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Some Species of *Harpographium* Sacc.¹

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ABSTRACT: Twelve species and one variety of the genus *Harpographium* have been described in the literature. Two species, *H. fasciculatum* and *H. corynelioides*, are described and illustrated. The writer's findings, from a study of a co-type, agree with those of Dearness in that *H. magnum* is identical with *Cornularia persica*, and therefore must be excluded from the genus. The examination of a specimen of *H. rhizomorpha* as identified by Masee and of its description indicate that this species does not belong to the genus *Harpographium*. A new species, *H. constrictum*, from Jamaica is described and illustrated.

The genus *Harpographium* was proposed by Saccardo (1880) with *H. fasciculatum* Sacc. as type species. The genus is characterized primarily by dark synnemata and fusiform to falcate conidia and is classified in the group Amerosporae, section Phaeostilbeae, Stilbella-ceae, Moniliales of the Fungi Imperfecti.

Saccardo erected the genus to encompass species of *Graphium* which have falcate conidia. In addition to *Harpographium fasciculatum*, Saccardo (1886) proposed four other new combinations: *H. rhizomorpha* described in 1856 as a *Graphium* by Montagne; *H. macrocarpum* described as a *Graphium* by Corda in 1839; *H. olivaceum* described as an *Atractium* by Schmidt in 1817; and *H. cristatum* described as an *Epilithia* in 1855 by Nylander.

Three species of *Harpographium* were named by Cooke and Masee. *H. corynelioides* and *H. quaternarium* were listed as new Australian fungi by Cooke and Masee in Cooke (1887) and apparently have never been reported since. The third species, *H. graminum*, was listed as new for Britain by Cooke and Masee in Masee (1887). The designation appeared in Masee (1887) as *Haplographium graminum*, but in Masee (1893) the spelling of the generic name was corrected with the description in the 1887 paper cited as the original publication. This species is apparently known only from Britain.

Penzig and Saccardo (1901) described *H. nematosporum* as a new species in Malpighia. The fungus was redescribed and an illustration was included in *Icones fung. javan.* (Penzig and Saccardo, 1904). In the latter publication the species is cited as new, but in the introduction it is stated that the volume contains mostly redescrptions with added illustrations. Therefore, the valid publication date is 1901.

P. Magnus (1905) described *H. volkartianum* as new, and proposed the new combination, *H. pallescens*, to take the place of *Graphium pallescens*.

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A variety, *H. fasciculatum* var. *hirsutum*, was described by Ferraris in 1909. No other reference to the variety has been found.

The twelfth species described in the genus was *H. magnum* (Saccardo, 1915). This species was based on a specimen collected on *Prunus* sp. at Albany, N.Y. A specimen of *H. magnum* on *Prunus* sp., collected at Albany, N.Y., from the Dearness Herbarium, No. 3979, in Herbarium D.A.O.M., is labelled co-type. Comments in the packet indicate that Dearness considered this to be *Cornularia persica*. I concur with this opinion and exclude *H. magnum* from *Harpographium* since the fungus, as well as Saccardo's description of it, fits the description of *Cornularia persica*.

A specimen labelled *H. rhizomorpha* Mont. deposited in the New York Botanical Garden has been examined. The specimen was secured in 1905 from the Herbarium of George Masee and the label states that it constitutes a first record for Britain. Although the fungus fits the rather meager description of *H. rhizomorpha*, it differs greatly from the other species of *Harpographium*. The conidia are fusiform to falcate as in *Harpographium* species, but the spores have septa, usually one, but occasionally two. In addition, the spores are borne in a mucous head, a characteristic very unlike that of the other species of *Harpographium*. Except for the shape and septa in the conidia, the fungus is quite similar to *Graphium*. Although the correct disposition of this fungus is uncertain at this time, it must be excluded from the genus *Harpographium*.

H. macrocarpum was transferred to the genus *Sterigmatobotrys* as a new combination, *S. macrocarpa*, by Hughes (1958).

Of the remaining nine species only two, *H. fasciculatum* and *H. corynelioides*, have been examined in this study. *H. corynelioides* is known only from Australia while *H. fasciculatum* has been reported from at least five countries. Although few collections are deposited in the major herbaria of the United States, *H. fasciculatum* appears to be a rather common lignicolous fungus, since I have made large collections of it in Indiana, Illinois, and Tennessee. In addition to these two species, a new species, *H. constrictum*, is here described. The fungus is similar to *H. fasciculatum* but has characteristics distinctive enough to warrant species status. It does not fit any of the other descriptions of members of the genus.

