PERSOONIA
Published by the Rijksherbarium, Leiden
Volume 9, Part 4, pp. 491–500 (1978)

NOTES ON HYDNUMS—XI

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Oegstgeest

(With 11 Text-figures)

Some of the species and names of hydnoid fungi treated in Furukawa's work are discussed. *Hydnum albidum* is recorded in Europe for the first time. Further finds of some interesting species are reported. *Auriscalpium barbatum* (Western Australia) and *Steccherinum peruvianum* (Peru) are described as new species. A key to the species of *Auriscalpium* is given.

For the preparation of the present paper material has been received on loan or for incorporation in the 'Rijksherbarium' from the herbaria at Baton Rouge (LSUM), Bergen (BG), Graz (GZU), Helsinki (H), München (M), Oulu (OULU), and Perth (UWA), as well as from the correspondents A. Nyffenegger (Belp, Switzerland), L. Riousset (Maillane, France), and E. Schild (Brienz, Switzerland). To all these I wish to express my best thanks. Acknowledgment is also made to the Director of the 'Rijksherbarium' for providing working facilities.

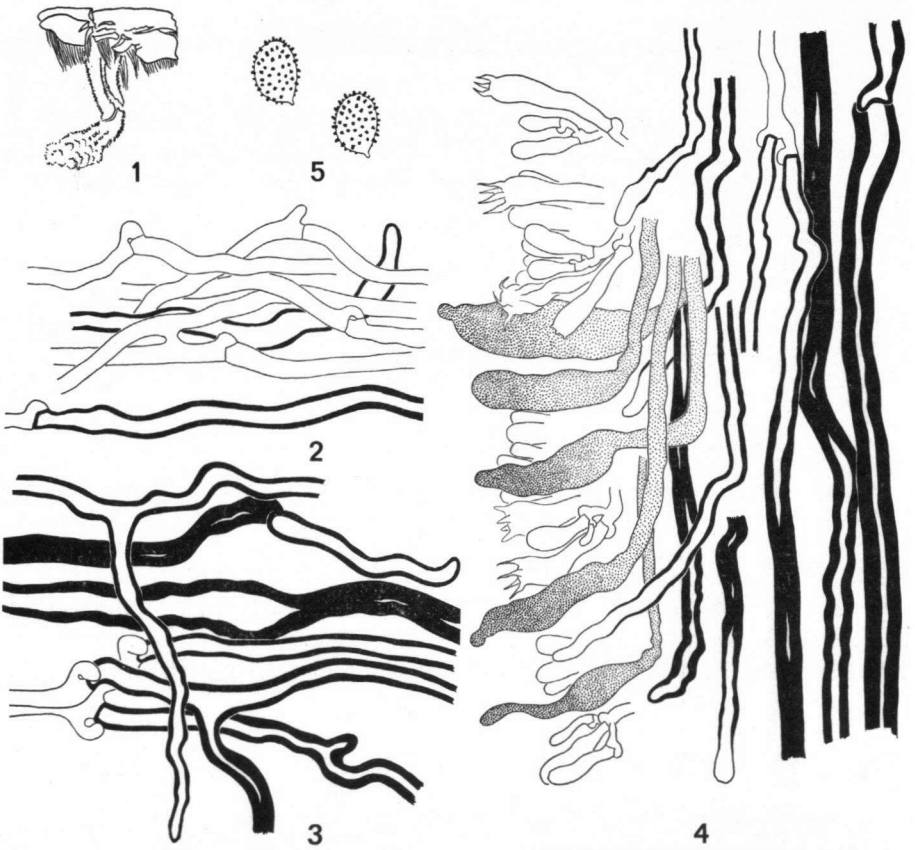
AURISCALPIACEAE

Auriscalpium barbatum Maas G., *sp. nov.*[1]—Figs. 1-5

Basidioma solitarium. Pileus circa 20 mm diam., orbicularis, plano-convexus vel centro paulum depressus, laevis vel radiatim subrugulosus, maxima ex parte glaber, margine vero processibus multis minutis praeditus, subtiliter radiatim striatus, nitidulus, rufo-umbrinus, in sicco margine incurvato, crenulato vel in aculeos producto. Stipes circa 15 × 3–5 mm, centralis, solidus, inferne curvatus, sursum dilatus, hispidus praecipue basin versus, fulvus, subiculo lanoso concolori exortus. Aculei usque ad 7 mm longi, decurrentes, conferti, subulati, cinerei, apice sordide incarnati. Caro circa 0.5 mm crassa, modice mollis, brunnea, et supra et infra linea tenuissima fusca delimitata, dimitica, e hyphis generatoriis skeletalibusque formata, paucis hyphis oleiferis immixtis. Hyphae generatoriae 2–3.6 μm latae, haud inflatae, tenuiter tunicatae, ramosae, interdum anastomosantes, septatae, fibulatae. Hyphae skeletales 2–8 μm latae, crasse tunicatae vel solidae, nonnullae etiam generatoriarum modo ramosae et fibulatae. Basidia 22–25 × 5.5–7 μm, clavata, fibulata, 4-spora, sterigmatibus usque ad 4.5 μm longis praedita. Sporae 5.8–6.3 × 3.8–4.7 μm, ellipsoideae, adaxialiter paulum applanatae, spinulosae (spinulis sat robustis), incolores, amyloideae, apiculo obliquo munitae. Gloeocystidia apice 7–11.5 μm lata, numerosa, e hymenio prolata, variantia sed vulgo fusiformia, tenuiter tunicata.

