

ON *ARTHROBOTRYUM COONOORENSE*

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Arthrobotryum coonoorens was described by Subramanian (1955) as follows: "The colonies are amphigenous and deep black in colour. The coremia vary in length from 630–1,120 μ . The coremial stalks are brownish black to deep black, arising singly or in small clusters of 2–5, somewhat swollen at the base where they are 60–170 μ thick, cylindrical in the middle, composed of septate, dark brown fungal hyphae 3–5 μ broad, expanded at the tip into a fan-shaped portion composed of the free ends of numerous conidiophores. The stalks are 21–56 μ broad in the middle and 42–63 μ broad and paler in colour immediately below the fan-shaped crown. The fan-shaped crown of conidiophores is pale to dark brown in colour and 210–550 \times 56–700 μ . The conidiophores (free ends) are brownish below, paler above, unbranched, cylindrical, up to 20-septate, up to 500 μ long, 5.0–8.5 μ broad. The conidia are produced singly and acrogenously at the tips of the conidiophores. They are spindle-shaped to obclavate, with smooth, thick, often wavy walls, constricted at some of the septa, golden-brown in transmitted light, with up to eight transverse septa, flat-based, with rounded blunt tip, 30–85 \times 9.4–13.6 μ , and 5.1–8.5 μ broad at the point of attachment to the conidiophore. The conidiophore may proliferate through the scar of the fallen conidium."

The type species of the genus *Arthrobotryum* Ces. (*A. stilboideum* Ces.) was studied by Hughes (1951) who indicated that the sporogenous cells of this fungus bore annellations. Later he (Hughes, 1953) confirmed this and, from a study of a pure culture of this fungus, concluded that the spores formed a black slimy mass. *Arthrobotryum coonoorens* has been re-examined and, as indicated in the original description, the conidiophore proliferates through areas of disjunction of spores. The conidia are apparently formed in the same way as in *Annellophora* Hughes, a significant feature of which is the repeated proliferation of the conidiophores through areas of disjunction of spores and formation of spores at successively higher levels (Ellis, 1958). In *Arthrobotryum coonoorens* the conidiophores are therefore in a sense annellophores, although morphologically distinct sporogenous cells characteristic of *A. stilboideum* are not seen. Apart from this distinction, the spores in *A. coonoorens* are dry and not slimy as in *A. stilboideum*. *A. coonoorens*,

moreover, is a foliicolous parasite on living leaves. For these reasons, it is sufficiently distinct from *A. stilboideum* to merit disposition in a separate genus:

Anellophragmia SUBRAMANIAN GEN. NOV.

Pertinet ad Fungos Imperfectos, ad Hyphomycetes Phaeophragmeas.

Synnemata constantia a hyphis simplicibus, fuscis, septatis, evadentibus liberis ad apicem distantem. Conidiophora (*i.e.*, apices liberi hypharum in synnemate) simplicia, septata, proliferantia atque successive producentia conidia ad partes superiores. Conidia acrogena, solitaria, fusca, sicca, septis transversis nonnullis.

Species typica: **Anellophragmia coonoorensis** (Subram.) Subram. comb. nov. Huius speciei nomen basicum *Arthrobotryum coonoorensis* Subram. in *Proc. Indian Acad. Sci.*, 1955, **42 B**, 285, Fig. 1. Typus lectus in foliis viventibus *Thysanolaenae maximae*, in Horto Sim's dicto, ad Coonoor in montibus Nilagiricis in ditone Madras a T.S.S. and C.V.S. et positus in herbario M.U.B.L. sub numero 984.

Fungus imperfectus, Hyphomycete, phaeophragmae.

Synnemata composed of simple, dark-coloured, septate hyphae becoming free distally. Conidiophores (free ends of hyphae of synnema) simple, septate, proliferating and producing conidia successively at higher levels. Conidia acrogenous, solitary, dark-coloured, dry, with several transverse septa.

Type species: *Anellophragmia coonoorensis* (Subram.) Subram. comb. nov.

- ≡ *Arthrobotryum coonoorensis* Subram., 1955 (issued January 1956), *Proc. Indian Acad. Sci.*, **42 B**, 285, Fig.
- = *Arthrobotryum velutinum* Butler in Chona and Munjal, 1955 (issued May, 1956), *Indian Phytopath.*, **8**, 194.
- = *Podosporium thysanolaenae* Kandaswamy and Sundaram, 1956, *Indian Phytopath.*, **9**, 76.

SUMMARY

Arthrobotryum coonoorensis Subram. is considered to possess features warranting disposition in a separate genus. It is not congeneric with *A. stilboideum* Ces., the type species of the genus since the former produces dry phragmospores from conidiophores capable of repeated proliferation

through areas of disjunction of spores and successive production of spores at progressively higher levels; in the latter the phragmospores are slimy and are produced from typical annellophores which are in the form of distinct sporogenous cells. Accordingly, *Arthrobotryum coonoorensis* is made the type of a new genus *Annellophragmia* and disposed as *A. coonoorensis* (Subram.) Subram.

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REFERENCES

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