Attempts to place *H. fasciculatum* and *H. constrictum* in culture met with failure. Several different culture media were employed. To my knowledge, no species of *Harpographium* have ever been in culture.

The abbreviations following collection data listed under specimens examined are those of various herbaria in which the specimens are deposited (Lanjouw and Stafleu, 1956).

Harpographium Saccardo

Harpographium Sacc. in *Michelia* 2:33. 1880; Syll. fung. 4:619. 1886.

Forming brown, gray, or black synnemata; cylindrical to clavate

synnemata on stromata; conidia fusiform or falcate, continuous, hyaline, not forming chains.

1. *Harpographium fasciculatum* Saccardo

Harpographium fasciculatum Sacc. in *Michelia* 2:33. 1880; Syll. fung. 4:619. 1886.

Graphium fasciculatum Sacc. in *Michelia* 1:76. 1877; Exs. Sacc. Myc. venet. 739.

Figs. 1-4

Synnemata simple or branched, clustered on a stromatic base, gray when fresh becoming dark brown or black with age, cylindrical to slightly flattened, erect, up to 2600 μ tall; hyphae branched, septate, light brown becoming paler toward slightly thickened tips, hyphae parallel and tightly packed except at apices of synnemata where ends become free, hyphae verrucose, 2-3 μ in diameter; spore-producing area elongate with spores produced almost the entire length of synnemata, with spore-bearing hyphal tips along sides of synnemata bent outward and occasionally slightly recurved; conidia continuous, guttulate, fusiform to falcate, hyaline, 12-20 μ \times 1.5-2 μ , produced singly.

Type locality.—Italy.

Distribution.—Italy, Portugal, France, India and United States (Louisiana, Ohio, Tennessee, Illinois, Indiana).

Habitat.—Saprobic on *Pelargonium* sp., *Morus alba*, *Carya* sp., *Platanus* sp., *Platanus occidentalis*, *Robinia pseudoacacia*, *Populus tremuloides*, *Rhus* sp.

Specimens examined: On *Morus alba*, Italy, Sept. 1905, Saccardo, *Mycotheca italica* No. 1742 (BPI) (NY); Ad corticem arboris cujusdam, Portugal, April 1910, C. Torrend, *Fungi selecti exsiccati* No. 199 (BPI) (F) (WIS); On *Carya* sp., Martinsville, Louisiana, A.B. Langlois, *Flora Ludoviciana* Nos. 1130, 1204, 1909, 2324 (BPI); On branches of *Platanus* sp., Preston, Ohio, August 1887, A.P. Morgan, *Ellis and Everhart's North American Fungi* No. 2000 (NY); On deciduous wood and bark, Weakley Co., Tennessee, 7 May 1958, EFM No. 198 (IA); On deciduous wood, Macomb, McDonough Co., Illinois, 16 August 1960, EFM No. 210 (IA); On bark and wood of *Platanus occidentalis*, Montgomery Co., Indiana, 27 August 1961, EFM No. 227 (IA).

2. *Harpographium corynelioides* Cooke and Masee

Harpographium corynelioides Cooke and Masee in *Grevillea* 16:76. 1887; Syll. fung. 10:695. 1892; Cooke, *Austral. Fungi* 384.

Figs. 5-8

Synnemata simple or branched, clustered on a stromatic base, black, cylindrical, clavate, erect, up to 4000 μ tall; hyphae branched, septate, 2.5-4 μ wide, brown becoming paler toward nonthickened tips; hyphae tightly packed throughout length of synnemata; spore-producing area elongate with spores produced almost the entire length of synnemata; conidia continuous, fusiform to falcate, hyaline, guttulate, 7-12 μ long and 2-3 μ wide, produced singly.

Type locality.—Australia.

Distribution.—Australia.

Habitat.—*Leptospermum juniperinum* and *L. scoparium*.

Specimen examined.—On *Leptospermum scoparium*, Mt. Compass, South Australia, August 1921, T.G.B. Osborn and G. Samuel, From Botany Dept., University of Adelaide (BPI).

3. *Harpographium constrictum* sp. nov.

Figs. 9-12

Synnemata erecta, brunnea, simplicia vel ramosa, cylindrica, transversim constricta, in fasciculis constantia, e stromatibus surgentia, usque 2100μ alta; hyphae simplices vel ramosae, parallelae, septatae, verrucosae, brunneae, ramis ultimis pallidioribus attenuatis; conidia hyalina, continua, fusiformia vel falciformia, guttulata, singulariter producta, $10-15\mu$ longa, $1-1.5\mu$ lata.

