

NOTULAE AD FLORAM AGARICINAM NEERLANDICAM – XX  
A revision of *Dermoloma* (J. Lange) Sing. – 2<sup>1</sup>

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A key to the western European species of *Dermoloma* with amyloid spores is provided. Descriptions of the accepted taxa are given. Special attention is paid to the variation in spore size. *Dermoloma hygrophorus* and *D. pragensis* are regarded as synonyms of *D. josserandii* var. *josserandii* and *D. phaepodium* is reduced to a variety of that species.

A previous paper (Arnolds, 1991) treated the taxonomic position of the genus *Dermoloma*, the variability in some diagnostic characters and the indigenous taxa with inamyloid spores. This paper completes the revision of *Dermoloma* by describing and discussing the species with amyloid spores.

KEY TO THE SPECIES  
with amyloid spores

- 1a. Spores on the average  $6.2-7.3 \times 4.1-4.7 \mu\text{m}$ , av.  $Q = 1.5-1.7$ , ellipsoid to ellipsoid-oblong. Basidiocarps usually more slender: pileus c. 7–25 mm, stipe c.  $12-50 \times 1-3$  mm. Pileus medium to dark brown. Lamellae,  $L = 11-21$ , usually dark brown to smoke-grey, sometimes pale grey-brown or beige brown . . . *D. pseudocuneifolium*
- b. Spores on the average  $5.0-6.2 \times 3.6-4.8 \mu\text{m}$ , av.  $Q = 1.15-1.4$ , broadly ellipsoid to ellipsoid. Basidiocarps usually rather thick-set: pileus c. 15–50 mm, stipe c.  $20-60 \times 2-8$  mm. Pileus colour variable: whitish, pale grey-brown to dark brown. Lamellae,  $L = 18-34$ , usually white, beige or pale grey-brown, sometimes darker grey-brown . . . *D. josserandii*

*Dermoloma pseudocuneifolium* Herink ex M. Bon — Fig. 1

*Dermoloma pseudocuneifolium* Herink ex M. Bon, Doc. mycol. 17 (65) (1986) 52.

*Dermoloma pseudocuneifolium* Herink, Acta Musei Horti bot. Bohemiae borealis 1 (1958) 62 (invalidly published, without Latin diagn.).

Misapplied. *Tricholoma cuneifolium* sensu Joss., Bull. trimest. Soc. mycol. Fr. 59 (1943) 14. — *Dermoloma cuneifolium* sensu Horak, Syn. Gen. Agar. (1968) 219.

Selected icon. Joss., Bull. trimest. Soc. mycol. Fr. 59 (1943) pl. 1, fig. 2 (as *Tricholoma cuneifolium*).

Selected literature. M. Bon, Bull. trimest. Soc. mycol. Fr. 86 (1970) 152; Horak, Syn. Gen. Agar. (1968) 219–221, figs. a–e (as *D. cuneifolium*); Joss., Bull. trimest. Soc. mycol. Fr. 59 (1943) 14–15, fig. 2, right (as *Tricholoma cuneifolium*).

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Pileus (5–)7–25 mm, hemispherical or convex, then plano-convex, sometimes with weak umbo, finally sometimes with recurved margin, weakly to strongly hygrophanous, when moist first blackish brown, chocolate-brown or dark grey-brown (e.g. K&W 7F4-8, 6F5–8), then centre dark brown to grey-brown (e.g. K&W 7E4, 6F7, 6E4, 6E5), to the margin and on drying horn-brown to ochraceous brown (e.g. K&W 7D4, 6D4, 5C4), first smooth and micaceous, then usually irregularly cracked, showing whitish context in the cracks, not striate or translucently striate up to 2/3 of the radius when moist. Lamellae, L = 11–21, l = 1–3, rather crowded to subdistant, usually deeply emarginate or sinuate, often with decurrent tooth, ventricose, thickish, sometimes in small specimens adnate to subdecurrent, dark brown, dark grey-brown, smoke-grey, pale grey-brown or beige brown (e.g. K&W 6F3–5, 6E3–5, 6D3–5), usually slightly paler than pileus. Stipe (8–)12–50(–65) × 1–3(–4) mm, subcylindrical or slightly tapering downwards, solid to fistulose, concolorous with pileus or slightly paler, apex slightly whitish pruinose to subfloccose, smooth towards the base. Context brown or grey in cortex, inner part pale brown to white, rather fragile, especially in lamellae. Smell often absent when undamaged, but strongly farinaceous or rancid when cut. Taste farinaceous. Spore print white.

