

## Some new or interesting sequestrate Basidiomycota from African woodlands

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Five new or interesting sequestrate Basidiomycotina from the Zambezian miombo woodlands of central Africa are described or reported: *Aroramyces* Castellano & Verbeken gen. nov., *Aroramyces radiatus* (Lloyd) Castellano, Verbeken & Walleyyn comb. nov., *Corditubera bovonei*, *Mackintoshia persica*, *Mycoamaranthus congolensis* (Dissing & Lange) Castellano & Walleyyn comb. nov., and *Octaviania ivoryana* Castellano, Verbeken & Thoen sp. nov. In addition, *Aroramyces gelatinosporus* (Cribb) Castellano comb. nov., from tropical North Queensland, Australia, is presented.

Keywords: ectomycorrhizal hypogeous fungi, miombo woodland, taxonomy, tropical Africa

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### Introduction

Few sequestrate Basidiomycotina have been reported from Africa south of the Sahara. Most reports concern descriptions of new taxa based on a single collection. Castellano and Trappe (1990) list 21 species and varieties from various countries in sub-Saharan Africa. Sequestrate fungi are more difficult to discover than classical mushrooms, for their habit is to fruit beneath litter, duff or the soil surface. The relative paucity of collecting of sequestrate fungi on the African continent makes it likely that many more species remain undiscovered.

Many sequestrate fungi belong to fungal families within which a majority of the species are thought to form ectomycorrhiza with host plants.

Africa traditionally was thought to be low in diversity of ectomycorrhizal host plants. Meanwhile, through 1992, 51 African plant species in 19 genera have been confirmed as forming ectomycorrhiza (Thoen, 1993). These species belong to the plant families Leguminosae (Caesalpinioideae and Papilionoideae), Euphorbiaceae, Dipterocarpaceae, and Proteaceae. Large vegetation zones, such as the Zambezian and Sudanian woodlands, and parts of the Guineo-Congolian rainforest, are dominated by these ectomycorrhizal trees.

During a collecting trip in drier Zambezian miombo woodland in Zimbabwe, Walleyyn and Verbeken found several sequestrate fungi, which

appeared not uncommon, especially under *Brachystegia spiciformis* Benth. These collections are studied here together with a few isolated collections from African woodland, sent over the last 15 years to the senior author for identification.

As we honor the contributions of Marja Härkönen, who published several papers on the mushroom flora of Tanzania, it is timely to present a number of species of tropical African sequestrate fungi that we feel can be confidently placed in the mycological scheme of things.

#### Materials and methods

Methods of collection and macroscopic and microscopic study were generally those of Castellano et al. (1989). Herbarium names are abbreviated according to Holmgren et al. (1990). Colors of fresh specimens are in general terms. Hand-cut sections of both fresh and dried material were mounted in 5% KOH or Melzer's reagent for standard light microscopy. Spore dimensions are based on the measurement of 30 randomly selected spores mounted in KOH; spore lengths include sterigmatal attachment. Measurements of sterile tissues (e.g., peridium) and spores are from mature sporocarps. Names of vegetation types follow White (1983).

#### Taxonomic treatment

*Aroramyces* Castellano & Verbeken, gen. nov.  
= *Radiogaster* Lloyd (as McGinty), Mycol. Writings 7, Mycol. Notes 73: 1304. 1925 (invalid, nom. prov., Art. 34.1 a & b).

*Basidiomata subglobose ad irregularia; superficies tomentosa. Gleba ex rubro brunnea, loculis irregularibus. Rhizomorphae singulae vel numerosae, concolorae. Columella gelatinosa, distincta. Peridium usque ad stratis tribus, ex hyphis intermixtis, fibulatis. Trama ex hyphis hyalinis vel leviter refractivis, compacte et irregulare intermixtis, infibulatis, in matrico gelatinoso. Basidia hyalina, parieto tenui, bispora vel tetraspora. Sporae symmetricae, inamyloideae, nondextrinoideae, spinis in utriculo saccato inflato inclusis ornatae. Typus: Aroramyces gelatinosporus (Cribb) Castellano.*

Type: *Aroramyces gelatinosporus* (Cribb) Castellano.

