

## Revisiones Generum Obscurorum Hyphomycetum: Four genera described by A. C. J. Corda\*

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Four genera of hyphomycetes described by A. C. J. Corda are revised based on the available material in his herbarium in Prague. *Chaetostroma* Corda 1829 is considered a nomen dubium because there is no known material of the type species, *C. carmichaeli* Corda. The identities of three other species referred by Corda to *Chaetostroma* are reconsidered. *Coccosporium* Corda 1831, typified by *C. maculiforme* Corda, is an earlier name for *Corynespora* Güssow 1906. *Corynespora* will be proposed for conservation against *Coccosporium* and a new combination for Corda's species is made here in the former genus. The generic name *Gliostroma* Corda 1837, typified by *G. pezizoides* Corda, is a nomen dubium as it cannot be taxonomically identified from the type specimen. The genus *Medusula* Tode 1790 was emended by Corda 1837 and is also considered a nomen dubium. Tode's original material is lost and Corda's additional species probably were proposed for fungi that would now be referred to the Chaetomiaceae.

Keywords: *Chaetostroma*, *Coccosporium*, *Corynespora*, *Gliostroma*, *Medusula*.

***Chaetostroma*** Corda apud Sturm, Deutsch. Fl. III, 2, Heft 9: 123, 1829.

Type: *C. carmichaeli* Corda (as *carmichaeli*), l.c.

= *Aegerita setosa* Carmichael apud Gréville, Scott. Crypt. fl. 5: p. 268, fig. 2. 1827.

Corda typified the genus with *Aegerita setosa* Carmichael, which he considered a good species, and used the new name *Chaetostroma carmichaeli* for it. Later, Pfeiffer (1873, 1874) accepted this and designated *Periola setosa* Fr. as the lectotype of the genus classified by Fries (Syst. Mycol. 3 (Index): 126, 1832) as a synonym of *Aegerita setosa* Carm.

No material of *C. carmichaeli* studied by Corda is deposited in PRM. Corda studied some material collected on dry oak wood near Horni Litvinov in Bohemia („auf trockenem Eichenholz bei Oberle

\* See Seifert, K. A. & M. A. Vincent (1992). *Sydowia* 44(2): 307–320.

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utengdori“ in Böhmen). He described and illustrated the fungus as having white cushion-like colonies, covered with erect white setae and spores small, translucent, partly globose and partly fusiform, with pointed ends, slightly curved.

Corda established his new genus as closely related to *Aegerita* and *Fusarium*, and characterized it by the presence of dimorphic conidia and bristled or setose stalks („durch die borstigen Träger“). In 1838, Corda corrected his observations and explained that he had interpreted broken cells of the conidiophores as spores. From the description of this species, it is evident that it is a hyphomycete, probably similar to species of *Volutella* Tode : Fr. (see Domsch & al., 1980) as accepted by Lindau (1910), or to *Myrothecium* Tode : Fr. With no type material available and the original description insufficient to recognize the taxon, the application of the name is uncertain.

Therefore, *Chaetostroma* Corda is a *nomen dubium*, because it is impossible to identify any of Corda's species on the basis of their protologues, descriptions, illustrations and the poorly preserved material (see also Tulloch, 1972, p. 36).

Corda classified three additional species in *Chaetostroma*, which are briefly discussed here.

1. ***Chaetostroma isabellinum*** Corda apud Sturm, Deutsch. Fl. III, 2, Heft 9: 125. tab. 59. 1829.

= *Volutella isabellina* (Corda) Sacc., Syll. Fung. 4: 687. 1886. Holotype: Czechoslovakia, Bohemia, leg. Corda, s.d., PRM No. 155736.

The preserved material includes two small twigs, but lacks any designation of locality, substrate and date. In his description, Corda mentioned that the material was found on dry fallen branches of *Salix*. Corda's fungus can no longer be found on the specimen. The Latin diagnosis reads, „Ch. solitarium, convexum, isabellinum, stromate atro-fusco.“ In German, he further described the fungus as having a solid, dark brown, verrucose stroma, simple, unbranched, translucent setae, with abundant yellowish, globose or partly fusiform spores on aggregated thin, isabelline coloured hairs. These characters are insufficient for identification of the fungus in the absence of usable original material.

2. ***Chaetostroma buxi*** (DC) Corda, Icon. Fung. 2: 30. tab. XIII fig. 107. 1838.

= *Tubercularia buxi* DC, Fl. Fr. 6 p. 110. 1819.

= *Psilonia buxi* (DC) Fr., Syst. Orb. Veg. p. 187. 1821.

= *Volutella buxi* (DC) Berk., Ouline of British Fungi p. 340. 1860.

