

***Chaetocalathus* and *Crinipellis* (Basidiomycota, *Marasmiaceae*) in tropical Africa: taxonomic and nomenclatural novelties**

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Abstract – A monograph of *Crinipellis* and *Chaetocalathus* species growing in tropical Africa is in preparation. During studies of the original material and other specimens, some new taxa were recognized and are described in this paper: *Chaetocalathus niduliformis* var. *bisporus*, *Crinipellis atrovinosa* var. *parvispora*, *C. goossensiae*, *C. minutuloides*, *C. kisananensis*, *C. nsimalensis*, and *C. pseudopalmarum*. *Crinipellis mauritiensis* is described as a nomen provisorium because of the absence of a macroscopic description and the presence of only very poor material. Type revisions of *Chaetocalathus niduliformis* and *Lentinus minutulus* caused some taxonomic and nomenclatural novelties that are published here. A new status is proposed for *Crinipellis pseudostipitaria* var. *orientalis*.

***Crinipellis* / *Chaetocalathus* / new species / new status / taxonomy / type revisions**

Résumé – La monographie des espèces *Crinipellis* et *Chaetocalathus* d'Afrique tropicale est en cours de préparation. Au cours de l'étude du matériel original et d'autres spécimens, plusieurs taxa nouveaux ont été détectés et sont décrits dans le présent article : *Chaetocalathus niduliformis* var. *bisporus*, *Crinipellis atrovinosa* var. *parvispora*, *C. goossensiae*, *C. minutuloides*, *C. kisananensis*, *C. nsimalensis* et *C. pseudopalmarum*. *Crinipellis mauritiensis* n'est décrit que provisoirement à cause de l'absence d'une description macroscopique et de la qualité médiocre des spécimens disponibles. Les révisions du type de *Chaetocalathus niduliformis* et de *Lentinus minutulus* ont conduit à plusieurs modifications taxonomiques et nomenclaturales dans le présent article. Un nouveau statut est proposé pour *Crinipellis pseudostipitaria* var. *orientalis*.

***Crinipellis* / *Chaetocalathus* / espèces nouvelles / révision des types / statut nouveau / taxinomie**

INTRODUCTION

Crinipellis and *Chaetocalathus* represent rather small genera world-wide (152 *Crinipellis* and 25 *Chaetocalathus* taxon names in MycoBank; c. 65 and 20 species, respectively, in Kirk *et al.*, 2008). In contrast to Europe (Antonín & Noordeloos, 2010), South America (Singer, 1976), and South-East Asia (Kerekes & Desjardin, 2009), species from tropical Africa have never been published monographically. Only Pegler (1967, 1967, 1977) published some Central African taxa. Moreover, the only world monograph of these genera is almost 70 years old (Singer, 1943).

The author already published a monograph of tropical African species of *Marasmius* and some smaller genera in the Fungus Flora of Tropical Africa series (Antonín, 2007). During the preparation of this monograph, several new *Crinipellis* and *Chaetocalathus* taxa were discovered, and are described here together with some other taxonomic novelties.

MATERIAL AND METHODS

Macroscopic descriptions were made by the collectors, sometimes they have been written or completed according to photos and/or dry specimens. Microscopic features are described from dried material mounted in KOH, Melzer's reagent and Congo Red using an Olympus BX-50 light microscope with a magnification of 1000×. For basidiospores, the factors E (quotient of length and width in any one spore) and Q (mean of E-values) are used. Values of basidiospores are based on 20 measurements per collection. For lamellae, L means the number of entire lamellae and l the number of lamellulae between each pair of entire lamellae. Colour abbreviations follow Kornerup & Wanscher (1978), herbarium abbreviations follow Thiers (2012). Authors of fungal names are cited according to the International Plant Names Index Authors website (<http://www.ipni.org/ipni/authorsearchpage.do>).

RESULTS

Chaetocalathus niduliformis (Murrill) Singer var. *bisporus* Antonín et Rammeloo var. nov.

MycoBank MB 564680

A varietate typica sporis leviter magnis et basidiis bisporis differt.

Holotypus: Mauritius, Trou d'eau douce, 15.IV.1990 leg. J. Rammeloo 9255 (holotypus in herbario BR 006906194 asservatur).

Etymology. "bisporus" – having 2-spored basidia.

Specimens examined. Mauritius. Trou d'eau douce, 15 Apr. 1990 leg. J. Rammeloo 9252 (BR 006903162). – Ibid., 15 Apr. 1990, leg. J. Rammeloo 9255 (holotype, BR 006906194).

Remarks. This new variety has only been recorded in Mauritius. It differs from the typical variety in having 2-spored basidia and larger, 9.0-11 × 6.5-8.0 μm basidiospores, whereas the typical variety has smaller basidiospores (7.5-9.0 × 4.5-6.25(-7.0) μm; 207 spores of 15 specimens measured) in African material.

Singer (1943) mentioned that the original description of *Chaetocalathus niduliformis* (as *Pleurotopsis niduliformis*) by Murrill (Murrill, 1915) agrees well with the recent concept of this species, however, the type specimen represents a different taxon. Therefore, the type specimen has been revised. Our revision of the holotype material (see below) showed that it fully agrees with the current concept of *Chaetocalathus niduliformis* (e.g. Pegler, 1967, 1977):

holotype revision of Pleurotopsis niduliformis Murrill

Basidiospores (7.5) 8.0-10.5 × 5.25-7.0 μm, average 9.0 × 6.1 μm, E = 1.34-1.63, Q = 1.48, broadly ellipsoid, ovoid, thin-walled, dextrinoid. **Basidia** 25-33 ×

Fig. 1

8.5-11 μm , 4-spored, clamped. **Basidioles** 15-35 \times 4.0-10 μm , clavate, cylindrical, clamped. **Cheilocystidia** 21-28 \times 6.5-11 μm , clavate, fusoid, entirely or except for base slightly thick-walled, usually with 1-3 apical projections, sometimes with crystalliferous apical caps. **Pileipellis** a cutis of cylindrical, thin- to slightly thick-walled, not incrustated, non-dextrinoid, up to 8.0 μm wide hyphae. **Pileus hairs** cylindrical, curved, thick-walled (walls up to c. 1.0 μm), obtuse, with obliterated lumen, dextrinoid, up to 5.0 μm wide.

Holotype: Bermuda, on fallen dead twigs of *Juniperus barbadensis*, 29 Nov.-14 Dec. 1912, S. Brown, N.L. Britton & F.J. Seaver 1350 (NY 775376).

Remarks. Although basidiospores of the holotype specimen are slightly longer than in African material, I consider them belonging to the species variability.

Type revision of *Lentinus minutulus* Henn.

One Tanzanian collection identified as *Crinipellis minutula* by D.N. Pegler was found during a revision of *Crinipellis* specimens in the Kew herbarium. A revision of the type specimen of *Lentinus minutulus* Henn. is provided here.

Type specimen. Togo, May 1895 leg. Baumann 5, det. P. Hennings (FH). The type specimen consists of two small, well-preserved basidiocarps.

