

B O T A N I K

Type Specimens of Algae in the Herbarium of Anton Hansgirg

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Anton Hansgirg, whose family originated in Pilsen, was born in Prague in 1854. He attended the Gymnasium in Königgrätz and the Czech University in Prague, where he was appointed Privatdozent in 1885. Later he received the title of Professor at the University. Sometime after 1902 he moved to Vienna, where he resided until his death on February 15, 1917 (see *Nuova Notarisia*, v. 29, p. 124, 1918). During the period 1880—1905 he collected and studied in considerable detail the microscopic algae of Bohemia (1880—92), Istria (1885—91), Dalmatia (1888—91), Carinthia (1889), Slovenia (1889—90), Styria (1890), Bosnia (1890), Tyrol (1891), Gorizia (1891), Croatia (1891), India (1895), Greece and Egypt (1901), and Austria (1903—05). He also examined and named a series of these algae collected by M. Foslie in arctic Norway in 1889. His exhaustive studies on the algae of Bohemia were set forth in detail in his „Prodromus der Algenflora von Böhmen“ (1886—92); his other researches appeared in the „Sitzungsberichte der Böhmisches Gesellschaft der Wissenschaften“, in various botanical journals, and in several short privately printed works.

While collecting in the Austro-Hungarian provinces, Hansgirg examined the algae microscopically in the field (see *Bot. Centralbl.*, v. 22, p. 252, 1885) and preserved specimens of most by drying them in paper packets (see *Prodr.*, v. 1, p. 14—16, 1886). Other specimens were mounted in glycerine on slides. The bulk of this material was presented to the Naturhistorisches Museum in Vienna in 1894 and 1902 (see *Ann. Naturh. Hofmus. Wien*, v. 10 [Not.], p. 32 [1895]; *ibid.*, v. 18 [Not.], p. 44, 45 [1903]; *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1903 [XXVIII], p. 17). Both the packets of dried material and the slides are chiefly without annotation as to the taxa included — indeed, such annotation was perhaps deemed unnecessary by Hansgirg, who assumed (see *Bot. Centralbl.*, v. 22, p. 246 ff., 1885) that species as we know them among flowering plants do not exist as entities among microscopic plants; the taxa which he indicated are growth-forms, produced under restricted sets of environmental conditions, and which are transformed into other growth-forms when the environment changes. Nevertheless, following Kützing's example (see *Naturh. Verh. Holland. Maatsch. Wet. Haarlem*, v. 2 [1], p. 1—120 [1841]), he employed the usual nomenclature of botanical classification by referring to his taxa as species, varieties, and forms and by arranging them in genera, families, orders, and their respective subdivisions.

In such a collection, labeled only with localities and dates, I found it impracticable during my brief visit in Vienna in 1950 to search out original specimens to be employed as Types for all the taxa of unornamented coccoid algae which Hansgirg described as novelties. As a favor granted by the Naturhistorisches Museum in Vienna, the entire collection of dried specimens was received on loan and studied at my convenience in Chicago. I made a thorough investigation of the more than 3000 packets to find the original specimens of all taxa, including those of bacteria, described as new. The Types of the unornamented coccoid algae in this collection were designated and interpreted by Drouet & Daily in *Butler Univ. Bot. Stud.*, v. 12 (1956). Specimens which were the bases for certain taxa proved to be absent from among the series of packets studied; it is possible

that material was not preserved from certain localities, or that it exists only on the preserved slides in the Vienna Museum, which I have not had the opportunity to study with care. The specimens from Austria enumerated by Hansgirg in his last paper on algae, in *Beih. z. Bot. Centralbl.*, v. 18 (2), p. 417—522 (1905), are yet to be found. Likewise, his collections from India, Corfu, Crete, and Egypt are represented only in small part in the collection available. Additional specimens may be sought in the files of the Vienna Museum and in the herbaria of Veit Wittrock, Otto Nordstedt, Paul Richter, G. Schmidle, and others with whom Hansgirg corresponded.

Hansgirg's dried specimens are all excellently preserved. Although, as in most natural cultures, they are chiefly mixtures of more than one species, it proved to be essentially a routine matter to identify the algae which his descriptions indicate. In some instances, the algae described are fragmentary or are sparsely represented in the specimens selected as the Types. But here it has been considered a prime necessity to the taxonomist that real algae, capable of being stained, dissected, and otherwise studied, rather than descriptions and illustrations made of ink and paper, be selected as the Type of a taxon, however unfavorably they might impress an impatient or inexperienced student in the future. If Hansgirg found it unnecessary to describe new taxa from better material, we can assume that other botanists will be no less able than he to understand these specimens.

In the list below, the Type specimens are those so annotated in the Herbarium of the Naturhistorisches Museum in Vienna, unless otherwise indicated. Portions of most of these Types are also on file in the Cryptogamic Herbarium of Chicago Natural History Museum and in my personal herbarium. These and other herbaria are referred to in the list by means of the abbreviations (adapted from those employed by Lanjouw & Stafleu in *Index Herbariorum*, part I, 1954) used by Drouet & Daily in *Butler Univ. Bot. Stud.*, v. 12, p. 9, 10 (1956). The taxa are arranged alphabetically according to their basonyms; and for the sake of brevity, most of their synonymy has been omitted. I have added my personal interpretation of the majority of the Types. A few determinations, as indicated in the text, were made by Dr. L. H. Tiffany and by Dr. Herman S. Forest; to them I am grateful. For certain details concerning Hansgirg's life, I am indebted to Dr. K. H. Rechinger and, through him, Prof. Dr. Josef Keil of the Vienna Akademie der Wissenschaften. I wish to thank Mr. Emil Sella, Dr. Sidney F. Glassman, and Dr. Joseph Rubinstein for their excellent criticism of parts of the manuscript; and Miss Rosalie Weikert and Dr. H. W. Rickett for assistance with some of the bibliographic work. Lastly, I want to acknowledge, with gratitude, the kindness and cooperation of Dr. Bohuslav Fott, who made a thorough, though unsuccessful, search for specimens of the Hansgirg collection in the herbaria in Prague.

Acanthococcus aciculiferus var. *pulcher* Hansg., *Prodr.*, v. 1 (2), p. 145; 1888. — Type from Bohemia: Prebischthor, Jul. 1883 = parasitized cells of *Palmogloea protuberans* (Sm. & Sow.) Kütz., growing in a mixture with *Anacystis montana* (Lightf.) Dr. & Daily and *Trentepohlia iolithus* (L.) Wallr.

A. minor Hansg., *Bot. Centralbl.*, v. 22, p. 44; 1885. — Type from Bohemia: im Prager-Vereinsgarten, 4. Apr. 1885 = parasitized aplanosporangia of *Stichococcus subtilis* (Kütz.) Klerck.

A. palustris Hansg., *Prodr.*, v. 1 (2), p. 274; 1888. — No specimen found.

Allogonium halophilum Hansg., *Physiol. & Algol. Stud.*, p. 110; 1887. Hedwigia, v. 26, p. 22; 1887. — Type from Bohemia: Oužič nächst Kralup, Jul. 1886 = *Asterocytis ornata* (Ag.) Hamel.

A. halophilum var. *stagnale* Hansg., *Prodr.*, v. 2, p. 132; 1892. — No specimen found.

A. ramosum var. *crassum* Hansg., *Oesterr. Bot. Z.*, v. 39, p. 4; 1889. — Type from Croatia: Lussin-piccolo, Aug. 1888 = *Asterocytis ornata* (Ag.) Hamel.

- A. smaragdinum* var. *palustre* Hansg., Notarisia, v. 3(9), p. 399; 1888. — Type from Bohemia: Gross. Wossek, Aug. 1887 = *Asterocytis ornata* (Ag.) Hamel.
- A. Wolleanum* var. *calcicola* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890 (1), p. 18; 1890. — Type from Dalmatia: Clissa nächst Spalato, Aug. 1889 = *Asterocytis ornata* (Ag.) Hamel.
- A. Wolleanum* var. *simplex* Hansg., Prodr., v. 2, p. 131; 1892. — Type from Bohemia: Selc nächst Roztok, Nov. 1886 = *Asterocytis ornata* (Ag.) Hamel.
- Anabaena macrosperma* var. *pellucida* Hansg., Prodr., v. 2, p. 71; 1892. — Type from Bohemia: Smichow, Jun. 1887 = *Cylindrospermum licheniforme* (Bory) Kütz.
- A. variabilis* f. *mareotica* Hansg., Pflanzenbiol. Unters., p. 220; 1904. Ann. Naturhist. Hofmus. Wien, v. 19, p. 403; 1904. — Type (in Mus. Vindob. Krypt. Exs., Alg., no. 1004) from Egypt: Mallaha prope Alexandriam, 1901 = *Nostoc rivulare* Kütz., without spores.
- Aphanocapsa anodontae* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(2), p. 99; 1891. — Type (with that of *Pleurocapsa concharum* Hansg.) from Bohemia: Tuchomeric-Ounětic nächst Roztok, Jun. 1890 = *Entophysalis rivularis* (Kütz.) Dr.
- A. anodontae* var. *major* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 358; 1891. — Type from Slovenia: Tremersfeld nächst Cilli, Aug. 1890 = *Entophysalis rivularis* (Kütz.) Dr.
- A. concharum* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 19; 1890. — Type from Istria: Pola, Apr. 1889 = *Entophysalis deusta* (Menegh.) Dr. & Daily.
- A. fonticola* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 19; 1890. — Type from Bohemia: Hostin nächst Beraun, Jul. 1888 = *Anacystis montana* (Lightf.) Dr. & Daily.
- A. fuscolutea* Hansg., Prodr., v. 2, p. 156; 1892. — Type from Bohemia: Prager-Vereinsgarten, Oct. 1884 = *Anacystis montana* (Lightf.) Dr. & Daily.
- A. litoralis* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 229; 1892. — Type from Istria: Pola, Aug. 1888 = *Entophysalis deusta* (Menegh.) Dr. & Daily.
- A. litoralis* var. *macrococca* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 229; 1892. — Type from Istria: Pirano, Apr. 1889 = *Entophysalis deusta* (Menegh.) Dr. & Daily.
- A. marina* Hansg. in Foslie, Contrib. Knowl. Mar. Alg. Norway, v. 1, p. 169; 1890. — Type (in Hauck & Richter, Phyk. Univ., no 486) from Norway: Pasvig, M. Foslie, 3. Aug. 1889 = *Anacystis marina* (Hansg.) Dr. & Daily. Isotypes of this have been studied in several herbaria (D, FH, L, MIN, NY, UC; also in Wittrock, Nordstedt & Lagerheim, Alg. Exs., no. 1546, L).
- A. rufescens* Hansg., Prodr., v. 2, p. 157; 1892. — Type from Bohemia: Insel Gross-Wenedig, Mar. 1887 = spores of *Nostoc Muscorum* Ag.
- A. salinarum* Hansg., Physiol. & Algol. Stud., p. 153; 1887. — Type from Bohemia: Ouzič nächst Kralup, Oct. 1883 = *Anacystis thermalis* (Menegh.) Dr. & Daily.
- A. thermalis* var. *minor* Hansg., Prodr., v. 2, p. 159; 1892. — Type from Bohemia: Karlsbad, Aug. 1883 = *Anacystis montana* (Lightf.) Dr. & Daily.
- Aphanochaete globosa* var. *minor* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 5; 1890. *Chaetosphaeridium globosum* var. *minus* Hansg., Prodr., v. 2, p. 209; 1892. *C. minus* Hansg., *ibid.*, p. 268; 1892. — No specimen found.
- Aphanothece caldariorum* var. *cavernarum* Hansg., Bot. Centralbl., v. 37, p. 38; 1889. — Type from Bohemia: Korno nächst Beraun, Sept. 1888 = *Coccochloris Peniocystis* (Kütz.) Dr. & Daily.
- A. nidulans* var. *thermalis* Hansg., Prodr., v. 2, p. 137; 1892. — Type from Bohemia: Karlsbad, Aug. 1883 = Bacteria.
- A. subachroa* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(2), p. 98; 1891. — Type from Bohemia: Smichow, Dec. 1883 = *Coccochloris Peniocystis* (Kütz.) Dr. & Daily.