Holotypus: *UWA 2149*, pars in L.

[1] Etymology: *barbatus*, bearded; referring to the long spines which give the pileus a bearded appearance.



Figs. 1–5. *Auriscalpium barbatum* (Holotype). — 1. Habit sketch of basidiome put together from various broken parts. — 2. Detail of context close under upper surface of pileus and about 1.5 mm back from margin, showing scarcity of skeletal hyphae. — 3. Detail of context at lower surface of pileus near insertion of a spine, also about 1.5 mm back from margin, showing abundance of skeletal hyphae (most generative hyphae omitted). — 4. Detail of spine, showing basidia, gloeocystidia, and skeletal hyphae. — 5. Two spores. (Fig. 1, ×1; Figs. 2–4, ×700; Figs. 5, ×1400.)

Basidiome solitary. Pileus c. 20 mm across, orbicular, plano-convex or with somewhat depressed centre, smooth to somewhat radiately rugulose, glabrous for the greater part but with many minute excrescences near margin, with delicate radiating striations, slightly shiny, dark brown with some reddish shade; margin incurved (in dry condition), crenulate or running out into spines. Stipe c. 15 × 3–5 mm, central, solid, curved below, widening upwards, hispid particularly towards base, fulvous, springing from a woolly, concolorous, sand-incrusted subiculum. Spines up to 7 mm long, decurrent, crowded, subulate, ash grey with horny, dingy flesh-coloured tips. Context c. 0.5 mm thick in pileus, fairly soft, brown, bounded both above and below by a very thin, dark brown to black line.

Context of pileus dimitic (but see remarks), made up of generative, some oleiferous, and skeletal hyphae, Generative hyphae 2–3.6 μm wide, not inflated, thin-walled, branched, sometimes anastomosing, septate, with clamp connections. Skeletal hyphae 2–8 μm wide, thick-walled to solid, not infrequently mixed with or passing

into equally thick-walled sclerified generative hyphae which are branched, septate' and clamped. Context of spines similar, generative hyphae somewhat narrower (up to 2.7 μm wide), oleiferous hyphae more conspicuous, skeletal hyphae confined to core of spine. Both oleiferous hyphae and skeletals curving outwards terminally, the former to produce gloeocystidia, the latter to reach or penetrate the subhymenial region but never protruding beyond the basidia. Basidia 22–25 × 5.5–7 μm, clavate, clamped, 4-spored, with sterigmata up to 4.5 μm long. Spores 5.8–6.3 × 3.8–4.7 μm, pip-shaped, conspicuously spinulose, colourless, amyloid, with oblique apiculus. Gloeocystidia 7–11.5 μm wide, numerous, protruding, variously shaped but usually fusiform, thin-walled.

