

Mårten Magnus Wilhelm Brenner, Finnish plant enthusiast

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Mårten Magnus Wilhelm Brenner (1843–1930) was a controversial figure in Finnish botany. He was a passionate non-professional botanist, amongst the most diligent Finnish writers of his time having published 220 articles or notes. He described 833 taxa, including 411 species, six subspecies, 196 varieties, four subvarieties, 199 forms and 17 subforms. Typifications of 151 names are provided in a separate article.

Brenner was particularly interested in the *Hieracium* taxonomy, but he studied several other plant genera and species during almost 60 years of botanical activity: *Alnus*, *Erophila* [*Draba*] *verna*, *Euphrasia*, *Juncus*, *Linnaea borealis*, *Picea abies*, *Pimpinella saxifraga*, *Primula officinalis* [*veris*], *Rosa*, *Sorbus aucuparia*, *Taraxacum* and *Viola tricolor*, for example. His descriptions resulted largely from his own collection activity without any synoptic work. Typically, each taxon was based on small, minor details, sometimes on a single or a few specimens, and often characterised by local distribution. Producing detailed infraspecific classifications was common practice in those times, apparently inspired by the German school of taxonomy, which was later called the Aschersonian approach.

For many obvious reasons, botanists of that and later eras did not appreciate Brenner's taxonomic results. Only some *Euphrasia* (one taxa), *Hieracium* (11) and *Taraxacum* (20) names are currently accepted in the Checklist of Finnish vascular plants, and *E. wetstenii* var. *botniensium* has recently been recognised. Brenner's interest was not restricted to vascular plants. He collected an amount of lichens in late 1869 and 1870 on the island of Suursaari in the Gulf of Finland, for example, and he published extensive floristic accounts of Suursaari and northern Finland. He focused also on ecology and was concerned about changes in nature resulting from human activity. In northern Finland he collected bryophytes, many of which were new to Northern Ostrobothnia. He wrote a review of the history of lichenology in Finland, which the editorial board considered supercritical and did not accept, and which he therefore released as a self-published edition.

Brenner became a member of the *Societas pro Fauna et Flora Fennica* in 1863, holding the position of Secretary in 1866–1876, and he was a member of the Printing Committee for the Publication Series in 1873–1878, 1884–1888 and 1890–1894. However, he was disliked because of his arrogant and presumptuous character, and he sometimes referred to the findings of others as his own at the monthly meetings of the *Societas*. Eventually, in 1890, he drifted into a polemical relationship with researchers working at the Botanical Museum. His extensive private herbarium was donated posthumously to the Botanical Museum, nowadays the Botanical Museum (H), Finnish Museum of Natural History (Luomus), University of Helsinki, and, he had already donated several batches of plant specimens he collected on trips funded by the *Society*. *Carex brenneri* Christ. is lectotypified here.

Introduction

Mårten Magnus Wilhelm Brenner (Fig. 1) was born in Helsinki, on 5 May 1843. His parents were shopkeeper Magnus Wilhelm Brenner and Maria Catharina Häggström. He married Emilia Sofia Lindström (1853–1915) in 1833, and they had six children. Brenner died in Inkoo (Ingå) on 24 April 1930.

Brenner graduated from Porvoo secondary school in 1861. He went on to study natural sciences at the Imperial Alexander University of Finland (nowadays the University of Helsinki), receiving his Master's degree in 1869.

Brenner was Swedish-speaking and he wrote his publications in Swedish. Consequently, he used the Swedish names of parishes and other localities if available, but the Finnish parish names are used in this article. Table 1 lists both, as well as the biogeographical provinces (Fig. 2) in which they are located. He lived with his family in Helsinki (Unioninkatu 5) until 1908 when he moved to Svartbäck, Inkoo, where he had built a villa. He collected a lot of plants in these areas.

Fig. 2. Biogeographical provinces of eastern Fennoscandia today. AI / A = Alandia / Ahvenanmaa; Ab / V = Regio aboensis / Varsinais-Suomi; N / U = Nylandia / Uusimaa; Ka / EK / Karelia australis / Etelä-Karjala; Ik / Kk = Isthmus karelicus / Karjalan kannas; St Satakunta; Ta / EH = Tavastia australis / Etelä-Häme; Sa / ES = Savonia australis / Etelä-Savo; Kl / LK = Laatokan Karjala / Karelia ladogensis; Kol / AK = Karelia olonetsensis / Aunuksen Karjala; Oa / EO = Ostrobothnia australis / Etelä-Pohjanmaa; Ta / PH = Tavastia borealis / Pohjois-Häme; Sb / PS = Savonia borealis / Pohjois-Savo; Kb / PK = Karelia borealis / Pohjois-Karjala; Kon / ÄK = Karelia onegensis / Äänisen Karjala; Kton / ÄtK = Karelia transonegensis / Äänisentakainen Karjala; KP / PuK = Karelia Pudogensis / Puutoisten Karjala; Om / KP = Ostrobothnia media / Keski-Pohjanmaa; Ok / KN = Ostrobothnia kajanensis / Kainuu; Kpoc / LV = Karelia pomorica / Länsi-Viena; Kpor / IV = Karelia pomorica orientalis / Itä-Viena; Obo / OP = Ostrobothnia ouluensis / Oulun Pohjanmaa; Obu / PeP = Ostrobothnia ultima / Perä-Pohjanmaa; Ks / Ks = Regio kuusamoënsis / Koilismaa; Kk / PV = Karelia keretina / Pohjois-Viena; Lkk / Kil = Lapponia kittilensis / Kittilän Lappi; Lks / Sol = Lapponia sompiensis / Sompien Lappi; Lim / ImL = Lapponia Imandrae / Imanteron Lappi; Lv / VL = Lapponia Varsugae / Varsugan Lappi; Lp / PoL = Lapponia ponojensis / Ponoin Lappi; Le / EnL = Lapponia enontekiensis / Enontekiön Lappi; Li / InL = Lapponia inarensis / Inarin Lappi; Lps / PsL = Lapponia petsamoënsis / Petsamon Lappi; Lt / TL = Lapponia tulomensis / Tuloman Lappi; Lm / ML = Lapponia murmanica / Muurmannin Lappi.

Career

Brenner was a lecturer at the Helsinki Lyceum from 1868 until 1873, and thereafter he taught mathematics and natural history at the so-called Helsinki Real School, as well as serving as Headmaster until the school closed in 1896 (Elfving 1930, Haapasaari 1994).



Fig. 1. Mårten Magnus Wilhelm Brenner. Finna CC BY 4.0.

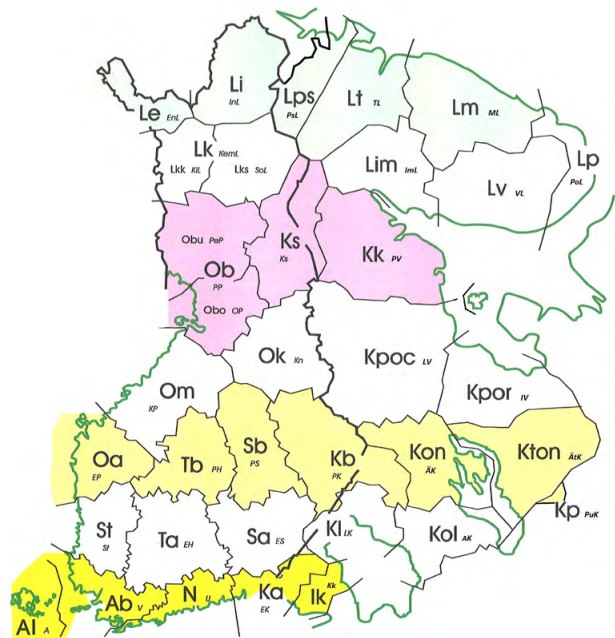


Table 1. List of localities Brenner used in his articles, always in Swedish, and their Finnish equivalent. If lacking in Brenner, municipality or city is given, and the biogeographical province (Fig. 1).

Alkärr [Leppäsuu; Helsinki, N/U]
Artsjö [Artjärvi, N/U]
Berghäll [Kallio; Helsinki, N/U]
Birkkala [Pirkkala, Ta/EH]
Borgbacken [Linnamäki; Porvoo, N/U]
Borgå [Porvoo, N/U]
Brahestad [Raaha, St/St]
Brunnsparken [Kaivopuisto; Helsinki, N/U]
Djurgårdsvilla [Eläintarha; Helsinki, N/U]
Fabriksparken [Tehtaanpuisto; Helsinki, N/U]
Fölisön [Seurasaaari; Helsinki, N/U]
Gamla Kyrkogården [Vanha hautausmaa; Helsinki, N/U]
Gkby, Gamlakarleby [Kokkola, Om/KP]
Gräsviken [Ruoholahti; Helsinki, N/U]
Hafshamnen [Merisatama; Helsinki, N/U]
Haikå [Haiko, N/U]
Hangö [Hanko, N/U]
Helsinge [Vantaa, N/U]
Helsingfors [Helsinki, N/U]
Hogland [Suursaari, Ka/EK]
Hoplax [Huopalahti; Helsinki, N/U]
Ingå [Inkoo, N/U]
Kakkis [Johannes, Ka/EK]
Karjaa [Karis, N/U]
Kexholm [Käkisalmi, KI/LK]
Kides [Kitee, Kb/PK]
Kirjavalaks [Kirjavalhti, KI/LK]
Kjulo [Köyliö, Ab/V]
Konevitz [Konevitsa, KI/LK]
Kronoborg [Kurkijoki, KI/LK]
Kyrkslätt [Kirkkonummi, N/U]
Lampis [Lammi, Ta/EH]
Lappviken [Lapinlahti; Helsinki, N/U]
Libelits [Liperi, Kb/PK]
Limingo [Liminka, Obo/OP]
Limingo äng [Liminganniitty, Obo/OP]
Lojo [Lohja, Ab/V]
Lovisa [Loviisa, N/U]
Nagu [Nauvo, Ab/V]
Observatoriiberget [Tähtitornimäki; Helsinki, N/U]
Pargas [Parainen, Ab/V]
Pernå [Pernaja, N/U]
Petrosawodsk [Petroskoi, Kol/AK]
Raumo [Rauma, St/St]
Runsala [Ruissalo; Turku, Ab/V]
Ruokolaks [Ruoholahti, Sa/ES]
Rödbergen [Punavuori; Helsinki, N/U]
Sandviken [Hietalahti; Helsinki, N/U]
Sibbo [Sipoo, N/U]
Skatudden [Katajanokka; Helsinki, N/U]
Strömfors [Ahvenkoski; Ruotsinpyhtää, N/U]
Sumparn [Sompassaari; Helsinki, N/U]
Tavastehus [Hämeenlinna, Ta/EH]
Tiudie [Tivdiya, Kon/AK]
Tyrvis [Tyrvää, St/St]
Tölö [Töölö; Helsinki, N/U]
Töölöpark [Töölönpuisto; Helsinki, N/U]
Uguniemi [Uukuniemi, KI/LK]
Uleå [Oulu, Obo/OP]
Ulrikasborgberget [Ullanlinnanmäki; Helsinki, N/U]
Wasa [Vaasa, Om/KP]
Wesilaks [Vesilahti, Ta/EH]
Vihtis [Vihti, Ab/V]
Willmanstrand [Lappeenranta, Sa/ES]
Åbo [Turku, Ab/V]
Åbo skärgård [Turku archipelago, Ab/V]

Societas pro Fauna et Flora Fennica

After a few years of studying Brenner was accepted as a member of *Societas pro Fauna et Flora Fennica* (hereafter *Societas*) on 13 March 1863, along with future Professor in Botany Johan Petter Norrlin (1842–1917), Forester Frans Johan Frithiof Silén (1839–1912) and Karl Johan Wilhelm Unonius (1840–1910), a senior teacher in Natural History and Calligraphy at the Swedish Normal Lyceum. All were active botanists. Professor of Botany and renowned lichen researcher William Nylander (1822–1899) was President of *Societas* at the time, but he moved to Paris in the same year.

When he was still a student, Brenner was appointed Secretary of *Societas*, a position he held from 1866 to 1876 (Norrin & Palmén 1896), and he was also a member of the Printing Committee for the 1873–78, 1884–88 and 1890–94 publication series (Fr. Elfving 1921). He was elected an honorary member of the society on his 80th birthday in 1934 (Palmgren 1925).

Brenner produced reports on the monthly meetings of *Societas* in 1871–76, and he published botanical notes (e.g. Brenner 1873, 1889a) for the Lund botanical series *Botaniska Notiser*.

Early field trips

Brenner made many expeditions as a young man, probably inspired by his early teacher in Porvoo, skilled plant expert Johan Elias Strömborg (1833–1900). Strömborg had previously been plant hunting with Erik Niklander (1835–1856), and with Professor Anders Thiodolf Saelan (1834–1921) who worked as a doctor at Lapinlahti Hospital in Helsinki. All three were keen plant experts, whether amateur or professional. Norrlin and Saelan were also active members of *Societas*.

Brenner spent his first university vacation in the summer of 1862 collecting plants in Ahvenanmaa (Alandia, Al/A), Uusimaa (Nylandia, N/U) and Varsinais-Suomi (Regio aboënsis, Ab/V), which he donated to the Botanical Museum (H*) (Elfving 1930). In the following summer he col-

*H is the official acronym of the Botanical Museum, Finnish Museum of Natural History (Luomus), University of Helsinki.

lected plants from the Kola Peninsula and the coasts of the Arctic Ocean, accompanied by Nils Isak Fellman (1841–1919), a bachelor of natural sciences (Fellman 1869, 1882), and with Nils Johan Laurin (1842–1904), a student. The routemap is given in Sennikov & Kozhin (2018).

Northern Ostrobothnia

Societas supported Brenner's expedition to Northern Ostrobothnia in 1864. He was accompanied by Berndt Axel Nyberg (1840–1924), who would become a senior teacher of mathematics and physics. Nyberg focused his studies on Kuusamo in particular, whereas Brenner concentrated on the coastal area of Bothnian Bay. Nyberg (1864) mentions 325 taxa in his travel report. He collected 341 vascular plant specimens for the Botanical Museum, whereas Brenner collected 339. The demarcation of *Ostrobothnia borealis* (O in Fig. 3) at the time (W. Nylander & Saelan 1859) was much broader than nowadays, and included *Ostrobothnia ouluensis* (today Obo/OP), *Ostrobothnia kajanensis* (Ok/Kn) and the southern parts of *Regio kuusamoënsis* (Ks/Ks) and *Ostrobothnia ultima* (Obu/PeP).

Societas also sponsored Brenner's trip to Northern Ostrobothnia in 1869, specifically in the southern parts of the region from east to west, including the parish of Kuusamo and some of Northern Karelia (Lindberg 1871, Elfving 1921): his visit in 1870 was at his own expense. *Carex* × *elytroides* [*C. acuta* × *nigra*] was discovered in Liminka, and *Poa caesia* [*P. glauca*] in Kuhmo (Brenner 1871e). Significant findings in Oulu included *Achillea ptarmica*!, and *Bidens cernua* var. *radiata* [*B. radiata*] (Brenner 1871e), the former nowadays being very common in the area. He pointed out later (Brenner 1874a) that the information on Oulu was from the nearby parish of Ii.

The 1869 travel account is brief, but hundreds of species are mentioned (Brenner 1878b), including *Carex incurva* [*maritima*] in Oulu. The specimen at H is lost (Laine 1997). There are speculations implying that Brenner's critic Harald Lindberg (1871–1963), custodian of the botanical museum, discarded the sample because he considered the information unreliable (Ulvinen, Tauno, pers. comm. 1997). Indeed, it is not currently list-

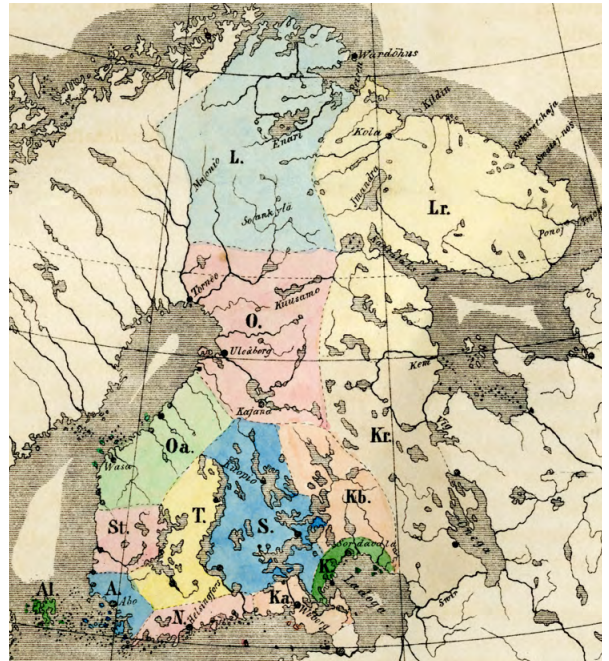


Fig. 3. Biogeographical provinces of eastern Fennoscandia in 1859 (Nylander & Saelan 1859).

ed among the flora of Finland. Its discovery was entirely possible, given that species such as *Primula nutans*, which primarily occurs along the Arctic coast, grow on the shores of the Bothnian Bay (Ericsson & Wallentinus 1979). *Euphrasia micrantha* was described as a new species (see the section entitled Euphrasia).

Brenner met Emil Hougberg (1857–1909) in Oulu (Väre et al. 2005), as well as Fredrik Nylander (1820–1880) (Väre 2007, 2008). Both were skilled plant experts. Hougberg presented his herbarium, which Brenner regarded as an almost comprehensive collection of regional flora. Hougberg, a physician and later a professor, frequently visited Oulu from the late 1860s until the 1880s. Most of his collections are currently unknown, but Brenner often mentioned them (Väre et al. 2005). The mosses found during the 1869 expedition contained several taxa that were new to Northern Ostrobothnia (Brenner 1896a).

Islands in the Gulf of Finland

Societas funded Brenner's 1867 expedition to the islands on the eastern side of the Gulf of Finland (Lavansaari, Suursaari, Tytärsaari and some less-

er ones). He described the names of the places and the flora in great detail (Brenner 1871b), having found 412 species of vascular plants, 285 of which were dicotyledons, 108 monocotyledons, 18 pteridophytes and one algae, *Chara aspera*. He also mentions six subspecies (*), 33 varieties (var.) and 20 forms (f.). Brenner consistently used these abbreviations in his articles for taxonomic ranks, as well as subvar. for subvarieties, and subf. for subforma. He lists the species in tables and provides more specific information about the growing sites, and also notes the findings of previous researchers. He re-visited the islands four times between 1870 and 1873, and he describes a few new forms of vascular plants in the supplement (Brenner 1871c). The known number of vascular plant taxa in the islands was 422 in Brenner's time (Brenner 1884), with one significant new taxon, *Cotoneaster niger* (*C. laxiflorus*), reported by Vainio, that does not grow in present-day Finland. Saalan's reference to *Poa compressa* as an original species from Suursaari prompted Brenner (1900m) to point out that it must have been recently established as alien to the island because he had not discovered it. Brenner's investigations on the islands served as a basis for later expeditions.

Following his field trips Brenner collected samples in and around Helsinki in particular. He retired in 1896, when he moved to Inkoo and continued his collecting there.

After his death his extensive collection was donated to the Botanical Museum in Helsinki (H).

Lichenologist

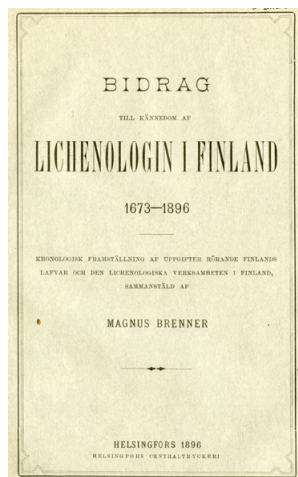
Brenner also collected lichens, especially from Suursaari in the Gulf of Finland. W. Nylander reviewed or determined his collections. It comprised 402 taxa (Brenner 1886a), including new species, which were described by Nylander, e.g. *Lecidea* = *Fuscidea hoglandica* and *Thelocarpon conoidellum* (H). At a *Societas* meeting on 4 February 1899, Brenner (1900l) reported new determinations by Nylander concerning some previous ones done by another famous well-known lichenologist, Edvard Vainio (1853–1929).