Macroscopic characters. **Pileus** 4-7 mm broad when dried, convex or finally expanded, umbonate in umbilicus-like depression, which is less hairy than the rest of the pileus, umbo with rather conspicuous hairy tuft (lens), curly-radially-hairy, cinnamon (Hennings 1897), nearly "argus brown" when dry (Singer 1943). **Lamellae** moderately crowded, not or hardly connected attenuate-free or almost free, with a few lamellulae, rather narrow, yellowish subalutaceous when dry. **Stipe** 4-5 \times 0.5-0.8 mm (dry), central, tomentose, somewhat curved, cylindrical, concolorous with pileus. **Context** thin, white. (Singer 1943)

Results of the type revision. **Basidiospores** 6.5-8.75 \times 3.5-4.5 μm , average 7.3 \times 3.8 μm , E = 1.69-2.17, Q = 1.90, ellipsoid-fusoid, pip-shaped, thin-walled, non-dextrinoid. **Basidioles** up to 28 \times 5.0-8.0 μm , clavate, subcylindrical, fusoid. **Cheilocystidia** 20-40 \times 8.0-15 μm , fusoid, subutriform, less frequently clavate, often (sub)rostrate, simple, smooth, thin-walled. **Pleurocystidia** numerous, 31-51 \times 7.5-9.0 (10.5) μm , clavate, subcylindrical, fusoid, thin- to slightly thick-walled (walls up to 0.5 μm), often originating in subhymenium. **Trama hyphae** cylindrical, thin- to slightly thick-walled, smooth or minutely thick-walled, up to 10 μm wide. **Pileipellis** a cutis composed of radially arranged, cylindrical or inflated, thin- to thick-walled, smooth, non-dextrinoid, up to 12 μm wide hyphae. **Pileus hairs** up to c. 300 \times 2.0-6.0 μm , cylindrical, obtuse to subacute, thick-walled (walls up to 1.5 (2.0) μm), dextrinoid, septate and sometimes with obliterated lumen. **Stipitipellis** a cutis of cylindrical, parallel, thick-walled (walls up to 1.0 μm), 2.0-6.0 μm wide hyphae, with yellow-brown walls in KOH. **Stipe hairs** up to c. 200 \times 4.0-8.0 μm , cylindrical, fusoid, subulate, sometimes inflated at base, thick-walled (walls up to 2.5 μm), obtuse to subacute, dextrinoid, septate, sometimes obliterated, with hyaline to pale yellow-brown and sometimes olivaceous tinged walls in KOH. **Clamp connections** present in all tissues. (Fig. 2)

Remarks. The type revision showed that this fungus belongs to the genus *Crinipellis*, and its correct name is *Crinipellis minutula* (Henn.) Pat.

However, the above mentioned Tanzanian collection from the Kew herbarium represents a different, very distinct species. Therefore, together with a second, later collection from Gabon, it is described as a new species here.

Crinipellis minutuloides* Antonín sp. nov.*Fig. 3***Mycobank* MB 564681

Pileus usque 10 mm lato, convexo-conico vel plano-convexo, ochraceo-brunneo. *Lamellis* luteo brunneis vel alutaceis, acie concolore. *Stipite* usque 10 × 0.5 mm, cylindraco, villosa-tomentosa, brunneo. *Basidiosporis* 7.0-9.0 × 3.0-4.25 µm, ellipsoideis, ellipsoideo-fusiformibus, ellipsoideo-cylindracois. *Cheilocystidiis* 16-32 × 6.0-9.0 (12) µm, clavatis, subcylindracois, subfusiformibus, tenui- vel leviter crassitunicatis. *Setis hymenialibus* 31-60 (70) × 7.0-16 (20) µm, fusiformibus, crassitunicatis. *Setis pilei et stipitis praesentibus, cylindracois, crassitunicatis.*

Holotypus: Gabon, Ogooué-Ivindo, Station d'Ipasa-Makokou, 13 March 2005, leg. S. Dibaluka Mpusulu 13 (*holotypus in herbario BR 159812-53 asservatur*).

Etymology. "minutuloides" – similar to *Crinipellis minutula*.

Pileus up to 10 mm broad when dried, convex to plano-convex, with small papilla at centre, involute at margin, slightly concentrically zonate, fibrillose, ochraceous brown, fibrils dark brown at centre and ± concolorous with pileus towards margin. **Lamellae** moderately distant, L = c. 18-20, l = 1-2, yellowish brown or alutaceous when dry, edge finely pubescent, concolorous. **Stipe** up to 10 × 0.5 mm, central, cylindrical, insititious, hairy-tomentose, with ± strigose base, brown. (According to dry specimens of the holotype.)

Basidiospores 7.0-9.0 × 3.0-4.25 µm, average 8.1 × 3.8 µm, E = 1.75-2.50, Q = 2.15-2.18, ellipsoid, ellipsoid-fusoid, ellipsoid-cylindrical, thin-walled and non-dextrinoid and slightly thick-walled and dextrinoid. **Basidia** e.g. 20 × 6.0 µm, 4-spored, clavate. **Basidioles** 15-30 × 3.0-9.0 µm, clavate, (sub)cylindrical, fusoid. **Cheilocystidia** 16-32 × 6.0-9.0 (12) µm, clavate, subcylindrical, subfusoid, with apical projections, thin- to slightly thick-walled. **Hymenial setae** present on lamella edge and sides, 31-60 (70) × 7.0-16 (20) µm, fusoid, sometimes (sub)rostrate, obtuse, thick-walled (up to 3.0 µm), originating in subhymenium and not or only slightly projecting beyond hymenium, dextrinoid, refractive, subhyaline to pale yellow-brown in KOH. **Trama hyphae** ± cylindrical, ± slightly thick-walled, finely incrustated, non-dextrinoid, up to 10 µm wide. **Pileipellis** (hypotrachium) composed of ± cylindrical, slightly thick-walled, smooth or minutely incrustated, up to 8.0 (10) µm wide cells. **Pileus hairs** up to c. 1000 × 6.0 µm, cylindrical, thick-walled (walls up to 2.0 µm), obtuse, septate, sometimes with obliterated lumen, dextrinoid, walls yellow-brown in H₂O and yellow-brown, sometimes olivaceous tinged in KOH. **Stipitipellis** a cutis of cylindrical, slightly thick-walled, up to 5.0 µm wide hyphae with olivaceous brown walls in KOH. **Stipe hairs** similar to pileus hairs, but smaller (up to c. 350 × 7.0 µm) and with under-layer of short hairs. **Clamp connections** present.

Ecology. On fallen branches and litter.

Distribution. So far collected in Gabon and Tanzania.

Specimens examined. **Gabon**: Ogooué-Ivindo, Station d'Ipasa-Makokou, 13 March 2005 leg. S. Dibaluka Mpusulu 13 (BR 159812-53, holotype). **Tanzania**: Tanga Prov., Lushoto Distr., Usambara Mts., Magamba, c. 4 km N of Lushoto, 4°50' S, 38°15' E, alt. 1600-2000 m, 21-22 Febr. 1973 leg. L. Ryvarden 10887, det. D.N. Pegler (K(M) 138494, as *C. cf. minutula*).

Remarks. *Crinipellis minutuloides* is characterized by a small pileus and stipe, rather small basidiospores, apically branched cheilocystidia, the presence of hymenial setae, and pileus and stipe hairs with olivaceous brown walls in KOH. *Crinipellis minutula* (Henn.) Pat. differs by having a shorter stipe (4-5 × 0.5-0.8 mm), fusoid, subutriform, less frequently clavate, often (sub)rostrate,

simple, smooth cheilocystidia, clavate, subcylindrical or fusoid, thin- to slightly thick-walled pleurocystidia, and by the absence of hymenial setae (holotype FH!).

This species has a special position in the genus *Crinipellis* by having fusoid hymenial setae representing a unique character in the genus.

***Crinipellis atrovinosa* var. *parvispora* Antonín & Rammeloo var. nov.**

Mycobank MB 564686

A varietate typica sporis, 8.0-11 × 3.2-4.5 μm, et basidiis brevis, 20-23 × 6.0-7.0 μm, differt.

Holotypus: Democratic Republic of the Congo, Irangi, Kivu, Apr. 1972 leg. J. Rammeloo JR Z343 (holotypus in herbario GENT asservatur).

Etymology. “parvispora” – having small basidiospores.

Pileus up to 9 mm broad, conical, with central umbo, slightly striate at margin, radially fibrillose, brownish red (10D6) at centre, red (9A6) towards margin. **Lamellae** distant, narrowly adnate to almost free, yellowish white (4A2) when young, then light yellow (4A4), with concolorous finely pubescent edge. **Stipe** up to 28 × 0.5 mm, cylindrical, fibrillose, reddish brown (8D6-7).