Holotype.—AUSTRALIA: Western Australia. Fitzgerald River National Park (between Albany and Esperance), on the track leading to West Mount Barren, 16 Aug. 1977, *R. N. Hilton*, 'growing from fragments of sparse humus embedded in sandy earth ... in open, not woodland, country', with small trees of *Eucalyptus tetragona* nearby (*UWA 2149*, fragment in L).

The type consists of a single specimen which, most unfortunately, was badly broken in transport. As a result, the habit sketch (Fig. 1) must be regarded as an approximation.

No information is available on the colour of the context in young, fresh specimens, which to my mind is an important character, but this may be deduced from the colour of the context of similarly constructed *A. umbella* Maas G. (1971: 17). Unlike *A. vulgare* S. F. Gray (Maas Geesteranus, 1963: 427), *A. umbella* is a species with soft-fleshed pileus, without thick-walled hyphal elements (with their high refractive power), the context of which is known to be brownish already when fresh, and drying even browner. It is perhaps permissible to assume that the context of equally soft-fleshed *A. barbatum*, which is brown now, likewise was tinged brownish when fresh and young, and never had the whiteness of *A. vulgare*.

Reverting to my 1963 publication quoted above, special attention may be drawn to the striking resemblance between *A. vulgare* and *A. barbatum* in the hyphal structure of their spines. I have little doubt, therefore, that these two species are more closely related mutually than to any other species of the genus, in spite of obvious differences.

Since the genus appears to grow larger a key is provided to facilitate identification of the species.

KEY TO THE SPECIES OF AURISCALPIUM

1. Context of pileus tough. Skeletal hyphae (and/or sclerified generative hyphae) abundant, also near upper surface of pileus.
   2. Pileus umbilicate to cyathiform, sparingly pilose to glabrous (eastern China): *A. fimbriato-incisum*
   2. Pileus plano-convex, villose with a few scattered bristle-like hairs or densely hispid, glabrescent only in old age (Northern Hemisphere): . . . . . *A. vulgare*
1. Context of pileus fairly soft. Skeletal hyphae (and/or sclerified generative hyphae) absent or present only near lower surface of pileus.
   3. Spores 3.5–4.7 μm broad. Not growing on mosses.
      4. Growing on wood or fallen branches. Spines without or with rare skeletal hyphae (South America): . . . . . *A. villipes*
      4. Springing from a subiculum 'embedded in sandy earth'. Spines with abundant skeletal hyphae in core (Western Australia): . . . . . *A. barbatum*
   3. Spores 4.9–5.6 μm broad. Base of stipe attached to mosses (New Zealand): *A. umbella*

HERICIACEAE

DENTIPELLIS MACRODON (Pers. ex. Fr.) Furukawa

This is a recombination proposed by Furukawa (1974: 53), but he seemed to have been unaware of the following. Donk (1962: 233) stated that he had been unable to locate authentic material of *Hydnum macrodon*. He suggested (p. 234) that the name be rejected as a nomen dubium. He further discussed the interpretations as given to *H. macrodon* by L. W. Miller and by Lundell. According to Donk, *H. macrodon* sensu L. W. Mill. represents *Dentipellis separans* (Peck) Donk (p. 235), while *H. macrodon* sensu Lundell is *Dentipellis fragilis* (Pers. ex Fr.) Donk (p. 233).

Strictly speaking, Furukawa's recombination, being based on a nomen dubium, is a nomen dubium, too. Very probably, however, his description agrees with one of the two more modern conceptions. Thus, his material will prove to be identical with either *Dentipellis fragilis* or *D. separans*. I am not at the moment prepared to say which, as this would entail a thorough re-examination of Peck's type.

HYDNACEAE

In discussing the taxonomic relationships of some genera of hydnoid fungi, Furukawa (1974: 7) selected the development of tramal tissue in the spines of the hymenophore and the sterile tip of the spine as the most important features to define the family Hydnaceae. To him this kind of spine constituted 'the spine in its real sense'. In order to preclude any ambiguity he repeated (p. 8) that 'tramal structure in the spine, and sterile at the apices [represent] absolute character of the Hydnaceae...'. He found that spines of this kind occur in such diverse genera as *Basidioradulum*, *Dentipellis*, *Mycoacia*, and *Odontia*. This led him to place these taxa indiscriminately under the Hydnaceae irrespective of differences in the consistency of the context, the hyphal make-up, the shape of the basidia, amyloidity of the spores, and presence or absence of cystidia.