Bertholdia orbicularis var. *grandis* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891 (1), p. 310; 1891. *Chaetopeltis orbicularis* var. *grandis* Hansg., Prodr., v. 2, p. 220; 1892. — Type from Bohemia: Hlubočep nächst Prag, Jun. 1883 = *Chlorotylum cataractarum* Kütz.

Botryococcus Braunii f. *horridus* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 461; 1905. — No specimen found.

B. Braunii var. *mucosus* Lagerh. in Hansg., Prodr., v. 2, p. 242; 1892. — Type from Bohemia: Edmundsklamm nächst Herrnskretsch, Sept. 1890 = *Palmogloea protuberans* (Sm. & Sow.) Kütz.

B. Braunii f. *validus* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 461; 1905. — No specimen found.

Bulbochaete sanguinea Hansg., Beih. z. Bot. Centralbl., v. 18 (2), p. 437; 1905. — No specimen found.

Calothrix Bauेरiana var. *minor* Hansg., Prodr., v. 2, p. 53; 1892. — Type from Bohemia: Chlumec, Jul. 1885 = *C. juliana* (Menegh.) Born. & Flah.

Chaetonema irregulare var. *subvalidum* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 309; 1891. — Type from Bohemia: Elbeteinitz (Labska Tynice), 1891 = Fungus hyphae in plants of *Chaetophora elegans*, rare among plants of *Gloeotrichia Pisum* (Ag.) Thur.

Chamaesiphon fuscus var. *auratus* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 353; 1891. — Type from Croatia: Martinscica nächst Fiume, 1891 = *Entophysalis rivularis* (Kütz.) Dr., the plants not well developed and in part parasitized, among other larger Myxophyceae, as noted by H. Luther, Acta Bot. Fenn., v. 55, p. 27 (1954). Perhaps some dilute nitric acid, to dissolve the carbonates, would render this material as understandable to the present-day observer as it apparently was to Hansgirg when he described it.

C. roseus var. *major* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 227; 1893. — Type from Istria: St. Andrea nächst Triest, 1891(?) = *Entophysalis conferta* (Kütz.) Dr. & Daily.

C. Rostafinskii var. *minor* Hansg., Prodr., v. 2, p. 123; 1892. — Type from Bohemia: Sct. Prokop gegenüber Nová Ves, Apr. 1887 = Ferrobacteriaceae.

Chantransia chalybea var. *fuscoviolacea* Hansg., Prodr., v. 1(2), p. 217; 1888. — Although I was unable to find plants of this in the material studied (FC), this alga may be sought for in other specimens from the type locality (Vetrusic gegenüber Podmorán, Bohemia) distributed under the name of *Chlorotylum cataractarum* Kütz. in Kerner's Fl. Exs. Austro-Hung., no. 2494-I.

C. chalybea var. *maxima* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 430; 1905. — No specimen found.

C. chalybea var. *thermalis* Hansg., Prodr., v. 1, p. 25; 1886. — Type from Bohemia: Johannsbad, Jul. 1885 = juvenile *Batrachospermum* sp.

C. Hermannii var. *subchalybea* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 302; 1891. — Type (with that of *Pleurococcus vulgaris* f. *glomeratus* Hansg.) from Dalmatia: Cannosa nächst Ragusa, 1891 = juvenile *Batrachospermum* sp.

C. incrustans Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 4; 1890. — Type from Istria: zwischen Parenzo und Orsera, Apr. 1889 = juvenile *Batrachospermum* sp.

Characium Naegelii var. *majus* Hansg., Prodr., v. 1(2), p. 236; 1888. — Type from Bohemia: Satalka nächst Kunratic, Jun. 1887 = sporelings of *Oedogonium* sp.

Chlorotylum cataractarum var. *submarinum* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 233; 1893. — Type from Dalmatia: Ombla nächst Ragusa, 1891 = *C. cataractarum* Kütz.

Chroococcus atrochalybeus Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 230; 1893. — Type from Istria: Orsera, Apr. 1889 = *Entophysalis deusta* (Menegh.) Dr. & Daily.

C. fuscoater var. *fuscoviolaceus* Hansg., Oesterr. Bot. Z., v. 38, p. 115; 1888
C. fuscoviolaceus Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 20; 1890. — Type from Bohemia: Tannwald, Jul. 1885 = *Entophysalis rivularis* (Kütz.) Dr.

C. fuscoviolaceus var. *cupreofuscus* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 20; 1890. *Pleurocapsa cuprea* Hansg., Prodr. v. 2, p. 128; 1892; SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 149; 1893. — Type (with that of *C. fuscoater* var. *fuscoviolaceus* Hansg.) from Bohemia: Tannwald, Jul. 1885 = *Entophysalis rivularis* (Kütz.) Dr.

C. helveticus var. *aurantiofuscescens* Hansg., Prodr., v. 2, p. 162; 1892. — Type from Bohemia: Podmoráň, Jun. 1885 = *Anacystis thermalis* (Menegh.) Dr. & Daily.

C. helveticus var. *aureo-fuscus* Hansg., Prodr., v. 2, p. 162; 1892. — Type from Bohemia: Slichow, May 1885 = *Anacystis thermalis* (Menegh.) Dr. & Daily.

C. macrococcus var. *aquaticus* Hansg., Oesterr. Bot. Z., v. 36, p. 333; 1886. — Type from Bohemia: Oužič nächst Kralup, Jul. 1886 = *Dinoflagellata*, encysted.

C. macrococcus var. *salinarum* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 230; 1893. — Type from Istria: Strogiano nächst Pirano, Jul. 1889 = *Dinoflagellata*, encysted.

C. membraninus var. *crassior* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 360; 1891. — Type from Slovenia: Tüffer, Aug. 1890 = *Anacystis thermalis* (Menegh.) Dr. & Daily.

C. minutus var. *salinus* Hansg., Oesterr. Bot. Z., v. 36, p. 333; 1886. — Type from Bohemia: Oužič nächst Kralup, Oct. 1883 = *Anacystis thermalis* (Menegh.) Dr. & Daily.

C. montanus Hansg., Notarisia, v. 3, p. 400; 1888. — Type from Bohemia: Libsic, Oct. 1886 = *Coccochloris stagnina* Spreng.

C. turgidus var. *glomeratus* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 154; 1893. — Type from Tyrol: Kufstein, 1891 = *Anacystis thermalis* (Menegh.) Dr. & Daily.

C. turgidus var. *submarinus* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 230; 1893. — Type from Istria: zwischen Capodistria und Zaule, Aug. 1889 = *Anacystis dimidiata* (Kütz.) Dr. & Daily.

C. turgidus var. *subnudus* Hansg., Prodr., v. 2, p. 161; 1892. — Type (in Kerner, Fl. Exs. Austro-Hung., no. 2398-I) from Bohemia: Stechowic = *Anacystis dimidiata* (Kütz.) Dr. & Daily. Isotypes have been studied in several herbaria (D, FC, FH, MIN, MO, S).

C. varius var. *luteolus* Hansg., Prodr., v. 2, p. 164; 1892. — Type from Bohemia: Smichow, Jan. 1884 = *Anacystis montana* (Lightf.) Dr. & Daily.

C. Zopfi Hansg., Bot. Centralbl., v. 22, p. 24; 1885. — No specimen found.

Chroodactylon Hansg., Ber. Deutsch. Bot. Ges., v. 3, p. 14; 1885. — Type species: *C. Wolleanum* Hansg., *ibid.*, p. 14, 15; 1885. — Type (as *Asterocystis Wolleana* Lagerh. in Wittrock & Nordstedt, Alg. Exs., no. 769) from Bohemia: Pürglitz prope Rakonitz, 8. Sept. 1884 = *Asterocystis ornata* (Ag.) Hamel. Isotypes have been examined in other herbaria (D, FC, NY).

Chroomonas Hansg., Physiol. & Algol. Stud., p. 117; 1887. — Type species: *C. Nordstedtii* Hansg., Bot. Centralbl., v. 23, p. 230; 1885. — Type (in Wittrock & Nordstedt, Alg. Exs., no. 800^{1/2}) from Bohemia: Nusle ad Pragam, 18. May 1885 = *C. Nordstedtii* Hansg. Isotypes have been seen in other herbaria (D, FC).

