

**GUEPINIOPSIS ORESBIA,
A NEW WOOD DESTROYING BASIDIOMYCETE**

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ABSTRACT

A new dacrymycetaceous fungus is described and illustrated based on specimens found growing on *Schima*, *Vaccinium*, *Casuarina* and other decayed wood in mountain areas in Java.

ABSTRAK

Suatu jenis baru jamur perusak kayu yang tergolong suku Dacrymycetaceae dipertelakan dan digambar berdasarkan spesimen yang ditemukan tumbuh pada kayu *Schima*, *Vaccinium*, *Casuarina* dan lain-lain di beberapa daerah pegunungan di Jawa.

In the course of a survey on Indonesian dacrymycetaceous fungi (Rangkuti 1975) an apparently undescribed species was discovered colonizing decayed wood of several tree species growing at higher altitudes. This species is pezizoid and has more or less obconical fruitbodies with undulating discoid top lined by a layer of hymenium consisting of bifurcate metabasidia and slender dikaryophyses. The sterile surface of the fruitbody is covered by a palisade of cortical hairs the cells of which are catenulate and provided with refractive, gelatinized and thick walls. No clamp connection has been observed in any part of the fruitbody, and its basidiospores are ultimately transversely 3—7 septate.

Macroscopically this new species is very similar to *Calocera guepinia* Holterm. as illustrated by Holtermann (1898). Hennings (1900) considered the latter to be identical with *Guepinia merulina* (Pers.) Quel., a species now commonly treated as a synonym of *Guepiniopsis buccina* (Pers. ex Fr.) L. Kennedy which in turn has been accepted as the

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effective type species of the genus *Guepiniopsis* Pat. In describing *Calocera guepinia*, however, Holtermann (1898) emphatically stated that it had one septate basidiospores. Although Hennings's contention might be correct, but because of the unreliability of most of Holtermann's observations (Boedijn 1935) and the fact that *Calocera guepinia* was never rediscovered again, it is suspected that in all probability the new species is identical with it. In the absence of any authenticated specimen of *Calocera guepinia* it would be advisable to regard the two as distinct taxa.

In view of the difficulty in separating *Guepiniopsis* from *Heterotextus* Lloyd and *Dacrymyces* Nees ex Fr. it is worthwhile to discuss the justification for classifying the new species in *Guepiniopsis*. It seems that the catenulate hairs and the absence of clamp connection place this species near *Guepiniopsis buccina*; the two species can be separated from each other mainly by the difference in the number of their basidiospore septation. Therefore the species to be described below will not only fall within the scope of *Guepiniopsis* (inclusive of *Heterotextus*) as commonly accepted by modern authors (Kobayashi 1939, Martin 1952, Kennedy 1959, Reid 1974) but it will also fit in the narrower generic limits adopted by Donk (1964) and MacNabb (1965a, 1965b).

Guepiniopsis oresbia Rangkuti & Rifai, *spec. nov.* — Fig. 1

Fructificationes subpileatae, pezizoideae, gregariae vel caespitosae, in vivo luteae vel aurantiacae et gelatinosae, ex hyphis gelatinosis, septatis, efibulatis compositae. Cortice cum crassoparietibus, simplicibus vel ramosis pilis tecto. Probasidia 32–55 x 4–6.5 μ m, cylindrice clavata dein bifurcata. Basidiosporae suballantoideae, hyalinae, 3–7 septatae, 12.5–22 X 4.5–8 μ m, germinatione per conidia vel per tubulos germinantes.

TYPUS: *D. Rangkuti* 402 (BO).

Fruitbodies gregarious to caespitose, rarely scattered, when fresh appearing yellow, orange yellow to orange with firm gelatinous consistency, becoming orange brown and horny when dried. They are often more or less pileate or pezizoid and sometimes much contracted below and rooted into the substrate. The sterile lower part subcylindrical to almost obconical, gently expanded above and occasionally laterally compressed, longitudinally irregularly grooved, in general short and stout, measuring up to 15 mm high by 9 mm wide. The fertile upper part often slightly darker coloured than the lower part, discoid with undulating surface and wavy margin, becoming distinctly but shallowly cupulate when dried, up to 12 mm wide. Except for the cortical and hymenial

