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Miscellaneous notes on some micromycetes (II)*

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Abstract: Braun, U. 2002: Miscellaneous notes on some micromycetes (II). Schlechtendalia **8**: 33-38.
The new species *Passalora heliotropiigena* is described and the new names and new combinations *Erysiphe corylacearum, E. lonicerae-ramosissimae, E. picrasmicola, E. shinii, E. symplocigena, Passalora deightonii, Pseudocercospora clerodendrigena, P. websteri* and *Stenella cinnamomea* are introduced.

Zusammenfassung: Braun, U. 2002: Vermischte Anmerkungen zu einigen Mikromyceten (II). Schlechtendalia **8**: 33-38.
Die neue Art *Passalora heliotropiigena* wird beschrieben und die neuen Namen und Kombinationen *Erysiphe corylacearum, E. lonicerae-ramosissimae, E. picrasmicola, E. shinii, E. symplocigena, Passalora deightonii, Pseudocercospora clerodendrigena, P. websteri* and *Stenella cinnamomea* werden eingeführt.

In this paper, some additions and corrections to the nomenclature of *Erysiphe* emend. Braun & Takamatsu (2000) are published, a new species of *Passalora* Fr. on *Heliotropium eichwaldii* from Pakistan is described and the generic affinities of *Cercoseptoria clerodendri* Pavgi & U.P. Singh, *Eriocercospora websteri* P.Rag. Rao, Manohar. & P. Rama Rao and *Scolecotrichum cinnamomeum* Racib. are discussed.

1. Additions and corrections to the nomenclature of *Erysiphe* emend. (incl. *Microsphaera* and *Uncinula*)

Based on rDNA ITS sequences, new SEM examinations and other morphological data, Braun & Takamatsu (2000) reassessed the whole complex of powdery mildew genera with *Pseudoidium* anamorphs and introduced a new circumscription of the genus *Erysiphe*. *Erysiphe* emend. comprises now all genera with *Pseudoidium* anamorphs, i.e., epiphytic mycelium, lobed appressoria and solitary conidia with rugose surface. The genera *Bulbomicrosphaera* A.Q. Wang, *Bulbouncinula* R.Y. Zheng & G.Q. Chen, *Furcouncinula* Z.X. Chen, *Medusosphaera* Golovin & Gamalizk., *Microsphaera* Lév., *Setoerysiphe* Y. Nomura, *Uncinula* Lév. and *Uncinuliella* R.Y. Zheng & G.Q. Chen were reduced to synonymy with *Erysiphe* emend. and the species concerned were transferred to the latter genus. However, some corrections are necessary:

Erysiphe corylacearum U. Braun & S. Takam. **nom. nov.**
≡ *Microsphaera hommae* U. Braun, Mycotaxon 15: 124 (1982), non *E. homae* U. Braun, 1981.
≡ *Erysiphe hommae* (U. Braun) U. Braun & S. Takam., Schlechtendalia 4: 9 (2000), non U. Braun, 1981.

Erysiphe lonicerae-ramosissimae (Tanda) U. Braun & S. Takam. **comb. nov.**
≡ *Microsphaera lonicerae-ramosissimae* Tanda, Mycoscience 41: 158 (2000).

Erysiphe picrasmicola U. Braun & S. Takam. **nom. nov.**
≡ *Uncinula picrasmae* Homma, J. Fac. Agric. Hokkaido Imp. Univ. 38: 353 (1937), non *E. picrasmae* (Sawada) U. Braun & S. Takam., 2000.

* Part I in Schlechtendalia **5**: 31-56.

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≡ *Erysiphe picrasmae* (Homma) U. Braun & S. Takam., Schlechtendalia 4: 22 (2000), non (Sawada) U. Braun & S. Takam., 2000.

Erysiphe shinii U. Braun & S. Takam. **nom. nov.**
≡ *Microsphaera thermopsis* ('*thermopsidis*') U. Braun, Mycotaxon 20: 491 (1984), non *Erysiphe thermopsis* R.Y. Zheng & G.Q. Chen, 1981.
≡ *Erysiphe thermopsis* (U. Braun) U. Braun & S. Takam., Schlechtendalia 4: 14 (2000), non R.Y. Zheng & G.Q. Chen, 1981.
[Etym.: H.D. Shin, Korean mycologist and phytopathologist].

Erysiphe symplocigena U. Braun & S. Takam. **nom. nov.**
≡ *Microsphaera symploci* Y.N. Yu & Y.Q. Lai, Acta Microbiol. Sin. 21: 19 (1981), non *Erysiphe symploci* J.N. Kapoor, 1965.
≡ *Erysiphe symplocicola* U. Braun & S. Takam., Schlechtendalia 4: 14 (2000), non R.Y. Zheng & G.Q. Chen, 1981.