There is a hand-written Swedish version of W. Nylander's *Synopsis methodica Lichenum* in the archives of the Botanical Museum (H), probably translated by Brenner. After Nylander's death Brenner presented Grilli's (1899) obituary at a monthly meeting of *Societas* (*Luonnon Ystävä* 3: 193, 1899). Those who knew them described Brenner's and Nylander's characters as compatible.

Enthusiastic about lichens, Brenner compiled a history of research on their occurrence in Finland, to be published in *Societas* for its 75th anniversary in 1896. However, the editorial board considered it over-critical and did not accept it, so Brenner (1896j) released it as a self-published edition (Fig. 4).

Plant Exchange Societas of Helsinki

The *Zoological-Botanical Association (ZBA)* was founded in 1869 by the Faculty of Physical and Mathematical Sciences. At a meeting on 19 February, and probably inspired by the corresponding association at Uppsala (Floderus & Krok 1861), world-famous bryologist Viktor Ferdinand Brotherus (1849–1929) put forward a proposal to establish the *Plant Exchange Societas of Helsinki (PESH)*; Pesola 1915). During the same year, Brotherus, August Johan Malmberg (later Aukusti Juhana Mela) (1846–1904) and Brenner anony-



◀◀ Fig. 4. Cover of History of lichenology in Finland (Brenner 1896).

◀ Fig. 5. First exchange catalogue of Plant Exchange Societas of Helsinki (Brenner et al. 1869).

mously compiled a catalogue entitled "A List of Finnish Seed Plants and Pteridophytes and their Relative Exchange Value" (Fig. 5) (Saelan 1916).

PESH began its activities on 1 October 1869. An exchange value of five to 100 was established for approximately 340 taxa of monocotyledons, 845 dicotyledons, six conifers and 56 pteridophytes (Brenner et al. 1869). For this, the team had to estimate the frequency of the 1,245 vascular plant taxa known to occur in Finland.

Of the 26 members of PESH in 1872, 16 had collected 280 species and 2,570 samples, with a total exchange value of 34,445. Adding the previous collections brought the total value to 110,945. Many other Botanical Societies compiled similar exchange lists. Brenner (1871a) described the activities of PESH, which in practice was administered by a student, Otto Collin (1850–1924) (Brenner 1872). Pesola (1915) compiled its history.

Brenner was active at ZBA, as secretary in 1870–71 and vice-chair in 1874–77. The aim was to bring together biology teachers and students (Elfving 1930). He briefly described the activities of these associations and of *Societas* in *Botaniska Notiser*, 1871–76.

The Yenisei expedition

Young Brenner proved to be a promising botanist, and because of this he was invited to be an interpreter on the Yenisei expedition in 1876, led by Professor Nils Adolf Erik Nordenskiöld (1832–1901). Johan Reinhold Sahlberg (1845–1920), a future Professor of Entomology from Finland, was among the participants. Sahlberg collected insects, as well as vascular plants including those from Chantaik, which Arnell and Brenner did not visit (Scheutz 1888): the list is in the archives of the Botanical Museum (H).

Other naturalists on the expedition included bryologist Hampus Wilhelm Arnell (1848–1932) and zoologist Johan Hjalmar Théel (1848–1937). Théel's (1877) report includes a map of the area studied. The expedition comprised two groups, one travelling by land and the other by sea. The land journey, which Brenner joined, began in St. Petersburg on 6 May 1876: see Fig. 6 and Table 2 for the list of localities visited and the dates.

Arnell and Brenner collected 700 plant species. Scheutz (1888), writing in *Plantae vasculares Jeniseenses*, focused mainly on those collected by Arnell, and gives a historical account of previous expeditions to the area. The first visiting researcher was Daniel Gotlib Messerschmid from Germany (1685–1735), in the 1720s, and his fellow German Johann Georg Gmelin (1709–1755) explored the area in 1739. Brenner was honoured, *Carex brenneri* H. Christ. in Scheutz [= *C. umbrosa* subsp. *sabynensis*] was described as new to science.

The Yenisei expedition was difficult for Brenner, whose health was failing (*Helsingfors Dagblad* 329, December 2 1876). He went on to spend six years (1877–83) in Central Europe attending to his health (Haapasaari 1994). There is no report on the nature of his illness. He did not publish anything during that time, but he collected plants at least in Switzerland in 1879 (H) and Austria in 1882 (H).

It was not until much later that Brenner (1910b) published his extensive list of species at various collection sites, possibly because of his weakened condition after the expedition. He included a list of phenological observations and a list of localities in which he studied. In 1876 *Helsingfors Dagblad* published the travelogues Brenner wrote during the expedition under the heading *Från Jenisej-expeditionen* (Numbers 139, 200, 255) and *Jenisei-fararne* (277, 329).

Brenner's Flora for Pupils

After returning from Central Europe, Brenner (1886h) published a textbook for pupils entitled *Floristik Handbok* (Fig. 7). As part of their educational programme pupils had to prepare an extensive herbarium. Otto Alcenius (1838–1913), an early Finnish Darwinist and a teacher of mathematics and natural history, had already produced a textbook with a similar purpose (Alcenius 1863, 1878), but it had sold out. Brenner's *Flora* has its merits, such as its descriptions of some new plant families, its explanations of the scientific names and acronyms used by the authors and its extensive list of terminology, with explanations.

Flora covered the politically defined Finland of the time, but species occurring only in northern

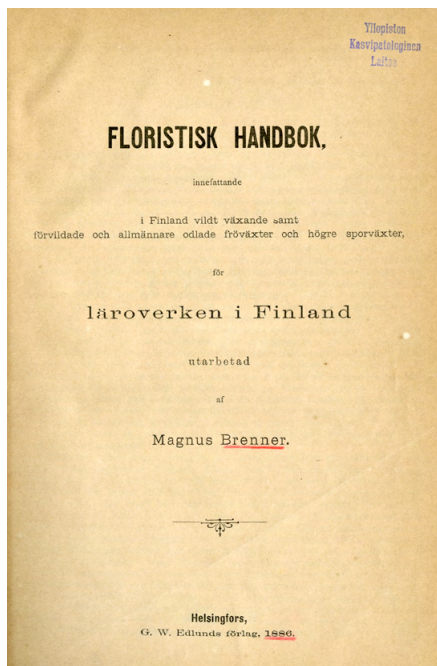


Fig. 7. Cover of Brenner's (1886) Flora for Pupils.

▼ Fig. 8. Biogeographical provinces of eastern Fennoscandia in 1899 (Brenner 1899).



Finland, such as in the Province of Lapland, were not counted. It presents 1,299 species and varieties, comprising 937 (including 32 *Hieracium*) dicotyledons, 310 monocotyledons, 10 conifers and 42 pteridophytes, many ranked as a variety. The numbers include 156 crops, 29 of which had been naturalised, and 50 were ballast newcomers. If these are excluded, the comparable taxon number with other floras of the time is 1,043. Cultivated plants and alien species were not normally included in other floras. Six new varieties were described (M. Br. as the auctor acronym, later officially Brenner), without locality information.

Collin (1888) reviewed *Flora* critically, pointing out many minor mistakes. Some of the scientific nomenclature was outdated, there were many unnecessary varieties and forms and many hybrids presented as species, for example. No new editions were published, but several editions of Alenius' book were used in Swedish-language schools until the 1960s: the 13th edition appeared in 1958 (Nordström 1958).

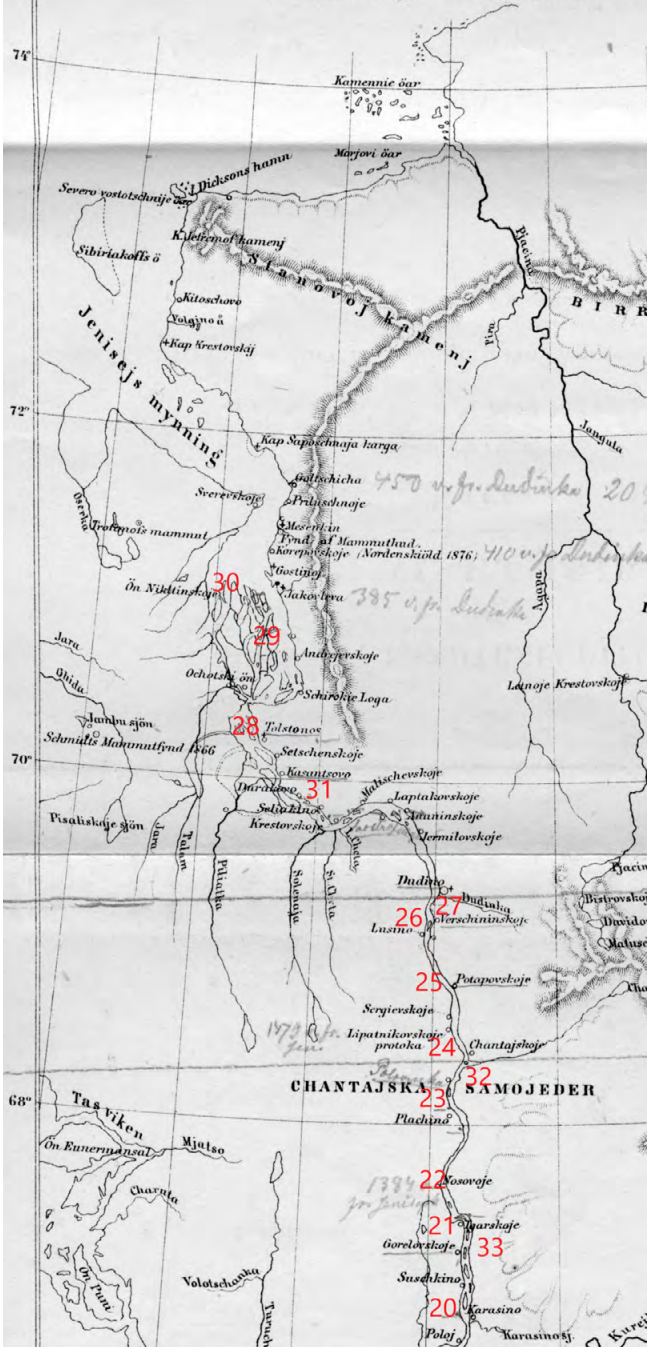
Back in Northern Ostrobothnia

The so-called Helsinki Real School closed in 1896, which meant that Brenner (1899) could complete his main work, a compilation of Northern Ostrobothnian plants, which he corrected and supplemented (Brenner 1911a). Biogeographical provinces were redefined (Fig. 8) following the publication of his previous article (Brenner 1871e). The work was criticised later in his obituary: "Brenner's great, time-consuming work, delayed by circumstances, seemed like a ghost of times gone by" (Elfving 1930). Despite this criticism, Brenner's 1899 summary of plants in Northern Ostrobothnia is still a significant source. It contains information on the species in the area at that time, all observations from different municipalities. Possible shortcomings include the fact that the ecological data is very poor, and Brenner's own data is limited. Four *Hieracium* taxa are described as new to science, six others as a rank of varieties and six as forms. There are 35 scientific names without a description. The flora ends on p. 307 thus: "May God Protect the Fatherland". This could reflect the fact that the oppressive years of the Russian Duma had begun.

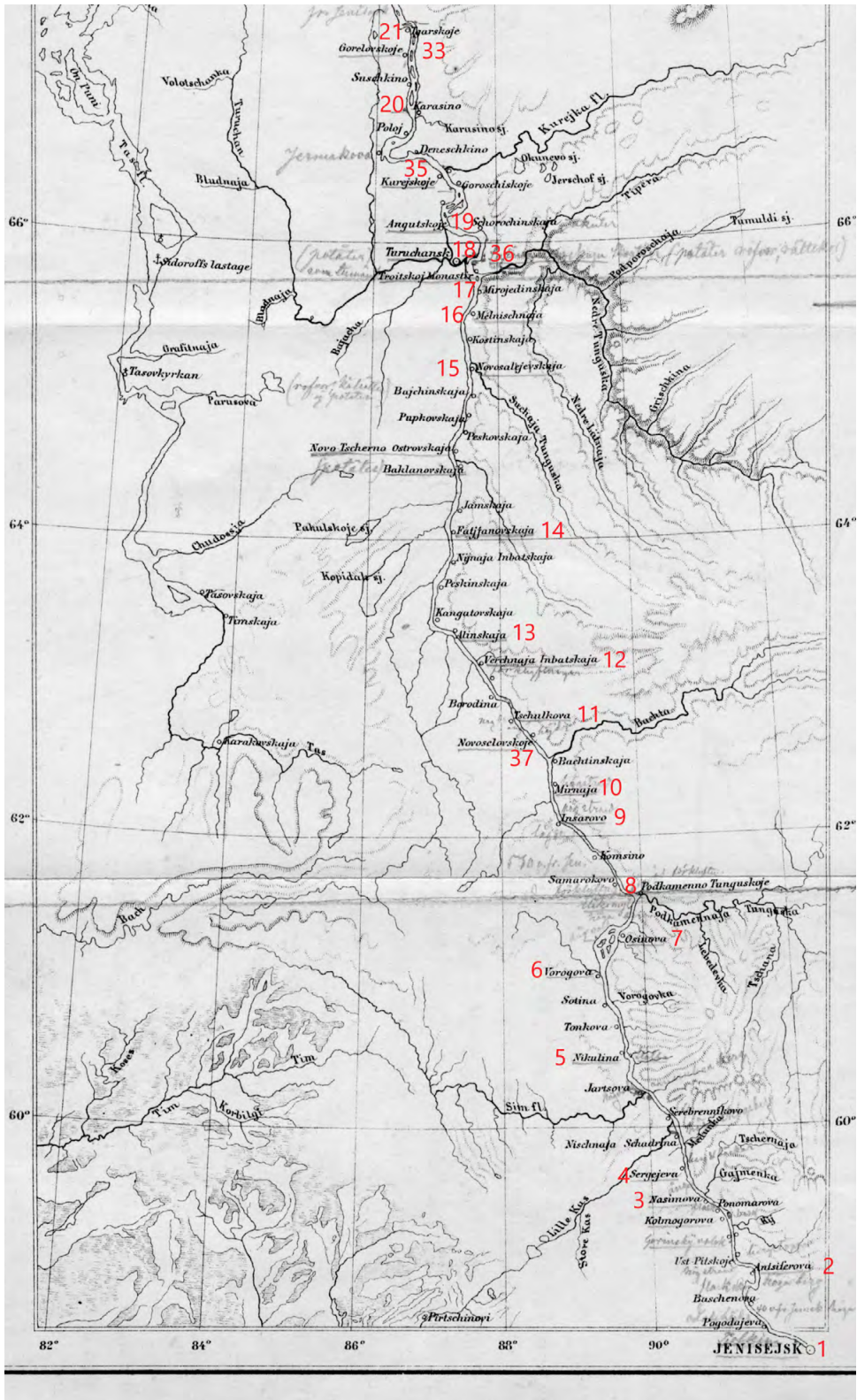
Karta
öfver
JENISEJS NEDRE LOPP,
efter Ryska officiella källor och Prof. Nordenskiölds kartor

• Ortbestämningar af Prof. Nordenskiöld (1875).

Fig. 6. Itinerary of the Yenisei expedition in 1876 (Théel 1877).



Date	Locality name i Théel (1877)	No in map (red)
25 VI	Jenisejsk	1
26-27 VI	Antsiferova	2
28 VI	Nasimova	3
29 VI	Sergejeva	4
30 VI	Nikulina	5
1 VII	Stolba	
2 VII	Vorogova	6
3 VII	To Osinova	
4 VII	Osinova	7
5 VII	Uskij mys	
6 VII	Podkamenn Tunguskaja	8
7 VII	Insarjovo	9
7 VII	Mirnaja	10
8 VII	Tschulkova	11
9 VII	Verchnje Inbatskaja	12
9 VII	Alinskoje	13
10 VII	Fatijanova	14
11 VII	Novo Salievskoje; Mjelnitschnaja	15
12 VII	Mjelnitschnaja	16
13 VII	Monastirskaja / Troitskij monastir	17
14 VII	Nischnaja Tunguska	17
15-16 VII	Chantajka; Turuchansk	18
17 VII	Chantajka	18
18 VII	Chantajka, N shore of Jenisejsk protok	18
19 VII	Angutsckaja; opposite to Goroschino	19
20 VII	Opposite shore to Karasino	20
21 VII	Opposite shore to Igarskoje	21
22 VII	S of Plachino	22
23 VII	N of Plachino	23
24 VII	Chantajka	24
25 VII	Protok; Patapovskoje	25
26 VII	Verschininskoje	26
27-28 VII	S of Dudinka	27
29 VII-8 VIII	Dudinka	27
9-10 VII	Tolstoj nos	28
11-12 VIII	Malo Briochovskij	29
13-24 VIII	Nikandrovsckij	30
25 VIII-4 IX	Tolstoj nos	28
5 IX	Malyschevo; Kretsovskoje; Seljäkina;	
	Kasantsova	31
6 IX	Saostrovskoje	27
7-9 IX	Dudinka	27
10-13 IX	Dudinka; Saostrovskoje	27
14 IX	Protok	26
15 IX	Polovinka	32
16-17 IX	Gorelovo	34
18 IX	Kurejka	35
19 IX	Salivanova	36
20 IX	Monastirskaja / Troitskij monastir	17
21-22 IX	To Fatijanova	
23 IX	Fatijanova	14
24 IX	To Verchnje Inbatskaja	
25 IX	Verchnje Inbatskaja	12
26 IX	Novo Sjolovskoje	15
27 IX	Lebjevevo eller Insarjovo	37
28 IX	Podkamenn Tunguskaja	8
29 IX	To Vorogova	
30 IX	Vorogova	6
1 X	Nikulina	5
2 X	To Gorinskija volok	
3 X	Gorinskij volok; Kolmogorova	38



”Microspecies”, varieties and form

Brenner was a botanical enthusiast, probably the most diligent Finnish amateur writer of his time, with 220 articles. Most of these were brief communications presented in *Societas* meetings, but there were also broader reviews, especially of apomict vascular plants. He published 100 articles before 1901 (Saelan 1916), and Collander et al. (1973) listed the newer ones. Most of them were published in *Societas* series: *Acta Societatis pro Fauna et Flora Fennica*, *Meddelanden af Societas pro Fauna et Flora Fennica* and *Notiser ur Sällskapet pro Fauna Flora Fennica*. The first two are continuations of the last-mentioned. Apart from his scientific descriptions of new taxa, he focused on floristic records and teratology.

Brenner enthusiastically devoted himself to polymorphic genera and species, to describing new varieties and forms. However, he lacked a broader view of the variation in morphology of a species throughout its range. It was obviously important to name as many new taxa as possible. Producing detailed infraspecific classifications was common practice in those times, apparently inspired by the German school of taxonomy, known later as the Aschersonian approach and represented in Finland e.g. by Harald Lindberg, custodian of the Alexander University Herbarium (Väre 2010, 2012).

Hieracium studies

Nägeli’s (1885) monograph on Central European *Hieracium* is the basic work of this genus, providing a macrospecies view and distinguishing ”basic” (”Hauptarten”, ”species principales”) from ”intermediate” (”Zwischenarten”, ”species intermediae”) species. Basic species have unique morphological characteristics, whereas intermediate species present a combination of the morphological characteristics of two or more basic species and, as inferred in many cases from early crossing experiments (Peter 1884), are assumed to be hybrid in origin. Later, Ostenfeld & Raunkiaer (1903) studied the apomixis (asexual seed production) phenomenon in *Hieracium*. Apomictic plant genera facilitated the identification of numerous new ”micro-species”. *Hieracium* taxa de-

scribed by Finnish taxonomists are listed in Sennikov (2002).

At an early age, Brenner (1871b) described one new subspecies, *H. vulgatum* subsp. *flaccidum* from the island of Suursaari. More than a decade had passed when he returned to the *Hieracium* taxonomy. He treated *Pilosella* as a subgenus of *Hieracium*.

Spridda bidrag till kännedom af Finlands *Hieracium*-former I–VII

Brenner published a seven-part series entitled ”Scattered contributions to current knowledge of Finnish *Hieracium*”. The **first** part deals mainly with taxa from southern Finland, Nylandia [N/U], and introduces 89 new taxa to science, of which 42 species, 40 varieties and 7 forms (Brenner 1892a). Kihlman (1893b: 107) provided a summary in German.