Typus in ligno emortuo in St. Elizabeth Parish, Jamaica, 31 VII 1957 a A. L. Welden lectus et in herbario Tulane University sub numero 498 positus.

Synnemata erect, brown, simple or branched, cylindrical with transverse constrictions, arising from a stroma, and occurring in compact clusters, up to 2100μ tall; hyphae simple or branched, parallel, septate, verrucose, brown becoming paler toward tips; spore-producing area elongate with spores produced almost the entire length of synnemata; conidia hyaline, continuous, fusiform to falcate, guttulate, produced singly, $10-15\mu$ long and $1-1.5\mu$ wide.

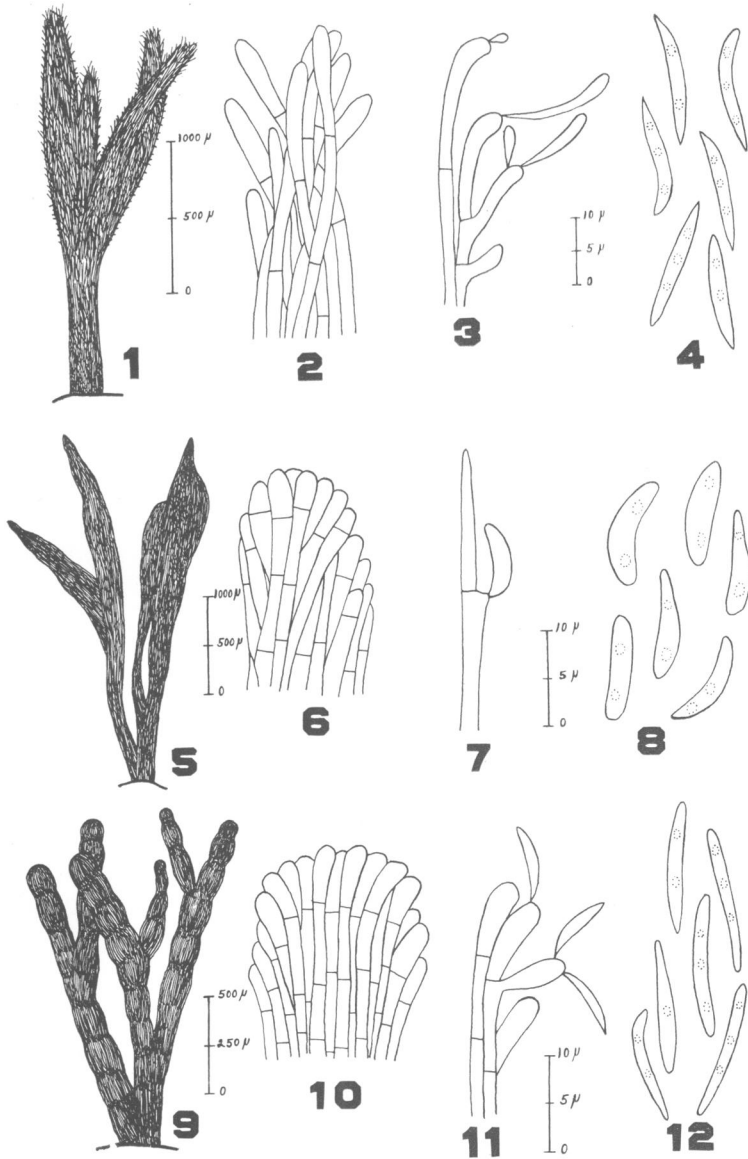
Type specimen.—On dead wood, St. Elizabeth Parish, 31 July 1957, A. L. Welden No. 498, deposited in the Herbarium of Tulane University.

The specific epithet is descriptive of the most striking characteristic of the species. The constrictions in the synnemata along with the closely packed nature of the hyphae very readily separate *H. constrictum* from *H. fasciculatum*.

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Figs. 1-12.—Three species of *Harpoglyphium*. 1-4.—*H. fasciculatum* Sacc.: 1. Habit; 2. Tip of synnema; 3. Spore-bearing hyphae; 4. Conidia. 5-8.—*H. corynelioides* Cooke & Masee: 5. Habit; 6. Tip of synnema; 7. Spore-bearing hypha; 8. Conidia. 9-12.—*H. constrictum* sp.nov.: 9. Habit; 10. Tip of synnema; 11. Spore-bearing hyphae; 12. Conidia.

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