2. ***Passalora heliotropiigena*** U. Braun **sp. nov.** Fig. 1

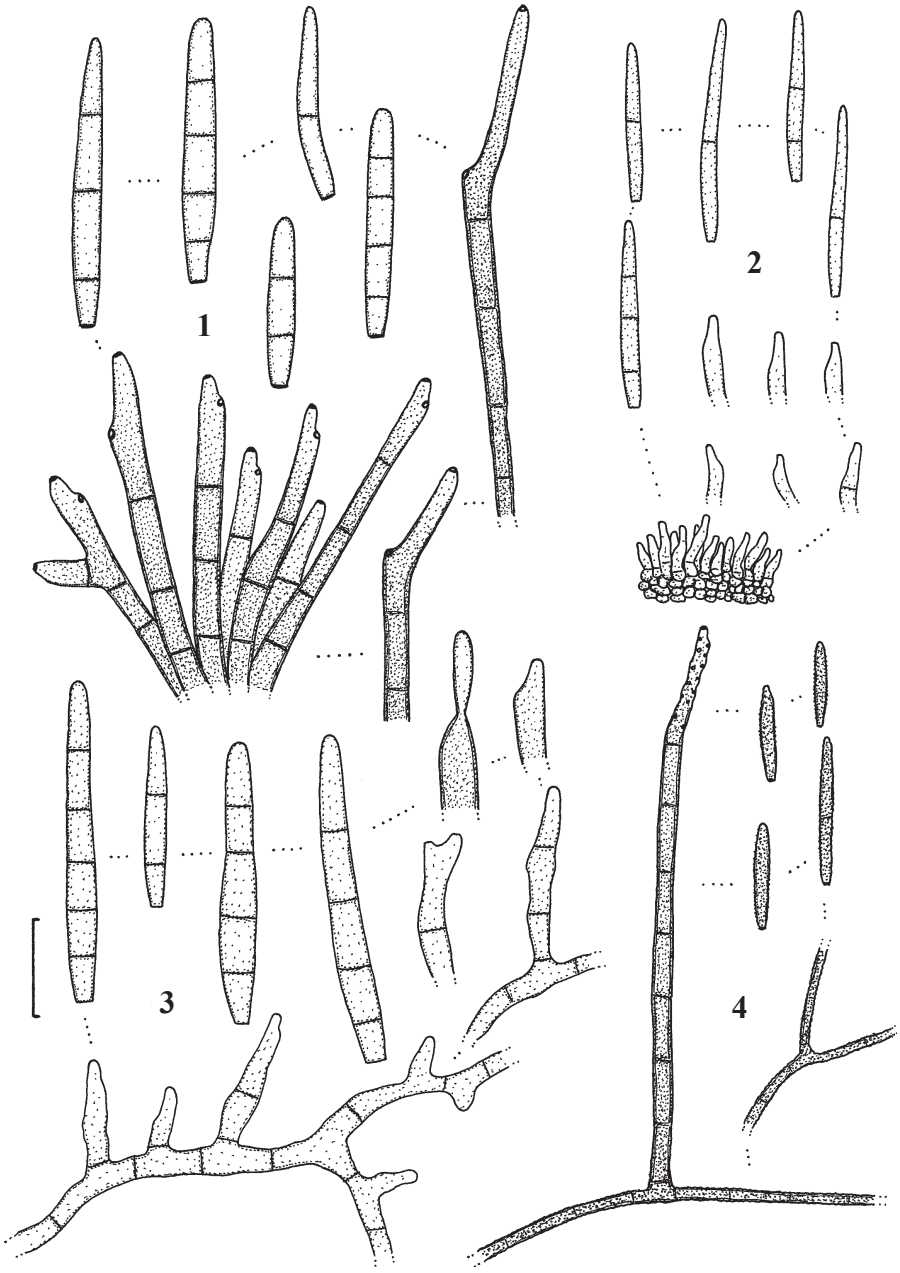
Differt a P. deightonii conidiophoris ad 185 µm longis et pluriseptatis, conidiis solitariis, ad 55 µm longis et 4-8 µm latis.

Holotype: on *Heliotropium eichwaldii* (Boraginaceae), Pakistan, Oderolal Farm, 18 Dec. 1963, A.A. Khan (IMI 104326). Paratype: on *H. eichwaldii*, Pakistan, Tandojam, Campus of the Agricultural Research Institute, 17 Mar. 1962, S. Tahir (IMI 93452).