Brenner introduces taxa from Northern Ostrobothnia in the **second** part, and describes 34 new species, nine varieties and two forms (Brenner 1893a). The **third** part concerns the taxa of Nylandia [N/U], with 42 new species, 13 crosses, 39 varieties and 25 forms that were new to science (Brenner 1894a). He continues with the taxa of Nylandia [N/U] in the **fourth** part, describing 69 new species, 16 varieties and three forms (Brenner 1895a). The **fifth** part deals with the taxa of western Nylandia [N/U], mentioning 76 taxa, of which 14 new species, six varieties and seven forms were described (Brenner 1897). The **sixth** part concerns the taxa of Nylandia [N/U] and *Tavastia asutralis* [Ta/EH], describing 92 new species, 22 varieties and five forms (Brenner 1903a), and the **seventh** part continues the process, with 26 new species, seven varieties and eight forms (Brenner 1903b).

A few notes on *Hieracium*

Brenner (1895d) introduced three new taxa without naming them. From Northern Ostrobothnia he described four taxa, three species and one variety (Brenner 1899). He found *Hieracium sabulosorum* ”sabuletorum”, which is common in Sweden, in Ruskeala [K1/LK] (Brenner 1900r), new *Eupilosella* (*Pilosella*) in Inkoo and Kirkkonummi; he also identified a new species in the lat-

ter area, *H. fuscovillosum* (Brenner 1901d). *Hieracium cymosum* was found in Sipoo (Brenner 1902d), three new species and one variety in northern Finland (Brenner 1902e) as well as four new species (Brenner 1907h).

Hieracologiska meddelanden I–VIII

Brenner also published an eight-part series entitled "Communications on Hieracium": **I** and **II**, *Alandia* and *Karelia*, three new species, one variety and one form (Brenner 1904i); **III**, six new species, three varieties and one form (Brenner 1904l); **IV**, 15 new species, three varieties and three forms (Brenner 1906i); **V**, two new varieties and one form (Brenner 1908l); **VI**, four new species in Kuusamo (Brenner 1909d); **VII**, three new species and one variety (Brenner 1925c); **VIII**, six new species from Inkoo [N/U] (Brenner 1925l).

All in all, Brenner described or named 642 *Hieracium* taxa, 367 species, five subspecies, 185 varieties, three subvarieties and 70 forms (Table 3). Three of the names were previously described by himself, for which he provided *nomina nova*, and nine names without descriptions. He also mentions dozens of hybrids in subg. *Piloselloidea* in his publications without giving them scientific names, as well as making 120 nomenclatural combinations and providing a further 39 scientific *Hieracium* names without describing them.

Brenner's activity was extensive, and his names of new species sometimes predated those established by Norrlin. The priority of just a few of Brenner's plant names is recognised in Hackman & Sennikov (1998).

Table 3. *Hieracium* names provided by Brenner, including seven new combinations he did. A = Acta Societas pro Fauna et Flora Fennica, M = Meddelanden af Societas pro Fauna et Flora Fennica, N = Notiser ur Sällskapet pro Fauna Flora Fennica.

H. abbrevians Brenner, M 50: 63. 1925l.
H. abradenum Brenner, A 9(5): 33. 1893a.
H. abreptum Brenner, A 13(1): 42. 1895a.
H. abreptum var. *villigerens* Brenner, A 25(2): 19. 1903a.
H. aciculare Brenner, A 13(1): 42. 1895a.
H. aciculare var. *exstriatum* Brenner, A 25(2): 20. 1903a.
H. acrolepis Brenner, A 25(2): 28. 1903a.
H. acrotrichum Brenner, A 13(1): 34. 1895a.
H. adeneilema Brenner, A 25(2): 34. 1903a.
H. adenochaetum Brenner, A 25(2): 16. 1903a.
H. adenocladum Brenner, M 31: 148. 1906i.
H. adenotrichum Brenner, A 25(2): 63. 1903a.
H. adsistens Brenner, A 25(2): 48. 1903a.
H. aequiflorum Brenner, A 25(2): 67. 1903a.

H. aequifolium Brenner, M 50: 66. 1925l.
H. aequilingua Brenner, A 25(2): 17. 1903a.
H. albicans Brenner, A 25(2): 77. 1903a.
H. albicapillum Brenner, A 16(1): 16. 1897.
H. albiciliatum Brenner, A 12(1): 18. 1894a.
H. albicinum Brenner, A 12(1): 12. 1894a.
H. albidoglaucum Brenner, A 12(1): 31. 1894a.
H. albotomentosum Brenner, A 25(2): 43. 1903a.
H. alboviride Brenner, M 18: 112. 1892a.
H. alboviride var. *breviflorum* Brenner, A 16(1): 13. 1897.
H. alticeps Brenner, A 13(1): 34. 1895a.
H. ambustum Brenner, A 25(2): 49. 1903a.
H. angulatum Brenner, A 16(1): 13. 1897.
H. angusticeps Brenner, M 18: 107. 1892a.
H. angusticeps var. *glandulosus* Brenner, M 48: 139. 1925c.
H. anodon Brenner, A 16(1): 11. 1897.
H. anomalum Brenner, A 13(1): 52. 1895a.
H. apargioides (Norrl. ex Naeg. & Peter) Brenner, A 12(1): 40. 1894a.
H. arcuatum Brenner, A 16(1): 15. 1897.
H. aridicola Brenner, A 25(2): 50. 1903a.
H. articeps Brenner, M 50: 63. 1925l.
H. asperellum Brenner, A 13(1): 8. 1895a.
H. assimilatum Norrl. var. *leucoideum* Brenner, M 29: 141. 1904i.
H. assimilatum var. *albuliceps* Brenner, A 12(1): 12. 1894a.
H. assimilatum var. *nudulum* Brenner, A 12(1): 12. 1894a.
H. atribarbatum Brenner, A 25(2): 66. 1903a.
H. atricapitatum Brenner, M 35: 121. 1909d.
H. atricomum Brenner, M 18: 105. 1892a.
H. atriglandulosum Brenner, M 50: 65. 1925l.
H. atriplex Brenner, A 9(5): 30. 1893a.
H. atrisetum Brenner, A 13(1): 47. 1895a.
H. auricula f. *brachyaetum* Brenner, A 12(1): 38. 1894a.
H. auricula f. *brevivittatum* Brenner, A 12(1): 36. 1894a.
H. auricula f. *chaetocephalum* Brenner, A 12(1): 36. 1894a.
H. auricula f. *chaetolepis* Brenner, A 12(1): 37. 1894a.
H. auricula f. *chaetophorum* Brenner, A 12(1): 38. 1894a.
H. auricula f. *criniceps* Brenner, A 12(1): 37. 1894a.
H. auricula f. *epitrichum* Brenner, A 12(1): 35. 1894a.
H. auricula f. *laeviceps* Brenner, A 12(1): 34. 1894a.
H. auricula f. *leptochaetum* Brenner, A 12(1): 38. 1894a.
H. auricula f. *microchaetum* Brenner, A 12(1): 37. 1894a.
H. auricula f. *mucronatum* Brenner, A 12(1): 34. 1894a.
H. auricula f. *paucisetum* Brenner, A 12(1): 36. 1894a.
H. auricula f. *rarglandulosum* Brenner, A 16(1): 21. 1897.
H. auricula f. *seticeps* Brenner, A 12(1): 35. 1894a.
H. auricula f. *seticollum* Brenner, A 12(1): 38. 1894a.
H. auricula f. *setosum* Brenner, A 12(1): 33. 1894a.
H. auricula f. *setuliceps* Brenner, A 12(1): 34. 1894a.
H. auricula f. *setuliferum* Brenner, A 12(1): 35. 1894a.
H. auricula f. *subcomosum* Brenner, A 12(1): 33. 1894a.
H. auricula f. *subepilobum* Brenner, A 12(1): 34. 1894a.
H. auricula f. *tenuisetum* Brenner, A 12(1): 34. 1894a.
H. auricula var. *infundibulare* Brenner, A 12(1): 39. 1894a.
H. auricula var. *laetibracteum* Brenner, A 12(1): 36. 1894a.
H. auricula var. *megalocladum* Brenner, A 12(1): 38. 1894a.
H. auricula var. *melaenum* Brenner, A 12(1): 37. 1894a.
H. auricula var. *melanocalyx* Brenner, A 12(1): 38. 1894a.
H. auricula var. *minutale* Brenner, A 12(1): 36. 1894a.
H. auricula var. *normale* Brenner, A 12(1): 33. 1894a.
H. auricula var. *obscuriceps* (Naeg. & Peter) Brenner, A 12(1): 34. 1894a.
H. auricula var. *parvicalyx* Brenner, A 12(1): 36. 1894a.
H. auricula var. *pterolepis* Brenner, A 12(1): 35. 1894a.
H. auricula var. *pterophorum* Brenner, A 12(1): 38. 1894a.
H. auricula var. *stenopterum* Brenner, A 12(1): 35. 1894a.
H. auricula var. *stipitatum* (Naeg. & Peter) Brenner, A 12(1): 34. 1894a.
H. barbatulum Brenner, A 9(5): 33. 1893a.
H. basifolium var. *apricola* Brenner, A 13(1): 17. 1895a.
H. basifolium var. *apricorum* Brenner, M 18: 110. 1892a.
H. basifolium var. *dissectifolium* Brenner, M 18: 110. 1892a.
H. basifolium var. *tomentosulum* Brenner, A 9(5): 21. 1893a.
H. botniense Brenner, A 9(5): 10. 1893a.
H. brachycalyx Brenner, A 13(1): 47. 1895a.
H. brachyeilema Brenner, A 13(1): 56. 1895a.
H. brachysoma Brenner, A 25(2): 71. 1903a.

- H. brachytes* Brenner, A 25(2): 64. 1903a.
H. brevipes Brenner, A 12(1): 23. 1894a.
H. brevipes var. *reductum* Brenner, A 12(1): 24. 1894a.
H. brevittatum Brenner, A 25(2): 31. 1903a.
H. caesiiceps Brenner, M 18: 118. 1892a.
H. caesiiceps var. *firmum* Brenner, M 18: 118. 1892a.
H. caesiiflorum var. *subcanitiosum* Brenner, M 31: 149. 1906i.
H. caesitium (Norrl.) Brenner, A 18: 122. 1892a.
H. caesium f. *angustifolium* Brenner, M 31: 14. 1906i., nomen nudum.
H. caesium var. *cinericeps* Brenner, M 18: 112. 1892a.
H. caesium var. *minoriceps* Brenner, A 13(1): 13. 1895a.
H. caesium var. *stellulatum* Brenner, M 18: 112. 1892a.
H. caesium var. *versidens* Brenner, M 18: 112. 1892a.
H. caespitifforme Brenner, A 25(2): 15. 1903a.
H. canaliculatum Brenner, M 18: 104. 1892a.
H. canomarginatum Brenner, M 29: 140. 1904i.
H. canovirens Brenner, A 25(2): 25. 1903a.
H. ceradenium Brenner, A 25(2): 33. 1903a.
H. chloreloma Brenner, A 13(1): 39. 1895a.
H. chloroloma Brenner, A 25(2): 46. 1903a.
H. chloroloma f. *flagelliferum* Brenner, A 25(2): 47. 1903a.
H. chloroloma f. *valdelaceratum* Brenner, M 31: 160. 1906i.
H. chloroptermum Brenner, A 25(2): 61. 1903a.
H. chlorostigma Brenner, A 16(1): 20. 1897.
H. cincinnulatum Brenner, M 18: 119. 1892a.
H. cincinnulatum var. *chlorelloides* Brenner, M 18: 120. 1892a.
H. cincinnulatum var. *oophyllum* Brenner, A 13(1): 19. 1895a.
H. cinericeps Brenner, M 18: 92. 1892a.
H. cinericeps var. *firmifolium* Brenner, A 16(1): 7. 1897.
H. coactile Brenner, A 13(1): 62. 1895a.
H. coactile var. *abrasulum* Brenner, A 25(2): 28. 1903a.
H. coalescens var. *subcongregatum* Brenner, M 31: 161. 1906i.
H. cochlearifolium Brenner, A 12(1): 25. 1894a.
H. collatum f. *curtifolium* Brenner, M 31: 157. 1906i.
H. comparile Brenner, M 35: 122. 1909d.
H. comulatum Brenner, A 25(2): 32. 1903a.
H. concinnum Brenner, A 16(1): 14. 1897.
H. condyloides Brenner, A 9(5): 12. 1893a.
H. conforme Brenner, M 18: 116. 1892a.
H. conglobatum Brenner, A 12(1): 22. 1894a.
H. conglobatum f. *brachiolatum* Brenner, A 13(1): 36. 1895a.
H. conglobatum f. *parcisatum* Brenner, A 13(1): 36. 1895a.
H. coniocephalum Dahlst. ex Brenner, A 25(2): 12. 1903a.
H. conioops subsp. *helvolum* Norrl. ex Brenner, A 16(4): 255. 1899.
H. conioops var. *hebescens* Brenner, A 9(5): 21. 1893a.
H. conolepis Brenner, A 9(5): 29. 1893a.
H. conspersum (Norrl.) Brenner, A 12(1): 53. 1894a.
H. contractum (Norrl.) Brenner, A 12(1): 6. 1894a.
H. contractum var. *setifolium* Brenner, A 12(1): 6. 1894a.
H. contrarium (Norrl.) Brenner, A 25(2): 74. 1903a.
H. cordifrons Brenner, A 13(1): 18. 1895a.
H. coronarium Brenner, M 18: 106. 1892a.
H. corymbiforme Brenner, A 9(5): 35. 1893a.
H. crassiglandulosum Brenner, A 25(2): 38. 1903a.
H. crebrescens Brenner, A 12(1): 9. 1894a.
H. crepidioides var. *tenuescens* Brenner, A 16(4): 253. 1899.
H. crispiceps Brenner, A 13(1): 10. 1895a.
H. crispiceps var. *molluscum* Brenner, A 16(1): 9. 1897.
H. cuneolus Brenner, A 25(2): 73. 1903a.
H. curtatum f. *pallidiceps* Brenner, A 9(5): 18. 1893a.
H. curtivittatum Brenner, A 25(2): 31. 1903a.
H. curvipes Brenner, A 13(1): 31. 1895a.
H. cuspidiflorum Brenner var. *breviusculum* Brenner, M 48: 139. 1925c.
H. cuspidifolium Brenner f. *breviusculum* Brenner, M 37: 37. 1911d.
H. cyathiceps Brenner, A 12(1): 41. 1894a.
H. cynodon Brenner, M 18: 103. 1892a.
H. cynodon var. *stelluligerum* Brenner, A 13(1): 14. 1895a.
H. dasylepis Brenner, A 13(1): 53. 1895a.
H. defloccatum Brenner, M 31: 153. 1906i.
H. densiciliatum Brenner, A 12(1): 20. 1894a.
H. densisetum Brenner, A 12(1): 41. 1894a.
H. diaphanellum Brenner, A 9(5): 27. 1893a.
H. diaphanoides f. *densifloccosum* Brenner, M 31: 153. 1906i.
H. diaphanoides var. *flocculiferum* Brenner, M 18: 105. 1892a.
H. diaphanoides var. *nycterinum* Brenner, A 13(1): 28. 1895a.
H. diaphanoides var. *subtenebrosus* (Brenner) Brenner, M 33: 89. 1907h).
H. dilucidum Brenner, A 9(5): 23. 1893a.
H. dilucidum var. *rhombofolium* Brenner, A 9(5): 23. 1893a.
H. diluticolor Brenner, A 12(1): 26. 1894a.
H. diluticolor var. *eciliatum* Brenner, A 12(1): 26. 1894a.
H. dimorphoides f. *subsetosum* Brenner, A 9(5): 37. 1893a.
H. dimorphum var. *rariceps* Brenner, A 12(1): 16. 1894a.
H. distantilingua Brenner, A 25(2): 12. 1903a.
H. distendens Brenner, M 31: 150. 1906i.
H. distinctisquamium Brenner, A 25(2): 52. 1903a.
H. divaricans Brenner, M 18: 124. 1892a.
H. drosocalyx Brenner, A 25(2): 57. 1903a.
H. drosocalyx var. *locupletius* Brenner, A 25(2): 57. 1903a.
H. elaeodes Brenner, A 9(5): 32. 1893a.
H. electum Brenner, M 30: 137. 1904i.
H. elucens Brenner, A 12(1): 45. 1894a.
H. epacroides Brenner, A 9(5): 14. 1893a.
H. euryilema Brenner, A 25(2): 49. 1903a.
H. euryodon Brenner, M 31: 152. 1906i.
H. exacutum (Norrl.) Brenner, A 12(1): 53. 1894a.
H. exile Brenner, A 13(1): 12. 1895a.
H. exurgens Brenner, A 9(5): 37. 1893a.
H. exuviatum Brenner, A 9(5): 18. 1893a.
H. falotrichum Brenner, A 13(1): 35. 1895a.
H. farinicolor Brenner, A 25(2): 29. 1903a.
H. farreiceps Brenner, A 13(1): 61. 1895a.
H. felinum Brenner, A 25(2): 14. 1903a.
H. fimbriatum Brenner, A 12(1): 51. 1894a.
H. fimbriatum var. *exilius* Brenner, A 25(2): 50. 1903a.
H. fissiflorum Brenner, A 25(2): 66. 1903a.
H. fissilingua Brenner, M 48: 141. 1925c.
H. flaccidum Brenner, M 18: 99. 1892a.
H. flexipes Brenner, A 25(2): 48. 1903a.
H. flocciscapum Brenner, A 12(1): 14. 1894a.
H. florescens Brenner, A 25(2): 49. 1903a.
H. forficulatum Brenner, A 9(5): 17. 1893a.
H. furfuraceum Brenner, A 13(1): 60. 1895a.
H. furvellum Brenner, A 25(2): 25. 1903a.
H. furvicolor Brenner, M 18: 108. 1892a.
H. furvicolor f. *pumila* Brenner, M 18: 108. 1892a.
H. furvum Brenner, A 25(2): 47. 1903a.
H. fuscovillosulum Brenner, M 50: 67. 1925i.
H. fuscovillosum Brenner, A 25(2): 8. 1903a.
H. fusculum Brenner, A 12(1): 21. 1894a.
H. galbanum var. *crassifrons* Brenner, A 13(1): 17. 1895a.
H. galbeum Brenner, M 18: 113. 1892a.
H. glossolepis Brenner, A 16(1): 18. 1897.
H. gnaphalolepis Brenner, A 13(1): 64. 1895a.
H. gonotophyllum Brenner, M 31: 152. 1906i.
H. griseellum Dahlst. ex Brenner, A 13(1): 7. 1895a.
H. griseiceps Brenner, M 33: 86. 1907h), replaced name *H. leontodontoides* Brenner
H. griselliceps Brenner, M 18: 90. 1892a.
H. griselliceps var. *sublucens* Brenner, M 18: 91. 1892a.
H. griseolum Brenner, A 25(2): 70. 1903a.
H. grisescens Brenner, M 29: 140. 1904i.
H. gymnacrum Brenner, A 13(1): 59. 1895a.
H. hamulosum Brenner, A 13(1): 23. 1895a.
H. hebecalyx Brenner, A 9(5): 28. 1893a.
H. hebecalyx var. *minutellum* Brenner, A 9(5): 28. 1893a.
H. heliomorphum Brenner, M 48: 142. 1925c.
H. hemidiaphanum Dahlst. ex Brenner, A 13(1): 29. 1895a.
H. hemipsilum Brenner, M 18: 106. 1892a.
H. heteradenium Brenner, A 13(1): 46. 1895a.
H. hilmae Brenner, A 9(5): 40. 1893a.
H. hilmae var. *estriatum* Brenner, A 12(1): 53. 1894a.
H. hirsutulium (Naeg. & Peter) Brenner, A 12(1): 13. 1894a.
H. hirtelliceps Brenner, A 25(2): 9. 1903a.
H. hjeltii f. *villosius* Brenner, M 30: 139. 1904i.
H. hoglandicum Brenner, M 18: 88. 1892a.
H. hoglandicum f. *humosa* Brenner, M 18: 88. 1892a.
H. hololoma Brenner, M 31: 151. 1906i., nomen novum.
H. hololoma, M 33: 88. 1907h), replaced name *H. holophyllum* Brenner