Basidiospores 8.0-11 × 3.2-4.5 μm, average 9.5 × 4.2 μm, E = (1.89) 2.00-2.50 (3.14), Q = 2.19-2.65, fusoid, cylindrical-fusoid, ellipsoid-fusoid, thin-walled and non-dextrinoid or thick-walled and dextrinoid, subhyaline to pale greenish in KOH. **Basidia** 20-23 × 6.0-7.0 μm, 4-spored, clavate or subutriform. **Basidioles** up to 25 × 5.0-9.0 (11) μm, clavate, cylindrical, fusoid. **Cheilocystidia** 15-30 (36) × 5.0-10 μm, fusoid, clavate, subutriform, rarely subcylindrical, rarely irregular or with projections or branches, thin-walled. **Pleurocystidia** absent. **Trama hyphae** cylindrical to subinflated, ± thin-walled, non-dextrinoid, up to 15 μm wide. **Pileipellis** a cutis composed of ± cylindrical, ± slightly thick-walled, smooth, non-dextrinoid, up to 10 μm wide hyphae. **Pileus hairs** up to 1000 × 3.0-10 μm, cylindrical, thick-walled (walls up to 3.0 μm), ± regular to curved, obtuse, septate, sometimes with obliterated lumen, walls purple-brown or vinaceous in H₂O and green-blue in KOH; sometimes with underlying layer of 20-40 × 11-15 μm, clavate, fusoid, often irregular, thick-walled cells with the same microchemical reactions. **Stipitipellis** a cutis of cylindrical, slightly thick-walled, dextrinoid, up to 6.0 μm wide hyphae with walls yellow-brown in H₂O and olivaceous green in KOH. **Stipe hairs** similar to pileus hairs. **Clamp connections** present.

Ecology. On twigs and leaf litter, on bark of fallen *Ficus sycamora*, and at base of a néré-tree (*Parkia biglobosa*).

Distribution. This variety is known from the Democratic Republic of the Congo, Ethiopia, Ghana and Nigeria.

Specimens examined. **Democratic Republic of the Congo:** Irangi, Kivu, Apr. 1972 leg. J. Rammeloo JR Z343 (GENT, holotype). – ? 20km NE of Yambao, 19 June 1939 leg. J. Louis 15245 (BR 031800-81). **Ethiopia:** Illubabare Prov., Gambela, alt. 1087 m, 28 July 1971 leg. Ash 1087 (K(M) 157447). **Ghana:** ? Cape Coast, near Efutu, 19 May 1975 leg. A.C. Rose C.C.7551B (K(M) 157454). **Nigeria:** Cross River State, Uyo, Anua Ravine, 6 June 1990 leg. R.A. Nicholson 498 (K(M) 16549). – Ibid., 14 Apr. 1990 leg. R.A. Nicholson 346 (K(M) 16751). – Cross River State, Calabar to Cameroon road, 3 July 1990 leg. R.A. Nicholson 599 (K(M) 18618).

Remarks. It differs from var. *atrovinosa* by distinctly smaller basidiospores, smaller basidia and basidioles.

Collections by Louis 15245 (BR 031800-81) and Rose C.C.7551B (K(M) 157454) are included with a question mark here because of the slightly smaller basidiospores.

Crinipellis goossensiae* Singer ex Antonín sp. nov.*Fig. 4***Mycobank* MB 564687

Pileo 13-25 mm lato, convexo vel plano, brunneo-rubro. *Lamellis* albo-alutaceis, acie concolore. *Stipite* usque 30×1.5 mm, cylindraco, villosa-tomentosa, brunneo. *Basidiosporis* $7.0-9.0 \times 3.5-4.5$ μm , ellipsoideis, ellipsoideis-fusififormibus, ellipsoideis-cylindracois. *Cheilocystidiis* $19-29 \times 5.0-8.0$ μm , clavatis, subcylindracois, lobatis, apicem cum projectionibus coralliformibus. *Setis pileis et stipitis* presentibus, cylindracois, crassitunicatis.

Holotypus: Democratic Republic of the Congo, Binga, 15 June 1939 leg. M. Goossens-Fontana 2000 (holotypus in herbario BR 031789-70 asservatur).

Etymology. “goossensiae” – named in honor of the collector M. Goossens-Fontana.

Pileus 13-25 mm broad, low convex, then appanate, with small papilla at centre and concentrically zonate around it, involute and striate at margin, especially around centre radially fibrillose, otherwise tomentose, brown-red. Lamellae distant, L = 17-18, l = 1-2, adnate, white-fawn, with paler, finely tomentose edge. Stipe up to 30×1.5 mm, cylindrical, insititious, hollow, entirely hairy-tomentose, brownish. Context thin, white, without any smell but very sweet taste. (Description according to the original notes by Goossens-Fontana and dry basidiocarps.)

Basidiospores $7.0-9.0 \times 3.5-4.5$ μm , average 8.1×3.6 μm , E = 1.89-2.83, Q = 2.23, ellipsoid, ellipsoid-fusoid, cylindrical-ellipsoid, thin-walled, non-dextrinoid. **Basidia** not observed. **Basidioles** up to $28 \times 3.0-8.0$ μm , clavate, cylindrical, subfusoid. **Cheilocystidia** $19-29 \times 5.0-8.0$ μm , clavate, subcylindrical, lobate, with projections or almost coralloid at apex, thin- to slightly thick-walled, non-dextrinoid. **Pleurocystidia** conspicuous, $30-60 \times 5.0-9.0$ μm , fusoid, subcylindrical, lanceolate, slightly thick-walled (walls up to 1.0 μm), regular, often originating in trama. **Trama hyphae** \pm cylindrical, \pm thin-walled, non-dextrinoid, up to 10 μm wide. **Pileipellis** (hypotrachium) a cutis composed of cylindrical or subinflated, \pm slightly thick-walled, up to 10 μm wide hyphae. **Pileus hairs** up to 8.0 μm wide, cylindrical, thick-walled (walls up to 3.0 μm), obtuse, rarely (sub)acute, septate, with olivaceous brown walls in KOH; mixed with short, often irregular cells with identical microchemical reactions in lower layer. **Stipitipellis** a cutis of cylindrical, parallel, slightly thick-walled (walls up to 1.0 μm), dextrinoid, up to 4.0 μm wide hyphae. **Stipe hairs** similar to pileus hairs. **Clamp connections** present.

Ecology. Growing in groups in detritus in a dry forest.

Distribution. So far known only from the type locality in the Democratic Republic of the Congo.

Specimens examined. **Democratic Republic of the Congo**: Binga, 15 June 1939 leg. M. Goossens-Fontana 2000 (BR 031789-70, holotype).

Remarks. *Crinipellis goossensiae* is characterized in having a rather large pileus, small basidiospores, well-developed cheilocystidia with projection(s) or coralloid at apex, distinct, long, mostly fusoid, slightly thick-walled pleurocystidia and hairs with olivaceous walls in KOH. *Crinipellis goossensiae* has never been validly published by Singer. This name was mentioned by him only on the label of the herbarium specimen in BR.

Crinipellis malesiana Kerekes et al., known from Indonesia, Malaysia and Thailand, has similar thick-walled pleurocystidia. However, it especially differs by having larger basidiospores ($8-12.5 \times 4-6.5$ μm), and usually simple cheilocystidia, only few of them with short apical projections (Kerekes & Desjardin, 2009). *Crinipellis trichialis* (Lév.) Pat. ex Antonín et al., known from South America, has

larger, particularly broader basidiospores (7.3-9.7 (10.2) \times 4-6.7 μm), smaller pleurocystidia (16-49 \times 6.8-8.3 μm), and larger, branched or appendiculate cheilocystidia (13-48 \times 5.5-8.3 μm) similar to pleurocystidia (Singer, 1976); *C. excentrica* (Pat. & Gaillard) Pat. has an eccentric stipe and broader basidiospores (7-9.5 \times 5-6 (7) μm) (Singer, 1976).