Leaf spots amphigenous, subcircular to angular-irregular, 1-6 mm diam., at first yellowish-ochraceous, later pale to dark brown, finally greyish brown to dingy grey, margin indefinite or somewhat darker. Caespituli amphigenous, punctiform to dense, brown. Mycelium internal. Stromata lacking or small, substomatal, occasionally intraepidermal, 10-30 µm diam., brown. Conidiophores in small to moderately large fascicles, loose to moderately dense, arising from internal hyphae or stromata, erect, straight, subcylindrical to slightly geniculate-sinuous, unbranched or occasionally branched, 30-185 x 3-8 µm, aseptate to pluriseptate throughout, pale brown or olivaceous-brown, paler towards the apex, wall thin to slightly thickened, smooth; conidiogenous cells integrated, terminal, 10-25 µm long; conidiogenous loci conspicuous, somewhat thickened and darkened, 3-4 µm diam. Conidia solitary, broadly cylindrical, occasionally obclavate-cylindrical, rarely subclavate, 15-55 x 4-8 µm, 1-5(-8)-septate, at first hyaline, later pale greenish or very pale olivaceous to olivaceous-brown, smooth, apex rounded, base obconically truncate, 2.5-4 µm wide, hila slightly thickened and darkened.

Khan & Kamal (1969) described and illustrated this fungus as '*Cercospora taurica*'. Pons & Sutton (1996) published a monographic treatment of cercosporoid hyphomycetes on *Heliotropium* spp., but the fungus on *Heliotropium eichwaldii* was not included. *P. heliotropiigena* is quite distinct from *C. taurica* by having shorter and wider cylindrical conidia which turn pale olivaceous or olivaceous-brown with age, and wider conidiogenous loci (3-4 µm). Type material of *C. taurica* has been examined (on *Heliotropium europaeum*, Ukraine, Crimea, Tshorgun, 1902, W. Tranzschel, LE 40444). This material is rather

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Figs 1-4: Conidiophore fascicles, conidiophores, conidia, superficial hyphae, 1 – *Passalora heliotropiigena*, 2 – *Pseudocercospora clerodendrigena*, 3 – *P. websteri*, 4 – *Stenella cinnamomea*; scale = 20 µm; U. Braun del.

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poorly developed and not quite mature. A new collection from France (on *H. europaeum*, l´Ile d´Oléron, 2000, P. Pellicier, HAL) is well-developed, mature and characterised as follows: Conidiophores 10-120 x 5-9 µm, 0-3-septate; conidiogenous loci 2-3 µm diam.; conidia obclavate-cylindrical, 40-110 x (2.5-)4-6(-7) µm, (0-)2-10-septate, hyaline, bases obconically truncate.

P. heliotropiigena is closely allied to ***Passalora deightonii*** (N. Pons & B. Sutton) U. Braun & Crous **comb. nov.** (Bas.: *Cercosporidium deightonii* N. Pons & B. Sutton, Mycol. Res. 100(7): 818, 1996; material examined: on *Heliotropium villosum*, Cyprus, Larnaca, Aug. 1939, Nattrass, IMI 7784), but the latter species differs in having shorter conidiophores (15-50 µm), continuous or sparingly septate, and longer, narrower conidia (20-100 x 3-5 µm), formed singly or in short chains. Based on catenate conidia, this species is *Phaeoramularia*-like, but *Phaeoramularia* as well as *Cercosporidium* have been reduced to synonym with *Passalora* (Crous et al. 2002).

3. ***Pseudocercospora clerodendrigena*** U. Braun **nom. nov.** Fig. 2

Bas.: *Cercoseptoria clerodendri* Pavgi & U.P. Singh, Mycopathol. Mycol. Appl. 30(3-4): 267 (1966), non *Pseudocercospora clerodendri* (Miyake) Deighton, 1976.

Material examined: on *Clerodendron siphonanthus*, India, U.P., Varanasi, 6 Jan. 1962, M.S. Pavgi (IMI 111857), holotype of *Cercoseptoria clerodendri*.

Leaf spots amphigenous, subcircular to angular-irregular, 4-10 mm diam., grey, margin reddish brown. Caespituli amphigenous, punctiform, brown. Mycelium internal. Stromata well-developed, intraepidermal to substomatal, 20-75 µm diam., brown, often somewhat erumpent. Conidiophores numerous, in dense sporodochial conidiomata, arising from stromata, erect, straight, subcylindrical-conical, occasionally slightly geniculate-sinuous, unbranched, 5-15(-20) x 2-4.5 µm, 0-1-septate, subhyaline to pale olivaceous, smooth; conidiophores usually reduced to conidiogenous cells; conidiogenous loci inconspicuous. Conidia solitary, cylindrical, cylindrical-obclavate, fusiform, 10-35 x (1.5-)2-2.5 µm, 0-2-septate, subhyaline, smooth, apex subacute or subobtuse, base truncate to obconically truncate, 1-2 µm wide, hila unthickened, not darkened.