Chroothoe Hansg., Oesterr. Bot. Z., v. 34, p. 352; 1884. In Wittr. & Nordst., Alg. Exs., fasc. 14, no. 696; 1884. In Wittr. & Nordst., Bot. Not., 1884, p. 128; 1884. — Type species: *C. Richteriana* Hansg., Oesterr. Bot. Z., v. 34, p. 353; 1884. In Wittr. & Nordst.,

Alg. Exs., fasc. 14, no. 696; 1884. In Wittr. & Nordst., Bot. Not. 1884, p. 128; 1884. — Type (in Wittr. & Nordst., Alg. Exs., no. 696): Auzitz prope Kralup, 6. Apr. 1884 = *Asterocytis ornata* (Ag.) Hamel. Isotypes have been studied in several herbaria (D, FC, FH, L, MO).

C. Richteriana var. *aquatica* Hansg., Oesterr. Bot. Z., v. 36, p. 333; 1886. — Type from Bohemia: Oužič nächst Kralup, Jul. 1886 = *Asterocytis ornata* (Ag.) Hamel. Isotypes, chiefly in Wittrock & Nordstedt, Alg. Exs., no. 1098, and in Kerner, Fl. Exs. Austro-Hung., no. 3197, have been studied in several herbaria (D, FC, FH, L, MO).

C. Richteriana f. *marina* Hansg., Oesterr. Bot. Z., v. 39, p. 5; 1889. — No specimen found.

C. rupestris Hansg., Oesterr. Bot. Z., v. 36, p. 110; 1886. *C. monococca* var. *rupestris* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 354; 1891. — Type from Bohemia: Chuchelbad, Nov. 1885 = *Asterocytis ornata* (Ag.) Hamel.

Cladophora fracta b) *gossypina* var. *incrustedata* Hansg., Prodr., v. 1, p. 80; 1886. — Type from Bohemia: Karlstein, Jul. 1884 = *C. glomerata* (L.) Kütz.

C. glomerata var. *petraea* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 312; 1891. — Type from Bohemia: Mittelgrund nächst Bodenbach, Sept. 1890 = *C. glomerata* (L.) Kütz.

Clastidium stigerum var. *rivulare* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 18; 1890. *C. rivulare* Hansg., Prodr., v. 2, p. 125; 1892. — Type from Istria: Strogiano nächst Pirano, Apr. 1889 = *Amphithrix janthina* (Mont.) Born. & Flah., largely young plants.

Coelastrum Naegelii var. *salinum* Hansg., Physiol. & Algol. Stud., p. 156; 1887. — No specimen found.

Coelosphaerium anomalum var. *minus* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 19; 1890. — Type from Bohemia: Kuchelbad nächst Prag, Apr. 1883 = *Anacystis montana* (Lightf.) Dr. & Daily. The plants described are rare in a mass of *Symploca muralis* Kütz. and *Stichococcus subtilis* (Kütz.) Klerck.

Coleochaete soluta var. *minor* Hansg., Prodr., v. 2, p. 208; 1892. — No specimen found.

Coleospermum Goeppertianum var. *minor* Hansg., Oesterr. Bot. Z., v. 33, p. 224; 1883. *Microchaete tenera* var. *minor* Hansg., Prodr., v. 2, p. 55; 1892. — Type from Bohemia: Prag, Oct. 1883 = *Scytonema Hofmannii* Ag., young plants, growing in a mass of *Nostoc Muscorum* Ag.

Conferva floccosa var. *major* Hansg., Prodr., v. 1, p. 75; 1886. — Type from Bohemia: Lomnitz nächst Wittingau, Aug. 1883 = *Microspora Wittrockii* (Wille) Lagerh. The filaments described by Hansgirg are mixed with those of *M. stagnorum* (Kütz.) Lagerh. in this specimen.

C. fontinalis var. *crassior* Hansg., Ann. Naturh. Hofm. Wien, v. 18, p. 364; 1903. — Type (in Mus. Vindob. Krypt. Exs., Algae, no. 857) from India: Bombay, Oct. 1895 = *Cladophora crispata* (Roth) Kütz.

C. globulifera var. *grandis* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 449; 1905. — No specimen found.

C. salina f. *tenuior* Hansg., Pflanzenbiol. Unters., p. 220; 1904. Ann. Naturh. Hofmus. Wien, v. 19, p. 408; 1904. — Type (in Mus. Vindob. Krypt. Exs., Algae, no. 1013) from Egypt: Mallaha prope Alexandriam, Oct. [1901] = *Rhizoclonium riparium* (Roth) Harv., a slender growth-form, growing in a mass of *Cladophora pulverulenta* (Mert.) Phinn.

C. tenerrima var. *subtilissima* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 310; 1891. — Type from Styria: Rudersdorf nächst Graz, Sept. 1890 = *Tribonema bombycinum* f. *tenuis* (Wille) Haz., the filaments rare in a mass of other algae.

Cosmaridium De-Baryi var. *minus* Hansg., Prodr., v. 1(2), p. 246; 1888. — Type from Bohemia: Magdalena nächst Wittingau (Třeboň), Sept. 1887.

- Cosmarium aphanichondrum* var. *calcareum* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 13; 1890. — Type from Bohemia: Hostin nächst Beraun, Jul. 1888.
- C. biretum* var. *minus* Hansg., Prodr., v. 1(2), p. 251; 1888. — No specimen found.
- C. Botrytis* var. *emarginatum* Hansg., Prodr., v. 1(2), p. 199; 1888. SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 133; 1893. — Type from South Tyrol: Neumarkt, 1891.
- C. circulare* var. *minus* Hansg., Prodr., v. 1(2), p. 249; 1888. — Type from Bohemia: Magdalena nächst Wittingau (Třeboň), Sept. 1887.
- C. cyclicum* var. *subtruncatum* Hansg., Prodr., v. 1(2), p. 196; 1888. — Type from Bohemia: Libřicertal gegenüber Davle, Jul. 1887. This novelty is noted as „rarissima“ with *Cosmarium speciosum* in Wittrock & Nordstedt, Alg. Exs., no. 974.
- C. granatum* var. *Nordstedtii* Hansg., Prodr., v. 1(2), p. 193; 1888. — Type (with that of *C. salinum* Hansg.) from Bohemia: Oužič nächst Kralup, May 1883.
- C. holmiense* var. *minus* Hansg., Prodr., v. 1(2), p. 197; 1888. — Type from Bohemia: Selc nächst Roztok, Nov. 1886.
- C. Regnesii* var. *trigonum* Hansg., Prodr., v. 2, p. 252; 1892. — Type from Bohemia: Neudorf nächst Kreibitz, Jul. 1888.
- C. salinum* Hansg., Oesterr. Bot. Z., v. 36, p. 335; 1886. — Type (with that of *C. granatum* var. *Nordstedtii* Hansg.) from Bohemia: Oužič nächst Kralup, May 1883.
- C. trilobulatum* var. *minus* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 12; 1890. — Type from Bohemia: Steinkirchen nächst Budweis, Aug. 1888.
- Cyanococcus pyrenogerus* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 521; 1905. — No specimen found.
- Cyanoderma rivulare* Hansg., Notarisia, v. 4, p. 658; 1889. *Pleurocapsa rivularis* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(2), p. 91; 1890. — Type from Bohemia: Pocatek, Aug. 1888 = *Entophysalis rivularis* (Kütz.) Dr.
- Cylindrocapsa geminella* var. *minor* Hansg., Prodr., v. 1(2), p. 224; 1888. — Type from Bohemia: Kostomlat, Jul. 1887 = *C. geminella* Wolle.
- Cylindromonas* Hansg., Bot. Centralbl., v. 24, p. 378; 1885. — Type species: *C. fontinalis* Hansg., loc. cit.; 1885. — Type from Bohemia: Johannisbad, Jul. 1885. Material named by the author from Adams near Neu-Bistritz in Bohemia has been distributed in Kerner, Fl. Exs. Austro-Hung., no 2797.
- Dactylococcopsis raphidioides* Hansg., Notarisia, v. 3, p. 590; 1888. — Type from Bohemia: Prag, Nov. 1883 = *Stichococcus subtilis* (Kütz.) Klerck., aplanospores.
- Dactylococcopsis* Hansg., Notarisia, v. 3, p. 590; 1888. — Type species: *D. rupestris* Hansg., loc. cit.; 1888. — Type from Bohemia: Karlstein, Jul. 1884 = *Stichococcus subtilis* (Kütz.) Klerck., aplanospores.
- Dactylococcus caudatus* Hansg., Physiol. & Algol. Stud., p. 86; 1887. — Type from Bohemia: Horovic, Aug. 1884 = *Stichococcus subtilis* (Kütz.) Klerck., aplanospores.
- D. caudatus* var. *minor* Hansg., Prodr., v. 1(2), p. 146; 1888. — Type from Bohemia: Hohenfurth, Aug. 1884 = *Stichococcus subtilis* (Kütz.) Klerck., aplanospores.
- D. litoralis* Hansg., in Foslie, Mar. Alg. Norway, v. 1, p. 157; 1890. — No specimen studied.
- D. marinus* Hansg., in Foslie, Mar. Alg. Norway, v. 1, p. 158; 1890. — No specimen studied.
- D. raphidioides* Hansg., Physiol. & Algol. Stud., p. 93; 1887. Oesterr. Bot. Z., v. 37, p. 122; 1887. — Type from Bohemia: Harrachsdorf, Jul. 1886 = *Stichococcus subtilis* (Kütz.) Klerck., aplanospores.
- D. sabulosus* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 12; 1890. — Type from Bohemia: zwischen Dittersbach und Hinter-Dittersbach, Jul. 1889 = *Palmogloea protuberans* (Sm. & Sow.) Kütz.

Dactylothece macrococca Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 323; 1891. — Type from Bohemia: Nieder- und Mittelgrund bei Tetschen, Sept. 1890 = *Stichococcus subtilis* (Kütz.) Klerck., palmelloid primordia.

D. macrococca var. *caldariorum* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 468; 1905. — No specimen found.

Dysphinctium curtum var. *exiguum* Hansg., Prodr., v. 1(2), p. 184; 1888. — Type from Bohemia: Hlubočep nächst Prag, Oct. 1885 = *Calocylindrus curtus* (Bréb.) de Bary.

D. globosum var. *minus* Hansg., Prodr., v. 1(2), p. 243; 1888. — No specimen found.

D. globosum var. *perpusillum* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 331; 1891. — Type from Bohemia: Edmundsklamm bei Herrnskretsch, Sept. 1890.