Crinipellis nsimalensis Antonín, Verbeke & P. Roberts **sp. nov.**

Fig. 5

Mycobank MB 564688

Pileo 10-25 mm lato, late conico vel conico-convexo, brunneo fibrilloso-squamuloso, cremeo. Lamellis cremeis, acie concolore. Stipite 25-60 \times 1-2 mm, cylindraco, fibrilloso-squamuloso, apicem cremeo, ad basin brunneo. Basidiosporis 9.5-11 (12) \times (4.0) 4.5-5.5 (6.5) μm , ellipsoideis, cylindraco-ellipsoideis. Cheilocystidiis 25-45 \times 6.0-13 μm , clavatis, subfusiformibus, subcylindracois, apicem cum projectionibus digitatis. Setis pilei et stipitis praesentibus, cylindracois, crassitunicatis.

Holotypus: Cameroon, Central Prov., Nsimalen, c. 30 km to S of Yaoundé, 3 Apr. 2001 leg. V. Antonín Cm01.22 (holotypus in herbario BRNM 666071 asservatur).

Etymology. “nsimalensis” – after the name of the village.

Basidiocarps in clusters. **Pileus** 10-25 mm broad, broadly conical to conical-convex when young, then broadly convex to almost appanate, with small, low and obtuse central papilla when young, then with plane to slightly depressed centre, involute then inflexed, when old up to revolute at margin, striate and crenulate at margin, then up to 3/4 of diam., when young, entirely densely brown fibrillose-squamulose when young, then glabrescent from margin, and squamules remaining only at centre and around them, surface among squamules cream-coloured. **Lamellae** moderately close, L = 16-19, l = 2 (3), emarginate, rather broad (up to 3 mm), thin, not intervenose or very slightly intervenose when old, cream, with concolorous, finely pubescent edge. **Stipe** 25-60 \times 1-2 mm, cylindrical, sometimes laterally compressed, insititious, entirely fibrillose-squamulose, squamules mostly paler than stipe surface, white to whitish at apex, becoming dirty whitish to brownish towards base, surface cream at apex, up to dark brown towards base. **Context** thin, whitish in pileus, concolorous with surface in the hollow stipe, with pleasant fungoid smell.

Basidiospores 9.5-11 (12) \times (4.0) 4.5-5.5 (6.5) μm , average 11.0 \times 4.9 μm , E = 1.90-2.50, Q = 2.23, ellipsoid, cylindrical-ellipsoid, often with depression to suballantoid, thin-walled, non-dextrinoid. **Basidia** not observed. **Basidioles** 15-35 \times 4.0-11 μm , clavate, subcylindrical, (sub)fusoid, subutriform. **Cheilocystidia** 25-45 \times 6.0-13 μm , clavate, subfusoid, utriform, subcylindrical, with 5.0-22 \times 1.5-4.0 μm , digitate, obtuse, regular or irregular, mostly branched apical projections, rarely simple, thin-walled to slightly thick-walled, non-dextrinoid. **Pleurocystidia** absent. **Trama hyphae** cylindrical or subinflated, thin-walled, non-dextrinoid, up to 40 μm wide. **Pileipellis** (hypotrachium) a cutis composed of cylindrical, fusoid, incrustated or pigmented, slightly thick-walled hyphae. **Pileus hairs** up to 250 \times 5.0-12 μm , cylindrical or subinflated, thick-walled (walls up to 2.0 μm), obtuse to (sub)acute, septate, dextrinoid, with walls (yellow-)brown in H₂O, and yellow-brown in KOH; underlayer with 26-55 \times 8.0-26 μm , clavate, utriform, thick-walled (up to 1.0 μm) cells with the same microchemical reaction as the hairs. **Stipitipellis** a cutis of cylindrical, parallel, slightly thick-walled (walls up to 0.75 μm), dextrinoid, up to 5.0 μm wide hyphae with yellow-brown walls. **Stipe hairs** similar to pileus ones, but shorter, 45-100 \times 10-12 μm , \pm fusoid. **Clamp connections** present.

Ecology. On fallen twigs and branches.

Distribution. So far known only from Cameroon.

Specimens examined. **Cameroon:** Central Prov., Nsimalen, c. 30 km S of Yaoundé, 03° 43' 00" N, 11° 32' 26" E, alt. 675-685 m, 3 Apr. 2001 leg. V. Antonín Cm01.22 (BRNM 666071, holotype). – Prov. de l'Est, Dja Biosphere Reserve, close to Somalomo, 03° 22.15' N, 12° 44.89' E, 7 Apr. 2007 leg. A. Verbeke 07-28 (BR 164507-92 ex GENT). – South West Prov., Korup National Park, trail from Rengo Camp to Ekunde-Kunde, 9 Apr. 1997 leg. P.J. Roberts K994 (K(M) 91504).

Remarks. *Crinipellis nsimalensis* is characterized by moderately large basidiocarps, with a pale coloured, ± strongly glabrescent pileus, rather large basidiospores, well-developed cheilocystidia with apical projections, the absence of pleurocystidia and yellow-brown hairs in KOH.

Among species with robust basidiocarps, *Crinipellis zonata* (Peck) Pat., growing in the USA, Canada, Portugal and the Republic of Korea, has smaller, differently shaped basidiospores (6.6-8.5 × (3.0) 3.5-5.0 µm), and simple cheilocystidia (Antonín & Noordeloos, 2010; Redhead, 1989); *C. sepiaria* Pat. & Demange has also small (5.7-7.7 × 4.5-5.7 µm), and also differently shaped basidiospores (Kerekes & Desjardin, 2009). *Crinipellis catamarcensis* Singer, described from Argentina, has a rusty brown pileus and stipe, smaller basidiospores (5.5-7.5 × 3.5-4.5 µm), and cheilocystidia without or with one to a few apical projections; *C. missionensis* Singer, also known only from Argentina, has an even more robust stipe (60 × 4 mm), smaller basidiospores ((7.5) 8.2 (9.3) × (5.4) 5.5 (6.8) µm), and different cheilocystidia (Singer, 1976). *Crinipellis subtomentosa* (Peck) Singer, widespread in Europe and North America, has differently shaped cheilocystidia and grows on herbaceous debris; *C. sardoa* Candusso, collected in the Mediterranean area of Europe, has a bright ochraceous and red tinged pileus, and a 3-6 mm wide stipe; moreover, both of them have smaller, differently shaped basidiospores (Antonín & Noordeloos, 2010).

***Crinipellis kisanganensis* Antonín & Buyck sp. nov.**

Fig. 6

Mycobank MB 564689

Pileo 5-7 mm lato, convexo, centro depresso, brunneo fibrilloso, centro obscure brunneo, margine brunneo vel brunneo-aurantiaco. *Lamellis* albidis, acie concolore. *Stipite* usque 35 × 0.5 mm, cylindraco, striato-villoso, griseo-brunneo. *Basidiosporis* 8.0-10 × 3.5-4.75 µm, fusiformibus, ellipsoideo-fusiformibus, sublacriformibus. *Cheilocystidiis* (12) 15-26 × 4.5-9.0 µm, clavatis, fusiformibus, subcylindracois, apicem cum projectionibus. *Setis pilei et stipitis praesentibus, cylindracois, crassitunicatis.*

Holotypus: Democratic Republic of the Congo, Tshopo, Kisangani, 24 Apr. 1984 leg. B. Buyck 1552 (holotypus in herbario BR 011744-07 asservatur).

Etymology. “kisangensis” – named according to the name of the village.