This species is a typical member of *Pseudocercospora* sect. *Cercoseptoria* (Petr.) U. Braun (Braun 1998). *Pseudocercospora clerodendri* (Miyake) Deighton (Deighton 1976) differs from *P. clerodendrigena* in having superfical hyphae with solitary conidiophores and longer, pluriseptate conidia, 20-110 x 3-4 µm. Sporodochial conidiomata are lacking.

4. ***Pseudocercospora websteri*** (P.Rag. Rao, Manohar. & P. Rama Rao) U. Braun **comb. nov.** Fig. 3

Bas.: *Eriocercospora websteri* P.Rag. Rao, Manohar. & P. Rama Rao, Curr. Sci. 51(24): 1155 (1982).

Material examined: on *Kydia* sp., India, A.P., Vikarabad, [Anawagiri], 24 Jan. 1969 [comm. Mar. 1969], C. Manoharachary (IMI 138952), holotype of *E. websteri*.

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Leaf spots lacking. Colonies hypophyllous, forming irregular, velutinous, dark brown patches. Primary mycelium internal; secondary mycelium external; hyphae superficial, creeping, branched, 2-6 µm wide, septate, pale to medium olivaceous or olivaceous-brown, smooth. Conidiophores solitary, arising from superficial hyphae, lateral or terminal, erect, straight, subcylindrical to somewhat flexuous, geniculate-sinuous, unbranched or branched, 10-120 x 3-5 µm, continuous to pluriseptate, pale olivaceous to olivaceous-brown or yellowish brown, smooth; conidiogenous cells integrated, lateral or terminal or conidiophores reduced to conidiogenous cells; conidiogenous loci inconspicuous, unthickened, not darkened or only somewhat refractive. Conidia solitary, obclavate-cylindrical, 15-90 x 4-8 µm, 1-15-septate, at first pale, later dark olivaceous, smooth, occasionally with oil drops, apex rounded, base obconically truncate, 1.5-3 µm wide, hila unthickened, not darkened.

E. websteri is a typical *Pseudocercospora* Speg. with inconspicuous conidiogenous loci and conidia with unthickened, not darkened hila. *Eriocercospora* Deighton (Deighton 1969) was introduced for the hyperparasitic species *E. balladynae* (Hansf.) Deighton. Rao et al. (1982) emended the generic circumscription of *Eriocercospora* to include plant pathogenic species. The examination of type material of *E. balladynae* (on *Balladynopsis entebbeensis,* on *Grumilea succulenta*, Uganda, Entebbe Rd., XI. 1943, C.G. Hansford 3264, IMI) showed that the conidiogenous loci are intermediate between *Passalora* and *Pseudocercospora,* i.e., inconspicuous to subconspicuous, unthickened, but slightly darkened-refractive. Taxa with conidiogenous loci belonging to this type are now included in *Pseudocercospora* (Crous et al. 2002), but *Eriocercospora* is tentatively maintained as a separate genus. Molecular examinations are necessary to find the true affinity of this genus.

5. ***Stenella cinnamomea*** (Racib.) U. Braun **comb. nov.** Fig. 4

Bas.: *Scolecotrichum cinnamomeum* Racib., Parasitische Pilze und Algen Javas: 40, Batavia 1900.
≡ *Cladosporium cinnamomeum* (Racib.) Höhn., in Kabát & Bubák, Fungi imperfecti exsiccati, Fasc. XIII, No. 643, Turnau et Tabor 1910.
= *Stenella cinnamomi* Hosag. & U. Braun, Indian Phytopathol. 48: 261 (1995).

Material examined: On *Cinnamomum* sp., Indonesia, Java, Buitenzorg, Tjenkumeh, 1908, F. v. Höhnel, Kabát & Bubák, Fungi imp. exs. 643 (PC). On *Cinnamomum sulphureum*, India, T.N., Coimbatore, Anamalai, Karian Shola, 14 Mar. 1994, V.B. Hosagoudar (HAL), type of *Stenella cinnamomi*.

Scolecotrichum cinnamomeum and *Stenella cinnamomi* are conspecific. The material from Java agrees very well with type material of *S. cinnamomi* (superficial mycelium verruculose; conidiophores solitary, arising from superficial hyphae, erect, 50-100 x 2.5-4 µm, pluriseptate throughout, wall somewhat thickened, medium to dark medium brown, smooth; conidiogenous cells integrated, terminal, 10-30 µm long, paler, geniculate-sinuous, with numerous minute but conspicuous conidiogenous loci; conidia solitary, ellipsoid-ovoid, subcylindrical, 7-25 x 2-2.5 µm, 0-1-septate, subhyaline to very pale olivaceous, verruculose).

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