D. notabile var. *pseudospeciosum* Hansg., Prodr., v. 1(2), p. 187; 1888. — Type from Bohemia: Libřicerthal nächst Davle, Jul. 1887. Isotypes are distributed (as *Cosmarium speciosum*) in Wittrock & Nordstedt, Alg. Exs., no. 974.

D. pusillum Hansg., Prodr., v. 1(2), p. 187; 1888. — Type from Bohemia: Prager-Vereinsgarten, May 1883. Hansgirg notes that isotypic material is distributed in Wittrock & Nordstedt, Alg. Exs., no. 788, and in Kerner, Fl. Exs. Austro-Hung., no. 3191.

D. tumens var. *minus* Hansg., Prodr., v. 1(2), p. 278; 1888. — Type from Bohemia: Libřicerthal gegenüber Davle, Jul. 1887.

Endoclonium marinum Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 6; 1890 — Type from Istria: Pola, Apr. 1889.

E. marinum var. *submarinum* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 6; 1890. — Type from Istria: zwischen Parenzo und Orsera, Apr. 1889 = *Stigeoclonium* sp., palmelloid and young filamentous states.

E. rivulare Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 7; 1890. — Type from Istria: Stroggniano nächst Pirano, Apr. 1889.

E. rivulare var. *gracile* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 114; 1893. — Type from South Tyrol: Roveredo, 1891.

Enteromorpha salina f. *mareotica* Hansg., Pflanzenbiol. Unters., p. 220; 1904. Ann. Naturh. Hofmus. Wien, v. 19, p. 407; 1904. — Type (in Mus. Vindob. Krypt. Exs., Algae, no. 1011) from Egypt: Mallaha prope Alexandriam, Oct. [1901].

Entocladia gracilis Hansg., Flora, v. 71, p. 499; 1888. — Type (from the original locality, but not the original collection) from Bohemia: Vrschowic nächst Prag, Aug. 1889. The plants are rare on filaments of *Cladophora crispata* (Roth) Kütz.

Epicladia Gelidii Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 232; 1893. — Type from Dalmatia: Ragusa, 1891.

E. Halimeda Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 232; 1893. — Type from Istria: Parenzo, Apr. 1889.

Euastrum ansatum var. *emarginatum* Hansg., Prodr., v. 2, p. 256; 1892. — Type from Bohemia: Vrbna nächst Veseli a. L., 1891.

E. binale var. *granulatum* Hansg., Prodr., v. 1(2), p. 253; 1888. — Type from Bohemia: Schneekoppe im Riesengebirge, Nov. 1883.

E. gemmatum var. *angusticolle* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 335; 1891. — Type from Styria: Ober-Premstätten nach Liebach nächst Graz, Sept. 1890.

E. verrucosum f. *grande* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 486; 1905. — No specimen found.

Euglena acus var. *minor* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 364; 1891. — Type from Istria: Dignano et Galesano prope Pola, Apr. 1889.

E. pisciformis var. *hyalina* Hansg., Physiol. & Algal. Stud., p. 120; 1887. — Type from Bohemia: Prag, Feb. 1883.

E. pisciformis var. *minor* Hansg., Physiol. & Algal. Stud., p. 120; 1887. — Type from Bohemia: Botičbach nächst Prag, Apr. 1885.

Glaucocystis nostochinearum var. *minor* Hansg., Prodr., v. 2, p. 140; 1892. — Type from Bohemia: Edmundsklamm nächst Herrnskretsch, Sept. 1890 = *Anabaena* sp., spores.

Gloeocapsa alpina var. *mediterranea* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 356; 1891. — Type from Istria: Pingvente, 1891 = *Anacystis montana* (Lightf.) Dr. & Daily.

G. nigra var. *minor* Hansg., Prodr., v. 2, p. 152; 1892. — Type from Bohemia: Eichwald nächst Zinnwald, Jul. 1883 = *Palmogloea protuberans* (Sm. & Sow.) Kütz.

G. salina Hansg., Oesterr. Bot. Z., v. 35, p. 115; 1885. — Type from Bohemia: Ouzič ad Kralup, Oct. 1883 = *Palmogloea protuberans* (Sm. & Sow.) Kütz.

Gloeocystis gigas f. *major* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 463; 1905. — No specimen found.

G. gigas var. *rufescens* A. Br. ex Hansg., Prodr., v. 1, p. 136; 1886. — Type from Bohemia: Pisek, Aug. 1883 = encysted Flagellata.

G. marina Hansg., Oesterr. Bot. Z., v. 39, p. 42; 1889. — Type from Istria: Pola, 1888 = *Monostroma* sp., the basal parts.

G. rupestris var. *subaurantiaca* Hansg., Prodr., v. 1(2), p. 136; 1888. — Type from Bohemia: Selc nächst Roztok, Nov. 1886 = *Palmogloea protuberans* (Sm. & Sow.) Kütz.

G. scopulorum Hansg. in Foslie, Mar. Alg. Norway, v. 1, p. 155; 1890. — Specimen not found.

G. scopulorum Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 239; 1893. — Type from Croatia: Zengg, 1891 = primordia of Chlorophyceae.

G. vesiculosa var. *caldariorum* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 321; 1891. — Type from Bohemia: Tetschen, Aug. 1890 = *Palmogloea protuberans* (Sm. & Sow.) Kütz.

G. vesiculosa var. *crassior* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 462; 1905. — No specimen found.

Gloeotaenium Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 10; 1890. — Type species: *G. Loitlesbergerianum* Hansg., loc. cit.; 1890. — No specimen found.

Gloeotheca tepidarium var. *cavernarum* Hansg., Bot. Centralbl., v. 37, p. 38; 1889. *G. rupestris* var. *cavernarum* Hansg., Prodr., v. 2, p. 136; 1892. — Type from Bohemia: Korno unterhalb Beraun, Sept. 1888 = *Anacystis montana* (Lightf.) Dr. & Daily.

Gomphosphaeria cordiformis var. *olivacea* Hansg., Oesterr. Bot. Z., v. 36, p. 333; 1886. *G. aponina* var. *olivacea* Hansg., Prodr., v. 2, p. 144; 1892. — Type from Bohemia: Ouzič nächst Kralup, Apr. 1884 = *G. aponina* Kütz. Isotypes, studied in several herbaria (MO, S, W), are distributed in Kerner, Fl. Exs. Austro-Hung., no. 3600.

Gonatonema ventricosum var. *tirolense* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 128; 1893. — Type from South Tyrol: zwischen Bozen und Leifers, 1891.

Gongrosira De-Baryana var. *robusta* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 451; 1905. — No specimen found.

Hapalosiphon pumilus var. *fischeroides* Hansg., Notarisia, v. 3, p. 398; 1888. — Type from Bohemia: Putim prope Pisek, Aug. 1887 = *H. fontinalis* (Ag.) Born.

H. pumilus f. *pyrenogerus* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 489; 1905. — No specimen found.

Herposteiron globiferum Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(2), p. 94; 1891. — Type from Bohemia: Smichow, Aug. 1883 = *Stichococcus subtilis* (Kütz.) Klerck., parasitized in part, in a mixture of Flagellata and *Nostoc Muscorum* Ag.

H. Hyalothecae Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 309; 1891. — Type from Styria: Ober-Premstätten nächst Graz, Sept. 1890. The plants described are epiphytic on *Hyalotheca mucosa* (Dillw.) Ehrenb., the filaments of which are not abundant among the other algae in the sample.

H. polychaete Hansg., Notarisia, v. 3, p. 398; 1888. Prodr., v. 1(2), p. 258; 1888. — No specimen found.

Hormiscia flaccida var. *montana* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 443; 1905. — No specimen found.

H. implexa var. *minor* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 7; 1890. — Type (with that of *Hormospora subtilis* var. *submarina* Hansg.) from Istria: Pola, Apr. 1889 = *Ulothrix implexa* Kütz.

H. zonata var. *undulata* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 443; 1905. — No specimen found.

Hormospora grandis Hansg., Physiol. & Algol. Stud., p. 136; 1887. Prodr., v. 1(2), p. 272; 1888. — No specimen found.

H. irregularis var. *palmodictyonea* Hansg., Prodr., v. 1(2), p. 271; 1888. — No specimen found.

H. mutabilis var. *minor* Hansg., Prodr., v. 1(2), p. 271; 1888. — No specimen found.

H. subtilis Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 8; 1890. — Type from Carinthia: Wörther See zwischen Gurlitsch und Klagenfurt, Sept. 1889 = *Stichococcus subtilis* (Kütz.) Klerck.

H. subtilis var. *submarina* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 8; 1890. — Type (with that of *Hormiscia implexa* var. *minor* Hansg.) from Istria: Pola, Apr. 1889 = *Ulothrix implexa* Kütz.

Hyalotheca dubia var. *subconstricta* Hansg., Prodr., v. 1(2), p. 169; 1888. — Type from Bohemia: Harrachsdorf, Jul. 1886 = *Microspora amoena* (Kütz.) Rabenh.

Hydrocoleum Bremii var. *obscurum* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 344; 1891. *H. obscurum* Hansg., Nuova Notarisia, 1893, p. 223; 1893. — Type from Croatia: Martinsceica nächst Fiume, 1891 = *H. heterotrichum* Kütz.

H. homoeotrichum var. *calcicola* Hansg., Nuova Notarisia, 1893, p. 224; 1893. — Type from Slovenia: Kaltenbrunn prope Laibach, Aug. 1889 = *H. homoeotrichum* Kütz.

H. homoeotrichum var. *tirolense* Hansg., Nuova Notarisia, 1893, p. 224; 1893. — Type from Tyrol: Jenbach, 1891 = *H. homoeotrichum* Kütz.

H. muscicola Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 343; 1891. — Type from Dalmatia: Ombla nächst Ragusa, 1891 = *Schizothrix penicillata* (Kütz.) Gom.

H. rivularioides Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 141; 1893. — Type from South Tyrol: zwischen Kardaun und Blumau nächst Bozen, 1891 = *Schizothrix fasciculata* (Näg.) Gom.

H. subcrustaceum Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 344; 1891. — Type from Dalmatia: zwischen Castellnuovo und Gruda, 1891 = *Schizothrix rubella* Gom.