- H. holophyllodes* Brenner, A 9(5): 25. 1893a.
H. holophyllum Brenner, M 18: 127. 1892a.
H. homoglossum Brenner, A 25(2): 56. 1903a.
H. hyalinum Brenner, M 18: 100. 1892a.
H. hymenacrum Brenner, A 9(5): 17. 1893a.
H. hymenopterum Brenner, A 12(1): 41. 1894a.
H. hymenopterum var. *brevilingua* Brenner, A 12(1): 41. 1894a.
H. hyperadenium Brenner, A 12(1): 7. 1894a.
H. hypogymnum Brenner, M 31: 145. 1906i.
H. imbricarium Brenner, A 9(5): 30. 1893a.
H. imitabile Brenner, A 16(1): 11. 1897.
H. imitans Brenner, M 18: 102. 1892a.
H. immarginatum Brenner, A 25(2): 59. 1903a.
H. impallescens Brenner, A 25(2): 30. 1903a.
H. impallescens var. *hirsutius* Brenner, A 25(2): 30. 1903a.
H. incanescens Brenner, A 25(2): 72. 1903a.
H. incaniceps Brenner, A 12(1): 40. 1894a.
H. inconstriatum Brenner, A 13(1): 13. 1895a.
H. inconstriatum var. *rgidiforme* Brenner, A 13(1): 14. 1895a.
H. inconstriatum var. *taeniifolium* Brenner, A 13(1): 14. 1895a.
H. inflatum Brenner, A 25(2): 23. 1903a.
H. ingens (Naeg. & Peter) Brenner, A 12(1): 16. 1894a.
H. ingens var. *subglabrum* Brenner, A 12(1): 16. 1894a.
H. interjacens Brenner, A 25(2): 30. 1903a.
H. interjectum Brenner, A 25(2): 11. 1903a.
H. intermixtum Brenner, M 18: 103. 1892a.
H. internatum Brenner, A 16(1): 6. 1897.
H. interrogans Brenner, A 25(2): 54. 1903a.
H. interspersum Brenner, M 18: 131. 1892a.
H. interspersum Brenner, M 33: 89. 1907h), replaced name *H. intermixtum* Brenner
H. interstans Brenner, A 16(1): 15. 1897.
H. inversum Brenner, A 16(1): 12. 1897.
H. kainuëense Brenner, A 9(5): 22. 1893a.
H. kemiticum Norrl. ex Brenner, A 16(4): 254. 1899.
H. laciniæfolium Brenner, M 18: 109. 1892a.
H. laetevillosum Brenner, A 13(1): 52. 1895a.
H. laeticolor f. *pumila* Brenner, M 29: 139. 1904i., nomen nudum.
H. laetilanosum Brenner, A 25(2): 60. 1903a.
H. laetilingua Brenner, A 25(2): 25. 1903a.
H. lagopoideum Brenner, A 25(2): 16. 1903a.
H. lamprochaetum Brenner, A 13(1): 29. 1895a.
H. lamprotrichum Brenner, A 25(2): 75. 1903a.
H. laniceps Brenner, A 13(1): 12. 1895a.
H. lanigineum Brenner, M 33: 88. 1907h), replaced name *H. sagittatum* subsp. *lanuginosum* Lönnr.
H. lanuliceps Brenner, A 25(2): 36. 1903a.
H. lapponicum f. *phyllopodum* Brenner, A 9(5): 19. 1893a.
H. lapponicum f. *pineticola* Brenner, A 9(5): 19. 1893a.
H. lasiocalyx Brenner, A 13(1): 51. 1895a.
H. lasiocalyx var. *stenglossum* Brenner, A 25(2): 61. 1903a.
H. lasiopodum Brenner, A 12(1): 17. 1894a.
H. latilingua Brenner, A 13(1): 58. 1895a.
H. laurenii Brenner, M 30: 140. 1904i.
H. lenifoliatum Brenner, A 13(1): 51. 1895a.
H. lenifoliatum f. *maxima* Brenner, M 50: 66. 1925l.
H. leontodontoides Brenner, A 13(1): 55. 1895a.
H. lepidistoides var. *subcrassifrons* Brenner, M 30: 139. 1904i.
H. leptacrum Brenner, A 25(2): 41. 1903a.
H. leptocalyx Brenner, A 13(1): 40. 1895a.
H. leptoglossum Brenner, M 48: 141. 1925c.
H. leptopodum Brenner, A 25(2): 58. 1903a.
H. leucochaetum Brenner, A 25(2): 69. 1903a.
H. leucochaetum f. *nigrisetum* Brenner, M 31: 160. 1906i.
H. leucochrom Brenner, A 12(1): 24. 1894a.
H. leucoloma Brenner, A 13(1): 64. 1895a.
H. leucopterum Brenner var. *stolonipes* Brenner f. *latifolium* Brenner, M 34: 143. 1908l., nomen nudum
H. leucopterum Brenner, A 12(1): 8. 1894a.
H. leucopterum var. *litotrichum* Brenner, A 13(1): 32. 1895a.
H. leucopterum var. *meiotrichum* Brenner, A 13(1): 32. 1895a.
H. leucopterum var. *stolonipes* Brenner, A 13(1): 32. 1895a.
H. limitare Brenner, A 16(4): 253. 1899.
H. linearisquameum Brenner, A 25(2): 23. 1903a.
H. linearium Brenner, A 25(2): 34. 1903a.
H. linifolium f. *graminicola* Brenner, M 18: 87. 1892a.
H. linifolium var. *confertifolium* Brenner, M 18: 88. 1892a.
H. linifolium var. *strömsbyense* Brenner, M 18: 88. 1892a.
H. lobulatum Brenner, M 18: 120. 1892a.
H. lomatolepis Brenner, A 12(1): 42. 1894a.
H. lomatolepis f. *caulescens* Brenner, A 25(2): 79. 1903a.
H. lomatolepis var. *curtilingua* Brenner, A 12(1): 42. 1894a.
H. lomatolepis var. *unicolor* Brenner, A 13(1): 49. 1895a.
H. lonchophorum Brenner, A 13(1): 14. 1895a.
H. longicuspis Brenner, A 9(5): 16. 1893a.
H. longiglandulosum Brenner, A 25(2): 53. 1903a.
H. lucescens Brenner, A 13(1): 11. 1895a.
H. luteiflorum Brenner var. *medioximum* (Brenner) Brenner, M 33: 86. 1907h). Basionyme *H. mollipes* Norrl. var. *medioximum* Brenner
H. luteiflorum Brenner, A 12(1): 47. 1894a.
H. luteiflorum var. *medioximum* Brenner, A 25(2): 15. 1903a.
H. lyratum subsp. *pataleforme* Norrl. ex Brenner, A 16(4): 255. 1899.
H. macrocalyx Brenner, A 13(1): 16. 1895a.
H. macroglossum Brenner, A 13(1): 44. 1895a.
H. malacocalyx Brenner, A 13(1): 42. 1895a.
H. malacochaetum Brenner, M 50: 64. 1925l.
H. malacolepis Brenner, A 13(1): 43. 1895a.
H. malolepis Brenner, A 13(1): 62. 1895a.
H. malolepis var. *glanduliceps* Brenner, A 25(2): 35. 1903a.
H. maurum (Norrl.) Brenner, A 25(2): 55. 1903a.
H. maurum var. *plenius* Brenner, A 25(2): 55. 1903a.
H. megadenium Brenner, A 13(1): 50. 1895a.
H. megalolepis Brenner, A 25(2): 59. 1903a.
H. megistocladum Brenner, A 13(1): 21. 1895a.
H. melanocrinum Brenner, A 25(2): 65. 1903a.
H. meleacrinum var. *virenticeps* Brenner, A 25(2): 27. 1903a.
H. meleagrimum Brenner, A 13(1): 61. 1895a.
H. mixtivillosum Brenner, A 25(2): 63. 1903a.
H. mollicepts Brenner, A 12(1): 49. 1894a.
H. mollicepts f. *furcatum* Brenner, A 12(1): 50. 1894a.
H. mollicepts var. *radiiferum* Brenner, A 25(2): 14. 1903a.
H. molliglandulosum Brenner, A 25(2): 18. 1903a.
H. molliglandulosum var. *esetosum* Brenner, M 50: 64. 1925l.
H. molliglandulosum var. *subesetosum* Brenner, M 50: 64. 1925l.
H. mollipes (Norrl.) Brenner, A 12(1): 48. 1894a.
H. mollipes var. *adenocalyx* Brenner, A 12(1): 49. 1894a.
H. mollipes var. *angustus* Brenner, A 12(1): 48. 1894a.
H. mollipes var. *ericalyx* Brenner, A 12(1): 48. 1894a.
H. mollipes var. *medioximum* Brenner, A 12(1): 49. 1894a.
H. mollipes var. *setiscapum* Brenner, A 12(1): 48. 1894a.
H. molliusculum Brenner, A 13(1): 43. 1895a.
H. molliusculum f. *brevifolium* Brenner, M 31: 158. 1906i.
H. monoticum Brenner, M 35: 121. 1909d.
H. multifrons Brenner, M 18: 121. 1892a.
H. muriceps Brenner, A 25(2): 9. 1903a.
H. murinum Brenner, A 25(2): 10. 1903a.
H. myocephalum Brenner, A 25(2): 64. 1903a.
H. neglectum f. *brevifolium* Brenner, A 9(5): 36. 1893a.
H. neglectum f. *longifolium* Brenner, A 9(5): 36. 1893a.
H. nigelloides Brenner, M 30: 139. 1904i.
H. nigroglandulosum var. *hastifolium* Brenner, A 9(5): 26. 1893a.
H. nitidifolium Brenner, A 12(1): 46. 1894a.
H. niveiceps Brenner, A 13(1): 63. 1895a.
H. niveiceps var. *chlorascens* Brenner, A 25(2): 37. 1903a.
H. norvegicum f. *latifolium* Brenner, M 18: 89. 1892a.
H. norvegicum f. *laxum* Brenner, M 18: 89. 1892a.
H. norvegicum var. *bracteatum* Brenner, A 16(1): 7. 1897.
H. norvegicum var. *brevisquameum* Brenner, M 18: 89. 1892a.
H. norvegicum var. *rufescens* f. *floccigerum*, M 29: 138. 1904i., nomen nudum.
H. norvegicum var. *saxifragoides* Brenner, A 16(1): 7. 1897.
H. norvegicum var. *ulricaeburgense* Brenner, M 18: 89. 1892a.
H. nylanderianum Brenner, M 18: 117. 1892a.
H. obconicum Brenner, A 25(2): 23. 1903a.
H. oblatum Brenner, A 13(1): 57. 1895a.
H. oblongaticeps Norrl. ex Brenner, A 16(4): 254. 1899.
H. obovale Brenner, A 25(2): 38. 1903a.
H. obscuriceps var. *dilatatum* Brenner, A 25(2): 70. 1903a.
H. obscurilingua Brenner, A 25(2): 24. 1903a.
H. obscuripes (Norrl.) Brenner, A 12(1): 54. 1894a.

- H. obscuripes f. furcatum* Brenner, A 12(1): 54. 1894a.
H. obscuripes var. *homophyllum* Brenner, A 12(1): 54. 1894a.
H. oligochaetium (Naeg. & Peter) Brenner, A 12(1): 54. 1894a.
H. oligochaetium (Norrl.) Brenner, A 25(2): 36. 1903a.
H. oligochaetium var. *ovoideum* Brenner, A 12(1): 54. 1894a.
H. oligochaetium var. *transitorium* Brenner, A 12(1): 54. 1894a.
H. ontopodium Brenner, A 13(1): 30. 1895a.
H. orariiforme Norrl. ex Brenner, A 16(4): 254. 1899.
H. ovulatum Brenner, A 16(1): 8. 1897.
H. pachyeilema Brenner, A 13(1): 41. 1895.
H. pachyphyllum Brenner, M 18: 115. 1892a.
H. pallidiceps Brenner, A 25(2): 44. 1903a.
H. panneiceps Brenner, A 13(1): 54. 1895a.
H. panneiceps var. *acropilum* Brenner, A 25(2): 72. 1903a.
H. parcidentatum Brenner, M 18: 110. 1892a.
H. parcidentatum var. *paltamoënsense* Brenner, A 9(5): 24. 1893a.
H. parvuliceps Brenner, M 18: 97. 1892a.
H. parvuliceps var. *saimense* Brenner, M 18: 98. 1892a.
H. pataliceps Norrl. ex Brenner, A 16(4): 255. 1899.
H. paucilingua Brenner, A 9(5): 40. 1893a.
H. pelliceps Brenner, A 13(1): 54. 1895a.
H. penicillatum Brenner, M 18: 98. 1892a.
H. penicillatum var. *subflaccidum* Brenner, M 18: 99. 1892a.
H. petiolatum Brenner, M 18: 100. 1892a.
H. petioliferum Brenner, M 18: 131. 1892a.
H. petioliferum Brenner, M 33: 88. 1907h), replaced name *H. petiola-*
tum Brenner
H. piceiceps Brenner, A 12(1): 30. 1894a.
H. piceiceps var. *dilutius* Brenner, A 12(1): 31. 1894a.
H. piliscapum Brenner, M 35: 120. 1909d.
H. planifolium Brenner, A 12(1): 18. 1894a.
H. platyglossum Brenner, A 13(1): 58. 1895a.
H. pohjolense Brenner, A 9(5): 14. 1893a.
H. pohjolense var. *meiophyllum* Brenner, A 9(5): 15. 1893a.
H. pohjolense var. *scololepis* Brenner, A 9(5): 15. 1893a.
H. pohjolense var. *sublineatum* Brenner, A 9(5): 15. 1893a.
H. poliocladum (Naeg. & Peter) Brenner, A 12(1): 12. 1894a.
H. poliocladum subvar. *hirsutum* (Naeg. & Peter) Brenner, A 12(1): 12.
1894a.
H. poliocladum var. *praealtiforme* Naeg. & Peter ex Brenner, A 12(1):
12. 1894a.
H. praetenerum var. *proximum* (Norrl.) Brenner, A 16(1): 16. 1897.
H. praetenerum var. *sertuliferum* (Brenner) Brenner, M 31: 152. 1906i,
nomen novum
H. praetenerum var. *subpatale* Brenner, M 31: 151. 1906i.
H. prasinatum (Norrl.) Brenner, A 12(1): 52. 1894a.
H. prasinatum f. *crebrisetosum* Brenner, A 9(5): 39. 1893a.
H. prasinatum f. *furcatum* Brenner, A 12(1): 52. 1894a.
H. prasinatum f. *furcatum* Brenner, A 13(1): 49. 1895a.
H. prasinatum f. *furcatum*, A 9(5): 40. 1893a.
H. prasinatum var. *crebrisetosum* (Brenner) Brenner, A 12(1): 52.
1894a.
H. prasinatum var. *substriatum* (Brenner) Brenner, A 12(1): 52.
1894a.
H. procerulum Brenner, A 25(2): 77. 1903a.
H. prolixatum Brenner, A 25(2): 41. 1903a.
H. prolixiforme var. *kuhmoënsense* Brenner, A 9(5): 19. 1893a.
H. prolixoides Brenner, M 18: 102. 1892a.
H. psefocalyx Brenner, A 13(1): 41. 1895a.
H. psefocalyx Brenner, A 25(2): 55. 1903a.
H. psefocalyx var. *plenum* Brenner, A 25(2): 56. 1903a.
H. psefocalyx var. *subfimbriatum* Brenner, A 25(2): 56. 1903a.
H. psefochaetum Brenner, A 25(2): 56. 1903a.
H. pseudohoppeanum Brenner, A 13(1): 65. 1895a.
H. pseudopellucidum Brenner, A 9(5): 26. 1893a.
H. pseudopinatum Brenner, A 16(4): 252. 1899.
H. psilacrum Brenner, M 31: 149. 1906i.
H. puberulum Brenner, A 13(1): 32. 1895a.
H. pubescens var. *firmicaule* (Norrl.) Brenner, A 12(1): 12. 1894a.
H. pubescens var. *longipilum* Brenner, A 12(1): 6. 1894a.
H. pubiceps Brenner, A 25(2): 32. 1903a.
H. pullulum Brenner, M 18: 92. 1892a.
H. pulvereum Brenner, A 13(1): 60. 1895a.
H. punctilliferum Brenner, A 13(1): 56. 1895a.
H. pycnadenium Brenner, A 9(5): 30. 1893a.
H. pycnochaetum Brenner, A 12(1): 10. 1894a.
H. radiatile Brenner, A 13(1): 58. 1895a.
H. radiosum Brenner, M 18: 95. 1892a.
H. ravidifolium Brenner, M 30: 136. 1904i.
H. ravidum Brenner, M 18: 113. 1892a.
H. remotilingua Brenner, A 25(2): 11. 1903a.
H. remotulum Brenner, A 25(2): 21. 1903a.
H. repandifrons Brenner, M 18: 123. 1892a.
H. rhodacrum Brenner, A 25(2): 73. 1903a.
H. rhyponium (Norrl. ex Hamb.) Brenner, M 29: 141. 1904i.
H. rigidifolium Brenner, A 9(5): 13. 1893a.
H. rosulare Brenner, A 9(5): 20. 1893a.
H. rubelliceps Brenner, A 12(1): 53. 1894a.
H. rubelliceps var. *grandiceps* Brenner, A 25(2): 45. 1903a.
H. rubelliceps var. *jubatum* Brenner, A 25(2): 45. 1903a.
H. rufescens var. *saxigenoides* Brenner, M 31: 145. 1906i.
H. sabulosorum f. *canocerinum* Brenner, A 25(2): 8. 1903a.
H. sabulosorum f. *ingoënsense* Brenner, A 25(2): 8. 1903a.
H. sabulosorum f. *weikolense* Brenner, A 25(2): 8. 1903a.
H. salebratum Brenner, A 25(2): 40. 1903a.
H. salebratum var. *subnerve* Brenner, A 25(2): 40. 1903a.
H. salebratum var. *villiferum* Brenner, A 25(2): 40. 1903a.
H. salebricola Brenner, A 12(1): 19. 1894a.
H. salebricola var. *fuscostylum* Brenner, M 31: 157. 1906i.
H. saxifragum subsp. *oribates* Brenner, M 30: 142. 1904i.
H. saxifragum var. *helsingense* Brenner, M 18: 90. 1892a.
H. saxifragum var. *obnaesiense* Brenner, M 18: 90. 1892a.
H. saxifragum var. *suboreinum* Brenner, M 18: 89. 1892a.
H. saxigenum Brenner, M 18: 89. 1892a.
H. scaberulum Brenner, M 33: 90. 1907h), replaced name *H. scabrel-*
ulum Brenner
H. scabratum Brenner, A 9(5): 24. 1893a.
H. scabrellum Brenner, A 13(1): 6. 1895a.
H. scapiforme Brenner, M 18: 117. 1892a.
H. scapiforme var. *subglabrum* Brenner, M 18: 117. 1892a.
H. scissum (Naeg. & Peter) Brenner, A 12(1): 30. 1894a.
H. sclerotrichum Brenner, A 12(1): 11. 1894a.
H. scotinum Brenner, A 12(1): 20. 1894a.
H. seminigrans Brenner, M 31: 154. 1906.
H. septentrionale var. *abrasum* Brenner, M 48: 140. 1925c.
H. septentrionale var. *adsimilans* Brenner, A 12(1): 15. 1894a.
H. septentrionale var. *densisetosum* Brenner, A 12(1): 15. 1894a.
H. sericolepis Brenner, A 13(1): 24. 1895a.
H. serrulare Brenner, A 16(4): 252. 1899.
H. serrulatum Brenner, A 12(1): 32. 1894a.
H. sertuliferum Brenner, M 18: 126. 1892a.
H. setosifolium Brenner, A 9(5): 20. 1893a.
H. sigmoideum (Norrl.) Brenner, A 12(1): 43. 1894a.
H. sigmoideum f. *furcatum* Brenner, A 12(1): 43. 1894a.
H. similifolium Brenner, A 9(5): 22. 1893a.
H. smaragdinum Brenner, A 13(1): 27. 1895a.
H. solitarium Brenner, A 13(1): 48. 1895a.
H. sotkamoënsense Brenner, A 9(5): 23. 1893a.
H. sparsiflorum Brenner, A 13(1): 58. 1895a.
H. sparsilingua Brenner, A 13(1): 45. 1895a.
H. sparsilingua var. *grossiglandulosum* Brenner, A 25(2): 68. 1903a.
H. spireodes Brenner, M 31: 156. 1906i.
H. sphacelolepis Brenner, M 31: 155. 1906i.
H. sphaerellum Brenner, A 12(1): 32. 1894a.
H. sphaerocalyx Brenner, A 25(2): 21. 1903a.
H. sphaeroideum Brenner, A 25(2): 17. 1903a.
H. splendens Norrl. ex Brenner, A 16(4): 254. 1899.
H. stenacrum Brenner, A 9(5): 12. 1893a.
H. steneilema Brenner, A 13(1): 59. 1895a.
H. stenocalyx Brenner, A 12(1): 5. 1894a.
H. stramineum (Norrl.) Brenner, A 12(1): 54. 1894a.
H. stramineum f. *biceps* Brenner, A 12(1): 54. 1894a.
H. subcoactile Brenner, A 25(2): 28. 1903a.
H. subconvexum Brenner, A 25(2): 50. 1903a.
H. suberigens Brenner, A 25(2): 55. 1903a.
H. subflexipes Brenner, A 25(2): 48. 1903a.
H. subflorescens Brenner, A 25(2): 49. 1903a.
H. subglomeratulum Brenner, M 31: 155. 1906i.
H. subhirsutulum Brenner, A 12(1): 13. 1894a.
H. subinversum Brenner, M 29: 138. 1904i.