HYDNUM ALBIDUM Peck

Hydnum albidum Peck *in* Bull. N.Y. St. Mus. **2**: 10. 1887; *in* Rep. N.Y. St. Mus. nat. Hist. **51**: 310, pl. 56 figs. 1–7. 1898; *in* Mem. N.Y. St. Mus. **4**: 175, pl. 67 figs. 1–7. 1900. — *Dentinum albidum* (Peck) Snell *in* Mycologia **37**: 51. 1945. — *Hydnum repandum* f. *albidum* (Peck) Nikolajeva *in* Fl. Pl. crypt. URSS **6** (Fungi) **2**: 306. 1961.

MISAPPLIED.—*Hydnum repandum* var. *albidum* (Peck) Bres., Icon. mycol. **21**: text to Pl. 1045. 1932.

Basidiome similar in habit to *H. repandum*. Pileus c. 65 mm across, plano-convex, minutely velutinous, milk white to gypsum white, flavescent, margin obtuse to acute in places. Stipe c. 50 × 14–20 mm, central, crooked and incrassate below, felted, concolorous with pileus, staining ochraceous yellow where bruised (spots turning more brownish after some time), with rounded base. Spines about as long as those in *H. repandum* but much more crowded and more slender, more or less decurrent,

concolorous with pileus, somewhat flavescent with age. Context not zoned, soft and fragile (as in *H. repandum*), milk white. Odour agreeable, somewhat spicy. Taste reminiscent of *H. repandum* but weaker, not acrid. (Macroscopic description based on notes provided by Mr. E. Schild.)

Context of pileus (badly dried, hence hyphae very hard to distinguish separately) monomitic, made up of generative hyphae, some of which were seen to be 18 μm wide, inflating, thin-walled, clamped. Basidia 36–40 × 5.5–7 μm, cylindrical-clavate, clamped, 5–6-spored, with sterigmata 4.5–5.5 μm long. Spores 4.5–5.2 × 2.9–3.6 μm, pip-shaped, smooth, colourless, with oblique apiculus 0.9 μm long.

COLLECTION EXAMINED.—SWITZERLAND: Canton Bern, Belp, near Hunzikenbrücke, 13 Sept. 1977, *A. Nyffenegger*, among moss in riverine wood with *Picea* bordering the River Aare (Herb. E. Schild and L).

This find is the first record of the species in Europe, but the epithet '*albidum*' is not new in European mycological literature.

Fries (1815: 139) once mentioned a pale form of *Hydnum repandum* which he called f. *albidum* but never referred to again.

Cejp (1928: 82) described a *Hydnum repandum* var. *albidum* which, however, had no connection with Peck's species, since it was based on a different type.

Bresadola (1932, see above) made the recombination *H. repandum* var. *albidum* (Peck) Bres. but misapplied the name, for the spore sizes he gave clearly indicate the association of his variety with *H. repandum*.

If it were not for Mr. Schild's vigilance, the present material might have gone unnoticed. Now that *H. albidum* is known to occur in Europe, it may be useful for mycologists on this continent to point out the three main features by which the species can be told from *H. repandum*. In *H. albidum* the entire basidiome is of a conspicuous whiteness, the spines are very much crowded and more slender than in *H. repandum*, while its spores are smaller and narrower.

STECCHERINACEAE

STECCHERINUM CILIOLATUM (Berk. & Curt.) Gilb. & Bud.

Maas Geesteranus, 1974: 506.

Furukawa (1974: 13), in describing this species under the name *Odontia ciliolata*, did not mention the skeletal hyphae and apparently failed to notice that the thick-walled cystidia are nothing but the terminal ends of skeletal hyphae.

STECCHERINUM FIMBRIATUM (Pers. ex Fr.) John Erikss.

Maas Geesteranus, 1974: 509.