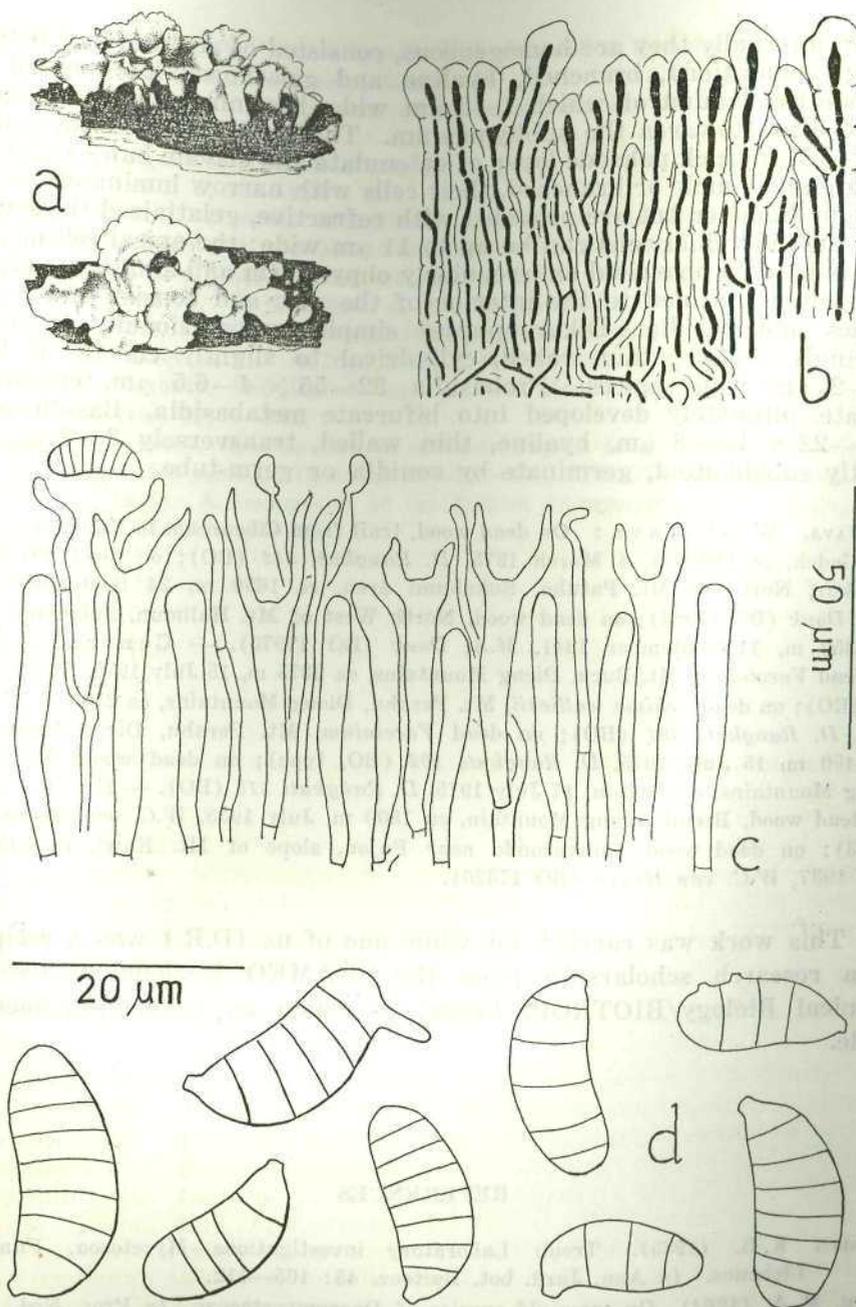


Fig. 1. *Guepiniopsis oresbia* — a, habit sketch, side and top view; b, cortical layer; c, hymenial layer; d, basidiospores (b and c to same scale; a from *D. Rangkuti* 415, b—d from type).