H. sublucidum Brenner, A 13(1): 11. 1895a.
H. subobatescens Brenner, M 33: 90. 1907h) nomen novum; *H. subobatescens* Brenner
H. suborbicans Brenner, M 31: 150. 1906i.
H. subpellucidum var. *amplifrons* Brenner, A 9(5): 29. 1893a.
H. subpellucidum var. *dentatum* Brenner, A 9(5): 29. 1893a.
H. subprasinatatum (Norrl.) Brenner, A 25(2): 52. 1903a.
H. subpratense var. *hircinum* Brenner, A 16(1): 19. 1897.
H. subtenebrosium Brenner, A 16(1): 16. 1897.
H. subtenerescens Brenner, M 31: 155. 1906i.
H. subtilidens Brenner, M 31: 144. 1906i.
H. subuliceps Brenner, A 16(1): 10. 1897.
H. suburnigerum (Norrl.) Brenner, A 25(2): 47. 1903a.
H. succedaneum Brenner, A 9(5): 16. 1893a.
H. suecicum subvar. *calvius* Naeg. & Peter ex Brenner, A 12(1): 29. 1894a.
H. suecicum subvar. *normale* Naeg. & Peter ex Brenner, A 12(1): 27. 1894a.
H. suecicum var. *albisetum* Brenner, A 12(1): 28. 1894a.
H. suecicum var. *calvifolium* Brenner, A 12(1): 27. 1894a.
H. suecicum var. *esetosum* Brenner, A 12(1): 27. 1894a.
H. suecicum var. *medians* Brenner, A 12(1): 29. 1894a.
H. suecicum var. *parcipilum* (Naeg. & Peter) Brenner, A 12(1): 28. 1894a.
H. suecicum var. *parvifolium* Brenner, A 13(1): 37. 1895a.
H. suecicum var. *pseudauricula* (Naeg. & Peter) Brenner, A 9(5): 16. 1893a.
H. suecicum var. *pseudauricula* f. *calvius* Brenner, A 13(1): 37. 1895a.
H. suecicum var. *setifrons* Brenner, A 12(1): 27. 1894a.
H. suecicum var. *stipiticeps* Brenner, A 12(1): 29. 1894a.
H. suecicum var. *stipitiflorum* (Naeg. & Peter) Brenner, A 9(5): 39. 1893a.
H. suecicum var. *subfloribundum* Brenner, A 13(1): 38. 1895a.
H. suecicum var. *subfloribundum* f. *effoccosum* Brenner, A 13(1): 38. 1895a.
H. suecicum var. *valdepilosum* (Naeg. & Peter) Brenner, A 12(1): 28. 1894a.
H. suomense var. *grisescens* (Brenner) Brenner, M 31: 154. 1906i.
H. taeniarum (Norrl.) Brenner, A 25(2): 33. 1903a.
H. tapeinodes Brenner, A 25(2): 19. 1903a.
H. tapeinum Dahlst. ex Brenner, A 13(1): 40. 1895a.
H. tenellum Brenner, A 9(5): 28. 1893a.
H. teneripes Brenner, A 25(2): 51. 1903a.
H. tenerisetum Brenner, M 30: 141. 1904l.
H. tenerisquamum Brenner, A 25(2): 44. 1903a.
H. tenuifloccosum Brenner, A 12(1): 39. 1894a.
H. tenuilingua (Norrl.) Brenner, A 12(1): 50. 1894a.
H. tenuilingua f. *furcatum* Brenner, A 12(1): 50. 1894a.
H. tenuirhizodes Brenner, A 25(2): 11. 1903a.
H. tenuistololum Dahlst. ex Brenner, A 25(2): 53. 1903a.
H. tenuivillosum Brenner, A 25(2): 79. 1903a.
H. tephreilema (Brenner ex H. Lindb.) Brenner, A 25(2): 33. 1903a.
H. tephrocalyx Brenner, A 12(1): 7. 1894a.
H. tonsile Brenner var. *malacophyllum* Brenner, M 30: 141. 1904l.
H. tonsile Brenner, A 12(1): 10. 1894a.
H. tornense Brenner, A 9(5): 11. 1893a.
H. trachyodon Brenner, A 9(5): 18. 1893a.
H. trichosoma (Naeg. & Peter) Brenner, A 12(1): 43. 1894.
H. trichosoma var. *pleiadenium* Brenner, A 13(1): 50. 1895a.
H. trichosoma var. *tephrophyllum* (Naeg. & Peter) Brenner, A 25(2): 79. 1903a.
H. trigonoides Brenner, A 25(2): 22. 1903a.
H. umbellatum f. *minutum* Brenner, M 18: 83. 1892a.
H. umbellatum L. f. *minor*, M 11: 36. 1884, nomen nudum
H. umbellatum L. f. *minor*, N 11 (ny serie 8): 22. 1871b, nomen nudum
H. umbellatum L. f. *monstrosa* Brenner, M 34: 142. 1908l, nomen nudum
H. umbellatum var. *arctophilum* Brenner, A 9(5): 10. 1893a.
H. umbellatum var. *crocatifolium* Brenner, A 9(5): 9. 1893a.
H. umbellatum var. *depressius* Brenner, M 18: 87. 1892a.
H. umbellatum var. *graminiforme* Brenner, M 18: 86. 1892a.
H. umbellatum var. *hispidicaule* Brenner, A 13(1): 6. 1895a.
H. umbellatum var. *laevius* Brenner, M 18: 83. 1892a.
H. umbellatum var. *lavandulaefolium* Brenner, M 18: 86. 1892a.

H. umbellatum var. *lingulaefolium* Brenner, M 18: 86. 1892a.
H. umbellatum var. *microphyllum* Brenner, M 18: 85. 1892a.
H. umbellatum var. *pectinatum* Brenner, M 18: 85. 1892a.
H. umbellatum var. *scaberrimum* Brenner, M 18: 84. 1892a.
H. umbellatum var. *scalpelliforme* Brenner, M 18: 84. 1892a.
H. umbellatum var. *subcrocatifolium* Brenner, A 9(5): 9. 1893a.
H. umbellatum var. *sublinifolium* Brenner, M 18: 84. 1892a.
H. umbellatum var. *subscabrum* Brenner, M 18: 85. 1892a.
H. umbellatum var. *subumbrosum* Brenner, M 18: 87. 1892a.
H. umbellatum var. *umbellatum* Brenner, M 18: 85. 1892a.
H. umbellatum var. *umbrosum* Brenner, M 18: 84. 1892a.
H. umbricola Sael. var. *pinetorum* Brenner, M 34: 142. 1908l.
H. umbricola var. *ravidifolium* (Brenner) Brenner, M 31: 148. 1906.
H. urnigerum (Norrl.) Brenner, A 12(1): 52. 1894a.
H. urnigerum Brenner, A 9(5): 40. 1893a.
H. ursinum Brenner, A 12(1): 46. 1894a.
H. ursinum var. *densivillosum* Brenner, A 25(2): 77. 1903a.
H. ursinum var. *fimbrillatum* Brenner, A 25(2): 77. 1903a.
H. ustulatum Brenner, A 12(1): 14. 1894a.
H. valens (Norrl.) Brenner, A 25(2): 77. 1903a.
H. variiceps Brenner, A 25(2): 42. 1903a.
H. variifrons Brenner, M 30: 138. 1904l.
H. ventosum Brenner, A 12(1): 47. 1894a.
H. ventricosum Norrl. f. *majoriceps* Brenner, M 34: 143. 1908l.
H. ventricosum Norrl. var. *sueciforme* Brenner, M 30: 139. 1904l.
H. versifolium Brenner, M 18: 117. 1892a.
H. vesticeps Brenner, M 31: 150. 1906.
H. villiceps Brenner, M 18: 114. 1892a.
H. villiceps var. *ampliflorum* Brenner, A 13(1): 17. 1895a.
H. villiceps var. *obscurifolium* Brenner, M 18: 115. 1892a.
H. villipes Dahlst. ex Brenner, A 25(2): 76. 1903a.
H. viridiceps Brenner, M 18: 96. 1892a.
H. vitile Brenner, A 25(2): 75. 1903a.
H. vitile var. *glandulipes* Brenner, A 25(2): 75. 1903a.
H. vulgatum Fr. f. *angustifolia*, N 11 (ny serie 8): 23. 1871b, nomen nudum
H. vulgatum Fr. f. *latifolia*, N 11 (ny serie 8): 23. 1871b, nomen nudum
H. vulgatum Fr. subsp. *flaccidum*, N 11 (ny serie 8): 23. 1871b)
H. vulgatum var. *apricarium* Brenner, M 18: 94. 1892a.
H. vulgatum var. *frutectorum* Brenner, M 18: 95. 1892a.
H. vulgatum var. *grandiceps* Brenner f. *tenuifolium*, M 18: 95. 1892a.
H. vulgatum var. *grandiceps* Brenner, M 18: 94. 1892a.
H. vulgatum var. *laetiviriide* Brenner, M 18: 95. 1892a.
H. vulgatum var. *leniceps* Brenner, A 13(1): 9. 1895a.
H. vulgatum var. *subulatum* Brenner, M 18: 93. 1892a.
H. vulgatum var. *triviale* (Norrl.) Brenner, M 18: 93. 1892a.
H. zebrinum Brenner, A 13(1): 55. 1895a.

Taraxaci and polemics

Brenner described several new *Taraxaci* for science, the first seven of which he designated varieties and forms (Brenner 1889b). Kihlman (1893b: 132) gives a summary of the article in German.

His next topic was the synonymy of the Finnish *Taraxacum corniculatum* s. lat., which had "horny" appendages in its involucre bracts (Brenner 1889b, 1892e). Harald Lindberg, at that time the Herbarium Amanuensis (H), disagreed with these interpretations. He stated in his plant catalogue (H. Lindberg 1901) that there were two taxa in Finland, *T. corniculatum* and *T. officinale* var. *laevigatum*, which Brenner (1902c) could

not accept. He further specified how to identify his previously described varieties of *Taraxacum officinale* var. *patulum* and var. *uncinatum*, and he defended his *T. officinale* var. *patulum* variety against Lindberg's new interpretations, preferring the name *T. intermedium* Raunk (Brenner 1906c, 1907f). According to H. Lindberg (1908), Brenner's determinations were based on a limited number of specimens, many were difficult to interpret and some were completely wrong; many of the species he described consisted of more than one species, and sometimes one species was described by several names.

This soon led to a polemic relationship. Brenner (1909e,i) defended himself, after which Lindberg reviewed the herbarium sheets on which Brenner based his descriptions. Lindberg's judgment was severe and his criticism was un-nuanced (Jalas 1969): Brenner had made countless errors (H. Lindberg 1909), on account of which Lindberg dismissed his work.

Brenner also went on to criticise Swedish *Taraxacum* expert Hugo Dahlstedt (1856–1934) for not accepting his nomenclature: e.g., *T. tenebricans* Dahlst., represented *T. officinale* var. *patulum* Brenner. *T. intermedium* Raunk. and *T. gelerti* Raunk. were also synonymous with var. *patulum* (Brenner 1910a). Brenner corrected H. Lindberg's assertion that *T. hamatum* was new to Finland, although having previously announced it (Brenner 1910f).

As new taxa, Brenner described four new varieties (Brenner 1906n); one new species (Brenner 1906o); four new species and two new combinations, viz. *T. gibbiferum* (Brenner) Brenner and *T. uncinatum* (Brenner) Brenner (Brenner 1907a), *T. laeticolor*, as new to Finland (Brenner 1907g); two replacement names and two combinations (Brenner 1907h); five new species, one subspecies and one form (Brenner 1907i [1908]); two new species and one combination (Brenner 1908b), and two new species (Brenner 1908f).

As a summary of the Inkoo *Taraxacum* he reports 38 taxa, with descriptions of 12 new species, one variety and three forms (Brenner 1925k).

A white-flowered species, *Taraxacum leucoglossum* (Fig. 9), was discovered at the mouth of the Umba River on the Kola Peninsula (Brenner 1915a). The nearest other white-flowered species grew in Central Asia.

In total, Brenner described 47 *Taraxacum* taxa, 27 species, two subspecies, 10 varieties and nine forms, and he made seven nomenclatural combinations (Table 4). Of the species, 20 are still accepted based on their priority (Lundevall & Øllgaard 1999, Kurtto et al. 2019).

Table 4. *Taraxacum* taxa by Brenner according to Lundevall & Øllgaard (1999). FR = Feddes Repertorium, MSFFF = Meddelanden af Societas pro Fauna et Flora Fennica.

<i>T. apicatum</i> Brenner, FR 4: 354, 1907a.
<i>T. attenuatum</i> Brenner, MSFFF 32: 114, 1906o.
<i>T. cornigerum</i> (Aschers.) Brenner ASFFF 54 (1): 270 1926.
<i>T. curvilobum</i> Brenner, MSFFF 50: 60, 1925k.
<i>T. curvilobum</i> Brenner, MSFFF 50: 60, 1925k
<i>T. densiflorum</i> Brenner, MSFFF 34: 75, 1908f.
<i>T. divaricatum</i> (Brenner) Brenner, MSFFF 50: 56, 1925k.
<i>T. duplidens</i> f. <i>nullidens</i> Brenner, MSFFF 50: 53, 1925k.
<i>T. duplidens</i> f. <i>paucidens</i> Brenner, MSFFF 50: 53, 1925k.
<i>T. duplidens</i> f. <i>subulidens</i> Brenner, MSFFF 50: 53, 1925k.
<i>T. duplidens</i> var. <i>contractum</i> Brenner, MSFFF 50: 53, 1925k.
<i>T. falcatum</i> Brenner, FR 4: 354, 1907a.
<i>T. gibbiferum</i> (Brenner) Brenner, FR 4: 355, 1907a.
<i>T. hastatum</i> Brenner, MSFFF 50: 57, 1925k.
<i>T. heterophyllum</i> Brenner, MSFFF 50: 55, 1925k.
<i>T. humile</i> Brenner, MSFFF 34: 75, 1908f.
<i>T. laceratum</i> (Brenner) Brenner, MSFFF 35: 179, 1909.
<i>T. laevigatum</i> var. <i>reflexum</i> Brenner, MSFFF 28: 10, 1902.
<i>T. leucoglossum</i> Brenner, MSFFF 41: 47 1915a.
<i>T. lobulatum</i> Brenner f. <i>collatatum</i> Brenner, MSFFF 33: 110, 1907i [1908].
<i>T. lobulatum</i> Brenner MSFFF 33: 110, 1907i [1908].
<i>T. medians</i> Brenner, MSFFF 33: 90, 1907h.
<i>T. officinale</i> *[subsp.] <i>laceratum</i> (Brenner) Brenner, MSFFF 33: 90, 1907h.
<i>T. officinale</i> *[subsp.] <i>patulum</i> Brenner, MSFFF 16: 113. 1889b
<i>T. officinale</i> subsp. <i>genuinum</i> f. <i>gibbiferum</i> Brenner (" <i>gibbifera</i> ") MSFFF 16: 112. 1889b.
<i>T. officinale</i> subsp. <i>genuinum</i> var. <i>reflexilobum</i> (H. Lindb.) Brenner, MSFFF 50: 53 1925.
<i>T. officinale</i> subsp. <i>laceratum</i> Brenner, MSFFF 33: 90, 1907i [1908].
<i>T. officinale</i> var. <i>divaricatum</i> Brenner, MSFFF 32: 98, 1906n.
<i>T. officinale</i> var. <i>genuinum</i> f. <i>minor</i> Brenner, MSFFF 16: 112. 1889b.
<i>T. officinale</i> var. <i>lacerum</i> Brenner, MSFFF 32: 98, 1906n.
<i>T. officinale</i> var. <i>patulum</i> Brenner, MSFFF 16: 113. 1889b.
<i>T. officinale</i> var. <i>patulum</i> Brenner f. <i>minor</i> Brenner, MSFFF 16: 113. 1889b.
<i>T. officinale</i> var. <i>stenolepis</i> Brenner, MSFFF 32: 97, 1906n.
<i>T. officinale</i> var. <i>uncinatum</i> Brenner, MSFFF 16: 113. 1889b.
<i>T. officinale</i> var. <i>uncinatum</i> Brenner f. <i>pygmaea</i> Brenner, MSFFF 16: 113. 1889b.
<i>T. officinale</i> var. <i>uncinatum</i> f. <i>gibberosa</i> Brenner, MSFFF 16: 113. 1889b.
<i>T. officinale</i> var. <i>ungulatum</i> Brenner, MSFFF 32: 97, 1906n.
<i>T. oligophyllum</i> Brenner, MSFFF 50: 59, 1925k.
<i>T. oxylobium</i> Brenner, MSFFF 33: 111, 1907i [1908].
<i>T. parciflorum</i> Brenner, MSFFF 33: 111, 1907i [1908].
<i>T. patulum</i> (Brenner) Brenner, MSFFF 35: 124, 1909.
<i>T. pycnodon</i> Brenner, MSFFF 50: 57, 1925k.
<i>T. radians</i> Brenner, MSFFF 50: 56, 1925k.
<i>T. repletum</i> (Dahlst.) Brenner, MSFFF 33: 109, 1907i [1908].
<i>T. revertens</i> Brenner, MSFFF 34: 25, 1908b.
<i>T. sagittarium</i> Brenner, MSFFF 50: 58, 1925k.
<i>T. sagitticordatum</i> Brenner, MSFFF 50: 58, 1925k.
<i>T. simulium</i> Brenner, MSFFF 33: 109, 1907i [1908].
<i>T. singulare</i> Brenner, MSFFF 50: 58, 1925k.
<i>T. stenoglossum</i> Brenner, FR 4: 356, 1907a.
<i>T. subulisquamum</i> Brenner, MSFFF 50: 55, 1925k.
<i>T. uncinatum</i> (Brenner) Brenner, FR 4: 356, 1907.
<i>T. unguatum</i> (Brenner) Brenner, MSFFF 50: 54, 1925k.



Fig. 9. Holotype of *Taraxacum leucoglossum* Brenner, the only white flowering Tarxacum in Fennoskandinavia.



HOLOTYPUS

Taraxacum leucoglossum Brenner.
(Syn. *T. turicense* Orlov.)
non est *T. leucanthum* (Led.) Led.
det. C.-F. Lundevall 19.69

MUSEUM BOTANICUM
UNIV. HELSINGIENSIS
135669

QUADR. CATAL. 19

HERBARIUM MUSEI FENNICI

Taraxacum leucoglossum Brenner.
Lappi Imandra, Umba, peltisig
sluttning vid stranden af Umba-
fjodens östra mynnings arm
19 ¹⁶/₁₁ 14 leg. Thord Brenner.

5631
HERBARIUM MUSEI FENNICI.
T. leucanthum
19 15 det. Harald Lindberg.

***Euphrasia* studies**

Brenner described *Euphrasia micrantha* (Fig. 10) as a new species to science at the beginning of his career (Brenner 1878b), but later he was inspired by Richard Wettstein's (1863–1931) *Monographie der Gattung Euphrasia* (1896).