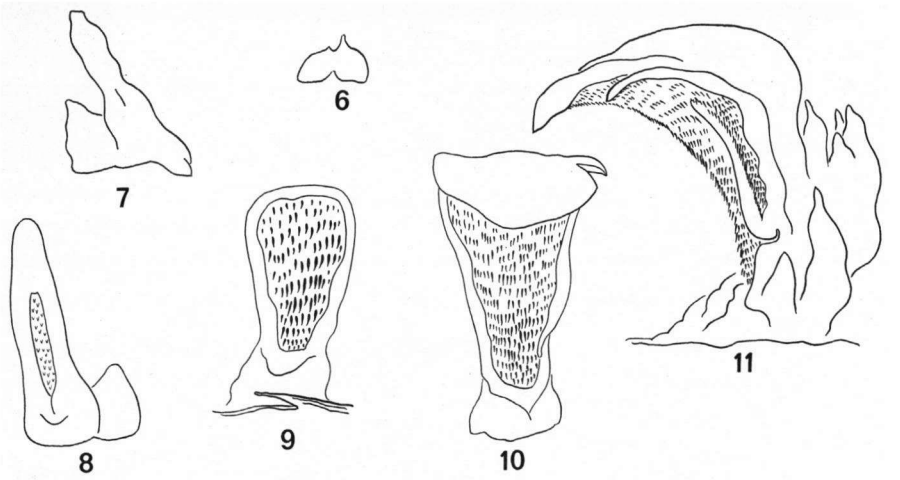
Hyphal analysis has become commonplace in the study of Aphyllophorales, but full advantage can be obtained only if the operation includes a little more than the rendering of a few meaningless fragments of hyphae. Furukawa (1974: 13) stated that '...*O. fimbriata* has a monomitic hyphal system...', but renewed observation may show him that his statement is in need of correction.

Steccherinum peruvianum Maas G., *sp. nov.*—Figs. 6-11

Basidiomata plus minusve coalita. Pileus usque ad 22 mm antice productus, 8 mm latus, initio cylindraceus vel subulatus, deinde flabelliformis, postice angustior, incurvatus, plano-convexus vel subconfragosus, minute radiatim rugulosus, margine minute fibrilloso-velutinus, alio loco potius lanosus vel lanoso-hirsutus, zonis tomento coacto laevioribus variegatus, pallide sordideque ochraceus, lineis concentricis obscuris destitutus, basi lanoso-hirsutus, fere fulvo-ochraceus. Aculei 0.5–0.8 mm longi, 0.1–0.2 mm lati, longe decurrentes, pilei basin versus convallati, conferti, subulati, teretes vel applanati, recti, vulgo simplices, sordide carnei, albo-pruinosi, apice puberuli. Caro usque ad 2 mm crassa, conspicue duplex, inferne concentrice zonata, pallide ochracea, e hyphis generatoriis skeletalibusque formata. Hyphae generatoriae 1.8–3.6 μm latae, haud inflatae, tenuiter tunicatae, ramosae, septatae, fibulis praeditae. Hyphae skeletales 2.7–6.3 μm latae, crasse tunicatae vel fere solidae. Basidia 12.5–13.5×4.7 μm, magna ex parte immatura, clavata, fibulata, 4-spora. Sporae 3.6–4.5× 2.2–2.7 μm, ellipsoideae, adaxialiter applanatae, laeves, hyalinae, apiculo obliquo munitae. Cystidia 2.7–4.5 μm lata, aculeorum apicem versus sat numerosa, hymenium haud vel paulo superantia, cylindracea vel apicem versus angustiora, apice vero obtusa, rarius incrustata.
Holotypus: *Lowy 484 P* (L).