*Basidiomata* subglobose to irregular, surface tomentose, numerous soil particles adhering to all sides. *Gleba* some shade of red to brown; locules irregular, empty or partially filled. *Rhizomorphs* single or numerous, concolorous with peridium. *Columella* gelatinous, distinct. *Peridium* up to three layers, clamp connections

present on interwoven hyphae. *Trama* of hyaline to slightly refractive, densely compacted, unorganized hyphae in a gelatinized matrix, clamp connections absent. *Basidia* hyaline, thin-walled, 2–4-spored. *Spores* ornamented with spines embedded within a nearly uniformly inflated utricle, symmetrical, utricle distinct, saccate, inflated, attached only at base, in KOH some shade of brown singly, nondextrinoid, inamyloid. *Etymology*: named for David Arora of Santa Cruz, California, accomplished mycologist and collector of numerous fungi in the miombo woodlands of central Africa.

*Aroramyces radiatus* (Lloyd) Castellano, Verbeken & Walley, comb. nov. – Figs. 1, 5, 9

= *Hymenogaster radiatus* Lloyd, Mycol. Writings 7, Mycol. Notes 73: 1304. 1925.

= *Gymnoglossum radiatum* (Lloyd) Bottomley, Bothalia 4: 499. 1948.

= *Dendrogaster radiatus* (Lloyd) Zeller & Dodge, Ann. Missouri Bot. Gard. 21: 688. 1934.

*Basidiomata* up to 2.5 (–3.3) cm in diam, subglobose to irregular, when fresh white to yellow-white with yellow-brown mottling, red-brown where handled, surface tomentose, numerous soil particles adhering to all sides, Guaiac immediately blue, FeSO<sub>4</sub> slowly pale blue-green, KOH slightly red around margin of droplet. *Gleba* slightly yellow-brown to red-brown to salmon; locules irregular, empty to partially filled. *Rhizomorphs* single or numerous, stout, up to 1.0 mm in diam, concolorous with peridium. *Columella* distinct, gelatinous, opaque, truncate, branched from near center of sporocarp. *Odor* sometimes strong, raphanoid or sweet. *Taste* mild.

*Peridium* three-layered, up to 400 µm thick, epicutis 100–150 µm thick, of thin-walled, hyaline, loosely interwoven hyphae 5–7.5 µm in diam, up to about 40 µm in length, hyaline crystalline particles abundant on hyphae near surface, clamp connections present; mesocutis variable in thickness, of hyaline, thin-walled, loosely interwoven hyphae with clavate end cells 7.5–10 µm in diam, end cells 13–27 µm in diam, clamp connections absent; subcutis 60–75 mm thick, of hyaline, thin-walled, compactly interwoven hyphae 2–3 µm in diam with some intergrading clavate cells from adjoining layer.

*Trama* of hyaline to slightly refractive, densely compacted, unorganized hyphae up to 7.5 µm in diam in a gelatinized matrix, clamp connections

absent. *Basidia* soon collapsed, hyaline, thin-walled, squat cylindrical to clavate  $10 \times 22 \mu\text{m}$ , (2–) 4-spored.

*Spores* ornamented with spines embedded within a nearly uniformly inflated utricle,  $10\text{--}12$  ( $\text{--}13.5$ )  $\times$   $6\text{--}7$  ( $\text{--}8$ )  $\mu\text{m}$ , (mean =  $10.8 \times 6.85$ ,  $l/w = 1.58$ ), broadly ellipsoid, symmetrical, base appears truncate owing to how the utricle is attached at the base of the spore, walls  $1\text{--}1.5 \mu\text{m}$  thick, utricle distinct, saccate, inflated up to  $1 \mu\text{m}$ , giving the spore a more or less square appearance, attached only at base, in KOH pale brown singly, golden brown in mass, nondextrinoid, inamyloid.

*Habit, habitat and season:* Single to gregarious; hypogeous to emergent on litter-rich termite mounds or on doleritic red clay soils in miombo woodland under *Brachystegia spiciformis* or *Uapaca* sp.; February and March.

*Collections examined:* **Zimbabwe**, Harare ("Salisbury"), March 1920 *F. Eyles* 2530 (holotype SRGH, isotypes OSC, BPI); Mashonaland East Prov., Bromley, Liemba Farm, Carters Estates, 1.II.1999 *A. Verbeke* 99–062 (OSC, GENT); *ibid.*, 3.II.1999 *A. Verbeke* 99–101, 99–102, 99–103 (OSC, GENT); Manicaland Prov., Penhalonga, Harris' Garden, 9.II.1999 *A. Verbeke* 99–148, 99–151 (OSC, GENT); Manicaland Prov., Chipinge, Busi Farm, forests around Scott's house, 12.II.1999 *A. Verbeke* 99–193 (OSC, GENT).