However, *E. micrantha* Brenner was a later synonym: earlier, in *Flora Germanica Excursoria*: 358, 1830, Heinrich Gustaf Reichenbach (1824–1889) had given the same name to another *Euphrasia* species (Kihlman 1896: 20) that also occurs in Finland. This is why Kihlman described this small-flowered coastal Bothnian Bay species as *E. bottnica* Kihlm. Brenner (1896b) did not accept that name and instead proposed *E. hebecalyx* (1898a) for his *E. micrantha*, suggesting that the name *E. bottnica* not be used for plants on the Kola Peninsula (Brenner 1896i).

Brenner (1899, 1900c, 1902a, 1921b) also used and defended the name *E. hebecalyx* in later publications. The editorial board of *Botaniska Notiser* responded to M. Brenner's (1898a) "defence" and accepted the name *E. bottnica* as legitimate. It is still used, one of a few endemic taxa in the Bothnian Bay area. Described as *E. latifolia* var. *rigida*, Brenner's (1899) variety *E. latifolia* var. *botniensium* (Brenner 1899) is now recognised as *E. wettsteinii* var. *botniensium* (Piiirainen 2020).

Brenner later described varieties of *E. reuteri*, var. *substricta* and var. *subcurta* (1904h), and presented Finnish *Euphrasia*; *E. micrantha* Brenner, *E. tenuis* Brenner, *E. brevipila*, *E. curta* and *E. latifolia* according to Wettstein's monograph (Brenner 1895e).

According to Brenner (1900p), *Euphrasia* × *murbeckii* was not an unambiguous hybrid as Wettstein had suggested (Brenner 1896f). He initially identified Wettstein's hybrid specimens as either *Euphrasia* × *murbeckii* [*E. brevipila* (*stricta*) × *curta* (*nemorosa*)] or *E.* × *reuteri* [*E. curta* (*nemorosa*) × *stricta*], in other words according to current understanding, the same hybrid *E. nemorosa* × *stricta*. Later on, he placed Wettstein's *E.* × *murbeckii* among an even more complicated group of hybrids. He recognised five basic types of this hybrid group, and suggested that, based on their morphology, nine hybrid taxa could be described (Brenner 1904h).

Brenner presented *E. rostkoviana* (= *officinalis*) from Hausjärvi at the monthly meeting of *Societas* (Brenner 1895e): *E. rostkoviana* var. *minoriflora* Borbas (= subsp. *fennica* = *E. officinalis* subsp. *officinalis*) from Kirkkonummi [N/U] (Brenner 1900j).

The morphological distinctive features of the genus *Euphrasia* species are minor and therefore difficult to distinguish. Jalas and Kukkonen (1973) typified his *Euphrasia* names, which clarified the taxonomy of the genus in Finland.

Numerous other taxa

Although Brenner was particularly interested in the *Euphrasia*, *Hieracium* and *Taraxacum* taxonomy, he also studied several other plant genera and species during his taxonomic activity that extended over almost 60 years: *Erophila* [Draba] *verna*, *Euphrasia*, *Juncus*, *Linnaea borealis*, *Picea abies*, *Pimpinella saxifraga*, *Primula officinalis* [*veris*], *Rosa*, *Sorbus aucuparia*, *Taraxacum* and *Viola tricolor*.

Primula officinalis* and *Alnus

As new to science, Brenner (1888a) described four forms and seven subforms of *Primula officinalis* [*veris*] throughout its fairly southern Finnish distribution range, and 12 varieties and forms of *Alnus glutinosa* and *A. incana* (Brenner 1892g).

Viola tricolor

Inspired by French national Claude Thomas Alexis Jordan (1814–1897), who described at least 42 taxa (<https://www.ipni.org/>, 4.10.2020), Brenner observed the variability of *Viola tricolor* (Fig. 11), describing three new varieties, nine forms and two subforms as new to science (Brenner 1893c, 1904c, 1921e). His enthusiasm re-appeared when Veit Brecher Wittrock (1839–1914) published his *Viola* studier (1895, 1897) in two parts. Brenner collected 210 sheets of *Viola tricolor*, mainly at N/U. In his herbarium labels he used 42 different names on these 210 sheets consisting of six species, 34 varieties, 128 forms, 24 subforms and 18 hybrids (Table 5).

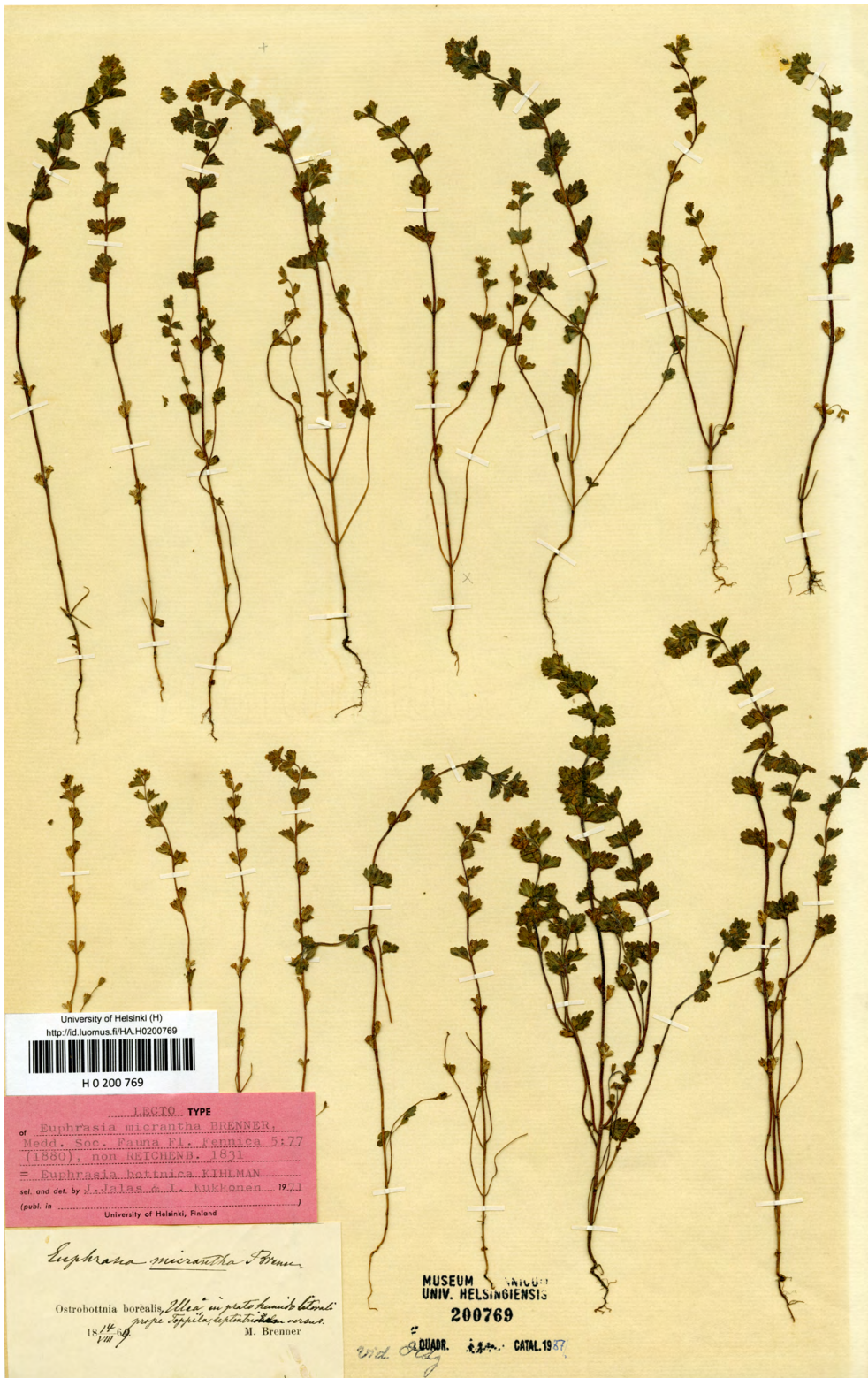


Fig. 10. Lectotype of *Euphrasia micrantha* Brenner (= *E. bottnica* Kihlm.).

Brenner also described *Viola canina* var. *montana* [rankless] *hamata* (1892f), which he collected in Kirkkonummi. Concerning *Viola canina*, before describing *hamata* (a rank he used f. in the labels) he collected 13 *canina* specimens in 1886–1896, mainly in Kirkkonummi. He was

also thinking of other taxa and once he used the names var. *ericetorum* and f. *minor* on the labels.

Erophila verna

Again inspired by Jordan, Brenner (1904g) described five species and one form of *Erophila*



Fig. 11. Lectotype of *Viola tricolor* f. *turgida* Brenner.

Table 5. Names of lower ranks of *Viola tricolor* used by Brenner in his own collections. Var. = variety, f. = form, subf. = subform, × = hybrid.

var. <i>aequalis</i> f. <i>versicolor</i> pr. p.
var. <i>aequalis</i>
var. <i>agrestis</i>
var. <i>agrestis</i> × var. <i>gracilentata</i>
var. <i>gracilentata</i> f. <i>albida</i> pr. p.
var. <i>gracilentata</i> f. <i>anopetala</i>
var. <i>gracilentata</i> f. <i>lutescens</i>
var. <i>gracilentata</i> f. <i>minor/minuta</i>
var. <i>gracilentata</i> f. <i>septentrionalis</i>
var. <i>gracilentata</i> f. <i>sublutescens</i>
var. <i>gracilentata</i> f. <i>versicolor</i> pr. p.
var. <i>gracilentata</i>
var. <i>gracilentata</i> × var. <i>polygonata</i> f. <i>segetalis</i>
var. <i>polygonata</i> f. <i>excelsa</i> × f. <i>petrophila</i>
var. <i>polygonata</i> f. <i>excelsa</i> × f. <i>ruderalis</i>
var. <i>polygonata</i> f. <i>excelsa</i>
var. <i>polygonata</i> f. <i>excelsa</i> subf. <i>versicolor</i>
var. <i>polygonata</i> f. <i>flavescens</i>
var. <i>polygonata</i> f. <i>petrophila</i>
var. <i>polygonata</i> f. <i>petrophila</i> × f. <i>segetalis</i>
var. <i>polygonata</i> f. <i>petrophila</i> × f. <i>sublutescens</i>
var. <i>polygonata</i> f. <i>petrophila</i> × subf. <i>albescens</i>
var. <i>polygonata</i> f. <i>petrophila</i> subf. <i>albescens</i>
var. <i>polygonata</i> f. <i>petrophila</i> subf. <i>versicolor</i> pr. p.
var. <i>polygonata</i> f. <i>petrophila</i> subf. <i>typica</i>
var. <i>polygonata</i> f. <i>petrophila</i> subf. <i>subflavescens</i>
var. <i>polygonata</i> f. <i>roseola</i>
var. <i>polygonata</i> f. <i>ruderalis</i>
var. <i>polygonata</i> f. <i>segetalis</i>
var. <i>polygonata</i> f. <i>septentrionalis</i>
var. <i>tricolor</i> f. <i>minor</i> nom. superfl.
var. <i>tricolor</i>
var. <i>trivialis</i> f. <i>gracilescens</i> × f. <i>gracilentata</i>
var. <i>trivialis</i> f. <i>gracilescens</i> × f. <i>rupicola</i>
var. <i>trivialis</i> f. <i>gracilescens</i> × f. <i>turgescens</i>
var. <i>trivialis</i> f. <i>gracilescens</i> × f. <i>turgida</i>
var. <i>trivialis</i> f. <i>gracilescens</i>
var. <i>trivialis</i> f. <i>gracilescens</i> subf. <i>versicolor</i> pr. p.
var. <i>trivialis</i> f. <i>rupicola</i>
var. <i>trivialis</i> f. <i>turgescens</i>
var. <i>trivialis</i> f. <i>turgescens</i> × f. <i>turgida</i>
var. <i>trivialis</i> f. <i>turgida</i>

DC. (described in 1821). Jordan described almost 55 species (<https://www.ipni.org/>, 4.10.2020), most notably in his 1864 monograph *Diagnoses d'Espèces Nouvelles ou méconnues, pour servir de matériaux à une flore réformée de la France et des contrées voisines*. Keen taxic splitters are sometimes referred to as Jordananologists. Other Finnish botanists also considered naming new *Erophila* taxa by means of herbarium labels (H): f. *ovalis* (Saetan H 804769), f. *oblonga* (Saetan H 804772; H 804779; H 804771); subsp. *spathulata* (Láng) Walters (Jalas H 673174, H 695164). The last-mentioned, provisionally named by Professor Jaakko Jalas, is nowadays considered synonymous with *Draba verna* var. *boerhaavii* H. C. Hall, according to PoWo (<http://www.plantsoftheworldonline.org/>, 4.10.2020).

The splitting of *Erophila* is largely ignored currently, and the genus is back in *Draba* – as Linnaeus described it – *D. verna* L.

In addition to the five species Brenner described, he accepted another five Finnish species, bringing the total to 10. In Brennerian terms, even small populations were highly polymorphic: all 10 species and the only form (f.) grew in a single small area in Helsinki, Ullanlinnanmäki; nine species in Helsinki, Punavuori, and many locally in Inkoo. The hybrid *E. ovalis* × *radiosa* also grew in the Helsinki sites, *E. brachycarpa* × *radiosa* only at Ullanlinnanmäki, and Brenner once collected *E. acrocarpa* × *ovalis* in Katajanokka. He did his *Erophila* collecting in 1859–1925, especially in 1887–1902 (Table 6). Most *Erophila* specimens (111) were collected in Helsinki (Table 7). Several species usually grew in a single place.

Pimpinella saxifraga

Inspired by Danish Henning E. Petersen (1877–1946) and his *Nogle Studier over Pimpinella saxifraga* (Petersen 1921), Brenner (1925e) described 15 new forms of *Pimpinella saxifraga* (Väre 2021). The diagnoses are given in the key.

Table 6. Taxa and localities of *Erophila* specimens collected by Brenner.

	Helsinki	Inkoo	Porvoo
<i>E. acrocarpa</i> Brenner 1904	5		1
<i>E. acrospra</i> × <i>ovalis</i>	1		
<i>E. affinis</i> Jord. 1864	20	5	
f. <i>minor</i>	5		
<i>E. angustata</i> Brenner 1904	14	2	
<i>E. brachycarpa</i> × <i>radiosa</i>	4		
<i>E. brachycarpa</i> Jord. 1852	23		
<i>E. krockeri</i> Andr. 1860	6	4	
f. <i>minoriflora</i>	1		
<i>E. ovalis</i> Brenner 1904	31		
<i>E. ovalis</i> × <i>radiosa</i>	3		
<i>E. radiosa</i> Brenner 1904	38		
<i>E. rhomboidea</i> f. <i>rhomboidea</i>	41		
f. <i>abbreviata</i> Brenner 1904	1		
<i>E. rigidula</i> Jord. 1864	34	2	
<i>E. subrotunda</i> Jord. 1864	4		
	231	13	1
		total 245	

Table 7. Number *Erophila* sheets collected by Brenner in Helsinki at various places.

Hietalahti	7	Punavuori	14
Huopalahti	1	Ruoholahti	6
Katajanokka	3	Seurasaari	1
Lapinlahti	11	Töölö	4
Leppäsuo	1	Ullanlinnanmäki	62
Merisatama	1		

The richness of coniferous forms

Numerous varieties and forms of conifer, especially of *Picea abies* (L. 1753) H. Karst. 1881, have been described worldwide and many cultivars have been selected for propagation. The scientific names used for *P. abies* in Brenner's time were *Abies excelsa* (Lam. 1779) Poir. 1804 and *Picea excelsa* (Lam. 1779) Peterm. 1838, and rarely *P. abies*. Brenner named six forms of *Juniperus communis* (L. 1753), 30 taxa of *Picea abies*, 16 varieties and 14 forms, and two forms of *Pinus sylvestris* (L. 1753) (Table 8). Many of his new names were left without a description (Väre 2021).

He based a good number of these new names on environmentally induced temporary modifications, as he frequently pointed out in his articles, but they have no taxonomic significance.

Brenner (1895c) described *P. abies* f. *oligoclada* found in Lohja, and reported it in Inkoo at the

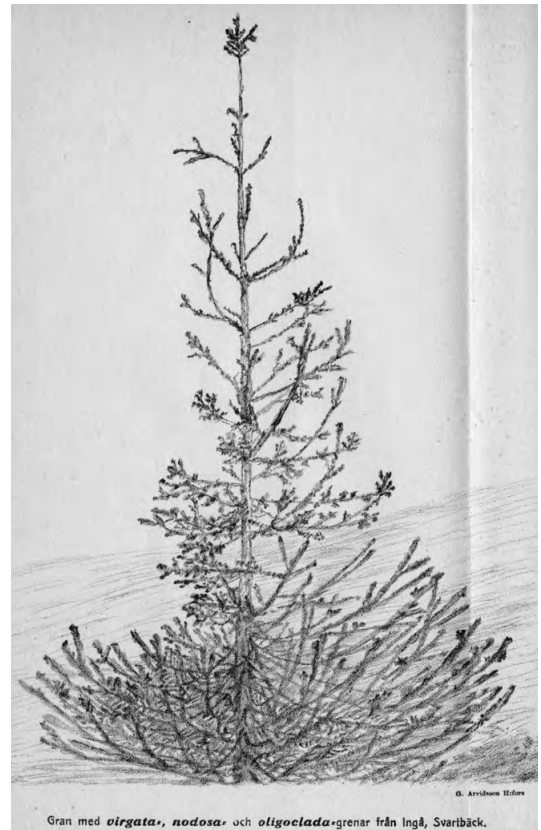
monthly meeting of *Societas* [Luonnon Ystävä 2 (8–9): 177, 1898]: f. *nodosa* (Fig. 12) which, like vice f. *brevifolia*, f. *virgata* and f. *glomerulans*, and f. *furcata* was not a permanent form (Brenner 1908d, 1908m), and 15 new *Picea* forms of three varieties based on the morphology of the cone scales (Brenner 1917b). He wrote in the article that he was inspired by the work of Wittrock. He believed that var. *rhombica* (Witt.) Brenner and var. *fennica* Reg. corresponded with the intermediate form of the *P. abies* subsp. *obovata* and *P. abies* subsp. *abies*, var. *acuminata* representing the former (Fig. 13) (Brenner 1917a). He pointed out that var. *medioxima* Nyl. represented var. *fennica* Reg. (Brenner 1917a), currently *P. abies* nothosp. × *fennica* (Regel) Parfenov, the prevailing race of *Picea abies* in Finland. There was a new form, f. *virgulata* (Brenner 1918b).

Brenner (1918a, 1920a,d) paid attention to cone morphology and described many taxa. The environmental factor was frequently in evident.