Hyella caespitosa var. *spiroorbicola* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 226; 1893. — Type from Dalmatia: Ragusa, 1891 = *Entophysalis deusta* (Menegh.) Dr. & Daily.

Hypheothrix litoralis Hansg., in Foslie, Contrib. Mar. Alg. Norway, v. 1, p. 166; 1890. *Lyngbya litoralis* Hansg., pro synon., loc. cit.; 1890. — No specimen found.

Inoderma majus Hansg., Physiol. & Algol. Stud., p. 93; 1887. Oesterr. Bot. Z., v. 37, p. 122; 1887. — Type from Bohemia: Harrachsdorf, Jul. 1886 = *Palmogloea protuberans* (Sm. & Sow.) Kütz., associated here with *Stichococcus subtilis* (Kütz.) Klerck.

Kentrosphaera facciolae var. *irregularis* Hansg., Prodr., v. 1(2), p. 124; 1888. — Type from Bohemia: Prager-Vereinsgarten, Apr. 1883. In this material, the alga described is embedded in a layer of *Lyngbya versicolor* (Wartm.) Gom.

K. facciolae f. *magna* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 464; 1905. — No specimen found.

Leptochaete crustacea var. *gracilis* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 138; 1893. — Type from Tyrol: zwischen Hall und S. Magdalena, 1891 = *Amphithrix janthina* (Mont.) Born. & Flah.

L. marina Hansg. in Foslie, Contrib. Mar. Alg. Norway, v. 1, p. 160; 1890. — Type (in Wittrock, Nordstedt & Lagerheim, Alg. Exs., no. 1501) from Norway: Bugönaes, M. Foslie, 10. Aug. 1889 = *Plectonema calothrichoides* Gom.

L. marina Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 13; 1890. — Type from Istria: Pola, Apr. 1889 = *Plectonema norvegicum* Gom.

L. nidulans Hansg., Oesterr. Bot. Z., v. 37, p. 121; 1887. — Type from Bohemia: Bystric prope Beneschau, Aug. 1884 = *Amphithrix janthina* (Mont.) Born. & Flah.

L. rivularis Hansg., Oesterr. Bot. Z., v. 38, p. 117; 1888. — Type from Bohemia: Pampferrütte bei Eisenstein, Aug. 1887 = *Amphithrix janthina* (Mont.) Born. & Flah.

L. rivularis var. *rivularium* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 493; 1905. — No specimen found.

L. stagnalis Hansg., Notarisia, v. 3, p. 399; 1888. — No specimen found.

Lyngbya amphibia var. *symplociformis* Hansg., Oesterr. Bot. Z., v. 34, p. 357; 1884. — Type from Bohemia: Karlsbad, Aug. 1883 = *Phormidium laminosum* (Ag.) Gom.

L. antliaria b) *phormidioides* var. *symplociformis* Hansg., Prodr., v. 2, p. 114; 1892. — Type from Bohemia: Laun, Jul. 1884 = *Phormidium autumnale* (Ag.) Gom.

L. bosniaca Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 348; 1891. — Type from Bosnia: Duboj, Aug. 1890 = *Amphithrix janthina* (Mont.) Born. & Flah.

L. calcicola var. *gloeophila* Hansg., Bot. Centralbl., v. 37, p. 38; 1889. — Type from Bohemia: Hlubočep, Oct. 1886 = *Amphithrix janthina* (Mont.) Born. & Flah.

L. calcicola var. *symplociformis* Hansg., Bot. Centralbl., v. 22(10), p. 310; 1885. — Type from Bohemia: Smichow, Feb. 1885 = *Schizothrix calcicola* (Ag.) Gom.

L. calcicola var. *violacea* Hansg., Prodr., v. 2, p. 93; 1892. — Type from Bohemia: Hermanicky, Aug. 1886 = *Schizothrix calcicola* (Ag.) Gom.

L. chalybea b) *torfacea* Hansg., Prodr., v. 2, p. 116; 1892. — Type from Bohemia: Veseli a. L., Aug. 1884 = *Phormidium Retzii* (Ag.) Gom.

L. elegans var. *symplociformis* Hansg., Oesterr. Bot. Z., v. 34, p. 357; 1884. *L. smaragdina* var. *symplociformis* Hansg., Prodr., v. 2, p. 89; 1892. — Type from Bohemia: Karlsbad, Aug. 1883 = *Hapalosiphon laminosus* (Kütz.) Hansg.

L. fallax Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 348; 1891. — Type from Gorizia: Görz, 1891 = *Fischerella ambigua* (Näg.) Gom.

L. Froelichii b) *dubia* var. *fuscescens* Hansg., Prodr., v. 2, p. 118; 1892. — Type from Bohemia: Podol nächst Prag, Apr. 1883 = *Oscillatoria limosa* (Roth) Ag.

L. Froelichii f. *thermophila* Hansg., Prodr., v. 2, p. 118; 1892. — Type from Bohemia: Königgrätz, Nov. 1883 = *Oscillatoria limosa* (Roth) Ag.

L. gracillima var. *phormidioides* Hansg., Prodr., v. 2, p. 108; 1892. — Type from Bohemia: Kaiserwiese, Prag, Nov. 1882 = *Oscillatoria splendida* Grev.

L. halophila Hansg., Oesterr. Bot. Z., v. 34, p. 355; 1884. — Type from Bohemia: Oužič prope Kralup, Oct. 1883 = *Schizothrix calcicola* (Ag.) Gom.

L. halophila var. *fuscolutea* Hansg., Oesterr. Bot. Z., v. 38, p. 42; 1888. — Type (with that of *L. halophila* Hansg.) from Bohemia: Oužič prope Kralup, Oct. 1883 = *Schizothrix calcicola* (Ag.) Gom.

L. inundata b) *fluviatilis* Hansg., Prodr., v. 2, p. 90; 1892. — Type from Bohemia: Smichow, Jul. 1886 = *Lyngbya versicolor* (Wartm.) Gom.

L. inundata b) *fluviatilis* var. *symplocoides* Hansg., Prodr., v. 2, p. 90; 1892. — Type (with that of *L. inundata* b) *fluviatilis* Hansg.) from Bohemia: Smichow, Jul. 1886 = *Lyngbya versicolor* (Wartm.) Gom.

L. inundata var. *symplociformis* Hansg., Prodr., v. 2, p. 90; 1892. — Type from Bohemia: Mies, Aug. 1883 = *Symploca muralis* Kütz.

L. (Oscillaria) investiens Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 16; 1890. — Type from Istria: Pola, Sept. 1889 = *Streptothrix* sp., not abundant on *Ceramium* sp.

L. Kuetzingiana var. *symplociformis* Hansg., Prodr., v. 2, p. 102; 1892. — Type from Bohemia: Plass nächst Pilsen, Aug. 1887 = *Phormidium autumnale* (Ag.) Gom.

L. lateritia var. *subaeruginea* Hansg., Prodr., v. 2, p. 94; 1892. — Type from Bohemia: Podmoran, Jun. 1885 = *Schizothrix fasciculata* (Näg.) Gom.

L. lateritia var. *symplocoides* Hansg., Prodr., v. 2, p. 94; 1892. — Type from Bohemia: Pampferhütte bei Eisenstein, Aug. 1887 = *Schizothrix Heufleri* Grun.

L. (Oscillaria) longarticulata Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 17; 1890. — Type from Istria: Pola, Apr. 1889 = *Plectonema terebrans* Born. & Flah.

L. Martensiana var. *marina* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 225; 1893. — Type from Croatia: Fiume, 1891 = *Lyngbya semiplena* (Ag.) J. Ag.

L. mexiensis Hansg., Pflanzenbiol. Unters., p. 220; 1904. Ann. Naturh. Hofmus. Wien, v. 19, p. 403; 1904. — Type (in Mus. Vindob. Krypt. Exs., Algae, no. 1002) from Egypt: Mex prope Alexandriam, Oct. [1901] = *Lyngbya semiplena* (Ag.) J. Ag.

L. (Oscillaria) minuta Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 17; 1890. — Type from Istria: Orsera, Apr. 1889 = *Plectonema Nostocorum* Born. [in the sheaths of *Hydrocoleum glutinosum* (Ag.) Gom.].

L. nigra var. *phormidioides* Hansg., Prodr., v. 2, p. 116; 1892. — Type from Bohemia: Turkowitz nächst Krumau, Aug. 1884 = *Phormidium uncinatum* (Ag.) Gom.

L. nigrovaginata Hansg., Oesterr. Bot. Z., v. 36, p. 110; 1886. — Type from Bohemia: Solopisk nächst Cernosic, Jun. 1888 = *Schizothrix Heufleri* Grun., as Hansgirg has noted in Nuova Notarisa, 1893, p. 223.

L. nigrovaginata var. *microcoleiformis* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(2), p. 98; 1891. — Type from Bohemia: Set. Procop nächst Prag, May 1890 = *Schizothrix Heufleri* Grun.

L. Okenii c) *fallax* Hansg., Prodr., v. 2, p. 110; 1892. — The Type (am Fuße des Skt. Bernhards Felsen in Karlsbad, C. A. Agardh) is noted by Hansgirg, loc. cit., to be on file in the Herbarium of the National Museum in Prague.

L. Regeliana var. *calothrichoidea* Hansg., Prodr., v. 2, p. 96; 1892. — Type from Bohemia: zwischen Karlstein und Beraun, Jul. 1884 = *Schizothrix Heufleri* Grun.

L. rupicola var. *phormidioides* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(2), p. 98; 1891. — Type (with that of *Oscillaria rupicola* Hansg.) from Bohemia: Hlubočep nächst Prag, Sept. 1884 = *Phormidium autumnale* (Ag.) Gom.

L. rupicola var. *tenuior* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(2), p. 98; 1891. — Type from Bohemia: Selc nächst Roztok, Sept. 1885 = *Phormidium autumnale* (Ag.) Gom.

L. Schroeteri var. *rupestris* Hansg., Prodr., v. 2, p. 117; 1892. — Type from Bohemia: Stechowic, Apr. 1887 = *Phormidium subfuscum* Kütz.

L. semiplena var. *chalybea* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 223; 1893. — Type from Dalmatia: Ragusa, 1891 = *L. confervoides* Ag.

L. semiplena var. *minor* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 17; 1890. — Type from Istria: Orsera, Apr. 1889 = *L. confervoides* Ag.