Collection consisting of five groups of more or less coalesced basidiomes, all very probably springing from the same mycelium. Pileus up to 22 mm radius and 8 mm wide, wider by confluence, at first cylindrical to subulate, then widening and becoming flabelliform, tapering towards base, incurved (from drying), plano-convex to uneven, finely radiately rugulose (also caused by drying?), finely fibrillose-velutinous at margin, more woolly or woolly-hirsute farther back, with alternating zones of a matted surface caused by collapse of tomentum, fairly pale dingy ochraceous, not zoned with concentric darker lines; margin entire to somewhat scalloped. Base short, woolly-hirsute, somewhat warmer ochraceous. Spines 0.5–0.8 mm long, 0.1–0.2 mm broad, decurrent far down, separated from base by raised rim which tends to disappear with age, crowded, subulate, terete to flattened, straight, usually simple, dingy flesh colour, whitish-pruinose, puberulous at tip. Context up to 2 mm thick, conspicuously duplex, the firmer lower part concentrically zoned, pale ochraceous.
Context dimitic, consisting of generative and skeletal hyphae; sclerified generative hyphae locally also present. Generative hyphae 1.8–3.6 μm wide, not inflating, thin-walled (but thick-walled sclerified hyphae), branched, septate, with clamp connections. Skeletal hyphae 2.7–6.3 μm wide, thick-walled or, the narrower ones, almost solid. Context of spines similar. Basidia 12.5–13.5×4.7 μm (the majority immature), clavate, clamped, 4-spored. Spores 3.6–4.5×2.2–2.7 μm, pip-shaped, smooth, colourless, with small oblique apiculus. Cystidia 2.7–4.5 μm wide, all of tramal origin, more numerous towards tip of spine, not or little protruding, cylindrical or tapering terminally, with obtuse apex, more rarely with clavately widened tip, the majority smooth, only very few near tip of spine scantily incrusted.
HOLOTYPE.—PERU: 'vicinity of Quistococha fish hatchery, about 20 km from Iquitos, Dpto. Loreto', 26 Oct. 1958. *B. Lowy* (L).

The type of this species presents several characters which at first sight reminded me of *Steccherinum peckii* Banker. These are (*i*) the fairly slender, flabelliform pilei, (*ii*) the raised rim separating the spine-bearing area from the base, (*iii*) the woolly-hirsute base of the basidiome, (*iv*) the rarity of incrusted cystidia and their occurrence near the tip of the spine, and (*v*) the size of the spores. On the other hand, there are several differences which cannot be ignored. In *S. peruvianum* (*i*) the pileus is devoid of concentric, darker lines, (*ii*) the base is not elongated to form a slender stipe, while



Figs. 6–11. *Steccherinum peruvianum* (Holotype). Successive stages in the development of basidiome and spine-bearing area (all figs., ×3).

the context of the pileus is (*iii*) conspicuously duplex, (*iv*) thicker than in *S. peckii* but (*v*) at the same time, and probably owing to the presence of fewer sclerified hyphae, not so hard and rigid as in that species. Because of this quality of the context the pilei of *S. peckii* never changed on drying, remaining perfectly straight, whereas those of *S. peruvianum* are curved inwards.

STECCHERINUM RENIFORME (Berk. & Curt.) Banker

Maas Geesteranus, 1974a: 524.

COLLECTIONS EXAMINED.—U. S. A., Ohio: Preble Co., Big Woods area, Hueston's Woods State Park, 12 July 1973, *W. B. & V. G. Cooke 47706*, on *Fagus grandifolia* (L); Hocking Co., The Gulf, Cedar Falls to Pold Man's Cave, 16 Nov. 1975. *W. B. & V. G. Cooke 51858*, on rotten wood (L); Highland Co., Fort Hill State Memorial, 3 Aug. 1976. *W. B. & V. G. Cooke 52361*, on hardwood (L).

THELEPHORACEAE

HYDNELLUM FERRUGIPES Coker

Maas Geesteranus, 1976: 280.

COLLECTIONS EXAMINED.—AUSTRIA: Steiermark, Graz, Ragnitztal near Schweinberg, 24 Sept. 1975, *J. Riedl* (GZU, part in L). — FINLAND: Uusima, Tammisaari, Tvärminne, Sandträsk, 13 Aug. 1937. *E. Häyrén*, in pine forest (H, part in L); Tuusula, Nummenkylä, 9 Sept. 1943, *E. Häyrén*, among moss in spruce forest (H); Etelä-Karjala, Kotka, Mussalo, 10 Aug. 1953. *A. Ulvinen* (OULU); Etelä-Häme, Loppi, Salo, Sorsamo, 13 Sept. 1970, *P. Alanko 16276*, in pine heath forest (H); Padasjoki, Vesijako Nat. Park, 3 Sept. 1971, *P. Alanko 18584* (H); Tammela, Mustiala, 2 Aug. 1866, *P. A. Karsten*, in pinastreto ('*Hydnum intermedium* n. sp.', H); Etelä-Savo, Taipalsaari, Karhunpää, 28 Aug. 1965, *O. Vitikainen*, sparse in dry pine heath (H); Pohjois-Häme, Toivakka,