Table 8. Conifer taxa described by Brenner

<i>Juniperus communis</i> f. <i>adpressa</i>
<i>Juniperus communis</i> f. <i>brevifolia</i>
<i>Juniperus communis</i> f. <i>densa</i>
<i>Juniperus communis</i> f. <i>intermedia</i>
<i>Juniperus communis</i> f. <i>laxa</i>
<i>Juniperus communis</i> f. <i>longifolia</i>
<i>Picea excelsa</i> f. <i>constricta</i>
<i>Picea excelsa</i> f. <i>corrugata</i>
<i>Picea excelsa</i> f. <i>deversa</i>
<i>Picea excelsa</i> f. <i>fastigiata</i>
<i>Picea excelsa</i> f. <i>furcata</i>
<i>Picea excelsa</i> f. <i>hemichlocarpa</i>
<i>Picea excelsa</i> f. <i>leptalea</i>
<i>Picea excelsa</i> f. <i>mesochlocarpa</i>
<i>Picea excelsa</i> f. <i>nodosa</i>
<i>Picea excelsa</i> f. <i>oligoclada</i>
<i>Picea excelsa</i> f. <i>recurvata</i>
<i>Picea excelsa</i> f. <i>sigmoidea</i>
<i>Picea excelsa</i> f. <i>umbelliformis</i>
<i>Picea excelsa</i> f. <i>virgulata</i>
<i>Picea excelsa</i> var. <i>acuminata</i> f. <i>bifida</i>
<i>Picea excelsa</i> var. <i>acuminata</i> f. <i>praemorsa</i>
<i>Picea excelsa</i> var. <i>fennica</i> f. <i>elliptica</i>
<i>Picea excelsa</i> var. <i>fennica</i> Reg. f. <i>obovoidea</i>
<i>Picea excelsa</i> var. <i>fennica</i> Reg. f. <i>subcuneata</i>
<i>Picea excelsa</i> var. <i>rhombica</i> f. <i>bicornis</i>
<i>Picea excelsa</i> var. <i>rhombica</i> f. <i>bidentata</i>
<i>Picea excelsa</i> var. <i>rhombica</i> f. <i>decapitata</i>
<i>Picea excelsa</i> var. <i>rhombica</i> f. <i>erosa</i>
<i>Picea excelsa</i> var. <i>rhombica</i> f. <i>mixta</i>
<i>Picea excelsa</i> var. <i>rhombica</i> f. <i>obtusata</i>
<i>Picea excelsa</i> var. <i>rhombica</i> f. <i>semibidentata</i>
<i>Picea excelsa</i> var. <i>rhombica</i> f. <i>semierosa</i>
<i>Picea excelsa</i> var. <i>rhombica</i> f. <i>subacuta</i>
<i>Picea excelsa</i> var. <i>rhombica</i> f. <i>subobliqua</i>
<i>Picea excelsa</i> var. <i>rhombica</i> f. <i>typica</i>
<i>Pinus sylvestris</i> f. <i>contortifolia</i>
<i>Pinus sylvestris</i> f. <i>cornigera</i>

Fig. 12. *Picea abies* with *virgata*, *nodosa* and *oligoclada* branches in the same tree (Brenner 1908d).



Gran med *virgata*, *nodosa* och *oligoclada*-grenar från Ingå, Svartbäck.



Fig. 13. Atypical cone scales in typical *Picea abies* (Brenner 1917a).

Brenner was less productive with regard to *Juniperus* and *Pinus*. Based on general habit, he described six new forms of *Juniperus communis* (Brenner 1921f), *Pinus sylvestris* f. *contortifolia* from Lohja, Ojamo (Brenner 1895b), with short, curved needles, and *P. sylvestris* f. *cornigera* from Kirkkonummi, a form with big appendages on the cone scales (Brenner 1898d, 1900q). Brenner wrote also brief notes on conifers (Table 9).

Brenner considered that the length of the *Picea* and *Pinus* needles varied for non-hereditary reasons and therefore it was of no taxonomic significance, although Fr. Elfving and H. Lindberg disagreed (Brenner 1907d, 1908d, 1909b,g, 1910d). The length and also the density of the needles also varied widely in *Juniperus communis* (Brenner 1921f).

Similarly, the morphology of the *Picea abies* cone scales varies (Brenner 1917a, 1920d). In Finland this characteristic is attributable to the



Fig. 1. En ensam, fertil, grön krokfjällskotte hos 14-årig gran af f. *interoligocladam* et *typicam*. Naturlig storlek.

Fig. 14. Morphologically intermediate *Picea abies* cones between *oligoclada* and *typica*-types (Brenner 1916b).

Table 9. Notes on conifers

- Picea abies* f. *oligoclada*, Inkoo (Brenner 1898b,c 1900e, 1907e, 1920b).
- P. abies* f. *virgata*, Inkoo (Brenner 1904j); [Raasepori], Snappertuna (Brenner 1907e); Sweden, small forest (Brenner 1909b).
- Pinus cornigera* f. *cornigera*, Kirkkonummi (Brenner 1898d); Inkoo (Brenner 1900q).
- P. sylvestris* f. *virgata*, Inkoo (Brenner 1918b).
- P. abies* f. *virgulata*, Inkoo (Brenner 1920b).
- P. sylvestris* f. *virgata*, Ruovesi (Brenner 1927a).

intermediates between *P. abies* subsp. *abies* and subsp. *obovata*, referred to as *P. abies* × notho-subsp. *fennica* (Väre et al. 2021). The intermediate taxon is the most common *Picea taxon* in Finland, an integration that occurred after the post-glacial spreading from the south (subsp. *abies*) and the east (subsp. *obovata*).

Various morphotypes of *P. abies* grew in Inkoo [N/U], such as 'f. *umbelliformis*' and f. *tabuliformis* (Brenner 1910c). Many *P. abies* f. *virgata* were cultivated from seeds obtained from Kaisaniemi Botanic Garden (Alexander University) and grew in Inkoo, and some of these were intermediates of f. *oligoclada* and f. *virgata* (Fig. 14) (Brenner 1910c, 1914, 1916b, 1921i).

Sorbus aucuparia

Brenner described three forms and five subforms of *Sorbus aucuparia* (listed in Väre 2021) based on leaf morphology (Brenner 1907c). Of those, *S. aucuparia* f. *heteromorpha* Brenner (Fig. 15) was later interpreted as var. *heteromorpha* (Brenner) Raatik. It represents variation in the *S. aucuparia* subsp. *aucuparia* at one extreme, namely individuals with long, narrow and tapering leaflets, a largely non-dentate margin at their base, sparsely hairy leaves and inflorescence in long flowering branches. The variety is assumed to be prevalent in eastern Finland, but trees grow more or less irregularly throughout southern and central areas, and their many intermediate forms are common. Consequently, var. *heteromorpha* has no great taxonomic significance.

Linnaea borealis

Inspired by Wittrock's (1879, 1907) studies, Brenner began to investigate *Linnaea borealis*, particularly in Inkoo. There is variation, especially in the colour and shapes of the spots in the corolla. He initially described two new varieties, seven forms and one subform (Brenner 1908h), then two forms (1909c), seven forms (1910e), and finally two more (1911d, 1912a). *L. borealis* f. *superba* Wittr. was new to Finland (Brenner, M. 1912a).

Carl von Linné (1707–1778) favored *L. borealis*. In his honour, Wittrock (1907) described 140 Swedish taxa based on variation in flower coloration. Brenner described 20 from Finland.

Rosa canina s. lat.

Sigfrid Oscar Immanuel Almquist (1844–1923) and Lars Peter Reinhold Mattsson (1870–1938) sparked Brenner's serious interest in *Rosa canina* s. lat. They both wrote about genus *Rosa* in *Flora of Sweden* (Mattsson 1901, Almquist 1918). The descriptions were complex, listing 16 species, seven hybrids and 196 varieties (Mattsson 1901), and 205 species and 270 subspecies (Almquist 1918) of *Rosa canina* s. lat. in Sweden. Almquist identified many rose specimens at H in 1918 and 1919. Brenner collected some 70 spec-

imens (H) mainly in Inkoo, near his home, and described one species, two subspecies and two forms. (Brenner 1906l, 1925a,c,m).

Other new taxa

With the exceptions of *Hieracium* and *Taraxacum*, all the taxa described by Brenner are listed in Väre (2021), like *Peucedanum palustre* var. *filifolium* (Fig. 16). References not given elsewhere are listed here: Brenner (1888e,h, 1900i, 1900n, 1906m, 1908k, 1925d).

Nomina nuda

In many of his publications, Brenner mentions 56 scientific names (Väre 2021) to which he does not give a description (e.g. Brenner 1871b,c, 1878b, 1884, 1886f, 1888a, 1904b,i, 1906i, 1907a,h, 1908l, 1911a, 1925e). All 56 of these names are invalid, *nomina nuda*, as they lack a description (Greuter et al. 2000: art 36.1), and three of them because they are subordinated to a hybrid formula rather than a species name. Brenner also made numerous nomenclatural combinations, many of which are probably not novelties.

Numbers

Excluding *Euphrasia*, *Hieracium* and *Taraxacum*, Brenner described 192 taxa: eight species, three subspecies, 32 varieties, one subvariety, 131 forms and 17 subforms. This original material comprises 690 sheets.

In total, including *Hieracium* and *Taraxacum*, he described 833 taxa: 411 species, six subspecies, 196 varieties, four subvarieties, 199 forms and 17 subforms.

In his later career, he actively collected in the places in which he lived, viz. Inkoo (68 type sheets) and Helsinki (34), both in the south of Finland, as well as in Kirkkonummi (19), where his father was born.



Fig. 15. Lectotype of *Sorbus aucuparia* f. *heteromorpha* Brenner (Brenner 1907b).



Fig. 16. Lectotype of *Peucedanum palustre* var. *filifolium* Brenner (Brenner 1899).

Numerous communications

Taxa new to Finland

Brenner reported many taxa as new to Finland in addition to those described above: 23 of them are original or established aliens in Finland (Table 10).

Casual aliens

Brenner collected many casual alien plants during his expeditions. He also inspected the herbaria of numerous students: collections included also rarities, of which some were new to Finland (Table 11).

Plant finds

Further, Brenner made communications on other interesting plant finds in Finland, some of which are listed in Table 12.

Nomenclatural issues

Brenner wrote many small taxonomic notes which are listed below.

The description of *Festuca ovina* var. *duriuscula* subvar. *litoralis* Brenner (Brenner 1888b) contain a list of type specimens along the coast. Later Brenner adopted the name *F. ovina* L. var. *glauca* Hack. subvar. *litoralis* Brenner (Brenner 1890, 1892n). This is *Festuca polesica*.

Determination of *Festuca glauca* by Kihlman was criticised by Brenner. According to Hackel, correct name should be *F. caesia* Sm. [*F. longifolia* subsp. *longifolia*]. Brenner (1892b,n) considered *F. ovina* var. *duriuscula* [*F. rubra*] to be correct. Kihlman (1893b: 107) provided a summary in German.

On the variability of *Rubus arcticus* leaves (Brenner 1892m).

On the variation of *Chenopodium album* and *C. viride* and some other taxa in Finland (Brenner 1892o).

Pulmonaria angustifolia (Brenner 1886h) might be *Nonea pulla* (Brenner 1894b).

Additional information of *Primula officinalis* [*P. veris*] hybrids (Brenner 1896g).

Odontites vernus and *O. serotinus* [*O. vulgaris*] resembled a lot each other's, *O. rubra*, *O. serotinus* and *O. vernus* ought to be treated as single taxon *O. rubra* [*O. vulgaris*], due to numerous intermediates (Brenner 1900h).

Table 10. Original or established aliens reported by Brenner as new to Finland. Currently used names are in the parenthesis. The varieties or forms are not usually recognised.

Carex × *elytroides*, *C. acuta* × *nigra*, Liminka (Brenner 1871e). However, this was a new to Finland.

Agrostis planifolia [*A. vinealis*], Tuusula (Brenner 1874c).

Artemisia campestris subsp. *bottnica*, Liminka, (Hjelt 1879), Brenner's collection, not re-found there.

Carduus nutans, Hamina; Helsinki; Oulu; Pori (Brenner 1886b,e).

Ononis hircina [*O. spinosa* subsp. *arvensis*], Porvoo (Brenner 1886f).

Viola canina var. *crassifolia*, Kirkkonummi (Brenner 1892h).

Viola riviniana var. *nemorosa*, Kirkkonummi (Brenner 1892h).

Alnus glutinosa f. *lobulata*, Kirkkonummi (Brenner 1892i).

Epilobium montanum × *palustre*, Helsinki (Brenner 1893d), kept by Kihlman (1893a) as *E. palustre*.

Epilobium palustre var. *fontanum*, Helsinki (Brenner 1893d).

Sonchus oleraceus var. *albiflorus*, Kirkkonummi (Brenner 1896e).

Lepidium draba, Helsinki, Ruoholahti, (Brenner 1900s).

Polygonum calcatum [*P. arenastrum*], Lauritsala (Brenner 1906a).

Calamagrostis phragmitoides var. *pulchella*, Helsinki, Kaivopuisto (Brenner 1906g).

Centaurea jacea × *phrygia*, Loviisa, Tervik (Brenner 1906j).

Ranunculus acris × *polyanthemos*, Helsinki, Hylkysaari (Kalfholmen) (Brenner 1906j).

Stellaria holostea f. *laciniata*, Vantaa, Pakkala (Backas) (Brenner 1906j).

Rubus idaeus f. *subviridis*, Lemland (Brenner 1906j).

Rubus arcticus × *idaeus*, Kuusamo, Hawananwaara, (Brenner 1909f).

Chenopodium album var. *praecacutum* f. *oblongum*, Helsinki, Katajanokka (Skatudden) and Kaivopuisto (Brunspark); Inkoo, Svartbäck; Kirkkonummi, Srömsby; Parainen (Brenner 1915b).

Chenopodium album var. *lanceolatum*, Helsinki, Katajanokka (Brenner 1915b).

Astragalus cicer, Inkoo (Brenner 1921h, 1925a,g).

Cerastium aggregatum [*C. siculum*] Inkoo, (Brenner 1925g).

Table 11. Twentyfive for Finland new casual alien vascular plants reported by Brenner. The varieties are not usually recognised. *Trifolium fragiferum* is original in the SW Finland. Currently used names are in the parenthesis.

Heracleum villosum, Sipoo (Brenner 1874c).

Veronica latifolia [*V. austriaca* subsp. *teucrium*], Liperi (Brenner 1874b).

Bromus unioloides [*Ceratochloa cathartica*], Helsinki, Eestiluoto, (Brenner 1886b, 1906d).

Bromus commutatus, Oulu (Brenner 1886c, 1899), properly perhaps *B. arvensis* × *commutatus* (Brenner 1906d).

Bromus macrostachys [*B. lanceolatus*], Oulu, (Brenner 1886c, 1906d).

Diplotaxis tenuifolia, Oulu (Brenner 1886c).

Scleranthus perennis Oulu (Brenner 1886c).

Erucastrum pollichii [*E. gallicum*], Helsinki (Brenner 1886d).

Carduus acanthoides, Helsinki (Brenner 1886b,e).

Carduus crispo-nutans [*C. × stangi*], Helsinki (Brenner 1886b,d).

Muscari botryoides, Helsinki (Brenner 1886f).

Crocus vernus, Helsinki (Brenner 1886f).

Papaver argemone [*Roemeria argemone*], Hanko (Brenner 1888g).

Trifolium fragiferum, Kokkola (Brenner 1888g).

Ajuga reptans, Kokkola (Brenner 1888g).

Rapistrum rugosum var. *clavatum*, Helsinki (Brenner 1892c).

Brassica juncea, Helsinki (Brenner 1892d, 1893b).

Senecio jacobus [*Jacobea vulgaris*], Helsinki, Malmi (Brenner 1892p).

Carduus crispo-nutans [*C. × stangi*], Porvoo (Brenner 1893b).

Bromus commutatus, Helsinki, Eestiluoto (Brenner 1906d).

Bromus racemosus, Helsinki, Eestiluoto (Brenner 1906d).

Ornithopus sativus, Helsinki, Eestiluoto (Brenner 1906d).

Phacelia tanacetifolia, Pernaja (Brenner 1906j).

Erodium cicutarium var. *holoporphyreum*, Kangasala (Brenner 1906k).

Potentilla atrosanguinea, Iisalmi (Brenner 1906k).

Silybum marianum, Helsinki (Brenner 1909a).

Table 12. Some most interesting plant records (71) by Brenner. Currently used names are given in the parenthesis.

Achillea ptarmica Oulu, (Brenner 1871e).
Bidens cernua var. *radiata* [B. *radiata*], Oulu (Brenner 1871e). Later Brenner (1874a) pointed out, that these Oulu records were from li.
Poa caesia [P. *glauca*], Kuhmo (Brenner 1871e).
Trisetum flavescens, Karkku (Brenner 1874b).
Potamogeton mucronatus [P. *friesii*], Liperi (Brenner 1874b).
Dracocephalus thymiflorum, Liperi (Brenner 1874b).
Farsetia incana [Berteroa *incana*], Liperi (Brenner 1874b).
Nepeta grandiflora, several finds (Brenner 1874b).
Deschampsia cespitosa f. "vivipara", Vihti, (Brenner 1874b).
Ranunculus acris f. "plena", Vihti, (Brenner 1874b).
Carex acutiformis, C. *riparia*, Tuusula (Brenner 1874d).
Carduus crispus × *nutans*, Helsinki (Brenner 1886d, 1893b)
Silene viscosa, Sipoo, Söderkär (Brenner 1886f).
Alnus glutinosa, li; Liminka, northernmost in Finland (Brenner 1886g).
Rubus idaeus, Helsinki, yellow fruits (Brenner 1888d).
Alnus glutinosa f. *lobulata*, with small "cones" (Brenner 1892i).
Alnus × *pubescens*, Kirkkonummi (Brenner 1892i). This is a common hybrid in Finland.
Convallaria multiflorum [Polygonatum *multiflorum*], Inkoo, Stor-Ram-sö (Brenner 1909a).
Chenopodium album var. *bicolor*, Helsinki, Katajanokka (Brenner 1900i).
Chenopodium album var. *pagonum*, Parainen, Viitasaari (Brenner 1900i).
Veronica officinalis, Helsinki, Punavuori, big- and doubleflowered (Brenner 1900i).
Salix phylicifolia, Helsinki, Kamppi, dense female inflorescence with short leaves (Brenner 1900i).
Fragaria elatior [F. *moschata*], Inkoo, naturalised (Brenner 1904f).
Ribes grossularia [R. *uva-crispa*], Lohja, naturalised (Brenner 1904k).
Pyrus malus [Malus *domestica*], Helsinki, naturalised (Brenner 1904k).
Potentilla goldbachii [P. *thuringiaca*], Loviisa, Tervik, new to Nylandia (Brenner 1906j).
Carex laevirostris [C. *rhynchophysa*], Kouvola, Elimä, new to Nylandia (Brenner 1906j).
Carex riparia, Kouvola, Mustila (Brenner 1906j).
Carex paludosa [C. *acutiformis*], Kouvola, Mustila (Brenner 1906j).
Sorbus hybrida [Hedlundia *hybrida*], Inkoo, naturalised (Brenner 1907b).
Melampyrum nemorosum, Inkoo (Brenner 1925a).
Puccinellia distans var. *pulvinata* [P. *capillaris*], Kirkkonummi; the White sea; Hattula (Brenner 1890, 1892j).
Rubus idaeus var. *simplificifolius* [var. *anomalus*], Vantaa, Latokartano, with one leaflet (Brenner 1890).
Festuca rubra var. *planifolia* [F. *rubra* subsp. *arctica*], Kemi (Brenner 1892f).
Primula officinalis f. *loncicalyx* [P. *veris*], Kirkkonummi (Brenner 1892f).
Alnus glutinosa f. *lobulata*, Kirkkonummi (Brenner 1892i).
Impatiens parviflora, Helsinki, spreading (Brenner 1892i).
Carpinus betulus Helsinki, Sinebrykoffin park, flowering (Brenner 1892p).
Sambucus racemosa, Porvoo, naturalised (Brenner 1893b).
Ribes Rubrum-Group "[Valkoinen Hollantilainen]", Helsinki, naturalised (Brenner 1893e).
Anemone nemorosa, Kajaani; Iisalmi (Brenner 1896c).
Eupatorium cannabinum, Kirkkonummi, new to Nylandia (Brenner 1898e).
Ononis spinosa, Kirkkonummi (Brenner 1898e).
Cardamine bulbifera, Kirkkonummi (Brenner 1898e).
Tilia cordata forest, Kirkkonummi (Brenner 1898e).
Trollius europaeus is not growing at *Alandia*, unlike reported (Brenner 1898f).
Alchemilla obtusa [A. *samuelssonii*], Ahvenanmaa (Brenner 1900a).
Alchemilla pastoralis [A. *monticola*] and A. *filicaulis* var. *vestita* were most common Alchemilla's in southern Finland (Brenner 1900a).

