Laupahoehoe, Hawaii.

David Douglas acquired his early education tramping the woods and fishing trout streams while skipping his classes at the parish school of Kinnoull, on the outskirts of Perth. From an early age he reared birds and collected plants. Not until he served an apprenticeship, from around 1811, in the gardens of the Earl of Mansfield at Scone did he develop a taste for books, in large part botany manuals. Following his engagement about 1818 as a gardener on the estate of Sir Robert Preston, near Dunfermline, he frequented Preston's extensive botanical library and became enamoured of exotic plants, for which Preston's gardens were renowned. Some two years later he was admitted to the infant Glasgow Royal Botanic Garden, where he became a star student of Professor William Jackson Hooker. On Hooker's recommendation he was engaged in 1823 by the Horticultural Society of London as a botanical collector.

That year the society sent Douglas to botanize in the northeastern United States. Authorized to go as far as Amherstburg, Upper Canada, he nevertheless proceeded to Sandwich (Windsor), passing through "The French Settlement" where, he noted, "the Fields are well cultivated . . . [and] attached to each house is a neat garden laid out and kept with taste." He remained at Sandwich from 18 to 22 September. On the 20th, during a trip into the countryside, his guide ran away with his money and coat while he was up a tree. Fortunately left with the hired horse and carriage, Douglas was, however, obliged to engage a driver to take him back to town, "the horse only understanding the French language, and I could not talk to him in his tongue." From Sandwich Douglas took a steamboat to Buffalo, N.Y., botanized on both sides of the Niagara River, and returned to New York via Queenston, Upper Canada, and Albany. He left for England on 12 December.

The many specimens Douglas brought back made his trip a publicly acclaimed success. After perfecting his knowledge of scientific and technical procedures in various fields, in July 1824 he was dispatched by the Horticultural Society, through the good offices of the Hudson's Bay Company, to the Pacific coast of North America. Based at Fort Vancouver (Vancouver, Wash.), he travelled extensively throughout the company's Columbia district, between northern California and the Columbia basin. In March 1827 he left with the HBC's annual brigade to York Factory (Man.), where he was to take ship for England. In the Athabasca Pass he performed the remarkable task of climbing a mountain of 9,156 feet in five hours, alone and without equipment; he named it Mount Brown in honour of Robert Brown, a prominent botanist, and to a nearby peak he gave the name of Mount Hooker.

Douglas collected botanical and zoological specimens as he travelled. En route, he encountered two scientists of John Franklin*'s second Arctic expedition, Thomas Drummond at Carlton House (near Batoche, Sask.) and John Richardson* at Cumberland House, and pronounced the collections of each "princely." Franklin himself took Douglas across Lake Winnipeg (Man.) to the mouth of the Winnipeg River. At the Red River settlement, where he remained for a month, Douglas formed "a small herbarium of 288 species." He arrived at York Factory on 28 August only to have his odyssey end on a tragic note: a "calumet eagle," given to him by Chief Factor John Rowand* at Fort Edmonton (Edmonton), had become tangled in its jess and was strangled. "What can give one more pain?" he wondered. "This animal I carried 2,000

miles and now lost him, I might say, at home." Douglas nearly lost his own life shortly after. Along with eight company men he, Drummond, and Edward Nicholas Kendall* and George Back*, who were also of Franklin's party, were sailing in a small boat from their ship to York Factory when they were caught in a violent storm and driven some 70 miles out into Hudson Bay. Their boat threatening to sink at any moment, soaked and frozen, without a compass and unable to see the shore or the stars, the group called on their combined experience and vigour to get themselves back to the ship, where they had been given up for dead. Douglas remained ill from the effects long after his arrival at Portsmouth, England, on 11 Oct. 1827.

Douglas's harvest of plants and seeds established a record for species introduced by an individual into Britain, the leading country in botanical research. The gardens of the Horticultural Society were overwhelmed, and recourse was had to private nurseries. Moreover, many of the species were considered valuable and were distributed among appropriate institutions. Douglas's discoveries were exhibited at meetings of the society and published in scientific periodicals. Almost the whole of his collection was described, along with those of Drummond and Richardson, in Hooker's *Flora Boreali-Americana* . . . (2v., London, 1840). Douglas had also sent and brought back zoological specimens, some of which were used by Richardson in his *Fauna Boreali-Americana* . . . (4 pts, London, 1829–37) and by James Wilson for his *Illustrations of zoology* . . . (Edinburgh and London, 1831). In addition, Douglas stated that he had brought back "several volumes of lunar, chronometrical, magnetical, meteorological and geographical observations, together with a volume of field sketches." At 29 he was a celebrity, and was admitted with honours to the Linnean, Zoological, and Geological societies of London. Consulted by the Colonial Office as to the boundary Britain should claim in the Oregon country, Douglas vigorously rejected American claims to the region and urged Britain to insist on the Columbia River as the most appropriate line west of the Rockies.

Another expedition to the American Pacific coast was organized for Douglas by the Horticultural Society in collaboration with the HBC. On 31 Oct. 1829 he left England for Fort Vancouver, where he arrived on 3 June 1830 to a warm welcome by the traders. His eyes, never strong, had deteriorated on his previous expedition because of blowing sand and brilliant snow and of glaring sun during the long sea voyage. As his eyesight dimmed he concentrated on his work, to the detriment of his safety; thus on one sortie he fell blindly into a ravine and lay in pain for five hours before being rescued. Yet a trader who accompanied him in the summer of 1830 noted: "I was much surprised to remark the quickness of sight he displayed in the discovery of any small object or plant on the ground over which we passed. When in the boats, he would frequently spring up abruptly in an excited manner, and with extended arms keep his finger pointed at a particular spot on the beach or shelving and precipitous rocks where some new or desirable plant had attracted his notice. This was the signal to put on shore, and we would then be amused with the agility of his leap to the land, and the scramble like that of a cat upon the rocks to the object he wished to obtain."

