

***Achroomyces lumbricifer*: a new auricularioid *Hyphodontia* parasite from Scotland**

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Roberts, P. (2001). *Achroomyces lumbricifer*: a new auricularioid *Hyphodontia* parasite from Scotland. – *Sydowia* 53(1): 152–155.

Achroomyces lumbricifer, a new auricularioid parasite of *Hyphodontia subalutacea*, is described from Scotland.

Keywords: *Achroomyces*, *Hyphodontia*, mycoparasite.

A Scottish collection of the corticioid fungus, *Hyphodontia subalutacea* (P. Karst.) J. Erikss., was found to contain an intrahymenial parasite with distinctive, coiled, auricularioid basidia and lageniform conidiophores which is described as follows:

***Achroomyces lumbricifer* P. Roberts, sp. nov. – Fig. 1.**

Basidiomata nulla, in hymeniis corticiorum parasitica. Hyphae 1.5–2.5 µm latae, fibulatae. Conidiophora lageniformia, 25–30 × 3–4 µm. Conidia cylindracea, 8.5–11 × 3.5–4.5 µm. Basidia cylindracea, in spiram contorta, ter transeptata, 40–50 × 5 µm. Basidiosporae ellipsoideae vel oblongae, 7.5–10 × 4.5–7 µm.

Holotype. – SCOTLAND: Kirkeudbrightshire, Glen Trool, Stroan House, in hymenium of *Hyphodontia subalutacea*, on fallen *Betula* trunk, 16 Sep. 1993, A. Leonard, K(M) 33234.

Basidiomes parasitic in host hymenium; not separately visible to the naked eye. – Hyphae hyaline, 1.5–2.5 µm wide, with clamp-connections. – Haustorial cells none seen. – Hyphidia absent.

Conidiophores narrowly lageniform (somewhat inflated towards base), 25–30 × 3–4 µm, apex acute, arising singly or in small clusters from clamp-connections, intermixed with basidia. – Conidia arising from conidiophore apex, cylindrical, elongated ovoid (Q = 1.8–2.4), 8.5–11 × 3.5–4.5 µm. – Cystidia absent. – Basidia auricularioid, ca 40–50 × 5 µm, 3-septate, becoming strongly recurved and +/- helicoid at maturity, arising singly or in

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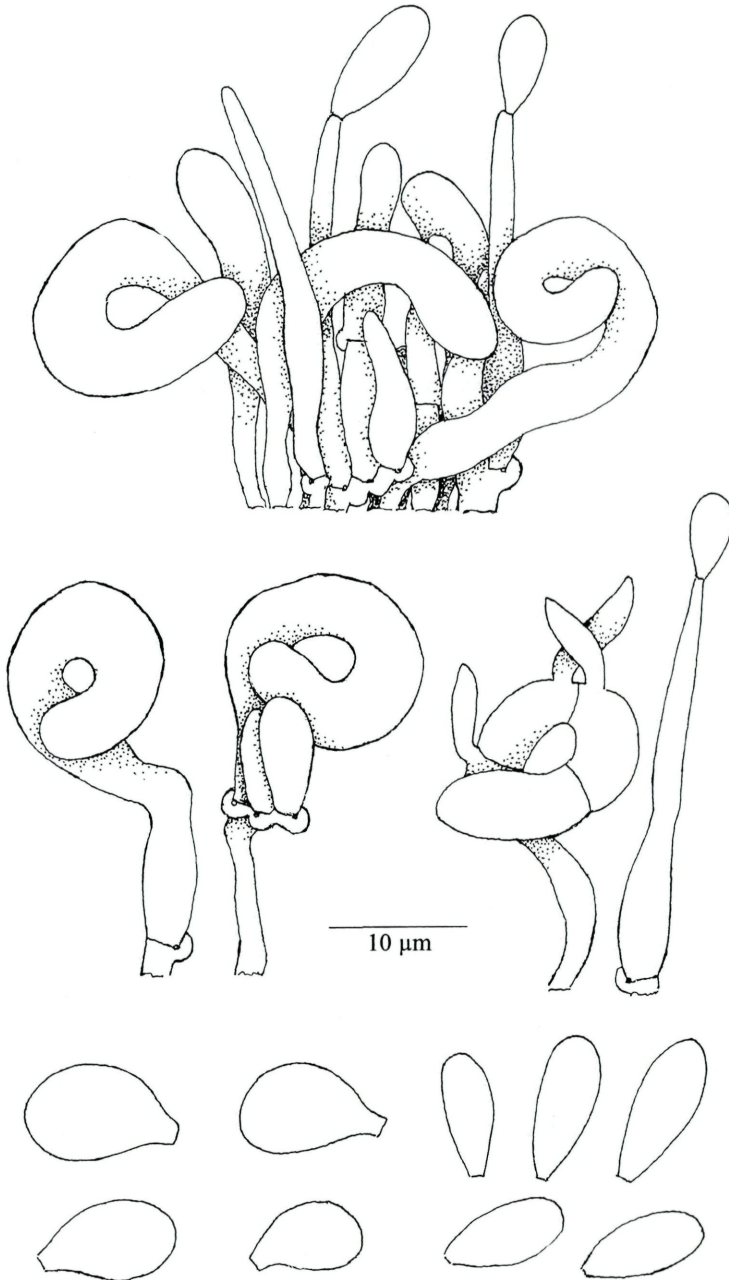