Pileus 5-7 mm broad, convex, with a shallow central depression, covered with dark brown hairs, dark brown (6F6-8) at centre, through brown (6E6-8) to brownish orange (6C4-5) at margin. **Lamellae** moderately distant, attached, not intervenose, white, with concolorous edge. **Stipe** up to 35 × 0.5 mm when dry, cylindrical, hollow, laterally compressed, longitudinally striate, densely covered with dark brown hairs, greyish brown (± 6D3). **Context** thin, white. (According to Buyck 1552)

Basidiospores 8.0-10 × 3.5-4.75 µm, average 8.9 × 4.0 µm, E = 1.90-2.50, Q = 2.04-2.44, fusoid, sublacriform, ellipsoid-fusoid, thin-walled, non-dextrinoid. **Basidia** e.g. 28 × 11 µm, 4-spored, clavate. **Basidioles** up to 28 × 3.0-10 µm, clavate,

subcylindrical, (sub)fusoid. **Cheilocystidia** (12) 15-26 × 4.5-9.0 μm, clavate, fusoid, subcylindrical, with apical (rarely also lateral) projections, ± thin-walled, non-dextrinoid. **Pleurocystidia** absent. **Trama hyphae** cylindrical or subinflated, thin- to slightly thick-walled, non-dextrinoid, up to 12 μm wide. **Pileipellis** (hypotrachium) a cutis composed of cylindrical, incrustated or pigmented, slightly thick-walled, up to 10 μm wide hyphae with (yellow-)brown to olivaceous walls in H₂O and KOH. **Pileus hairs** up to 500 × 2.5-10 μm, cylindrical, thick-walled (walls up to 2.0 μm), obtuse to (sub)acute, septate, often curved or irregular, dextrinoid, with (yellow-)brown to olivaceous walls in H₂O and KOH. **Stipitipellis** a cutis of cylindrical, parallel, slightly thick-walled (walls up to 1.0 μm), dextrinoid, up to 5.0 μm wide hyphae with pale olivaceous walls. **Stipe hairs** similar to pileus hairs. **Clamp connections** present.

Ecology. On fallen leaves and very small twigs.

Distribution. So far known only from the Democratic Republic of the Congo and Zimbabwe.

Specimens examined. **Democratic Republic of the Congo:** Tshopo, Kisangani, 00° 31' N, 25° 11' E, 24 Apr. 1984 leg. B. Buyck 1552 (BR 011744-07, holotype). **Zimbabwe:** Beacon Hill, 1930A4, 27 Dec. 1996 leg. C. Sharp 471/96 (BR 152510-26).

Remarks. *Crinipellis kisanganensis* is characterized by small basidiocarps, rather small basidiospores, well-developed cheilocystidia with apical projections, the absence of pleurocystidia and hairs with (yellow-)brown to olivaceous walls in KOH.

Among species with small basidiocarps, rather small basidiospores and no pleurocystidia, *Crinipellis foliicola* Singer, known from North- and South Americas, has a differently coloured pileus, and hair walls not becoming green in KOH; *C. phyllophila* Singer, from Mexico, also a differently coloured pileus, slightly broader basidiospores ((8) 9.3-10.5 (11.2) × (3.7) 4.3-5 μm), and hair walls not becoming green in KOH (Singer, 1976). *Crinipellis dipteroearpi* Singer differs by slightly broader basidiospores (5-10 × 3.0-5.5 μm) more variable in size, and hair walls not becoming green in KOH (Kerekes & Desjardin, 2009).

***Crinipellis roseorubella* Antonín & Stubbe sp. nov.**

Fig. 7

Mycobank MB 564690

Pileo 5-20 mm lato, plano-convexo, strigoso, marginem glabro, centro roseo-rubro, marginem roseo. *Lamellis anastomosantibus, albidis, acie concolore. Stipite usque* 6 × 1.5 mm, cylindraco, strigoso, roseo-rubro, apicem albido. *Basidiosporis* (11) 12-14.5 × (6.5) 7.0-9.0 μm, (late) ellipsoideis, fusiformibus-ellipsoideis. *Cheilocystidiis* 24-51 × 8.0-15 μm, clavatis, fusiformibus, utrififormibus, subcylindracois, tenuitunicatis. *Setis pilei et stipitis praesentibus, cylindracois, crassitunicatis.*

Holotypus: Cameroon, de l'Est Prov., Dja Biospheric Reserve, Somalomo Distr., Messamena, Schwamm, 12 Apr. 2007 leg. D. Stubbe DS 07372 (holotypus in herbario BR 164412-94 asservatur).

Etymology. "roseorubella" – according to the pink-reddish pileus colour.

Pileus 5-20 mm broad, somewhat (irregularly) wavy plano-convex, dry, radially strigose, margin more or less smooth, dark pinkish red in central area, towards margin paler, pink. **Lamellae** distant, L = 11-13, l = 0-1 (2), adnexed, rather broad, thick, anastomosing, white, with smooth, concolorous edge. **Stipe** short and rather thick, up to 6 × 1.5 mm, cylindrical, curved, firm, dry, strigose, pale pinkish red, whitish towards apex.

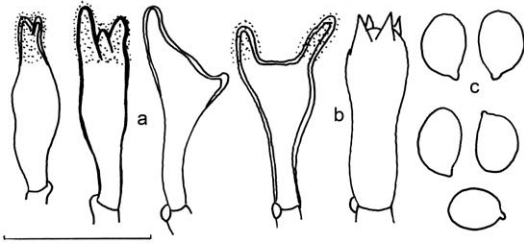


Fig. 1. *Pleurotopsis niduliformis* (holotype). **a.** cheilocystidia, **b.** basidium, **c.** basidiospores. Scale bar = 20 μ m.

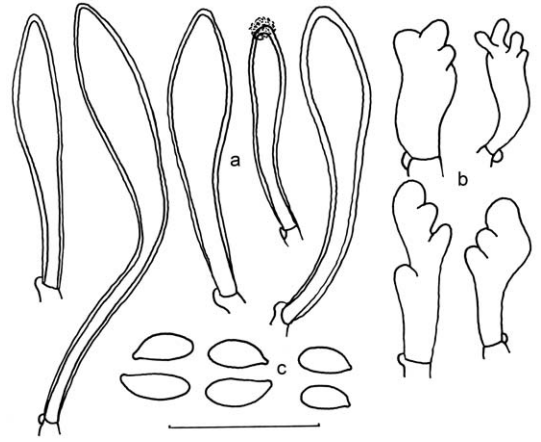


Fig. 4. *Crinipellis goossensiae* (holotype). **a.** pleurocystidia, **b.** cheilocystidia, **c.** basidiospores. Scale bar = 20 μ m.

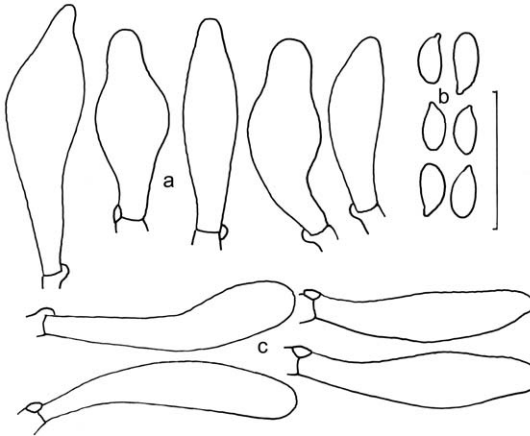


Fig. 2. *Lentinus minutulus* (holotype). **a.** cheilocystidia, **b.** basidiospores, **c.** pleurocystidia. Scale bar = 20 μ m.

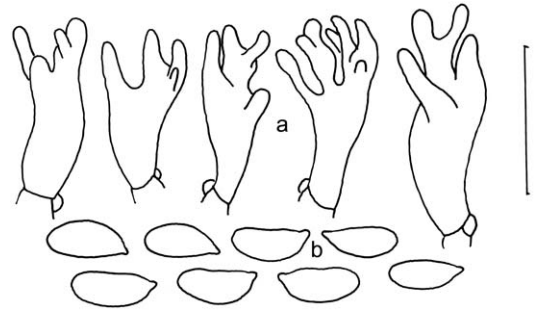


Fig. 5. *Crinipellis nsimalensis*. **a.** cheilocystidia, **b.** basidiospores. Scale bar = 20 μ m.