Huikko, about 1.5 km NE of public school, 28 Aug. 1974, *E. Kankainen*, in pine heath forest (OULU); Pohjois-Savo, Suonenjoki, Harjakangas, Maassa, 28 Aug. 1966, *K. Takala* (OULU); Keski-Pohjanmaa, Haapavesi, crossing of road to Korkattivuori hill, 5 Aug. 1966. *M. Ohenoja*, abundant among *Pleurozium* in dryish pine forest (OULU); Haapavesi, Mieluskylä, Kiikankallio, 15 Aug. 1970, *P. Koskela*, among mosses (OULU); Kainuu, Vaala, Maanamansalo, 7 Aug. 1977, *V. Hakulinen*, in dry pine forest rich in lichens + *H. ferrugineum* (OULU); Pohjois-Pohjanmaa, Haukipudas, Viitajärvi, Rönkölänkangas, 27 Aug. 1967, *T. Ulvinen*, in pine forest on mossy ground rich in litter (OULU); Kemijärvi, Juujärvi, Suorsavaara, 4 Aug. 1974, *P. Koskela*, fairly abundant in dry heath forest (OULU); Lumijoki, E of road to cemetery, 18 Aug. 1972, *K. Lehtosaari*, dryish pine heath of *Empetrum-Vaccinium vitis-idaea* type (OULU); Oulu, Sanginsuu, E bank of Sanginjoki river, 11 Oct. 1970, *T. Ulvinen*, in pine forest (OULU); Pudasjärvi, Aittojärvi, NW side of lake, 26 Aug. 1967, *T. Ulvinen*, in dry pine heath forest (OULU); Rovaniemi rural comm., Pahtaja, Tavivaara, 24 Aug. 1976, *E. Ohenoja & al.* (OULU); Rovaniemi rural comm., Kumpukivalo, 1 km S of Lammasuoma, 11 Aug. 1977, *K. Virtanen*, old HMT-spruce forest on gentle slope facing S, ca. 300 m alt. (OULU); Rovaniemi rural comm., Marrasjärvi, Uurtamo, W side of pond called Pieni Härklinlampi, 16 Aug. 1977, *E Uurtamo*, in dry EMT pine heath forest (OULU); Ylitornio, SE slope of Aavasaksa hill, 5 Sept 1973, *T. Ulvinen*, among mosses and litter in EMT forest (OULU); Kuusamo, Kuusamo, Oivanki, Rantalahti 1 km W, 7 Aug. 1966, *T. Ahti 22806*, in pine forest with lichen undergrowth (H); Kuusamo, Oulanka Nat. Park, Haaralammenkangas, path to Taivalköngäs falls, 21 Aug. 1974, *T. Ulvinen*, locally abundant in dry heath forest on sandy ground (OULU); Posio, Pernu, Kurtankaltio, N of Koivuköngäs falls of Kurttajoki river, 19 Aug. 1977, *T. Ulvinen*, abundant in sandy pine forest rich in lichens (OULU); Taivalkoski, Kylmälä, W side of Moskavaara hill, 23 Sept. 1972, *E. & M. Ohenoja*, in VMT forest on slope (OULU). — NORWAY: Hordaland, Lindas, Isdalstø, 18 Sept. 1976, *A. Berthelsen*, in spruce forest (BG, part in L).

The surprising number of new localities now on record for the present species would seem to indicate that *H. ferrugipes* is less rare in Europe than originally thought and suggests that, perhaps, at least some collections in the past may have been mistaken for the very similar and much commoner *Hydnellum caeruleum* (Hornem. ex Pers.) P. Karst.

