

Johann Christian Buxbaum (1693 – 1730)

Johann Christian Buxbaum, the son of Andreas Buxbaum, a doctor, and Marea Dorothea (née Bretnitz), was baptised on 5 October 1693 at Merseburg, Saxony, in central Germany. He was educated at the universities of Leipzig, Wittenberg, Jena and Leyden, but did not complete his medical degree. His affinity was with plants rather than medicine, and guided by botanist Heinrich Bernhard Rupprius (c.1689-1719) he studied the flora of Halle. His first treatise, published in 1721, was well received, and when Peter the Great asked the German court physician Friedrich Hoffmann to recommend a botanist to study the flora of Russia, he suggested Buxbaum. Later that year Buxbaum, then aged 28, arrived in St Petersburg to manage the new apothecary garden of the Medical Collegium on Aptekarsky Ostrov (Apothecary Island) - now the botanical garden. He gave lectures on botany to medical students, collected plants in the vicinity of the city, and was a founding member of the St Petersburg Academy of Sciences.

In 1724, as both doctor and scientist, Buxbaum was summoned to accompany Count Alexander Ivanovich Rumyantsev to Constantinople on a diplomatic mission to Turkey, and to carry out research in mineralogy, zoology and botany, focusing on medicinal plants. Buxbaum expanded his investigations to include fossil specimens, sea invertebrates, fishes and mosses, and on his own initiative collected antique objects and coins for the *Kunstkammer* (Museum of Anthropology and Ethnography). He also took the opportunity to visit Greece, where he climbed Mount Olympus, "the highest in this area, always covered by snow which is brought daily to Constantinople to make cold drinks", and collected many rare plants. On his return he travelled through Asia Minor and was one of the first to describe the flora of the shores of the Black Sea and Armenia. His reports were published in the transactions of the Academy of Sciences.

During his travels he contracted tuberculosis and in 1727 he was recalled to St Petersburg. Without delay he began processing the expedition material and submitted to the Academy of Sciences the first one hundred new species collected from the journey, whilst also beginning new fieldwork. As his health deteriorated, he retired from his post at the Academy of Sciences and returned to Wermsdorf, Saxony, where he died on 7 July 1730.

Buxbaum was among the pre-Linnaeus botanists who believed depictions more informative than herbarium specimens. Although his descriptions were brief, his drawings, whether made on the spot during the expedition or later in St Petersburg, were graphic and conducive to plant identification.

In 1712 he collected the type for the genus, *Buxbaumia aphylla*, on the banks of the Volga near Astrakhan. He wanted to name the moss after his father, as Jean Marchant had done for the liverwort *Marchantia*, but recalled the fox that was mocked because it begged for grapes, not for itself but for its sick mother. Instead, he called it *Muscus capillaceus aphyllus, capitulo crasso, bivalvi*. The name *Buxbaumia* was eventually given in honour of Johannes Christian Buxbaum by botanist and poet Albrecht von Haller in 1742. Johannes Hedwig and others attributed the name to Linnaeus, but he merely resurrected the one given by Haller after it had been changed yet again.



Buxbaumia aphylla

The Buxbaumiaceae are monogeneric, with *Buxbaumia* (bug moss, bug-on-a-stick or elf-cap moss) comprising about ten species, mostly in temperate regions. Two species are known from New Zealand. The extremely large capsules (up to 9 mm) persist for more than a year, but are difficult to see in the field, even by bryologists, and may not be recognised as belonging to a moss. The vegetative leaves of all species are minute and colourless, and probably contribute little to the nutrition of the developing sporophyte. They typically grow on soil or rotten wood. *Buxbaumia aphylla* (Greek 'without leaves'), widespread but local in the northern hemisphere, has been collected in the North Island of New Zealand in all seasons, and the South Island from late winter to spring.

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