From 1830 to 1833 Douglas botanized from Puget Sound to Santa Barbara (Calif.) and in the Sandwich (Hawaiian) Islands. In March 1833, having completely lost the vision of his right eye, he set out to return to England through New Caledonia (B.C.) to Sitka (Alaska) and then across Siberia. Leaving the HBC's annual brigade at Fort Okanagan (Wash.), he went north to Fort Alexandria (Alexandria) on the Fraser River and from there to Stuart Lake. Unable to find a sure party of traders going to the coast, where he intended to embark for Sitka, he was obliged to go back down the Fraser. On 13 June his canoe shot over a cataract below Fort George (Prince George) and was lost; he and his guide were spun through a whirlpool, and disgorged onto the rocks. Douglas saved his astronomical journal, charts, and barometrical observations, a book of rough notes, and some instruments but lost his botanical notes and entire collection of some 400 species. Without food or clothes, he arrived back at Fort Vancouver in July, with his guide, on the verge of starvation and broken in spirit.

On 18 October Douglas left for the Sandwich Islands, arriving at Honolulu on 23 December. On 12 July 1834 he was taking a mountain trail in northern Hawaii when he disappeared. He was 35. His gored and trampled body was found at the bottom of a cattle trap occupied by an enraged bull. Mysterious circumstances surrounding the death have given rise to speculation about whether it was an accident, murder, or suicide.

Douglas's celebrity brought him in contact with the most prominent British scientists of his time. Yet he was, wrote the president of the Horticultural Society, Thomas Andrew Knight, "the shyest being almost that I ever saw." He was at ease, however, with his mentor, Hooker, to whom he wrote letters full of humour and charm, and among the fur traders at Fort Vancouver, where, trader George <u>Barnston*</u> recalled, he was "one of the happiest, heartiest mortals in our little society." To

the Indians of the Columbia region he was "King George's Chief or the Grass Man," a vaguely menacing little magician capable of drinking boiling liquids ("an effervescent draught") and lighting his pipe with the sun (through a lens). He was as tough or as friendly with them as any trader, as skilful in shooting, and as capable of suffering hardship. But although he was comfortable among the traders — one of whom described him as a "sturdy little Scot; handsome rather; with head and face of fine Grecian mould" — he was not of their race and complained of being "molested out of my life by the men singing their boat-songs" as he tried to study while travelling by canoe. He had, indeed, little consideration for the HBC, which had greatly facilitated his work, describing it once to an astonished trader as "simply a mercenary corporation; there is not an officer in it with a soul above a beaver skin." The remark instantly earned Douglas an invitation to duel, which he heatedly accepted, but then, after some reflection, declined.

Douglas was more than a scientist who saw in nature only grist for the scientific mill. His eye "was alive to all that is picturesque," in the words of one contemporary, and his writings point to the inexhaustible variety and "great operations of nature" as manifestations of "an infinite intelligence and power in the Almighty hand." A man obsessed by the study of nature, he deplored a narrow-minded devotion to the pursuit of scientific truth as leading to "a condition little better than moral servitude." "We can travel through distant lands," he wrote, "and become acquainted with the complexions and the feelings and the characters of mankind, under every form of life; and in so doing this, if we be not most indocile pupils we must learn many lessons of kindness, and freedom of thought along with an appropriate knowledge of our immediate vocation."

The richness of Douglas's character, the variety of his skills, and his limitless enthusiasm, energy, and endurance enabled him to compress into a decade the accomplishment of a lifetime. An English colleague wrote: "If we only imagine the British gardens deprived of the plants introduced by Douglas, we shall find them but little further advanced in point of ornamental production than they were a century ago." At a time when some 92,000 species of plants were known the world over, Douglas had sent to Britain about 7,000 species, many of them new and native to what later became western Canada. His name has become a household word through the Douglas fir, the country's largest tree, but it is also attached to numerous smaller plants. Towards the end of the century George Mercer Dawson*, director of the Geological Survey of Canada, named an 11,000-foot peak northeast of Lake Louise (Alta) in honour of Douglas. A man who lived to search and died perhaps of curiosity, Douglas has been described by an historian of science as "one of our greatest and most successful exploring Botanists, to whom the world is deeply indebted," an opinion that no one would gainsay.

IN COLLABORATION WITH M. L. TYRWHITT-DRAKE

David Douglas is the author of *Journal kept by David Douglas during his travels in North America, 1823–1827...*, published in London in 1914 by the Royal Horticultural Society and reprinted in New York in 1959; he also wrote eight scientific papers, which are listed in appendix V of the *Journal*. The fullest study of Douglas is A. G. Harvey, *Douglas of the fir: a biography of David Douglas, botanist* (Cambridge, Mass., 1947), which includes a complete bibliography on Douglas up to 1946, as well as a portrait in pencil by a niece of the botanist. William Morwood, *Traveler in a vanished landscape: the life and times of David Douglas* (New York, 1973), is a speculative psychological study of Douglas which reaches the conclusion that his death, in mysterious circumstances, was suicide. The book has a bibliography of works published up to 1970.

Douglas's botanical specimens are housed at the British Museum, London, which acquired them from the Horticultural Society of London in 1856, at the Royal Botanic Gardens (London), and at the University of Cambridge. Zoological specimens are owned by the University of Glasgow, the Andersonian Institution, Glasgow, the Royal Scottish Museum, Edinburgh, and the Zoological Society of London.