*Iconography:* Lloyd (1925, pl. 298, figs. 2908–2909).

*Discussion:* Lloyd (1925) described this species in *Hymenogaster* Vittad., but at the same time provisionally introduced the generic name *Radiogaster* stating "This should be held as a genus (*Radiogaster* McG.) for it departs from *Hymenogaster* in several particulars. There are no gleba cells visible to the naked eye, no sterile base, in fact no 'base' at all for on splitting a specimen the gleba appears to radiate from the center. The spores closely resemble those shown by Tulasne for *Hymenogaster lycoperdineus* and mostly have toothed remains of the sterigmata giving the truncate effect of *Ganoderma* spores". Lloyd erred in thinking the gleba radiated from the center. He had the misfortune of "splitting" the specimen exactly across its axis instead of in cross-section. *Aroramyces radiatus* has a distinct columella which if cut through incorrectly would give the impression of a radiating glebal structure. Placement in *Dendrogaster* Buchholz and *Gymnoglossum* Massee by Dodge

and Zeller (1934), and Bottomley (1948), respectively, is incorrect. The type of *Dendrogaster*, *D. connectens* Buchholz has been shown by Fogel (1985) to be an immature *Hymenogaster* and possesses an apical beak characteristic of *Hymenogaster*. According to Smith (1966) *Gymnoglossum* has fusoid, smooth, thick-walled spores that have an apical pore. We propose the new genus *Aroramyces* based on the unique combination of spore characters and gelatinized gleba. *Aroramyces* has affinities to the Cortinariaceae based on spore pigmentation and ornamentation. The gelatinized gleba and distinctly inflated utricle instantly separates it from all known genera of sequestrate Cortinariaceae. In this genus we include another similar species, known from Queensland, with larger spores and a single-layered peridium:

*Aroramyces gelatinosporus* (Cribb) Castellano, comb. nov.

= *Hysterangium gelatinosporum* Cribb, Paps. Dept. Bot. Univ. Queensland 3: 156. 1958.

It is interesting to point out that this genus is only known from subtropical or tropical habitats in Zimbabwe and Queensland, Australia. The collections of *A. gelatinosporus* from Queensland are all from under various *Eucalyptus* (Myrtaceae) species, the collections from Zimbabwe are from under *Brachystegia* (Caesalpinioideae) and *Uapaca* (Euphorbiaceae).

*Corditubera bovonei* (Mattir.) Demoulin & Dring, Bull. Jard. Bot. Belg. 45: 347. 1975.

= *Scleroderma bovonei* Mattirollo, Bull. Jard. Bot. Etat 8: 30. 1922.

*Basidiomata* subglobose to globose, mottled yellow to yellow-brown with scattered off-white areas when fresh, distinctly rugulose, mottled pale gray and pale brown when dried. *Gleba* solid, nearly black with white to off-white veins. *Rhizomorphs* scattered, thin, yellow-brown. *Columella* absent. Taste not determined. *Odor* not determined.

*Peridium* two-layered, up to  $1330 \mu\text{m}$  thick; epicutis up to  $760 \mu\text{m}$  thick, of compact textura epidermoidea, slightly pale yellow-brown, thin-walled hyphae up to  $8 \mu\text{m}$  thick; subcutis up to  $570 \mu\text{m}$  thick, of compact textura epidermoidea, hyaline, thin-walled hyphae up to  $15 \mu\text{m}$  thick; clamp connections absent from both layers.





Fig. 1. *Aroramyces radiatus* (A. Verbeken 99-103). (Photo: R. Walley).



Fig. 2. *Mycoamaranthus congolensis* (A. Verbeken 99-105). (Photo: R. Walley).





Fig. 3. *Mackintoshia persica* (A. Verbeken 99–169). (Photo: R. Walley).



Fig. 4. *Octaviania ivoryana*, holotype in situ. (Photo: R. Walley).

*Trama* of hyaline, compact textura epidermoidea, hyphae up to 5  $\mu\text{m}$  thick; clamp connections absent. *Hymenium* not seen. *Basidia* not seen but remnant hyaline, sterigmal attachments can be observed. *Cystidia* absent.