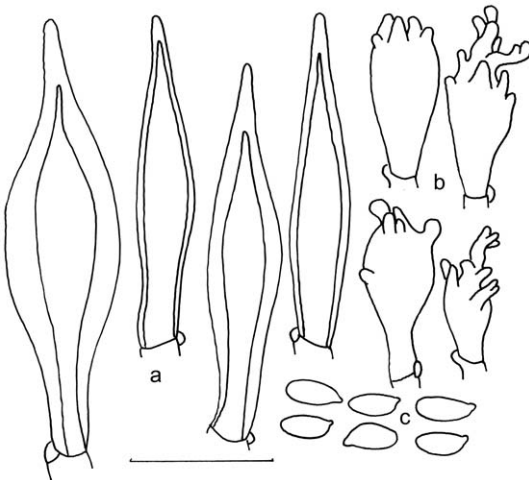


Fig. 3. *Crinipellis minutuloides* (holotype). **a.** hymenial setae, **b.** cheilocystidia, **c.** basidiospores. Scale bar = 20 μ m.

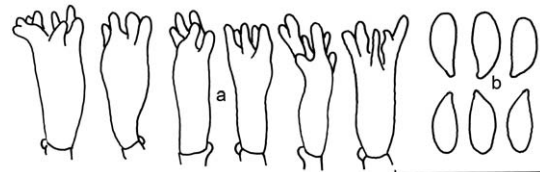


Fig. 6. *Crinipellis kisangensis*. **a.** cheilocystidia, **b.** basidiospores. Scale bar = 20 μ m.

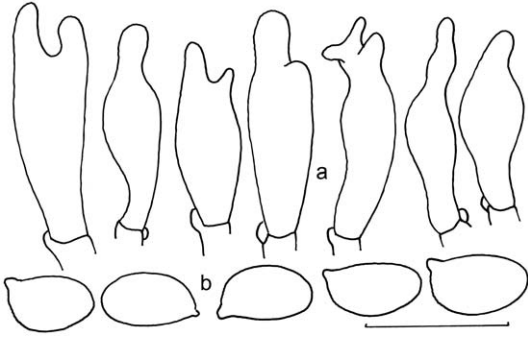


Fig. 7. *Crinipellis roseorubella* (holotype). **a.** cheilocystidia, **b.** basidiospores. Scale bar = 20 μ m.

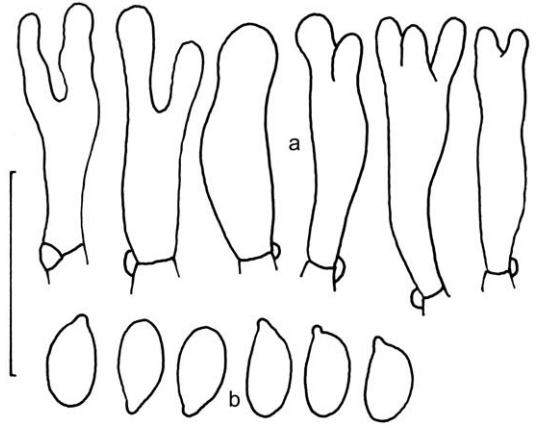


Fig. 9. *Crinipellis ochracea*. **a.** cheilocystidia, **b.** basidiospores. Scale bar = 20 μ m.

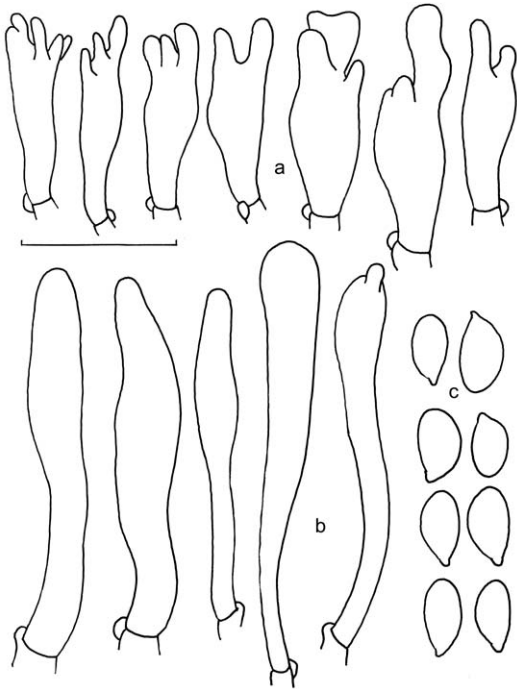


Fig. 8. *Crinipellis pseudopalmarum*. **a.** cheilocystidia, **b.** pleurocystidia, **c.** basidiospores. Scale bar = 20 μ m.

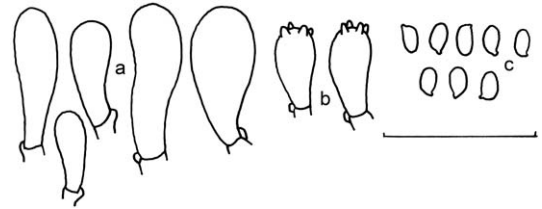


Fig. 10. *Crinipellis mauritiensis*. **a.** cheilocystidia, **b.** basidia, **c.** basidiospores. Scale bar = 20 μ m.

Basidiospores (11) 12-14.5 × (6.5) 7.0-9.0 µm, average 12.9 × 8.0 µm, E = 1.49-1.92, Q = 1.63, (broadly) ellipsoid, fusoid-ellipsoid, thin-walled, smooth, non-dextrinoid. **Basidia** 43-50 × 14.5-15 µm, 4-spored, clavate, often with median constriction. **Basidioles** 20-50 × 6.0-15 µm, clavate and then often with median constriction, subutriform. **Cheilocystidia** 24-51 × 8.0-15 µm, clavate, fusoid, utriform, subcylindrical, sublageniform, sometimes rostrate, sometimes with apical projections, thin-walled. **Pleurocystidia** absent. **Trama hyphae** cylindrical to subinflated, thin-walled, non-dextrinoid, up to 15 µm wide. **Pileipellis** a cutis composed of radially arranged, cylindrical or subinflated (fusoid), thin-walled, smooth or minutely incrustated, non-dextrinoid, up to 15 µm wide hyphae, terminal cells sometimes slightly thick-walled, up to 20 µm wide. **Pileus hairs** up to c. 300 × 4.0-10 µm, cylindrical to subulate, sometimes inflated, obtuse, thick-walled (walls up to 3.0 (5.0) µm), dextrinoid, sometimes septate, with subhyaline to greenish blue to blue walls in KOH (most distinctly usually in their lower part and at base). **Stipitipellis** a cutis of cylindrical, parallel, thick-walled (walls up to 1.0 µm), non-dextrinoid, up to 6.0 µm wide. **Stipe hairs** scattered, rather short, up to c. 80 × 7.0 µm, ± cylindrical or subulate, thick-walled (walls up to 1.0 µm), obtuse, dextrinoid, with (sub)hyaline walls in KOH. **Clamp connections** present in all tissues.

Ecology. Growing on dead twigs.

Distribution. So far collected only twice in the very close localities in Cameroon and the Democratic Republic of the Congo.

Specimens examined. **Cameroon:** de l'Est Prov., Dja Biospheric Reserve, Somalomo Distr., Messamena, village of Schwamm, trail towards Rochers de Schwamm (12 Apr. 2007 leg. D. Stubbe DS 07372 (BR 164412-94, holotype). **Democratic Republic of the Congo:** Eala, 15 Apr. 1923 leg. M. Goossens-Fontana 40 (BR 031795-76).

Remarks. *Crinipellis roseorubella* is characterized in having a small, dark pinkish red pileus with paler margin, distant, anastomosing, white lamellae, a short and rather thick, pale pinkish red stipe, very large basidiospores, large basidia, pileus hairs with mostly greenish blue to blue walls in KOH, and in the absence of pleurocystidia.