L. subcyanea Hansg., Prodr. v. 2, p. 88; 1892. — Type from Bohemia: Selc nächst Prag, Oct. 1885 = *Plectonema Nostocorum* Born.

L. subolivacea Hansg., Oesterr. Bot. Z., v. 39, p. 42; 1889. — Type from Istria: Pola, Apr. 1889 = *Plectonema calothrichoides* Gom.

L. tenuis a) *aerugineo-coerulea* var. *phormidioides* Hansg., Prodr., v. 2, p. 111; 1892. — Type from Bohemia: Prag, 1880–92 = *Phormidium autumnale* (Ag.) Gom.

L. tenuis a) *aerugineo-coerulea* var. *uncinata* Hansg., Prodr., v. 2, p. 111; 1892. — Type from Bohemia: Baumgarten-Podbaba, Oct. 1883 = *Phormidium autumnale* (Ag.)

Gom. The plants described are mixed in this specimen with those of *Symploca muralis* Kütz.

L. tenuis d) *limicola* var. *symplociformis* Hansg., Prodr., v. 2, p. 111; 1892. — Type from Bohemia: Böhmisch-Leipa, Sept. 1890 = *Phormidium Retzii* (Ag.) Gom.

L. tenuis var. *rivularis* Hansg., Oesterr. Bot. Z., v. 38, p. 115; 1888. — Type from Bohemia: Pampferhütte bei Eisenstein, Aug. 1887 = *Phormidium autumnale* (Ag.) Gom.

Mastigocoleus testarum var. *gracilis* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892(1), p. 220; 1893. — Type from Dalmatia: Ragusa, 1891 = *M. testarum* Lagerh.

Merismopoedia glauca var. *fontinalis* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(2), p. 98; 1891. — Type from Bohemia: Sct. Prokop nächst Prag, May 1890 = *Agmenellum quadruplicatum* (Menegh.) Bréb.

Mesotaenium caldarium f. *gracilis* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(2), p. 120; 1891. — Type from Trieste: in Perottis Warmhäusern, Jul. 1889 = *M. rubescens* (Bréb.) Dr. & Daily.

M. Endlicherianum var. *exiguum* Hansg., Prodr., v. 2, p. 248; 1892. — No specimen found.

M. Endlicherianum f. *minus* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(2), p. 120; 1891. — No specimen found.

Microchaete calothrichoides Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 494; 1905. — No specimen found.

Microcoleus cataractarum Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 15; 1890. — Type from Slovenia: Laibach, Aug. 1889 = *Schizothrix fasciculata* (Näg.) Gom.

M. hospita Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 15; 1890. — Type (with that of *M. polythrix* Hansg.) from Istria: Pola, Apr. 1889 = *Plectonema calothrichoides* Gom., growing outside of and within the sheaths of *Rivularia* sp.

M. polythrix Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 14; 1890. — Type (with that of *M. hospita* Hansg.) from Istria: Pola, Apr. 1889 = *Plectonema calothrichoides* Gom., growing outside of and within the sheaths of *Rivularia* sp.

Microspora amoena var. *crassior* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1889(1), p. 129; 1889. — Type from Bohemia: Pocatek, Aug. 1888 = *M. amoena* (Kütz.) Rabenh.

M. amoena var. *tenuior* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1889(1), p. 129; 1889. *M. elegans* Hansg., Prodr., v. 2, p. 223; 1892. — Type from Bohemia: Solopisker-Thal, Jul. 1888 = *M. Wittrockii* (Wille) Lagerh.

Microthamnion Kuetszingianum var. *subclavatum* Hansg., Prodr. v. 1(2), p. 265; 1888. — No specimen found.

Mougeotia corniculata Hansg., Oesterr. Bot. Z., v. 36, p. 334; 1886. — Type from Bohemia: Ausitz, Oct. 1883.

Myrionema submarinum Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 242; 1893. — Type from Dalmatia: Ombla nächst Ragusa, 1891 = a Fungus, parasitizing *Chlorotylidium cataractarum* Kütz.

Nostoc cuticulare var. *anastomosans* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 14; 1890. — No specimen found.

N. halophilum Hansg., Oesterr. Bot. Z., v. 35, p. 116; 1885. *N. Passerinianum* var. *halophilum* Hansg., Prodr., v. 2, p. 60; 1892. — Type from Bohemia: Oužič nächst Kralup, Oct. 1883 = *N. Passerinianum* (de Not.) Born. & Thur.

N. maculiforme f. *norvegicum* Hansg. in Foslie, Contrib. Mar. Alg. Norway, v. 1, p. 164; 1890. — Type (with *Nodularia spumigena* f. *litorea* [Kütz.] Born. & Flah. in Wittrock, Nordstedt & Lagerheim, Alg. Exs., no. 1344) from Norway: Bugönaes, M. Foslie, 10. VIII. 1889 = *Nostoc Muscorum* Ag., without spores.

- N. microscopicum* var. *linguiforme* Hansg., Prodr., v. 2, p. 65; 1892. — Type from Bohemia: Krumau, Aug. 1884 = *Anacystis montana* f. *minor* (Wille) Dr. & Daily.
- Nostochopsis lobatus* var. *stagnalis* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1889(1), p. 142; 1889. — No specimen found.
- Ochlochaete dendroides* var. *calcicola* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 235; 1893. — Type from Croatia: Fiume, 1891.
- O. dendroides* var. *pachyderma* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 234; 1893. — Type from Dalmatia: Ragusa Vecchia, 1891.
- O. pygmaea* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 236; 1893. — Type from Dalmatia: Cannosa nächst Ragusa, 1891.
- Oedogonium crenulato-costatum* var. *longearticulatum* Hansg., Prodr., v. 1, p. 46; 1886. — Type from Bohemia: Wittingau (Třeboň), Aug. 1883 = *O. longearticulatum* (Hansg.) Tiff., det. L. H. Tiffany.
- Oe. crispulum* var. *minutum* Hansg., Prodr., v. 1, p. 44; 1886. — Type from Bohemia: Veseli, May 1887 = *O. rugulosum* var. *minutum* (Hansg.) Tiff., det. L. H. Tiffany.
- Oe. fonticola* var. *flavescens* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 305; 1891. — Type from Dalmatia: zwischen Cannosa und Valdinoce nächst Ragusa, 1891.
- Oe. grande* var. *majus* Hansg., Prodr., v. 1, p. 45; 1886. — Type (with that of *O. undulatum* var. *incisum* Hansg.) from Bohemia: bei Tschausch nächst Brüx (Most), Jul. 1883.
- Oe. rufescens* var. *saxatile* Hansg., Prodr., v. 1(2), p. 221; 1888. — Type from Bohemia: Lettek nächst Roztok, Jul. 1887.
- Oe. sterile* Hansg., Prodr., v. 1(2), p. 260; 1888. — Type from Bohemia: Chlumec, Jul. 1885. The filaments described are very sparingly represented in this material.
- Oe. tenuissimum* Hansg., Notarisia, v. 3, p. 398; 1888; Prodr., v. 1(2), p. 222; 1888. — Type from Bohemia: Kostomlat, Jul. 1887.
- Oe. undulatum* var. *incisum* Hansg., Prodr., v. 1, p. 43; 1886. — Type (with that of *O. grande* var. *majus* Hansg.) from Bohemia: Tschausch nächst Brüx (Most), Jul. 1883.
- Oncobyrsa adriatica* var. *micrococca* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 228; 1893. — Type from Croatia: Zengg, 1891 = *Entophysalis conferta* (Kütz.) Dr. & Daily.
- Oocystis pusilla* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 9; 1890. — Type from Dalmatia: Castell Vecchio nächst Spalato, Aug. 1889.
- Oscillaria caldariorum* var. *phormidioides* Hansg., Physiol. & Algol. Stud., p. 70; 1887.
- Lyngbya sancta* b) *caldariorum* var. *phormidioides* Hansg., Prodr., v. 2, p. 117; 1892. — Type (as *Oscillatoria sancta* var. *caldariorum* in Mus. Vindob. Krypt. Exs., Algae, no. 2139) from Bohemia: Roth-Peček prope Kolin = *O. sancta* var. *caldariorum* (Hauck) Lagerh.
- O. intermedia* var. *phormidioides* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 16; 1890. *Lyngbya intermedia* var. *phormidioides* Hansg., Prodr., v. 2, p. 119; 1892. — Type from Bohemia: Oužič nächst Kralup, Dec. 1882 = *L. aestuarii* (Mert.) Liebm.
- O. leptotrichoides* Hansg., Ber. Deutsch. Bot. Ges., v. 3(1), p. 21; 1885. *Lyngbya leptotrichoides* Hansg., Prodr., v. 2, p. 108; 1892. — Type from Bohemia: Prag, Jan. 1884 = *Plectonema Nostocorum* Born. The filaments described are mixed here with those of *Schizothrix lateritia* (Kütz.) Gom. Isotypes are distributed in Wittrock & Nordstedt, Alg. Exs., no. 784.
- O. rupicola* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 16; 1890. *Lyngbya rupicola* Hansg., Prodr., v. 2, p. 109; 1892. — Type from Bohemia: Hlubočep nächst Prag, Sept. 1884 = *Phormidium autumnale* (Ag.) Gom.

O. tenerrima var. *nigricans* Hansg., *Physiol. & Algol. Stud.*, p. 64; 1887. *Lyngbya tenerrima* var. *nigricans* Hansg. pro synonym., loc. cit.; 1887. — Type (in Wittrock, Nordstedt & Lagerheim, *Alg. Exs.*, no. 1176) from Bohemia: Roth-Peček bei Kolin.

O. terebriformis var. *fallax* Hansg., *Oesterr. Bot. Z.*, v. 38, p. 43; 1888. *Lyngbya Okenii* c) *fallax* Hansg., *Prodr.*, v. 2, p. 110; 1892. — Type from Bohemia: Modran, Nov. 1887 = *Phormidium autumnale* (Ag.) Gom.

O. terebriformis var. *phormidioides* Hansg., *Oesterr. Bot. Z.*, v. 38, p. 44; 1888. *Lyngbya Okenii* c) *fallax* var. *phormidioides* Hansg., *Prodr.*, v. 2, p. 110; 1892. — Type from Bohemia: Modran, Nov. 1887 = *Phormidium autumnale* (Ag.) Gom.