*Spores* ornamented with spines or punctations, 9–11 (–13)  $\mu\text{m}$ , including ornamentation subglobose to globose, sometimes variously angled or flattened, symmetrical, ornamented uniformly with minute spines or a minute punctation, walls 1–2  $\mu\text{m}$  thick except at point of attachment where the spore wall is thin, in KOH pale yellow-brown singly, yellow-brown in mass.

*Habit, habitat and season:* subhypogeous to emergent through leaves in miombo woodland under *Brachystegia spiciformis*; February.

*Collections examined:* Zimbabwe, Manicaland Prov., Chipinge, Busi Farm, around Scott's house, 12.II.1999 A. Verbeken 99–189 (OSC, GENT).

*Iconography and figs.:* Mattirollo (1922, pl. 2), Dissing & Lange (1962, fig. 60D; 1964, pl. 42, fig. 11), Demoulin & Dring (1975: figs. 3ab).

*Discussion:* We did not examine the type but our specimens agree with the description of the type by Dissing and Lange (1962). The minute ornamentation of the spores lead Mattirollo (1922) to originally describe them as smooth. *Corditubera kivuensis* Demoulin and Dring differs by its smaller spores and more distinct ornamentation.

*Mackintoshia persica* Pacioni & Sharp, Mycotaxon 75: 226. 2000. – Figs. 3, 7, 10

*Collections examined:* Zimbabwe, Manicaland Prov., along Mutare–Bvumba road, near Prins Charles Viewpoint, 11.II.1999 A. Verbeken 99–169 (GENT, OSC); Manicaland Prov., Chipinge, Busi Farm, forest around Scott's house, 13.II.1999 A. Verbeken 99–210 (GENT, OSC).

The collections cited represent additional localities of this species that very recently has been described by Pacioni and Sharp (2000). For a full description on this fungus we refer to this publication.

*Mycoamaranthus congolensis* (Dissing & Lange) Castellano & Walley, comb. nov. – Figs. 2, 8, 11

= *Dendrogaster congolensis* Dissing & Lange, Bull. Jard. Bot. Etat 32: 335. 1962.

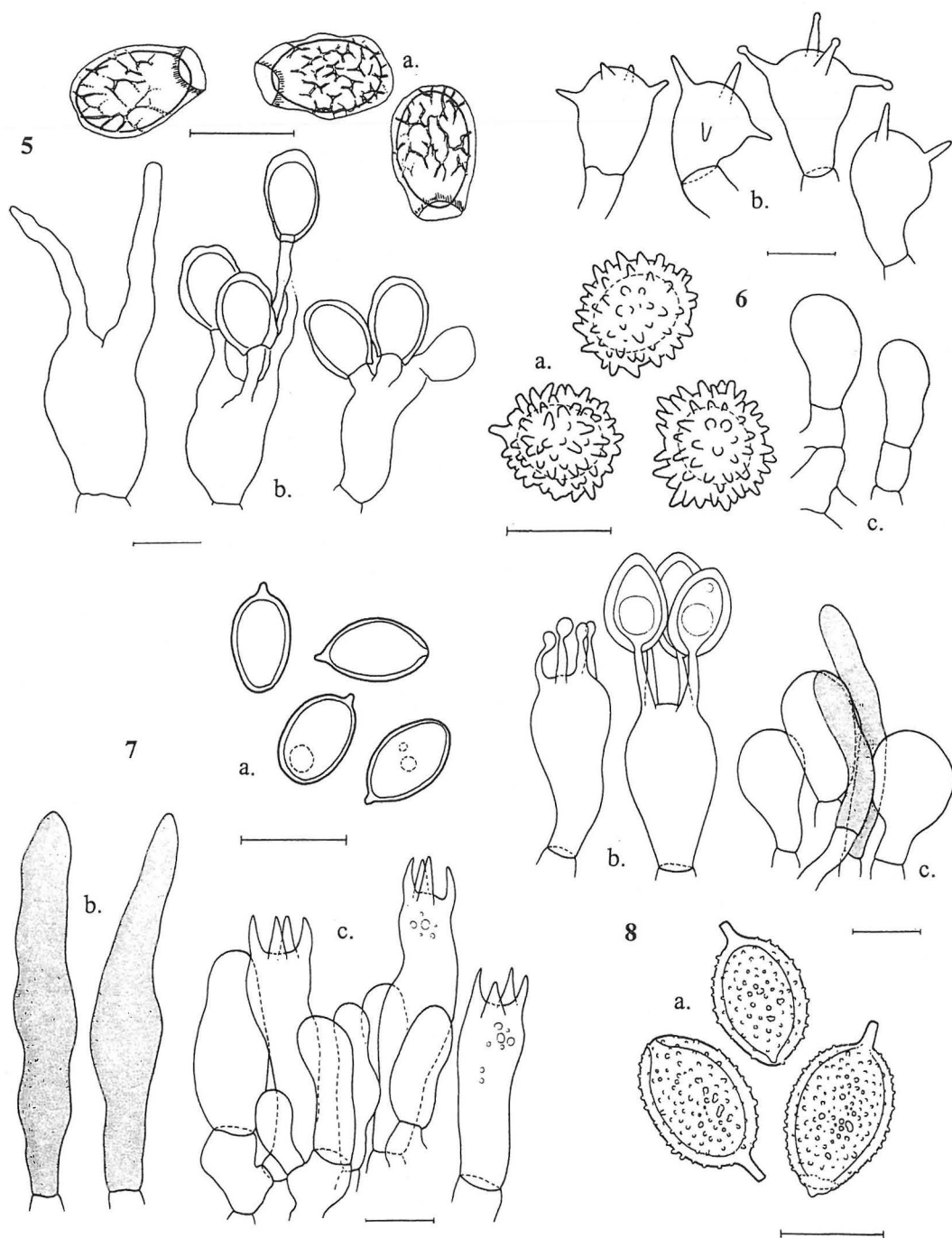
*Basidiomata* up to 40 mm wide and 30 mm tall, irregular, subglobose to globose to somewhat wrinkled and knobby, vivid yellow when fresh and remaining so at base but becoming slightly brown or olive over upper portion with age, when fresh peridium thin, membranous, arachnoid in places, easily separable from gleba, surface slightly tomentose, dry, somewhat powdery. *Gleba* firm, spongy-rubbery, pink in youth, becoming yellow-red, salmon to gray-red or dull red when mature; locules minute, irregularly shaped. *Rhizomorphs* scanty, emergent from base, concolorous with peridium. *Columella* extending up from sterile base, concolorous with peridium. Taste acrid and mealy. *Odor* indistinct or unpleasant, of plastic.