The regular occurrence of both *H. caeruleum* and *H. ferrugipes* in Finland may well offer an opportunity for starting detailed field studies in order to see whether there exist ecological differences between the two species. Cultural tests, moreover, should answer the question what significance if any must be attributed in certain cases to the presence or absence of clamps.

The gathering from Mustiala listed above and provisionally named 'Hydnum intermedium' by Karsten is most probably the oldest collection of the species in existence. A possible reason why the Finnish mycologist refrained from publishing this name is his apparent difficulty in distinguishing between 'H. intermedium' and the species then known to him as *Hydnum compactum* Pers. ex Fr. (a synonym of *Hydnellum caeruleum*). In Karsten's herbarium there is material collected 6 Sept. 1867, one year after the first find, and also named 'H. medium' but with the addition of 'Hydn. compactum?', clearly expressing his doubt.

HYDNELLUM TARDUM Maas G.

Maas Geesteranus, 1975: 54, 98.

COLLECTION EXAMINED.—FRANCE: 'Savoyer Alpen, Bozel sous Glaigetan, 19 Sept. 1971, *A. Bresinsky 71/93e & R. Kühner*', obviously in coniferous wood (M).

SARCODON GLAUCOPUS Maas G. & Nannf.

Maas Geesteranus, 1975: 64, 105.

COLLECTION EXAMINED.—FINLAND: Etelä-Karjala, Vehkalahti, Pyhältö, 22 Aug. 1972, *Lars Fagerström*, woodland of *Pinus* with lichen undergrowth on sandy soil W of Kettumäki (H).

SARCODON LEPIDUS Maas G.

Maas Geesteranus, 1975: 65, 105.

COLLECTIONS EXAMINED.—ITALY: Prov. Treviso, Montello, Sept. 1976, 25 Sept. 1977, *F. Dal Savio & E. Schild*, under a *Corylus avellana* bush growing under *Castanea vesca* (L).

SARCODON REGALIS Maas G.

Maas Geesteranus, 1975: 67, 106.

COLLECTIONS EXAMINED.—FRANCE: Dép. Bouches-du-Rhône, St-Rémy, Bois de [illegible], 28 Oct. 1976, *L. Riousset*, under *Quercus ilex* (L). — SWITZERLAND: Canton Bern, Brienz, Schwanden, Sportplatz, 18 Aug. and 14 Oct. 1976, *E. Schild & W. Wäfler*, in mixed wood of *Corylus* and *Picea* (L).

GENERA INCERTAE SEDIS

CLIMACODON PULCHERRIMUS (Berk. & Curt.) Nikol.

Maas Geesteranus, 1971: 138.

COLLECTION EXAMINED.—TURKEY: Bolu, Koru Motel (Loc. 313), 30 Aug. 1972, Finnish Bot. Exp. to West-Central Asia 1972, *M. Korhonen 1212*, on rotten wood in mixed forest of *Fagus* and *Abies*, 860 m alt. (H, fragment in L).

After a report had been published on the lignicolous macrofungi collected in Turkey by the recent Finnish Botanical Expedition to West-Central Asia (Niemelä & Uotila, 1977), the above material was sent to me for identification. The interest of this collection lies in the remarkable fact that (*i*) oleiferous hyphae in the pileus are very rare and (*ii*) all specimens prove to be devoid of gloeocystidia, even near the base of the spines. I have noticed this phenomenon before (Maas Geesteranus, 1971: 140) but never regarded it as anything more than an anomaly of rare occurrence. If, however, the lack of gloeocystidia proves to be a consistent feature of an entire collection, and possibly may happen more often, it is time to emend my key to the genera (1971: 13–14). The change concerns couplet 13 (on p. 14) which now should read:

13. Spores smooth.
    14. Generative hyphae in the spines as well as basidia lacking clamps: . . . *Climacodon*
    14. Generative hyphae in the spines as well as basidia with clamps: . . . . . *Hydnum*

MYCOLEPTODON LICENTII Pilát

A disturbing error crept into a previous publication (Maas Geesteranus, 1974b). The passage on p. 495 beginning with *Mycoleptodon licentii* Pilát must be deleted, since this species is a synonym of *Mycorrhaphium adustum*, not of *M. stereoides*.

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