Palmella tuberculosa Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1892(1), p. 240; 1893. — Type from Dalmatia: Ragusa, 1891 = *Entophysalis conferta* (Kütz.) Dr. & Daily.

Palmodactylon varium var. *ramosissimum* Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1890(2), p. 96; 1891. — No specimen found.

Pediastrum Boryanum var. *integriforme* Hansg., *Prodr.*, v. 1(2), p. 267; 1888. — No specimen found.

Phaeodermatium Hansg., *Notarisia*, v. 4, p. 658; 1889. — Type species: *P. rivulare* Hansg., loc. cit.; 1889. — Type from Bohemia: Solopisker-Thal nächst Cernosic, Jun. 1885 = *Entophysalis rivularis* (Kütz.) Dr.

Phaeophila horrida Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1890(1), p. 5; 1890. — Type from Istria: Volosca, Aug. 1885 = hyphae of a Fungus parasitizing cells of *Ulva Lactuca* L.

Pilinia minor Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1892, p. 236; 1893. — No specimen found.

Plectonema phormidioides Hansg., *Physiol. & Algol. Stud.*, p. 108; 1887. *Oesterr. Bot. Z.*, v. 37, p. 121; 1887. — Type from Bohemia: Siedlichfür nächst Neuwelt im Riesengebirge, Jul. 1886 = *Desmonema Wrangelii* (Ag.) Born. & Flah.

P. Tomasinianum var. *cinninatum* Hansg., *Prodr.*, v. 2, p. 40; 1892. — Type from Bohemia: Eisenbrod, Jul. 1885 = *P. Tomasinianum* (Kütz.) Born.

P. Tomasinianum var. *gracile* Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1891, p. 338; 1891. — Type from Dalmatia: Gruda-Castellnuovo, 1891 = *P. Tomasinianum* (Kütz.) Born.

Pleurocapsa concharum Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1890(2), p. 90; 1891. — Type from Bohemia: Tuchomeric-Ounetic nächst Roztok, Jun. 1890 = *Entophysalis rivularis* (Kütz.) Dr.

P. fluviatilis var. *subsalsa* Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1890(1), p. 18; 1890. — Type from Istria: zwischen Parenzo und Orsera, Apr. 1889 = *Entophysalis deusta* (Menegh.) Dr. & Daily.

P. minor Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1890(2), p. 89; 1891. — Type from Bohemia: Kuchelbad nächst Prag, 3. May 1884 = *Entophysalis rivularis* (Kütz.) Dr.

Pleurococcus angulosus var. *irregularis* Hansg., *Prodr.*, v. 1(2), p. 237; 1888. — Type from Bohemia: Plana nächst Tabor, 4. Apr. 1886 = *Flagellata*.

P. crenulatus Hansg., *Oesterr. Bot. Z.*, v. 36, p. 110; 1886. — Type from Bohemia: Veseli a. L., Aug. 1884 = *Stichococcus subtilis* (Kütz.) Klerck.

P. marinus Hansg. in Foslie, *Contrib. Mar. Alg. Norway*, v. 1, p. 158; 1890. — Specimen not found.

P. marinus f. *major* Hansg. in Foslie, *Contrib. Mar. Alg. Norway*, v. 1, p. 158; 1890. — Specimen not found.

P. miniatus var. *fuscescens* Hansg., *Physiol. & Algol. Stud.*, p. 87; 1887. — Type from Bohemia: Smichow, Oct. 1883 = *Flagellata*.

- P. miniatus* var. *roseolus* Hansg., Prodr., v. 1(2), p. 134; 1888. — Type from Bohemia: Libsic an der Moldau, Sept. 1886 = Flagellata.
- P. miniatus* var. *virescens* Hansg., Prodr., v. 2, p. 235; 1892. — Type from Bohemia: zwischen Debr̄ and Josephsthal, 1891 = *Palmogloea protuberans* (Sm. & Sow.) Kütz.
- P. vulgaris* f. *glomeratus* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 320; 1891. — Type from Dalmatia: Cannosa nächst Ragusa, 1891 = *Stigeoclonium* sp. ?, primordia.
- Polycystis aeruginosa* var. *major* Wittrock ex Hansg., Prodr., v. 2, p. 146; 1892. — Type from Bohemia: Libochowitz, Jul. 1888 = *Anacystis cyanea* (Kütz.) Dr. & Daily.
- P. fuscolutea* Hansg., Oesterr. Bot. Z., v. 38, p. 87; 1888. — Type from Bohemia: Modran, Nov. 1887 = *Entophysalis rivularis* (Kütz.) Dr.
- P. litoralis* Hansg. in Foslie, Contrib. Mar. Alg. Norway, v. 1, p. 169; 1890. — Type (L) from Norway: Bugönaes, M. Foslie = *Coccochloris stagnina* Spreng. Isotypic material is distributed with *Nodularia spumigena* f. *litorea* in Wittrock, Nordstedt & Lagerheim, Alg. Exs., no. 1344.
- P. marginata* var. *minor* Hansg., Prodr., v. 2, p. 145; 1892. — Type from Bohemia: Oužič nächst Kralup, Oct. 1883 = *Lamprocystis rosea* (Kütz.) Dr. & Daily.
- Polyedrium trigonum* var. *inermis* Hansg., Prodr., v. 1(2), p. 269; 1888. — No specimen found.
- Prasiola crispa* var. *sudetica* Hansg., Prodr., v. 1, p. 54; 1886. — Type from Bohemia: Krausebaude im Riesengebirge, Nov. 1883 = *P. crispa* (Lightf.) Ag.
- Protococcus botryoides* var. *nidulans* Hansg., Prodr., v. 1(2), p. 274; 1888. — Type from Bohemia: Nepomuk, Aug. 1887 = Flagellata.
- P. marinus* f. *Foslieanus* Hansg., in Foslie, Contrib. Mar. Alg. Norway, v. 1, p. 159; 1890. — Type (L) from Norway: Bugönaes, M. Foslie, 10. Aug. 1889 = Flagellata, encysted. Isotypic material is distributed with that of *Leptochaete marina* Hansg., in Wittrock, Nordstedt & Lagerheim, Alg. Exs., no. 1501.
- P. marinus* var. *Foslieanus* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 239; 1893. — Type from Croatia: Fiume, 1891 = primordia of larger *Chlorophyceae*.
- P. marinus* var. *virens* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1892, p. 239; 1893. — Type from Istria: Pola, Apr. 1889 = primordia of larger *Chlorophyceae*.
- P. ovalis* Hansg. in Foslie, Contrib. Mar. Alg. Norway, v. 1, p. 159; 1890. — No specimen found.
- P. variabilis* Hansg., Physiol. & Algol. Stud., p. 87; 1887; Oesterr. Bot. Z., v. 37, p. 122; 1887. — Type from Bohemia: Smichow, Sept. 1886 = Flagellata. Co-types collected 1. Oct. 1886 are distributed in Wittrock, Nordstedt & Lagerheim, Alg. Exs., no. 1091 (L, FI).
- P. viridis* var. *insignis* Hansg., Prodr., v. 1(2), p. 141; 1888. — Type from Bohemia: Wrsowic nächst Prag, May 1886 = Flagellata.
- P. Wimmeri* var. *major* Hansg., Prodr., v. 1(2), p. 273; 1888. — No specimen found.
- Protoderma concharum* Hansg., Oesterr. Bot. Z., v. 39, p. 43; 1889. — Type from Dalmatia: Zara, Aug. 1888.
- P. viride* var. *conchicola* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 306; 1891. — Type from Dalmatia: Ombla nächst Ragusa, 1891.
- Rhaphidium polymorphum* var. *anguineum* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 9; 1890. — Type from Slovenia: Veldeser-See, Sept. 1889 = *Ankistrodesmus falcatus* (Corda) Ralfs, rare in a mass of *Spirogyra* sp., etc.
- Rhodococcus* Hansg., Oesterr. Bot. Z., v. 34, p. 314; 1884. In Wittr. & Nordst., Alg. Exs., fasc. 14, no. 697; 1884. Bot. Not., 1884, p. 128; 1884. — Type species: *R. caldari-orum* Hansg., Oesterr. Bot. Z., v. 34, p. 315; 1884. In Wittr. & Nordst., Alg. Exs., fasc. 14, no. 697; 1884. Bot. Not., 1884, p. 128; 1884. — Type (in Wittr. & Nordst., Alg. Exs., no. 697) from Bohemia: Prag, 22. Dec. 1883 = *Palmogloea protuberans* (Sm. & Sow.)

Kütz. Isotypes were studied in several herbaria (D, FC, L, PC, S, UC); this same material was distributed in Kerner, Fl. Exs. Austro-Hung., no. 2399 & Nachtrag (S).

Scenedemus alternans var. *minor* Hansg., *Physiol. & Algol. Stud.*, p. 156; 1887. — No specimen found.

S. bidentatus Hansg., *Prodr.*, v. 2, p. 229; 1892. — Type (with that of *S. quadricauda* var. *variabilis* Hansg.) from Bohemia: Deutschbrod, 1891. The plants described are rare in this collection.

S. denticulatus var. *linearis* Hansg., *Prodr.*, v. 1(2), p. 268; 1888. — Type from Bohemia: Neuern, Aug. 1887. These plants are not abundant in a mixture with other algae.

S. quadricauda var. *bicaudatus* Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1890(1), p. 9; 1890. — Type from Bohemia: Neudörfel nächst Kreibitz, Jul. 1888. These plants are uncommon among other algae.

S. quadricauda var. *variabilis* Hansg., *Prodr.*, v. 2, p. 230; 1892. — Type (with that of *S. bidentatus* Hansg.) from Bohemia: Deutschbrod, 1891. The plants described are rare among other algae.

Scytonema Hofmannii var. *calcicola* Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1890(2), p. 97; 1891. — Type from Bohemia: Nová Ves nächst Sct. Prokop, May 1890 = *Calothrix parietina* (Näg.) Thur.

S. obscurum var. *terrestre* Hansg., *Prodr.*, v. 2, p. 36; 1892. — Type from Bohemia: Prag, Nov. 1883 = *S. Hofmannii* Ag.

Sorastrum spinulosum var. *crassispinosum* Hansg., *Prodr.*, v. 1(2), p. 235; 1888. — Type from Bohemia: zwischen Lomnic und Veseli, May 1887. The plants referred to are very rare among other algae.