*Peridium* with yellow pigment immediately leached from peridial tissue when mounted in KOH, leaching of pigment not evident in  $\text{H}_2\text{O}$  or Melzer's reagent, single layered, up to 600  $\mu\text{m}$  thick, of pale yellow to brown-yellow, thin-walled hyphae 5–8  $\mu\text{m}$  in diam in a textura epidermoidea, subpericlinial near gleba (within 100–200  $\mu\text{m}$ ), more loosely interwoven near peridial surface, with some encrustations on the hyphae near the surface; clamp connections absent.

*Trama* of hyaline, loosely interwoven, multi-branched, thin-walled hyphae, 4–5  $\mu\text{m}$  in diam, in a gelatinized matrix; clamp connections absent. *Hymenium* a single palisade of basidia. *Basidia* clavate to broadly clavate, hyaline, 24–28  $\times$  (12–) 13–15  $\mu\text{m}$  at the apex, 4-spored; sterigmata 5–7 (–8)  $\mu\text{m}$  long, 2  $\mu\text{m}$  wide at base, tapered; clamp connections absent. *Cystidia* absent, although in one collection (99–105) some unusual elements were observed emerging from the hymenium, they were narrowly cylindrical, hyaline, 23–38  $\times$  4–5  $\mu\text{m}$ .

*Spores* ornamented, (11–) 12–15  $\times$  8–10  $\mu\text{m}$  (mean = 12.9  $\times$  8.7  $\mu\text{m}$ , l/w = 1.49) excluding ornamentation but including pedicel, ellipsoid to broadly ovoid, symmetrical, ornamented uniformly with minute spines, approximately 0.5  $\mu\text{m}$  tall, walls 1–1.5 (–2)  $\mu\text{m}$  thick, sterigmal attachment distinct, hyaline, 2  $\mu\text{m}$  long  $\times$  1  $\mu\text{m}$  wide, spines and walls dextrinoid in youth, nondextrinoid at maturity, in KOH hyaline singly, pale yellow-brown in mass.