Corda found this fungus on decayed leaves of *Buxus sempervirens* in Praha but no material from Corda's time is preserved in PRM. The figure was prepared by Fries based on swedish material. This species was later transferred to *Volutella* and is a common fungus in Europe on *B. sempervirens* from spring to summer (Bezerra, 1963; Rossman & al., 1993). The author citation for this species is commonly given as *Volutella buxi* (Corda) Berk., but the correct author citation is *V. buxi* (DC : Fr.) Berk. Several of the synonyms listed by Corda are actually synonyms of the fungus now known as *Sesquicillium buxi* (Schmidt in Link : Fr.) W. Gams (Gams, 1968).

3. *Chaetostroma georginae* Corda, Icon. Fung. 2: 31, tab. XIII fig. 108, 1838.  
= *Volutella georginae* (Corda) Sacc., Syll. Fung. 4: 683. 1886. Holotype: Czechoslovakia, Bohemia, Praha, Lobkowitz garden (Lobk.), leg. Corda, s.d., PRM No. 155411.

The very small specimen collected by Corda on decayed bulbs of *Dahlia* in the Lobkowitz garden in Praha has been destroyed by insects and overgrown by other fungi. No fungus similar to that illustrated by Corda and producing distinct, dark, setose, columnar and zonate stromata or synnemata could be found in the material. Corda's fungus looks similar to a species of *Volutella* or *Colletotrichum* Corda, both having conidiomata with setae and conidia of similar shape and often also of a granulose consistency („Sporen sind ... milchig-fleckig und stellenweise mehr durchscheinend“). Species of these genera are not usually considered synnematosus, although stipitate species of *Volutella* are known. Corda's fungus from *Dahlia* bulbs cannot be recognized from the original material.

- Coccosporium* Corda apud Sturm, Deutsch. FI. III, 3, Heft 12; 49, 1831.

Type: *C. maculiforme* Corda apud Sturm., l.c., p.49, tab. 25.

Holotype specimen: Czechoslovakia, Bohemia, leg. Corda, s.d., PRM No. 491139.

Only one species was classified by Corda in his genus *Coccosporium*. The material preserved in PRM consists of three small pieces of *Quercus* wood. On their surface, effuse dark brown colonies are present and the fungus evidently corresponds to the one described by Corda. The original specimen is designated by Corda as „*Coccosporium maculiforme* Cda“, without any details regarding locality or date. His original description also lacks these data.

By microscopic study, the presence of conidiophores with conidia and the occurrence of some sclerotium-like structures were confirmed. Corda illustrated and described all these parts of the fungus in

his generic diagnosis as „Sporidia cornea cellulosa impellucida, gelatina, colorate farcta, floccis erectis articulatis, heterogeneis, diaphanis inspersa.“ His specific diagnosis is no more detailed: „C. caespitibus effusis atris; floccis quadriarticulatis fuscis, sporidiis globosis atris; gelatina lutea.“ In the German text that followed, Corda described the conidiophores as erect, in groups of 2 to 3 or single, each composed of 4 cells, brown and translucent; each cell of the conidiophore ovoid and easily detached. Abundant sclerotia were scattered among the conidiophores, almost as large as the conidiophores and were high, globose, roughened, multicellular, black and opaque, their cortex hard and cellular; after some pressure a yellow slime was released. Corda mentioned that he had never seen such a characteristic form of sporidia in the fungi. He considered this fungus well distinguished from the similar genera *Ospiosporium* and *Oedemium*.

Microscopic study of Corda's material shows that the fungus is a species of *Corynespora* Güssow 1906 (Figs 1-3). A description of Corda's original material follows.

Mycelium superficial and immersed in the substratum, composed of branched, septate, brown, thick-walled and smooth hyphae, 2-5  $\mu\text{m}$  wide, constricted at the septa, with cells sometimes swollen up to 8  $\mu\text{m}$ . – Conidiophores (Fig. 1) arising singly or in groups of 2-4, erect, simple, straight or flexuous, 3-7 septate, brown to dark brown, thick-walled, 27-125  $\mu\text{m}$  long, 6-8  $\mu\text{m}$  wide, 8-9.5  $\mu\text{m}$  wide near the base, usually slightly inflated to 8  $\mu\text{m}$  at the apex, with up to 5 successive cylindrical or occasionally barrel-shaped proliferations, apex of the conidiophore monotretic, with a distinct pore in the wall, typical for species of *Corynespora*. – Conidia (Fig. 2) formed singly or in short chains through the pore at the apex of the conidiophore or through a pore at the apex of the proliferation or through a pore at the terminal end of the first conidium, cylindrical to obclavate, straight to flexuous, pale brown to rusty brown, smooth-walled, 1-5 pseudoseptate, (14.5-)22-51  $\mu\text{m}$  long and 6.5-8.5  $\mu\text{m}$  wide.