Fig. 1. - *Achroomyces lumbricifer*. - Section of hymenium, showing intermixed conidiophores and coiled basidia; coiled basidia and conidiophore; basidiospores and conidiospores.

small clusters; probasidia absent. – Basidiospores ellipsoid to oblong ($Q = 1.4\text{--}1.7$), $7.5\text{--}10 \times 4.5\text{--}7 \mu\text{m}$, with wide apiculus, some producing secondary spores, germination not seen.

Etymology. – from the Latin *lumbricus* + suffix *-fer* = ‘worm-bearing’, with reference to the coiled, worm-like basidia.

Achroomyces lumbricifer is distinguished by its markedly coiled basidia, narrowly lageniform conidiophores, and elongated ovoid conidia. Eriksson & Ryvar den (1976) described and illustrated similar conidiophores and conidia from the hymenia of some (but not all) specimens of *Hyphodontia alutacea* (Fr.) J. Eriksson and from the hymenium of a single specimen of *Hyphodontia floccosa* (Bourdot & Galzin) J. Eriksson. The authors attributed these conidiophores to the *Hyphodontia* species, but no such structures were reported in the world monograph of *Hyphodontia* by Langer (1994), nor were they found in cultures of *H. alutacea* (Boidin, 1958; Nakasone, 1990). It seems probable, therefore, that the conidiophores and conidia illustrated in Eriksson & Ryvar den (1976) belong to an intrahymenial *Achroomyces* species and not to the host.

Haustorial cells (as found in species of *Occultifur* Oberw., *Spiculogloea* P. Roberts, and *Zygogloea* P. Roberts) may be present in *Achroomyces lumbricifer*, but were not seen. The species is presumed to be parasitic, in common with other intrahymenial auricularioid species, but how it interacts with its host is unclear.

Several other auricularioid species are known to occur as hymenial parasites of *Hyphodontia* J. Eriksson, namely *Achroomyces lunaticonidiatus* Van de Put, reported in *Hyphodontia sambuci* (Pers.) J. Eriksson from Belgium (Van de Put, 2000); *Achroomyces robertsii* Trichies, reported in *Hyphodontia nespori* (Bres.) J. Eriksson & Hjortstam from France (Trichies, 1997a); and *Spiculogloea occulta* P. Roberts, reported in *Hyphodontia sambuci* from Belgium (Van de Put, 1998), England (Roberts, 1997), France (Trichies, 1997b), and Germany (Langer & Oberwinkler, 1998). None of these have the coiled basidia and conidiophores of *Achroomyces lumbricifer*.

Achroomyces Bonord. contains a mixture of mycoparasitic auricularioid species not assigned elsewhere. As such, it is the appropriate genus for this new Scottish species, pending further research into its septal pore ultrastructure and interaction with its host.

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(Manuscript accepted 22nd October 2000)

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Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Sydowia](#)

Jahr/Year: 2001

Band/Volume: [53](#)

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Artikel/Article: [Achroomyces lumbricifer: a new auricularioid Hyphodontia parasite from Scotland. 152-155](#)