*Habit, habitat and season:* Single to gregarious; subhypogeous to emergent through leaves on doleritic red clay soils in miombo woodland under *Brachystegia spiciformis*, *Julbernardia*



Figs. 5–8. – 5. *Aroramycetes radiatus*. a. spores, b. basidia (A. Verbeken 99–148). – 6. *Octaviania ivoryana*. a. spores, b. basidia, c. basidioles (A. Verbeken 99–104). – 7. *Mackintoshia persica*. a. spores, b. pleurocystidia, c. basidia and basidioles (A. Verbeken 99–169). – 8. *Mycoamaranthus congolensis*. a. spores, b. basidia, c. basidioles and pleurocystidia (A. Verbeken 99–105). Bar = 10  $\mu$ m.



*globiflora* (Benth.) Troupin or *Uapaca* sp.; December through early February.

*Collections examined:* **Congo-Kinshasa**, Shilatembo, 19.II.1972 *D. Thoen* 5581 (herb. Thoen). **Malawi**, Malsoa, near Shire River, 30.I.1992 *D. Arora* 101 (OSC). **Zimbabwe**, Mashonaland East Prov., Bromley, Liemba Farm, 3.II.1999 *A. Verbeken* 99-105 (OSC, GENT); Manicaland Prov., Penhalonga, Harris' Garden, 9.II.1999 *A. Verbeken* 99-150 (OSC, GENT); Manicaland Prov., Chimanimani, 3.II.1992 *D. Arora* 72 (OSC); Harare, February 1999 *D. Arora* 127 (OSC).

*Iconography and figs.:* Dissing and Lange (1962, fig. 39; 1963, pl. 39, fig. 1).

*Local uses:* Eaten, first boiled and the dried, by local people in Eastern Burundi who call it 'ugutwikwinkende' (Nzigidahera 1994). In Malawi the people of the Yaowo tribe eat it and their name for it is "haira" (*D. Arora*, pers. comm.).

*Discussion:* The type collection is listed from Congo in Haut-Katanga District, in vicinity of "Elizabethville" (Lubumbashi) in December. Illustrations of basidia, spores and sterigmata fit perfectly, except spore width was reported by Dissing and Lange (1962) as 9.4–12  $\mu$ m. *Dendrogaster* was first described by Buchholz (1901) and reduced to synonymy under *Gymnoglossum* by Cunningham (1944). Smith (1966) disagreed with Cunningham and placed it in *Hymenogaster* as a subgenus. After study of the type (*D. connectens* Buchholz) Fogel (1985) agreed with Smith (1966) that *D. connectens* was indeed a *Hymenogaster* species aligned with other *Hymenogaster* species that possess an apical beak on the spore and some degree of columella development.

*Mycoamaranthus* was originally described from northern Queensland, Australia (Castellano et al. 1992). The type *M. auriorbis* Castellano, Trappe & Malajczuk is characterized by a vivid yellow peridium and unique spore ornamentation. *Mycoamaranthus congolensis* possesses both features but differs from *M. auriorbis* in size of the spores and basidia, both being larger in *M. congolensis* than in *M. auriorbis*. The collection from Thailand cited by Castellano et al. (1992) as *M. auriorbis* is a third, as yet, undescribed species from under Dipterocarpaceae.

*Octaviania ivoryana* Castellano, Verbeken & Thoen, sp. nov. – Figs. 4, 6, 12

*Basidiomata* usque ad 50 mm diam., subglobose, globosa, reniformia vel pyriformia, ex glauco alba cum maculis griseis vel cremeis; superficies ceracea vel leviter pruinosa; gustu indistincto; odore pomi similis. Gleba firma, alba vel rubroflavida, viridiflavida, cum maculis glaucis, loculis irregularibus. Columella interdum presens, alba. Peridium bistratis, 700  $\mu$ m crassum; epicutis usque ad 500  $\mu$ m crassa, ex hyphis hyalinis, gelatinosis, compacte intermixtis, infibulatis, superficiem versus palisadiformis; subcutis usque ad 200  $\mu$ m crassa, ex hyphis hyalinis, non gelatinosis, compacte intermixtis. Basidia clavata, 13–20  $\times$  11–12  $\mu$ m, tetraspora, interdum bispore. Sporae hyalinae ad pallide olivaceae in cumulo, 9–12(15)  $\times$  (7)8–10(12)  $\mu$ m, late ellipsoideae ad subgloboseae, spinis densis, acutis vel reflexis, in conis usque ad 2  $\mu$ m altis coalescentibus ornatae.