Some small sclerotia were observed, scattered abundantly among the conidiophores (Fig. 3). They are  $\pm$  rounded, regular or irregular, dark brown at the surface of distinctly swollen cells, 40-95  $\mu\text{m}$  diam. or ellipsoidal, 80-96 x 48-65  $\mu\text{m}$ , containing pale to yellow cells. From the crushed sclerotium pale brown to yellow cells are released. These sclerotium-like structures are similar to „sclérotos pédicellés“ known in some helicosporous genera (such as *Helicosporium*, *Helicomycetes* and *Drepanospora*). The latter, however, function as spermogonia and produce spermatia (small phialoconidia). On Corda's specimen, no

spermatium-like structures were observed. The sclerotium-like structures apparently belong to the conidiophores of *Corynespora*, but this cannot be unequivocally proved. No similar sclerotium-like structures are known in the genus *Corynespora*; therefore further observation of similar structures in recently collected material of *Corynespora* species from temperate zones is needed.

In Corda's material scattered conidia of *Oncopodiella trigonella* (Sacc.) Rifai were also observed.

The conidia and conidiophores on the holotype indicate that *Coccosporium maculiforme* Corda (1831) represents an earlier name for the taxon presently referred to as *Corynespora cambrensis* M. B. Ellis (1960). Because some species of *Corynespora* are common fungi, it is unsurprising that some were described earlier than *Corynespora* Güssow (1906) under a different generic name. Several papers concerning species of *Corynespora* have been published up to now and more than forty species are accommodated in the genus. Therefore, I do not wish to resurrect the generic name *Coccosporium* Corda 1831 and propose to conserve the commonly used generic name *Corynespora* Güssow (1906). Anticipating the acceptance of this proposal the following new combination is made:

***Corynespora maculiformis*** (Corda) Hol.-Jech. comb. nov.

Basionym: *Coccosporium maculiforme* Corda apud Sturm, Deutschl. Fl. III, 3, Heft 12: 49–50, tab. 25, 1831.

Syn.: *Corynespora cambrensis* M. B. Ellis, Mycol. Pap. 76: 28 – 30. 1960.

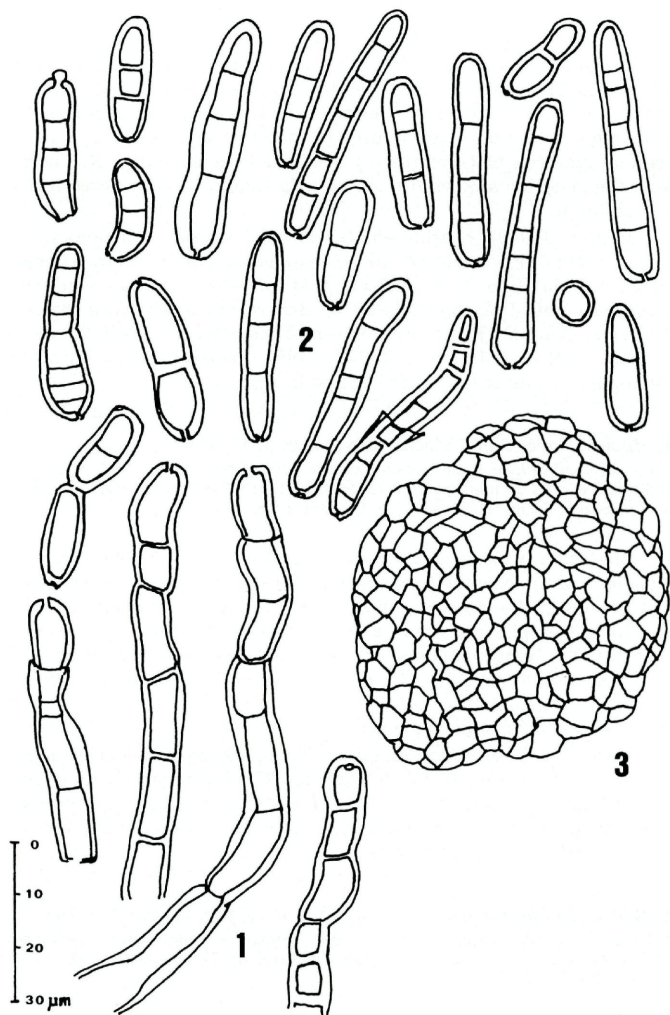
***Gliostroma*** Corda, Icon. Fung. 1: 5. 1837.

T: *G. pezizoides* Corda, l.c., tab. I fig. 86.

= *Aegerita pezizoides* (Corda) Bonorden, Handb. allgem. Myko. p. 32. 1851.

Holotype specimen: Czechoslovakia, Bohemia, near Praha, parasitic on *Dothidea typhina*, leg. Corda, s.d., PRM No. 155514.