Spirogyra Hassallii var. *austriaca* Hansg., *Beih. z. Bot. Centralbl.*, v. 18(2), p. 475; 1905. — No specimen found.

S. insignis var. *fallax* Hansg., *Hedwigia*, v. 27, p. 253; 1888. — Type from Bohemia: Prag, Mar. 1883.

S. rivularis var. *minor* Hansg., *Prodr.*, v. 1(2), p. 161; 1888. — Type from Bohemia: Troja nächst Prag, Oct. 1883. The plants here are not in the fruiting condition.

Spirotaenia closteridia var. *elongata* Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1891(1), p. 329; 1891. — Type from Bohemia: Edmundsklamm nächst Herrnskretsch, Sept. 1890 = *Palmogloea protuberans* (Sm. & Sow.) Kütz.

Spirulina adriatica Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1890(1), p. 17; 1890. — Type from Istria: Orsera, Apr. 1889 = *S. subsalsa* var. *oceanica* (Crouan) Gom.

S. Jenneri var. *tenuior* Hansg., *Prodr.*, v. 2, p. 121; 1892. — Type (as *S. Jenneri* in Rabenh., *Alg. Sachs.*, no. 728) from Bohemia: Fugau, Karl = *Arthrospira Jenneri* (Hass.) Stizenb.

Staurastrum intricatum var. *minus* Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1890(1), p. 13; 1890. — Type from Bohemia: Pocatek, Aug. 1888.

Stichococcus bacillaris var. *duplex* Hansg., *SB. Böhm. Ges. Wiss., math.-nat. Cl.*, 1890(1), p. 12; 1890. — No specimen found.

S. bacillaris c) *maximus* Hansg., *Bot. Centralbl.*, v. 22, p. 37; 1885. *S. bacillaris* var. *maximus* Hansg., *Physiol. & Algol. Stud.*, p. 85; 1887. — Type from Bohemia: Hohenfurth, Aug. 1884 = *Stichococcus subtilis* (Kütz.) Klerck.

Stigeoclonium falklandicum b) *longearticulatum* Hansg., *Prodr.*, v. 1, p. 65; 1886. — Type from Bohemia: Lobositz, Jul. 1884 = *S. tenue* (Ag.) Kütz., det. H. S. Forest.

S. longipilus var. *minor* Hansg., *Prodr.*, v. 1(2), p. 227; 1888. — Type from Bohemia: Cerhenic nächst Kolin, Oct. 1886 = young *Stigeoclonium* or *Chaetophora* sp.

S. pygmaeum Hansg., *Prodr.*, v. 1, p. 69; 1886. *Oesterr. Bot. Z.*, v. 36, p. 109; 1886. — Type from Bohemia: Chlumcan nächst Laun, Jul. 1884 = young *S. tenue* (Ag.) Kütz. (det. H. S. Forest), growing with *Chlorotylum cataractarum* Kütz.

S. tenue f) *epiphyticum* Hansg., Prodr., v. 1, p. 66; 1886. — Type from Bohemia: Pisek, Aug. 1883 = *Draparnaldia* sp., det. H. S. Forest.

S. tenue g) *lyngbyicola* Hansg., Prodr., v. 1(2), p. 227; 1888. — No specimen found.

S. tenue c) *uniforme* var. *irregularis* Hansg., Prodr., v. 1, p. 66; 1886. — Type (with that of *Ulothrix subtilis* c) *thermarum* var. *crassior* Hansg.) from Bohemia: Karlsbad, Aug. 1883 = *Stigeoclonium tenue* (Ag.) Kütz., det. H. S. Forest.

S. variabile var. *minus* Hansg., Prodr., v. 1, p. 65; 1886. — Type from Bohemia: Pisek, Aug. 1883 = young *Stigeoclonium tenue* (Ag.) Kütz. mixed with *Stichococcus subtilis* (Kütz.) Klerck. and *Microspora stagnorum* (Kütz.) Lagerh.

Tolypothrix distorta var. *symplocoides* Hansg., Prodr., v. 2, p. 39; 1892. — Type from Bohemia: Smichow, Jul. 1886 = *Scytonema Hofmannii* Ag., a luxuriant growth-form.

T. penicillata var. *tenuis* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 14; 1890. — Type from Istria: Pisino, Aug. 1889 = *Scytonema mirabile* (Dillw.) Born.

T. rivularis Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 337; 1891. — Type from Styria: Rudersdorf nächst Graz, Sept. 1890 = *Calothrix parietina* (Näg.) Thur.

Trentepohlia abietina var. *cupressicola* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 314; 1891. — No specimen found.

T. lagenifera var. *breviarticulata* Hansg., Pflanzenbiol. Unters., p. 220; 1904. — No specimen found.

T. lagenifera var. *ferricola* Hansg., Beih. z. Bot. Centralbl., v. 18(2), p. 451; 1905. — No specimen found.

T. lagenifera var. *mediterranea* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 314; 1891. — No specimen found.

T. Reinschii Hansg., Physiol. & Algol. Stud., p. 155; 1887. — No specimen found.

T. Willeana Hansg., Prodr., v. 1, p. 89; 1886. Oesterr. Bot. Z., v. 36, p. 110; 1886. — Type (with that of *Stigeoclonium pygmaeum* Hansg.) from Bohemia: Chlumčan nächst Laun, Jul. 1884 = *Chlorotylum cataractarum* Kütz.

Trochiscia crassa Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(2), p. 96; 1891. — Type from Bohemia: Klukovic nächst Prag, May 1890 = encysted Flagellata, growing with *Scytonema Hofmannii* Ag. and other algae.

T. halophila Hansg., Hedwigia, v. 27, p. 128; 1888. — Type from Bohemia: Ouzič prope Kralup, Oct. 1883 = Flagellata, encysted, in a mixture of *Anacystis thermalis* (Menegh.) Dr. & Daily and other algae.

T. psammophila Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1890(1), p. 12; 1890. — Type (with that of *Dactylococcus sabulosus* Hansg.) from Bohemia: zwischen Dittersbach und Hinter-Dittersbach, Jul. 1889 = Flagellata, encysted, mixed with *Palmogloea protuberans* (Sm. & Sow.) Kütz., etc.

Ulothrix flaccida b) *minor* Hansg., Bot. Centralbl., v. 22, p. 36; 1885. *U. flaccida* var. *minor* Hansg., Physiol. & Algol. Stud., p. 84; 1887. — Type (with that of *Acanthococcus minor* Hansg.) from Bohemia: Prag, 4. Apr. 1885 = *Stichococcus subtilis* (Kütz.) Klerck.

U. mirabilis Hansg., Oesterr. Bot. Z., v. 36, p. 109; 1886. — Type from Bohemia: Krausebauden, Nov. 1883 = *Schizogonium murale* Kütz.

U. parietina var. *major* Hansg., Prodr., v. 1, p. 62; 1886. — Type from Bohemia: Siebengründen, Nov. 1883 = *Schizogonium murale* Kütz.

U. subtilis e) *stagnorum* var. *radicans* Hansg., Prodr., v. 1, p. 59; 1886. — Type from Bohemia: Kunratic, Apr. 1885 = *Stigeoclonium tenue* (Ag.) Kütz.

U. subtilis b) *subtilissima* var. *macromeres* Hansg., Prodr., v. 1, p. 59; 1886. — Type from Bohemia: Ouzič nächst Kralup, Nov. 1885 = *Stichococcus subtilis* (Kütz.) Klerck.

U. subtilis c) *thermarum* var. *crassior* Hansg., Prodr., v. 1, p. 59; 1886. — Type (with that of *Stigeoclonium tenue* c) *uniforme* var. *irregularare* Hansg.) from Bohemia: Karlsbad, Aug. 1883 = *S. tenue* (Ag.) Kütz., det. H. S. Forest.

Urococcus Foslieanus Hansg. in Foslie, Contrib. Mar. Alg. Norway, v. 1, p. 156; 1890. — Type (with that of *Protococcus marinus* f. *Foslieanus* Hansg., L) from Norway: Bugønaes, M. Foslie, 10. Aug. 1889 = *Flagellata*, encysted.

Vaucheria geminata var. *rivularis* Hansg., Prodr., v. 1(2), p. 233; 1888. — Type from Bohemia: Sele nächst Roztok, Jun. 1887.

Xenococcus concharum Hansg., Oesterr. Bot. Z., v. 39, p. 5; 1889. — Type from Dalmatia: Zara, Aug. 1888 = *Entophysalis deusta* (Menegh.) Dr. & Daily.

X. Kernerii Hansg., Physiol. & Algol. Stud., p. 111; 1887. *Dermocarpa Kernerii* Hansg., Physiol. & Phycophyt. Unters., p. 234; 1893. — Type (on *Scytonema cincinnatum* in Kerner, Fl. Exs. Austro-Hung., no. 596) from Bohemia: Eisenbrod = *Entophysalis Lemaniae* (Ag.) Dr. & Daily.

X. Schousboei var. *pallidus* Hansg., Oesterr. Bot. Z., v. 39, p. 5; 1889. — Type from Dalmatia: Zara, Aug. 1888 = Chlorophyceae, primordia.

Zygnema chalybeospermum Hansg., Hedwigia, v. 27, p. 257; 1888. — No specimen found.

Z. chalybeospermum var. *gracile* Hansg., SB. Böhm. Ges. Wiss., math.-nat. Cl., 1891(1), p. 326; 1891. — Type from Dalmatia: Castellnuovo, 1891.

Z. stellinum var. *rhynchonema* Hansg., Oesterr. Bot. Z., v. 36, p. 334; 1886. — No specimen found.

Zusammenfassung

Die vorstehende Arbeit bringt eine Liste sämtlicher von Hansgirg beschriebener Algen. Es ist dem Verfasser gelungen, den größeren Teil der Typen im Herbarium des Naturhistorischen Museums in Wien aufzufinden. Sie waren von ihrem Autor wohl mit Fundortsangaben, nicht aber mit Namen versehen worden. In vielen Fällen konnte die Identität der Typen mit bereits bekannten Arten festgestellt werden, von denen sie oft nur extreme Wuchsformen darstellen.

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Zoologisch-Botanische Datenbank/Zoological-Botanical Database

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