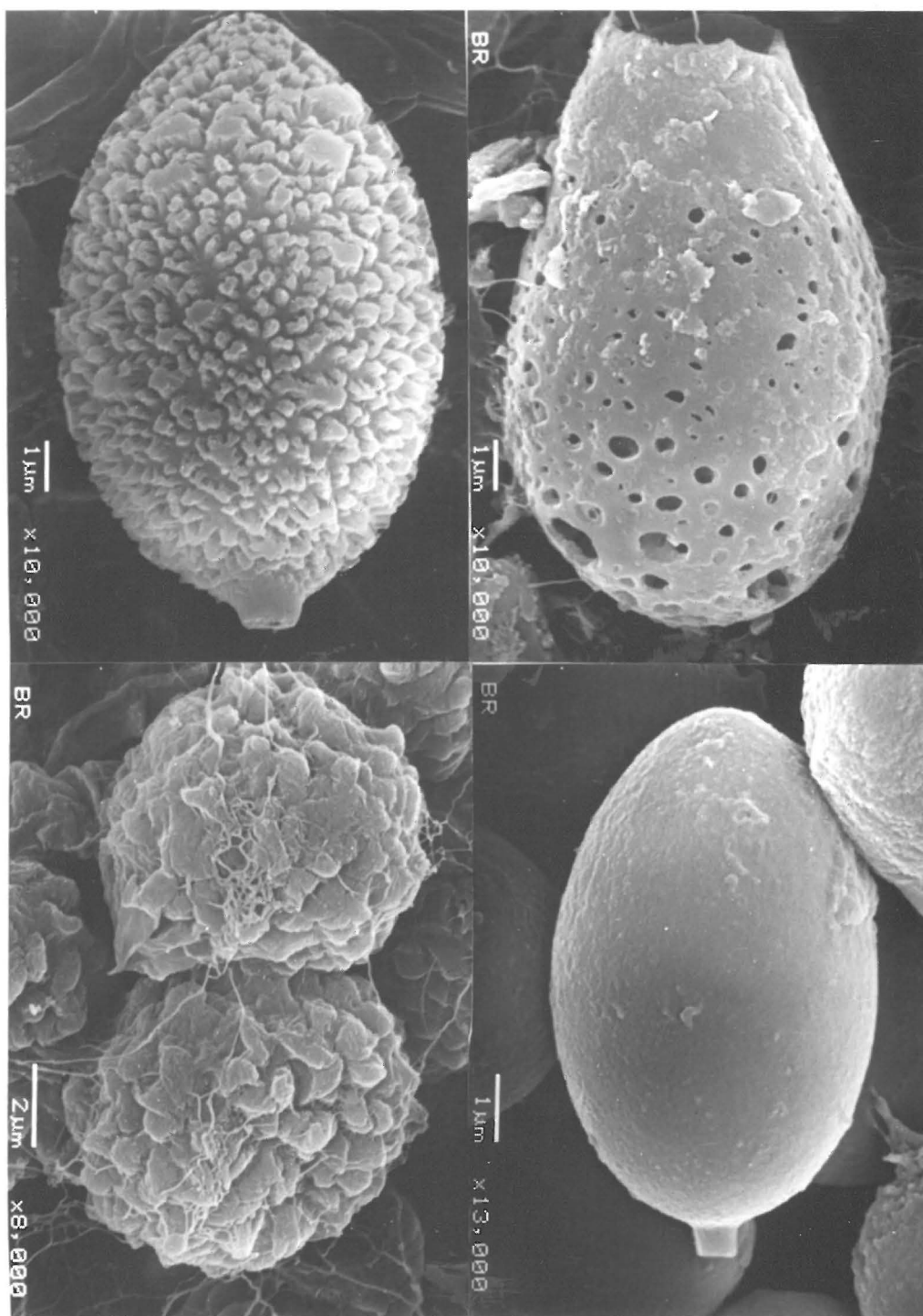
Typus: Zimbabwe, Mashonaland East Prov., Bromley, Liemba Farm, 3.II.1999 *A. Verbeken* 99-104 (holotype GENT, isotype OSC).

*Basidiomata* 10–50 mm in diam, subglobose, globose, reniform to pyriform, when fresh pure white with some small areas that are gray to cream, some blue-green stains and an undefinable pale green tinge, surface waxy, somewhat pitted in places, elsewhere smooth and somewhat powdery. In cross-section the peridium appears two-layered with the outer layer gray-pink and the inner layer pure white. *Gleba* solid, marbled white and red-yellow, green-yellow to pale yellow olive, sometimes developing blue to blue-green stains when cut; locules irregularly shaped, filled. *Rhizomorphs* single to numerous, fine to about 1 mm wide, attached at sporocarp base, white. *Columella* present or absent, when present white. *Taste* not distinctive. *Odor* sweet, pleasant, slightly apple-like.