layers internally they are homogeneous, consisted of septate (but without clamp connection), branched, hyaline and gelatinized long cylindrical hyphae the lumina of which 1—2 μ m wide, becoming slightly wider to about 3 μ m towards the subhymenium. The sterile part is covered by a 50—75 μ m thick palisade layer of catenulate and clavate hairs' which are septate and simple or branched, their cells with narrow lumina of only up to 5 μ m diameter but are provided with refractive, gelatinized thick walls that the individual cells can be up to 11 μ m wide; the apical cell of each hair is broadly obovoidal or irregularly obpyriform and almost mamillate. Hymenium confined to the interior of the disc and consist of dikaryophyses and basidia. Dikaryophyses simple or occasionally branched, sparingly septate, thin walled, cylindrical to slightly clavate at their 15—2 μ m wide apices. Probasidia 32—55 x 4—6.5 μ m, cylindrical clavate, ultimately developed into bifurcate metabasidia. Basidiospores 12.5—22 X 4.5—8 μ m, hyaline, thin walled, transversely 3—7 septate, mostly suballantoid, germinate by conidia or germ-tube.

JAVA. West Java: On dead wood, trail from Cibereum to Kandang Badak, Mt. Gedeh, ca 2000 m, 4 March 1975, *D. Rangkuti* 34-3 (BO); on dead wood, Mt. Tekukur, North of Mt. Patuha, Sukabumi area, ca 1650 m, 24 September 1941, *M.A. Donk* (BO 17964); on dead wood, North West of Mt. Halimun, Sukabumi area, ca 1350 m, 11 September 1941, *M.A. Donk* (BO 17970). — Central Java: On dead *Vaccinium*, Mt. Bueu, Dieng Mountains, ca 2375 m, 15 July 1975, *D. Rangkuti* 393 (BO); on dead *Schima wallichii*, Mt. Perahu, Dieng Mountains, ca 2500 m, 15 July 1975, *D. Rangkuti* 397 (BO); on dead *Vaccinium*, Mt. Perahu, Dieng Mountains, ca 2450 m, 15 July 1975, *D. Rangkuti* 402 (BO, type); on dead wood, Mt. Bucu, Dieng Mountains, ca 2400 m, 17 July 1975, *D. Rangkuti* 415 (BO). — East Java: On dead wood, Bremi, Iyang Mountain, ca 1500 m, July 1935, *W.C. van Heurn* (BO 15153); on dead wood, Cubanrondo near Pujon, slope of Mt. Kawi, ca 1450 m, July 1937, *W.C. van Heurn* (B6 17320).

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REFERENCES

- BOEDIJN K. B. (1935). Treub Laboratory investigations —Mycetozoa, Fungi & Lichenes. *In Ann. Jard. bot. Buitenz.* 45: 105—112.
 DONK, M.A. (1964). On some old species of Dacrymycetaceae. *In Proc. Ned. Akad. Wet.* C 67(2): 1—18.
 HENNINGS, P. (1900). Fungi II, *In O. WARBURG, Monsunia* 1: 137—174.

- HOLTERMANN, C. (1898). *Mykologische Untersuchungen aus den Tropen*. Verlag von Gebrüder Borntraeger, Berlin.
 KENNEDY, L. L. (1959). The genera of Dacrymycetaceae. *In Mycologia* 50(1958): 874—895.
 KOBAYASHI, Y. (1939). On the *Dacrymyces* group. *In Sci. Rep. Tokyo Bunrika Daigaku* B 4: 105—128.
 MACNABB, R. F. R. (1965a). Taxonomic studies in the Dacrymycetaceae. IV. *Guepiniopsis* Pat. *In New Zeal. J. Bot.* 3: 159—169.
 MACNABB, R. F. R. (1965b). Taxonomic studies in the Dacrymycetaceae. V. *Heterotextus* Lloyd. *In New Zeal. J. Bot.* 3: 215—222.
 MACNABB, R. F. R. (1975). Taxonomic studies in the Dacrymycetaceae. VIII. *Dacrymyces* Nees ex Fr. *In New Zeal. J. Bot.* 11: 461—524.
 MARTIN, G. W. (1952). Revision of North Central Tremellales. *In Univ. Iowa Stud. Nat. Hist.* 19: 1—122.
 RANGKUTI, D. (1975). *Investigation on wood-destroying fungi Dacryopinax, Calocera and related genera*. Technical Report — Doc. TFRS/75/181, BIOTROP, Bogor.
 REID, D. A. (1975). A monograph of the British Dacrymycetales. *In Trans. Brit. mycol. Soc.* 62: 433—494.