Elodea canadensis, Riihimäki, Vantaajoki, abundant (Brenner 1900b).
Carex hirta, Inkoo, Svartbäck and Westerkuilla (Brenner 1898b,c, 1900e, 1904e).
Malaxis monophylla, Inkoo (Brenner 1898b,c, 1900e, 1906f), correction to name, *Malaxis paludosa* [Hammarbya *paludosa*] (Brenner 1901a).
Alchemilla filicaulis var. *filicaulis*, A. *pastoralis* [A. *monticola*], A. *filicaulis* var. *vestita* and A. *pubescens* [A. *glaucescens*], Inkoo (Brenner 1900k).
Scirpus parvula [Eleocharis *parvula*], Helsinki, Seurasaari (Brenner 1902b).
Populus pyramidalis [P. *tremula* 'Pyramidalis'], Helsinki, planted in 1887 (Brenner 1904a).
Cynanchum vincetoxicum [Vincetoxicum *hirundinaria*], Kirkkonummi, Porkkalanniemi (Brenner 1906f).
Saxifraga granulata, Kirkkonummi, Porkkalanniemi, (Brenner 1906f).
Stachys palustris × *sylvatica*, Kangasala (Brenner 1906k).
Rubus idaeus, Inkoo, with red, light red and light yellow fruits (Brenner 1908a).
 Additions to flora of W Inkoo since E. Hisinger (1857) *Flora Fagervikiensis* (Brenner 1908g).
Glyceria aquatica [Catabrosa *aquatica*], Pyhtää, Ahvenkoski; Inkoo Fargervik (Brenner 1908i).
Origanum vulgare, Hanko; Helsinki; Inkoo Fargervik (Brenner 1908i).
Asplenium germanicum [A. *ruta-muraria* subsp. *ruta-muraria*], Föglö (Brenner 1908i).
Platanthera bifolia × *chlorthanthera*, Föglö, and other novelties (Brenner 1908i).
Frangula alnus, Helsinki, Kaivopuisto (Brenner 1909a).
Woodsia ilvensis, Helsinki, Kaivopuisto (Brenner 1909a).
 Spring flowers of Inkoo (Brenner 1921e).
Trapa natans, Inkoo, and other inland plants (Brenner 1925j). *Trapa natans* has been found only as fossil in Finland.

Callitriche vernalis f. *ambigua* was actually *C. polymorpha* (Brenner 1892d). Kihlman (1893b: 107) provided a summary in German.

Alnus incana var. *glabra* Blytt must be included in var. *virescens* Wahlenb. [A. *incana* subsp. *kolaënsis*] (Brenner 1901c), and on the deviating interpretations of *A. incana* varieties, according to Brenner (1892g) those are var. *virescens* (syn. var. *borealis* Norrl.), var. *hirsuta* (syns. var. *confusa* Brenner and var. *intermedia* Brenner), var. *sibirica* include var. *intermedia* f. *sublaevis* Brenner. Saelan considered that var. *glabra* is a root sprout. A debate broke out at the *Societas* meeting (*Luonnon Ystävä* 4: 23, 1900).

Rosa mollis var. *glabrata* f. *glandulosior* at Inkoo (Brenner 1906i), determined by P. Reinhold Mattsson as *R. glauca* [R. *dumalis*] × *mollis*, and considered by H. Lindberg (1906) as *R. mollis*.

Nomenclature of the various apomictic genera (Brenner 1907h).

On *Rosa opaca* [R. *dumalis* p. lat.] at Inkoo and its confused nomenclature (Brenner 1908j).

Brenner described only one *Dactylorhiza* taxon (Brenner 1911a). On the other hand, he sought to determine the Finnish taxa in four articles based on research that German-born Johannes Christof Klinge (1851–1902) did in the Baltic states. On the rac-

es of *Orchis traunsteineri* [*Dactylorhiza majalis*] (Brenner 1894c, 1896h). As determined by J. Klinge *Orchis latifolia* [*D. majalis* subsp. *baltica*], *O. cruenta* [*D. incarnata* subsp. *cruenta*] and *O. cruenta* [*D. cruenta*] × *O. maculata* [*D. maculata*] grew at Alandia, Jomala (*Luonnon Ystävä* 2:192, 1898; Brenner 1900g).

As determined by J. Klinge and based on his publications, 16 varieties, 10 forms and 11 hybrids of *Orchis angustifolia* subsp. *russowii* [*Dactylorhiza majalis*] grew in Finland. According to Brenner (1900o) true varieties were only var. *patula*, var. *tarbatonica* and var. *recurva*. The other forms were intermediates. Understanding *Dactylorhiza* in Klingean sense was and is very confusing.

On the distributions of Finnish *Alchemilla* (Brenner 1898g). *Thlaspi alpestre* [*Noccaea caerulescens*] in Finland (Brenner 1921a).

Atriplex and *Chenopodium* variability in Finland (Brenner 1925b).

Other topics

Ecological aspects

Brenner observed plants not growing on coastal areas in southern Finland; such were *Alnus incana*, *Campanula glomerata*, *Geranium sylvaticum*, *Knautia arvensis*, *Succisa pratensis* and *Salix rosmarinifolia* [*S. repens* subsp. *rosmarinifolia*], among others (Brenner 1904b). He found a small palsa-like bog formation in the area bordering Inkoo and Karjaa in which *Polytrichum commune* was abundant (Brenner 1916a). The core of the palsa is permanently frozen.

Nature protection

Brenner (1888f) was against collecting specimens of rare trees such as *Alnus incana* var. *pin-nati-partita* and *Betula verrucosa* [*B. pendula*] var. *birkalensis*. He believed that certain trees should be protected as natural monuments (Brenner 1907j), as should rare forms such as *A. glutinosa* f. *lobulata*, *B. verrucosa* var. *birkalensis* and *Picea excelsa* [*P. abies*] f. *virgata* (Brenner 1921d).

He feared that as Helsinki expanded, nature-rich and valuable plant sites such as the Kaivo-puisto herb-rich *Alnus glutinosa* forest and *Salix* marsh would be destroyed (Brenner 1906b). As a

result of the construction work the flora changed rapidly, which Brenner (1906h) demonstrated with many examples. The original natural habitat was destroyed, as exemplified in the disappearance of the original vegetation on the three islands of Sandviksholmarna (Brenner 1921g).

Bryophyte studies

Brenner's bryophyte discovery in Northern Ostrobothnia during 1869 brought to light several new taxa in three biogeographical areas: Ok/Kn yielding 31 (incl. Ob Utajärvi, Otermajoki), Obo/OP (Brenner Ob) four and Kb/PK six species (Brenner 1896a). Fr. Elfving reported on Brenner's (1900f) moss collections at a meeting of *Societas*: 40 new taxa were identified as new for Ok, Ob, and Kb. *Oncophorus polycarpon* [*Cynodontium polycarpon*] and *Mnium affine* [*Plagiomnium affine*] have not been re-found in Ok/Kn. *Leskea tectorum* [*Pseudoleskeella tectorum*] is also rare there. *Cephalozia catenulata* [*Fuscocephalozia catenulata*] from Utajärvi was new to Obo/OP (Kimmo Syrjänen, e-mail 13.3.2020). Brotherus overlooked these species in his classic *Die Laubmoose Fennoskandia* (Brenner 1925i).

Studies on fungi

Moriola section *Eumoriola* taxon on birch branches in Vuokatti (Brenner 1874d). The genus *Moriola* is very poorly known, its taxa and systematic status are unclear.

W. Nylander had re-determined two Finnish lichen species; *Ramalina obtusa* = *R. minuscula* and *Cladonia delessertii* = *C. cristata* var. *ceptrariaeformis* (*Luonnon Ystävä* 3: 39, 1899).

Teleutospores and ekidiospores of *Chrysomyxa ledi*, ekidiospore stage once named also *Aecidium corruscans*, were found in Inkoo on the needles of *Picea abies* growing on swamp; *Phallus impidicus*, Föglö (Brenner 1908c).

Exoascus [*Taphrina pruni*] caused deformations of the fruits of *Prunus padus* (Brenner 1898b,c, 1900d, 1901b).

Teratology and abnormalities

Abnormal *Picea abies* twigs (Brenner 1896d), the abnormal growths of *P. abies* and *Pinus sylvestris*

- (Brenner 1898d). Brenner (1871d) introduced *Larix* cones through which the branch had continued to grow (Brenner 1920c).
- Tumour-like structures at the roots of *Vicia angustifolia* [*V. sativa* subsp. *nigra*] and *V. hirsuta*, galls caused by aphids on flowers of *Cerastium vulgatum* [*C. fontanum* subsp. *vulgare*] (Brenner 1878a).
- Abnormal growth of *Hydrangea hortensis* leaves (Brenner 1888c).
- Atypical *Hieracium umbellatum* in Kirkkonummi and *Taraxacum* in Helsinki (Brenner 1892k).
- Tall *Ranunculus acris* and *Geum rivale* in Lohja (Brenner 1895b).
- Chlorotic flowers of *Prunus padus* (Brenner 1904d).
- New trunks of fallen or bent *Betula*, *Picea* and *Pinus sylvestris* (Brenner 1906e).
- Proliferation of *Rosa*, new branches growing through the flower (Brenner 1908e).
- Syringa vulgaris* holding leaves six cm on 12 January (Brenner 1909h).
- More abnormal *Picea abies* growth forms from Inkoo (Brenner 1911b, 1925f, h).
- Further information on the malformed flowers (f. *tricornis*) of *Platanthera bifolia* (Brenner 1911c).
- Post-flowering of plants and leaves emerging in autumn (Brenner 1912b).
- Growth disturbances of *Betula pendula* and certain other plants (Brenner 1920c).
- Double fruit of *Malus domestica* and large *Phleum pratense* (Brenner 1925a).
- Of cones on young *Picea abies* (Brenner 1927b).

Summary

In his obituary, Professor Fr. Elfving (1930) referred to Brenner as "completely self-taught". He must have been somewhat difficult to deal with: he had a questionable reputation for publishing others' plant finds as his own, for example. At that time, new and remarkable discoveries tended to be presented at *Societas* meetings, and then reported in the *Meddelanden* series by anyone who wished to do so. Future Professor in Botany Kaarlo Linkola (1888–1942) wrote a letter (1915) to his friend Olli Kyyhkynen (1878–1960), a teacher at elementary school who lived in the heart of Savonia, recommending him to send his best plant finds to be communicated as he notes, "Otherwise they will remain hidden until your local flora is published, or will be communicated by a new Brenner" (Haapasaari 1994).

Brenner's character was exposed in a presentation he gave at a *Societas* meeting: "The lecturer ruined the atmosphere by insulting an anonymous person working in the Herbarium of Alexander University" (*Luonnon Ystävä* 2: 16, 1898). His presentation was on *Euphrasia*, and the object of his insult was Alfred Oswald Kihlman (later Kairamo) (1858–1938), who did not share his views. Kairamo was an exemplary amanuensis at the Herbarium in 1880, an adjunct Professor of Botany (1897–1903), and later a senator.

Brenner was quite unknown as a botanist beyond the Nordic countries, but he once played a small role in international botanical nomenclature. When changes to the nomenclature rules were under discussion at the Copenhagen Naturalists' Meeting of 1892, Brenner suggested that family names should have the suffix *-aceae*. The name of the species and the lower ranks should be descriptive of the plant; subspecies should be indicated as *, varieties as var. and forms as f. (*Botaniska Notiser* 1893: 152–153). He constantly used these abbreviations.

Brenner had a block of flats known as Brenner House built in the Kaartinkaupunki of Helsinki in the 1890s. His son Magnus Widar Brenner (1887–1932) was Acting Associate Professor of Botany in the Department of Natural Sciences at the University of Helsinki, 1927–28, Acting Associate Professor of Botany in the Faculty of Agriculture and Forestry, 1928–30 and Associate Professor of Botany, 1930–32. Two other sons, Ola and Alf Brenner were also biologists specialising in agriculture.

Eponyms

Vascular plants *Carex brenneri* Christ. in Scheutz 1888 (Fig. 18), *Hieracium brennerianum* Norrl. 1889, lichens *Lecanora brenneri* H. Magn. 1936, *Rhizocarpon geographicum* f. *brenneri* Räsänen 1942.

Carex brenneri Christ. in Scheutz

Pl. Vasc. Jeniss. (1888) 178. – Lectotype designated here. [Russia], Sibiria, Jenisei, Ostium flum. Nischnaja Tunguska 65°50' N. lat, 14 July 1876, H. Wilh. Arnell s.n. (H 1055352!)

(Fig. 18). – Syntypes: [Russia], Sibiria, ad flum. Jenisei, Kantaika, 18 July 1876, J. R. Sahlberg s.n. (H 1055349!, H 1055351!); [Russia], Sibiria, Jenisei, qverst ofvan Plachnis, 1876 M. Brenner s.n. (H 1055353!).

This is *Carex umbrosa* subsp. *sabynensis* (Less. ex Kunth) Kük, det. V. Kreczetowicz 1907 as *C. sabynensis*.

Fig. 18. Lectotype of *Carex brenneri* Christ. (= *C. sabynensis* Less. ex Kunth).



Brenner's publications

1871

- Brenner, M. 1871a: Botaniska bytesföreningen i Helsingfors. – Botaniska Notiser 1871: 134.
- Brenner, M. 1871b: Bidrag till kännedom af Finska vikens övegetation I. – Not. Sällsk. Fauna Fl. Fenn.11 (ny serie 8): 1–38.
- Brenner, M. 1871c: Ytterligare bidrag till kännedom af Finska vikens övegetation. – Not. Sällsk. Fauna Fl. Fenn.11 (ny serie 8): 445–448.
- Brenner, M. 1871d: Om Lärkträdkottar, i spetsen småningom öfvergående till verkliga, barrbärande grenar. – Not. Sällsk. Fauna Fl. Fenn.11 (ny serie 8): 454.
- Brenner, M. 1871e: Tvenne för floran nya fröväxter, *Poa caesia* och *Carex elytroides*, funna sommaren 1869 den förra i Kuhmo, den senare i Limingo, samt några anmärkningsvärda växtformer från Uleåborg och Limingo. – Not. Sällsk. Fauna Fl. Fenn.11: 458–459.

1872

- Brenner, M. 1872: Botaniska bytesföreningen i Helsingfors. – Bot. Not. 1872: 191.

1873

- Brenner, M. 1873: Finsk botanisk litteratur. – Bot. Not. 1873: 112–113, 142–143.

1874

- Brenner, M. 1874a: Rättelser angående några i föregående meddelande lämnade uppgifter. – Not. Sällsk. Fauna Fl. Fenn. 13 (ny serie 10): 456.
- Brenner, M. 1874b: Om några sällsynta eller förut i vårt land ej observerade växter. – Not. Sällsk. Fauna Fl. Fenn. 13 (ny serie 10): 456–457.
- Brenner, M. 1874c: *Heracleum villosum* Fisch. från Sibbo socken och *Agrostis planifolia* C. Koch anträffad af lyceisten H. B. Aström vid Thusby träsk. – Not. Sällsk. Fauna Fl. Fenn. 13 (ny serie 10): 463.
- Brenner, M. 1874d: En *Eumoriola*-form på björk på Wuokatti i Sotkamo samt *Carex riparia* och *C. paludosa* i Thusby. – Not. Sällsk. Fauna Fl. Fenn. 13 (ny serie 10): 488.

1878

- Brenner, M. 1878a: Om *Vicia angustifolia* och *V. hirsuta* med svamplika utväxter på rötterna samt exx. af *Cerastium vulgatum* med abnormt utvecklade blommor och örtblad i följd af bladlöss-härjningar jämte några mindre vanliga former af *Chrysanthemum leucanthemum* och *Achillea millefolium*. – Meddeland. Soc. Fauna Fl. Fenn. 3: 169.
- Brenner, M. 1878b: Berättelse till Societas pro Fauna et Flora Fennica öfver en 1869 i Kajana och södra delen af Norra Österbotten verk-sälld botanisk resa. – Meddeland. Soc. Fauna Fl. Fenn. 5: 63–80.

1884

- Brenner, M. 1884 (1885): Bidrag till kännedom af Finska viken övegetation III. Tillägg till Hoglands fanerogamflora. – Meddeland. Soc. Fauna Fl. Fenn. 11: 33–40. [Preprint 1884].

1886

- Brenner, M. 1886a: Bidrag till kännedom af Finska vikens övegetation. IV. Hoglands lafvar. – Meddeland. Soc. Fauna Fl. Fenn. 13: 1–143.
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- Brenner, M. 1886d: [Nya barlastväxter från Helsingfors: *Erucastrum Pollichii* och *Carduus crispus* × *nutans*]. – Meddeland. Soc. Fauna Fl. Fenn. 13: 228.
- Brenner, M. 1886e: [På barlastplatser i Helsingfors-trakten förekommande *Carduus* former, bl. a. *C. nutans* och *C. acanthoides*]. – Meddeland. Soc. Fauna Fl. Fenn. 13: 237.
- Brenner, M. 1886f: [Växtfynd i Helsingfors, Borgå, Sibbo och Helsing]. – Meddeland. Soc. Fauna Fl. Fenn. 13: 241–243.
- Brenner, M. 1886g: [*Alnus glutinosa* i enstaka exemplar vid kusten i Limingo och i Ijo]. – Meddeland. Soc. Fauna Fl. Fenn. 13: 254.
- Brenner, M. 1886h: Floristisk handbok, infattande i Finland vildt växande samt förvildade och allmänare odlade fröväxter och högre spörväxter för läroverken i Finland. – 260 p. G.W. Edlunds förlag. Helsingfors.

1888

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- Brenner, M. 1888c: [En egendomlig missbildning hos *Hydrangea hortensis*]. – Meddeland. Soc. Fauna Fl. Fenn. 15: 187–188.
- Brenner, M. 1888d: [Hallonbuske med hvitgula frukter vildt växande på Busholmen vid Helsingfors]. – Meddeland. Soc. Fauna Fl. Fenn. 15: 189.
- Brenner, M. 1888e: [*Peucedanum palustre* var. *selinifolium* Brenner från Kyrkslätt socken]. – Meddeland. Soc. Fauna Fl. Fenn. 15: 191.
- Brenner, M. 1888f: [Om vigten af att enskilda sällsynta växter i vårt land bevarades från undergång]. – Meddeland. Soc. Fauna Fl. Fenn. 15: 199.
- Brenner, M. 1888g: [Barlastväxter från Hangö och Gamla Karleby]. – Meddeland. Soc. Fauna Fl. Fenn. 15: 218.
- Brenner, M. 1888h: Om de i Finland förekommande formerna af Linne's ursprungliga *Juncus articulatus* Fl. succ., Sp. plant. edit. I. – Meddeland. Soc. Fauna Fl. Fenn. 16: 47–58.

1889

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- Brenner, M. 1889b: Om några *Taraxacum*-former. – Meddeland. Soc. Fauna Fl. Fenn. 16: 107–114.

1890

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1892

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- Brenner, M. 1892g: [Former av *Alnus*]. – Meddeland. Soc. Fauna Fl. Fenn. 18: 178–185.
- Brenner, M. 1892h: [*Viola canina* var. *crassifolia* Grönv. och en form af *V. riviniana* antagligen var. *nemorosa* Murb., hvardera funnen af föredragaren i Kyrkslätt]. – Meddeland. Soc. Fauna Fl. Fenn. 18: 185.
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- Brenner, M. 1892j: [Om *Glyceria distans* var. *pulvinata* från Kyrkslätt och Pernå, samt *G. maritima* och *G. distans* vid Hvita hafvet och Ishafvet]. – Meddeland. Soc. Fauna Fl. Fenn. 18: 191.
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- Brenner, M. 1892o: [Om former af *Chenopodium album* i Finland]. – Meddeland. Soc. Fauna Fl. Fenn. 18: 211–212.
- Brenner, M. 1892p: [*Carpinus betulus* blommande i Helsingfors och *Senecio Jacobaea* funnen af föredragaren på Helsing malm]. – Meddeland. Soc. Fauna Fl. Fenn. 18: 219.
- 1893**
- Brenner, M. 1893a: Spridda bidrag till kännedom af Finlands *Hieracium*-former II. Nordösterbottniska *Hieracia*. – Acta Societatis pro Fauna et Flora Fennica 9(5): 1–43.
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- 1894
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- Brenner, M. 1894c: Om de finska formerna af *Orchis angustifolia* Reichenb. – Meddeland. Soc. Fauna Fl. Fenn. 20: 39–41.
- 1895**
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- Brenner, M. 1896f: *Euphrasia*-former från Kyrkslätt, däribland *Eu. curta* var. *glabrescens* Wettst., *Eu. stricta* Host., *Eu. Murbeckii* Wettst. och *Eu. Reuteri* Wettst. – Meddeland. Soc. Fauna Fl. Fenn. 22: 56.
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- Brenner, M. 1898c: [*Exoascus pruni*, *Picea excelsa* f. *oligoclada*, *Carex hirta*, *Malaxis paludosa* i Ingå]. – Luonnon Ystävä 2: 177.
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- 1899**
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- 1900**
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