*Peridium* two-layered, up to 700  $\mu$ m thick, epicutis up to 500  $\mu$ m thick, of hyaline to pale gray, thin-walled, gelatinized, compactly interwoven hyphae, 3–4  $\mu$ m in diam, with many erect hyphal tips forming a turf at the surface, clamp connections absent; subcutis up to 200  $\mu$ m thick, of hyaline, thin-walled, nongelatinized, tightly interwoven hyphae 5–8  $\mu$ m in diam.

*Trama* 20–50  $\mu$ m thick, of hyaline, divergent, slightly gelatinous, thin-walled hyphae, 2–4  $\mu$ m in diam, clamp connections absent. Basidia soon collapsed, clavate, 13–20  $\times$  11–12  $\mu$ m, (2–) 4-spored; sterigmata 2–5  $\mu$ m tall, 1–2  $\mu$ m wide at base.





Figs. 9–12. SEM photographs of spores. – 9. *Aroramyces radiatus* (A. Verbeken 99–148). – 10. *Mackintoshia persica* (A. Verbeken 99–169). – 11. *Mycoamaranthus congolensis* (A. Verbeken 99–105). – 12. *Octaviania ivoryana* (holotype).

Spores ornamented, 9–12 (–15) × (7–) 8–10 (–12) µm, (mean = 10.5 × 9.1 µm, l/w = 1.17), broadly ellipsoid to subglobose, ornamented with crowded, pointy to reflexed spines coalesced into cones, 1–2 µm tall, ornamentation radiates somewhat from point of attachment, symmetrical, thick-walled more or less 1 µm thick, in KOH hyaline to pale yellow-green singly, hyaline to pale olive in mass, dextrinoid, inamyloid.

**Etymology:** “ivoryana,” named in honor of Michael H. Ivory, of the Oxford Forestry Institute, accomplished collector of sequestrate fungi in far flung regions of the world.

**Habit, habitat and season:** Single to gregarious; subhypogeous to emergent through leaves on doleritic red clay soils in miombo woodland or on termite mounds under *Afzelia africana* Smith ex Pers., *A. quanzensis* Welw., *Anthonotha crassifolia* (Baill.) Léonard, *Brachystegia spiciformis*, or *Uapaca* sp.; July through September (Sudanian woodland) and January, February (Zambezian miombo woodland).

**Additional collections examined:** **Zimbabwe**, Manicaland Prov., Chimanimani, 3.II.1992 *D. Arora* 73 (OSC); Lake McLivaine, 10.I.1992 *D. Arora* 13 (OSC); Msina Ranch, 7.I.1999 *C. Sharp* 1197/99 (OSC, GENT); Mukuvusi, February 1992 *D. Arora* 126 (OSC). **Kenya**, Gede Forest Office, 5.VIII.1995 *M. Ivory* 978 (OSC). **Guinea**, Lébékéré, 14.VII.1988 *D. Thoen* 7958 (OSC, herb. Thoen). **Senegal**, Prov. de Kolda, Thiara, 17.VIII.1987 *A.M. Ba*, *D. Thoen* 7861 (OSC, herb. Thoen); Prov. de Kolda, Thiara, 25.VIII.1986 *D. Thoen* 7660 (OSC, herb. Thoen); Prov. de Kolda, Thiara, 23.IX.1986 *D. Thoen* 7701 (OSC, herb. Thoen); Prov. de Kolda, 29.VII.1988 *D. Thoen* 8011 (herb. Thoen).

**Iconography:** Thoen and Ducouso (1989, fig. 9e).

**Discussion:** The genus *Octaviania* Vittad. is characterized by dextrinoid spores ornamented with distinct cones of coalesced spines. We have not studied material of *Octaviania africana* Lloyd but its larger spores, as published in the description by Bottomley (1948), Lloyd (1922) and Verwoerd (1925), separate it from *Octaviania ivoryana*.

The specimens *D. Thoen* 7660, 7701, 7861 and 7958 were cited as *Sclerogaster* sp. by Thoen and Ba (1989) and Thoen and Ducouso (1989).

It should be noted that the Nomenclatural Committee for Fungi recently pointed out that *Octavianina* is a later orthographic variant of *Octaviania*, not to be used (Gams 1999).

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