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## Types catalogue of the Hedwig collection in G.

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One of the most widely known bryologists, at least among the historical figures, is Johannes Hedwig. Hedwig was born in 1730 in Brasso, Hungary (then Transylvania) and lived in Vienna, Chemnitz and Leipzig during his lifetime. He died in Leipzig in 1799 leaving behind him his second wife, and six of his 15 children. He was trained in medicine and practiced this throughout the early and middle phases of his career. He was appointed Professor of Botany and Director of the Botanical Garden at Leipzig University later in his life. Hedwig maintained an active interest in botany throughout his lifetime, a passion which he had developed in childhood. He was particularly interested in the study of cryptogams and while he was practicing medicine he would collect plants early in the morning and determine them in the evening after finishing with his patients (Florschütz, 1960). Detailed information about Hedwig and his publication *Species Muscorum Frondosorum* can be found in Florschütz (1960) and Margadant (1968) as well as in the series of articles published as part of the ‘1999 Hedwig Symposium’ on Hedwig’s life and work (Frahm, 2000, Wagenitz, 2000, Wissemann, 2000); the Hedwig-Schwägrichen’s herbarium (Geissler, 2000), as well as the influence of Hedwig on the current classification of mosses (Vitt, 2000).

It was the careful study of microscopic details of bryophytes by Hedwig, and his documentation and illustration of his findings, which opened up new insights in the taxonomy and the systematics of this group of plants. Hedwig published his innovative observations (and often revolutionary for that time period) on

bryophytes, including on antheridia, archegonia, protonema and sporophytes in a selection of books (Hedwig 1782, 1784, 1787-1797, 1798, 1799, 1801). He also described new genera and species of bryophytes, mostly mosses, within his publications. The plates in these books appear to have been drawn by Hedwig himself and they are in themselves beautiful examples of bryophyte illustrations.

Arguably his biggest contribution to modern bryology was his work *Species muscorum frondosorum*. This book was published posthumously in 1801 after being completed by Christian Friedrich Schwägrichen (1775-1853), a former student of Hedwig’s. *Species muscorum frondosorum* contains the descriptions of 372 mosses, essentially from Europe and North America but with some species from more tropical regions included (Jamaica, Hispanola, ‘*insulae australes*’). Hedwig’s descriptions were based on specimens from his own herbarium collection. He obviously appreciated the importance of a good herbarium collection as his specimens, although not a practice we continue today, were carefully pressed, arranged and glued onto the herbarium sheets. Specimen labels were also glued to these sheets.

Hedwig described 75 new species in *Species muscorum frondosorum*, however most of the names he employed were from his earlier publications (Hedwig - *Stirpes Cryptogamicae*, 1787-1797) or from earlier authors such as Bridel (*Muscologia Recentiorum*, 1798), Dillenius (*Historia Muscorum*, 1741), and Linnaeus (*Species Plantarum*, 1753, 1762). He described 35 moss genera within *Species muscorum frondosorum*, 24 of which were new to science, thus greatly elevating the number of moss genera recognised at that time. Previously, Dillenius (1741) had used only 6 genera and several years later Linnaeus (1753) increased that number to 8 genera.

### Importance of *Species Muscorum Frondosorum* and the Hedwig herbarium collection

Geissler (2000) discussed the importance of the Hedwig herbarium and gave a detailed explanation of its significance for moss nomenclature. In 1911 *Species muscorum frondosorum* was designated as the starting point of moss names (excluding *Sphagnum* L.). All the mosses published in *Species muscorum frondosorum* were ascribed to Hedwig and thus effectively became syntypes (the series of specimens used to describe a species or subspecies when the author did not include a holotype). This meant that Hedwig’s collection became of international importance with respect to the establishment of a stable nomenclature for many of the common and widely distributed European-North American mosses. This exceptional collection is deposited in the general herbarium of the Conservatoire et Jardin botaniques de la Ville de Genève (G) and we are also fortunate to be able to include it amongst the important collections to be found within the herbaria of Switzerland.

Recently a catalogue of the Hedwig part of the Hedwig-Schwägrichen collection has been compiled and published (Price, 2005). This catalogue contains protologue, name, herbarium label information and typification status for all the Hedwig moss names, as well as 349 images of the herbarium

sheets themselves (some of the original Hedwig collections are not present in G). An electronic version of the catalogue is also available through the website of the Conservatoire et Jardin botaniques de la Ville de Genève (see link under Price et al., 2004). These two forms of publication are intended to facilitate the long-term conservation of this important collection by reducing the need for repeated loans of the type collections, especially those that have been lectotypified already.

This types databasing and digitalisation project at G will continue with the compilation of the Schwägrichen part of the Hedwig-Schwägrichen collection. After acquiring the Hedwig herbarium Schwägrichen continued to work on the *Species Muscorum Frondosorum* series and published supplements to it (Schwägrichen, 1811-1816, 1823-1827, 1827-1830, 1842) which include the descriptions of over 200 new species. Although the Schwägrichen part of the Hedwig-Schwägrichen collection does not have the same significance for moss nomenclature as that of Hedwig it is a collection that is rich in types and it counts in its own right as one of the important historical herbaria to be housed in G. It can also be included as one amongst the rich resources held in the ensemble of Switzerland's botanical collections which are housed at BAS, BASBG, BERN, CHUR, G, HKGL, LAU, LUG, NEU, NMLU, RENZ, SCH, Z & ZT and ZSS (codes according to Index Herbariorum: <http://sweetgum.nybg.org/ih/>).

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