Crinipellis roseorubella belongs to the species group with the largest basidiospores in the genus in the world. *Crinipellis macrosphaerigera* Singer, described from Brazil, has 12.3-13.8 × 9.5-11.7 µm large, globose to subglobose basidiospores, and a centrally black pileus (Singer, 1976); *C. carecomoeis* (Berk. & M.A. Curtis) Singer, from Central America, has long, but narrow ((9) 13-14.5 (20) × (3.5) 4-5 (6.3) µm) basidiospores, a cinnamon buff or tawny olive pileus, and a chestnut brown to ferruginous stipe (Singer, 1976); *C. carecomoeis* var. *litseae* Singer, known from the Philippines, has 12.8-16.5 × 4.5-5.8 µm large basidiospores, a very small, only 3-4 mm broad, cinnamon buff to tawny pileus, and a longer and thinner, 7-21 × 0.2-0.5 µm large stipe (Kerekes & Desjardin, 2009); *C. insignis* Singer, from Bolivia, has especially narrower basidiospores (10.5-13.5 × 4.5-6.5 µm), and *C. eggertii* Pat., from the north of South America, has smaller, (7) 11-13 (14) × (4) 5.5-6.3 (7.5) µm basidiospores as well (Singer, 1976); *C. brunneipurpurea* Corner, known from Indonesia and Malaysia, has a violet-brown to dark ruby pileus, a larger stipe (6-33 × 1-2 mm), and narrower basidiospores (10-14 × 3-5 µm) (Kerekes & Desjardin, 2009).

***Crinipellis pseudopalmarum* Antonín, P. Roberts & Watling sp. nov.**

Fig. 8

Mycobank MB 564691

Pileo usque 18 mm lato, campanulato vel convexo, obscure purpureo, purpureo-brunneo, sanguineo vel carmineo. Lamellis albidis, acie concolore. Stipite

cylindraceo, fibrilloso, purpureo, purpureo-brunneo, sanguineo vel carmineo. Basidiosporis 9.0-12 (14.5) × (5.0) 5.5-7.0 μm, ellipsoideis, fusiformibus-ellipsoideis, fusiformibus. Cheilocystidiis 21-35 (50) × 6.0-11 μm, clavatis, fusiformibus, subcylindraceis, irregularibus, apicem cum projectionibus, tenuitunicatis. Pleurocystidiis 38-61 (70) × 6.0-9.0 (10) μm, (sub)cylindraceis, fusiformibus, tenuitunicatis. Setis pilei et stipitis praesentibus, cylindraceis, crassitunicatis.

Holotypus: Cameroon, South West Prov., Korup National Park, Mundemba, PV/S line, 13 Apr. 1990 leg. R. Watling (holotypus in herbario E asservatur).

Etymology. “pseudopalmarum” – similar to *Crinipellis palmarum*.

Pileus up to 18 mm broad (dry specimens), campanulate, then convex, with depressed centre and with or without central papilla, margin involute, fibrillose, dark purple, purple-brown, blood red or carmine. **Lamellae** distant, L = 15-18, l = 1-2, white, then cream or concolourous with the pileus, with concolorous edge. **Stipe** up to 25 × 2 mm, cylindrical, fibrillose, colour as the pileus; basal mycelium whitish pink to blood red. (According to the descriptions by the collector and dry specimens.)

Basidiospores 9.0-12 (13) × (5.0) 5.5-7.0 μm, average 10.9 × 6.0 μm, E = 1.57-2.18, Q = 1.84, ellipsoid, ellipsoid-fusoid, fusoid, thin-walled, non-dextrinoid, pale greenish bluish in KOH. **Basidia** e.g. 28-32 × 9.0-11 μm, 4-spored, clavate. **Basidioles** up to 32 × 5.0-11 μm, clavate, (sub)cylindrical, fusoid. **Cheilocystidia** 21-35 (50) × 6.0-11 μm, clavate, subcylindrical, fusoid, subutriform, irregular, rostrate or with apical projections, thin-walled. **Pleurocystidia** 38-61 (70) × 6.0-9.0 (10) μm, (sub)cylindrical, narrowly fusoid, obtuse or with small, sometimes branched rostrum, thin-walled, slightly refractive, purplish brown in H₂O and green-blue in KOH (always?). **Trama hyphae** cylindrical or subinflated, thin- to slightly thick-walled, non-dextrinoid, up to 15 μm wide, hyaline to sometimes (?) purplish in H₂O. **Pileipellis** a cutis composed of cylindrical or subinflated, thin- to slightly thick-walled, non-dextrinoid or dextrinoid, up to 11 μm wide hyphae, with hyaline or bluish greenish walls in KOH. **Pileus hairs** up to c. 600 × 3.0-9.0 μm, cylindrical, thick-walled (walls up to 3.0 μm), obtuse, septate, sometimes with obliterated lumen, with walls purple-brown in H₂O and blue-green in KOH. **Stiptipellis** a cutis of cylindrical, parallel, slightly thick-walled (walls up to 1.0 μm), dextrinoid, up to 5.0 μm wide hyphae with brown walls. **Stipe hairs** similar to pileus ones, up to 11 μm wide. **Clamp connections** present.

Ecology. Binding aerial litter, on dead, attached or fallen twigs, on wood, and on liana twigs.

Distribution. To date known only from the Korup National Park in Cameroon, where it seems to be very common.

Specimens examined. Cameroon: South West Prov., Korup National Park, Ireba-Inene Camp, alt. 50 m, 14 Apr. 1997 leg. M.E. Bechem and P.J. Roberts, det. P.J. Roberts (K(M) 60223, as *C. palmarum*). – Ibid., transect P, 25 Apr. 1996 leg. et det. P.J. Roberts K79 (K(M) 57919, as *C. palmarum*). – Ibid., transect P, 26 Apr. 1996 leg. et det. P.J. Roberts K136 (K(M) 39180, as *C. cf. palmarum*). – Ibid., trail to Rengo Rock Camp, 3 May 1996 leg. et det. P.J. Roberts K411 (K(M) 57920, as *C. palmarum*). – Ibid., Mundemba, PV/S line, 13 Apr. 1990 leg. R. Watling (E, holotype). – Ibid., transect P-P10, 16 Apr. 1990 leg. R. Watling (E). – Ibid., 11 Apr. 1990 leg. R. Watling (E). – Ibid., transect P18-P22, 24 March 1991 leg. R. Watling (E). – Ibid., transect P-base camp, 7 Apr. 1990 leg. R. Watling (E).

Remarks. *Crinipellis pseudopalmarum* is characterized by a dark blood red or carmine pileus, white to red lamellae, its stipe concolorous with pileus, broad basidiospores, and long (sub)cylindrical, narrowly fusoid, obtuse or rostrate pleurocystidia.

According to the herbarium specimens, this fungus seems to be macroscopically similar to *C. palmarum*, however, it distinctly differs by the larger basidiospores, and the presence of pleurocystidia. Among other species with a purple pileus tinge and well-developed pleurocystidia, *Crinipellis alcalivirens* Singer, from Colombia, has a ferruginous to chestnut brown pileus, smaller basidiospores ($7.5\text{--}8.5 \times 4.5\text{--}5.7 \mu\text{m}$), and a different microchemical reaction with KOH (Singer, 1976). *Crinipellis dusenii* (Henn.) Singer has more or less crowded ($L = c. 35$), white or pale cream lamellae, a longer and thinner ($20\text{--}60 \times 0.5\text{--}1 \text{ mm}$), wood brown or grey-brown stipe, narrower basidiospores ($10\text{--}12.5 \times 4.0\text{--}5.0 \mu\text{m}$, average $11.0 \times 4.8 \mu\text{m}$) with a different Q-ratio ($Q = 2.29$).

***Crinipellis ochracea* Antonín & De Kesel sp. nov.**

Fig. 9

Mycobank MB 564692

Pileo 2-7 mm lato, applanato, cum centro depresso papillato, ochraceo vel albido. Lamellis albidis, cremeis, acie concolore. Stipite 7-14 × 0.2-0.3 mm, tomentos, obscure brunneo vel griseo-brunneo, apicem albido. Basidiosporis (8.0) 8.5-9.5 (10) × 5.0-5.5 μm, ellipsoideis, fusiformibus-ellipsoideis, sublacrimiformibus. Cheilocystidiis 24-31 × 6.0-8.0 μm, clavatis, subfusiformibus, subcylindraceutis, regularibus vel irregularibus, apicem cum projectionibus, tenuitunicatis. Setis pilei et stipitis praesentibus, cylindraceutis, crassitunicatis.