Corda classified only one species in his genus *Gliostroma*. This species is a fungus parasitic on *Epichloë typhina* (Pers.: Fr.) Tul. (= *Dothidea typhina* Pers.) collected near Praha. The material preserved in PRM contains one piece of a grass-culm partly surrounded by an immature stroma of *E. typhina*. Corda's description and illustration are of a hemispheric, yellow, stromatic fruiting body that was originally gelatinous. No such fungus is present on the material now. On the stroma of *E. typhina*, only a very small piece of mycelium with the broken sporangiophore of some fungus was found. I have identified this as a possible member of the Piptocephalidaceae, probably *Syncephalis nodosa* van Tieghem. No such fungus was included in Corda's diagnosis of *G. pezizoides*, and it probably



Figs. 1-3. - Camera lucida drawings from the holotype of *Coccosporium maculiforme* Corda, PRM 491139. - 1. Apices of conidiophores. - 2. Conidia. - 3. Sclerotium-like structure.

developed secondarily. Further, some other undeterminable material, probably of insect origin, also is present.

Based on the specimen PRM 155514, it is impossible to determine which fungus Corda studied and illustrated. Corda's illustrated details may have represented some cleistothecia of a member of the Eurotiales, sclerotia, or structures of insect origin. None of Corda's original material of *Gliostroma pezizoides* is deposited in K. Therefore, the generic name *Gliostroma* Corda should be considered a nomen dubium.

Lindau (1910) considered *Gliostroma* Corda a synonym of *Aegerita* Pers.: Fr. and used the corresponding combination *A. pezizoides* (Corda) Bon. It is unlikely that *Gliostroma* Corda could be congeneric with the wood-inhabiting *Aegerita* Pers. The type species, *Aegerita candida* Pers.: Fr., is an anamorph of *Bulbillomyces farinosus* (Bres.) Jülich [Hughes, 1958, Donk, 1962; both as *Peniophora candida* (Pers.: Fr.) Lyman].

***Medusula*** Tode, Fungi Mecklenbergenses p. 17. 1790.

Type: *M. labyrinthica* Tode. emend. Corda, Icon. Fung. 1: 18. 1837 with two additional species. Non *Medusula* Pers., Syn. 2: 215. 1807 (Phanerogams, Violaceae). Non *Medusula* Eschweiler, Syst. Lich. 18. 1824 (Lichens).

*Medusula* is clearly a genus attributable to Tode (1790), with *M. labyrinthica* Tode as the type species. Fries (1832) listed Tode's genus and species in the Index to the Systema, noting only his opinion that the fungus might represent a Myxomycete "(Myxogaster mycelio corruptus?)". Hence, *Medusula* Tode cannot be considered sanctioned by Fries. Following Art. 13.1 of the current International Code of Botanical Nomenclature, however, *Medusula* Tode takes priority over the later homonyms listed above.

Corda (1837) emended *Medusula* Tode, adding two species of his own, but did not consider Tode's species. The Latin generic diagnosis is brief and gives few clues to put the genus in a modern context: "Stroma spurium carnosum, floccis septatis, heterogeneis, erectis tectum. Sporis simplices, floccis inspersae."

1. ***Medusula zamiae*** Corda, Icon. Fung. 1: 18, tab. IV, fig. 240. 1837.  
= *Volutella zamiae* (Corda) Sacc., Syll. Fung. 4: 638. 1886. Holotype: Czechoslovakia, Bohemia, Liberec (= Reichenberg), on *Zamia pungens*, leg. Corda, s.d., PRM No. 155570.

This fungus was collected by Corda in Liberec, northern Bohemia, on dead leaves of cultivated *Zamia pungens*. A small piece of a part of a leaf remains, which is covered by several immature

perithecia that were evidently described and illustrated by Corda as *Medusula zamiae*.

Corda described the hairs covering the fructification as erect, septate, subulate, subdichotomous, diaphanous, and pale yellowish, and the conidia as „sporis globosis aureis“. The terminal hairs on the specimen are verrucose to warty, brown, paler towards the apex, and dichotomously branched, often branching at right angles. The subglobose perithecia are immature, being pale and lacking asci and ascospores. The large rusty brown conidia described by Corda probably belong to *Harzia acremonioides* (Harz) Cost. (= *Acremoniella atra* Sacc.). Several different saprobic fungi are present on the surface of the leaf.

Because the specimen is immature, the species should be considered a *nomen dubium*. It is unlikely to be a species of *Volutella* Tode : Fr as that genus is now understood (Domsch & al., 1980).

## 2. *Medusula ochracea* Corda, Icon. Fung. 1: 18, tab.IV fig. 241. 1837.

= *Volutella ochracea* (Corda) Sacc., Syll. Fung. 4: 688. 1886.

No material of this species is preserved in PRM. Corda's description and illustration do not suggest that *M. ochracea* is congeneric with *M. zamiae*. However, the occurrence of dichotomously branched hairs indicates the possibility that both species may have been species of *Chaetomium*.

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