Holotypus: Benin, Oueme Prov., Agongo, 17 Aug. 1997 leg. V. Antonín B97.39 et A. De Kesel (holotypus in herbario BR 101093-19 asservatur).

Etymology. “ochracea” – according to the ochraceous pileus.

Pileus 2-7 mm broad, applanate with central depression, with distinct, conical, rather sharp central papilla especially when young, slightly inflexed at margin, distinctly and densely radially hairy, hairs brownish when young, then beige, concolorous with pileus surface when old (washed-out), surface pale ochraceous to dirty whitish, old specimens more distinctly dirty whitish, central papilla dark brown. **Lamellae** moderately distant, $L = 13\text{--}16$, adnexed to broadly adnexed, slightly ventricose when old, white when young, then cream, with concolorous, finely pubescent edge. **Stipe** 7-14 × 0.2-0.3 mm, almost filiform, slightly broadened at base, insititious, entirely hairy-tomentose, almost strigose at base, white to whitish at apex, dark brown to grey-brown towards base, almost black-brown in old specimens.

Basidiospores (8.0) $8.5\text{--}9.5 (10) \times 5.0\text{--}5.5 \mu\text{m}$, average $8.9 \times 5.1 \mu\text{m}$, $E = 1.50\text{--}1.92$, $Q = 1.75$, ellipsoid, ellipsoid-fusoid, sublacrimoid, thin-walled and non-dextrinoid or thick-walled and dextrinoid. **Basidia** 4-spored. **Basidioles** $15\text{--}30 \times 4.0\text{--}10 \mu\text{m}$, clavate, subcylindrical, fusoid. **Cheilocystidia** $24\text{--}31 \times 6.0\text{--}8.0 \mu\text{m}$, clavate, subfusoid, subcylindrical, subtriform, simple and irregular, or with one or several projections including apical projections, ± thin-walled, non-dextrinoid. **Pleurocystidia** absent. **Trama hyphae** cylindrical or subinflated, thin-walled, non-dextrinoid, up to $12 \mu\text{m}$ wide. **Pileipellis** (hypotrachium) a cutis composed of cylindrical, fusoid or subinflated, not incrustated, slightly thick-walled, up to $10 \mu\text{m}$ wide hyphae. **Pileus hairs** up to $c. 400 \times 2.0\text{--}5.0 \mu\text{m}$, cylindrical, curved, slightly thick-walled (walls mostly $\pm 0.5\text{--}0.75 \mu\text{m}$), mostly obtuse, septate, dextrinoid, hyaline or brownish in H_2O and hyaline to greenish in KOH. **Stipitipellis** a cutis of cylindrical, parallel, slightly thick-walled (walls up to $0.5 \mu\text{m}$), dextrinoid, up to $5.0 \mu\text{m}$ wide hyphae with walls brown in H_2O , pale olivaceous in KOH. **Stipe hairs** similar to pileus hairs, but shorter. **Clamp connections** present.

Ecology. On fallen small twigs.

Distribution. So far known only from the type locality in Benin.

Specimens examined. **Benin:** Oueme Prov., Agongo, 06° 22.93' N, 02° 37.33' E, 17 Aug. 1997 leg. V. Antonín B97.39 et A. De Kesel (BR 101093-19, holotype).

Remarks. *Crinipellis ochracea* is characterized by small basidiocarps with a pale coloured pileus, moderately large basidiospores, well-developed cheilocystidia mostly with apical projections, the absence of pleurocystidia and walls becoming olivaceous in KOH.

Among species with small basidiocarps, rather small basidiospores and absent pleurocystidia, *Crinipellis foliicola* Singer, known from North- and South Americas, has a darker brown pileus, longer basidiospores ((6.5) 7.2-10.7 (11.5) × (2.5) 3.2-4.8 µm) with a different Q ratio (1.9-2.5), and hair walls not becoming green in KOH; *C. phyllophila* Singer, from Mexico, also with a differently coloured, ferruginous then cinnamon pileus, longer and narrower basidiospores ((8) 9.3-10.5 (11.2) × (3.7) 4.3-5 µm), and hair walls not becoming green in KOH (Singer, 1976). *Crinipellis diptercarpi* Singer, differs by a light to dark brown pileus, different cheilocystidia, and hair walls not becoming green in KOH (Kerekes & Desjardin, 2009).

“*Crinipellis mauritiensis*” Antonín & Rammeloo **ad int.**

Fig. 10

Pileus c. 5 mm broad, convex, white, with brown parts, entirely white or brown hairy-tomentose. **Lamellae** moderately close, cream with concolorous, pubescent edge.

Basidiospores (3.75) 4.0-5.0 × 2.0-2.75 µm, average 4.3 × 2.4 µm, E = 1.60-2.25, Q = 1.82, ellipsoid, cylindrical-ellipsoid, slightly thick-walled, smooth, dextrinoid; sclerospores present. **Basidia** 11-16 × 5.0-6.5 µm, 4-spored, clavate. **Basidioles** 7.0-14 × 2.5-6.0 µm, clavate, ellipsoid, subfusoid. **Cheilocystidia** 12-24 × 5.0-9.0 µm, clavate, subcylindrical, thin-walled. **Pleurocystidia** absent. **Trama hyphae** cylindrical to subinflated, ± thin-walled, non-dextrinoid, up to 10 µm wide. **Pileipellis** a cutis consisting of ± cylindrical, thin- to slightly thick-walled, smooth or incrustated, non-dextrinoid, up to 8.0 µm wide hyphae. **Pileus hairs** more-celled, terminal cells up to 75 × 10 µm, subulate, narrowly clavate, subfusoid or cylindrical, sometimes branched, thick-walled (walls up to 1.5 µm), not septate, not obliterated, slightly dextrinoid, grey-brown in KOH. **Stipitipellis** a cutis of cylindrical, parallel, slightly thick-walled, non-dextrinoid, up to 4.0 (6.0) µm wide hyphae, with pale brownish walls in KOH. **Stipe hairs** scattered, similar to pileus hairs; adpressed to suberect, cylindrical, fusoid, narrowly clavate, non-dextrinoid, (sub)hyaline, very slightly thick-walled, obtuse, up to 8.0 µm wide terminal cells present. **Clamp connections** present.

Ecology. On decaying wood remnants.

Specimens examined. **Mauritius:** Trou d'eau douce, 15 June 1990 leg. J. Rammeloo 9253 (BR 006904-17).

Remarks. *Crinipellis mauritiensis* is especially characterized in having very small basidiospores and short basidia and basidioles.

Crinipellis roseola G. Stev., known from New Zealand, has a similar basidiospore size (4.5-6.4 × 2.8-3.8 µm), but has an only 1.5-2 mm broad, pinkish orange pileus, pinkish orange lamellae and differently shaped cheilocystidia (Kerekes & Desjardin, 2009). *Crinipellis rubida* Pat. & Heim, described from Venezuela, differs in having bright pink, then vinaceous pileus when dried, possessing long reddish pileus hairs, and a stipe concolorous with the pileus; its basidiospores are 5 × 2 µm (Singer, 1943).

Although *Crinipellis mauritiensis* represents a very distinct taxon, it is described as a *nomen provisorium* here because of the absence of a macroscopic description and the presence of only very poor material.

***Crinipellis pseudostiptitaria* var. *orientalis* (Singer) Antonín stat. nov.**

Basionym: *Crinipellis pseudostiptitaria* ssp. *orientalis* Singer, Lilloa 8: 472, 1943.

Mycobank MB 564693

Remarks. Singer (1943) described *C. pseudostiptitaria* with two subspecies – ssp. *occidentalis* (as the typical subspecies, the correct name is ssp. *pseudostiptitaria*) and ssp. *orientalis*. However, the subspecies should generally differ by e.g. a geographical gap. In this case, var. *mesites* described by Singer (1943) within ssp. *occidentalis* is known from Africa (as well as ssp. *orientalis*), and the typical subspecies from Central America. Therefore both subspecies represent only varieties; a new status of var. *orientalis* is proposed here.

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