Spores (5.5–)6.0–8.0(–9.0) × 3.5–5.0 μm, av. 6.2–7.3 × (3.9–)4.1–4.7 μm, Q = 1.4–1.8(–1.9), av. Q = 1.5–1.7, ellipsoid to ellipsoid-oblong, in part often slightly thick-walled, distinctly amyloid. Basidia 22–33 × 5.5–8 μm, Q = 3.2–4.9, 4-spored or a few 2-spored, sometimes exclusively 2- and 1-spored, in some collections a few thick-walled (crassobasidia, Fig. 1 J). Lamella edge fertile. Cystidia absent. Hymenophoral trama subregular, made up of subcylindrical or inflated cells, 32–145 × 6–35 μm. Pileipellis a pluristratous hymeniderm made up of erect, branched hyphae with strongly inflated, clavate, pyriform, spheropedunculate or subglobose terminal cells, 17–43 × 11–31 μm, often also subterminal cells slightly inflated, with brown parietal pigment, smooth to strongly incrustated, often with more or less thickened walls. Stipitipellis a dry cutis, made up of repent hyphae, 2–7 μm wide, hyaline or with pale brown parietal pigment. Apex of stipe with densely packed clavate caulocystidia or erect hyphae with swollen terminal cells, 13–48 × 4–20 μm, smooth, hyaline or with pale brown parietal pigment. Clamp-connections present at basidia and scattered in trama, absent in 2-spored basidiocarps.

**Habitat & distribution.** Usually subgregarious in poor, unfertilized meadows and hay-fields on dry, weakly to strongly calcareous clay, loam and sand (Mesobromion, Arrhenatheretum elatioris, Galio-Koelerion). Rare in the coastal dunes, along the big rivers (fluvial district) and in S. Limburg (cretaceous district). Widespread in West and Central Europe, but uncommon. Oct.–Nov.

**Collections examined.** NETHERLANDS: prov. Noord-Holland, Texel, 'Eijerlandse duinen', 26 Oct. 1968, *C. Bas 5070* (L); Texel, old dike near Wagejot, 31 Oct. 1984, *M. Groenendaal s.n.* (WAG-W); Texel, dike near Wezenspijk, 19 Oct. 1987, *M. Groenendaal s.n.* (WAG-W); prov. Zeeland, Haamstede, 21 Oct. 1966, *C. Bas 4821* (L); prov. Noord-Brabant, Drunen, 'Drongelens Kanaal', 21 Oct. 1981, *H. Huijser s.n.* (Herb. H. Huijser); idem, 7 Nov. 1983, *H. Huijser s.n.* (Herb. F. Benjaminsen); prov. Limburg, Geulle, along Julianakanaal, 21 Sept. 1980, *H. Huijser s.n.* (*Benjaminsen 800903*) (Herb. F. Benjaminsen); idem, 21 Sept. 1980, *H. Huijser s.n.* (*Benjaminsen 800905*) (Herb. F. Benjaminsen); idem, 30 Oct. 1982, *Th. W. Kuyper 2325* (L); Bemelen, 'Bemelerberg', 20 Oct. 1984, *E. Arnolds 5328* (WAG-W); Maastricht, Cannerberg, 30 Oct. 1988, *J. Schreurs s.n.* (WAG-W). — FRANCE: Bôle-Boudry, 1 Oct. 1968, *H. Huijsman s.n.* (L). — GERMANY: 'Müritz-see', 23 Oct. 1975, *J. Barkman s.n.* (WAG-W).

This species has been named *Dermoloma cuneifolium* by several authors, but the latter fungus is characterized by inamyloid spores and much paler lamellae. For a discussion on the nomenclature of *Dermoloma cuneifolium*, and the designation of a lectotype, see Arnolds (1991).

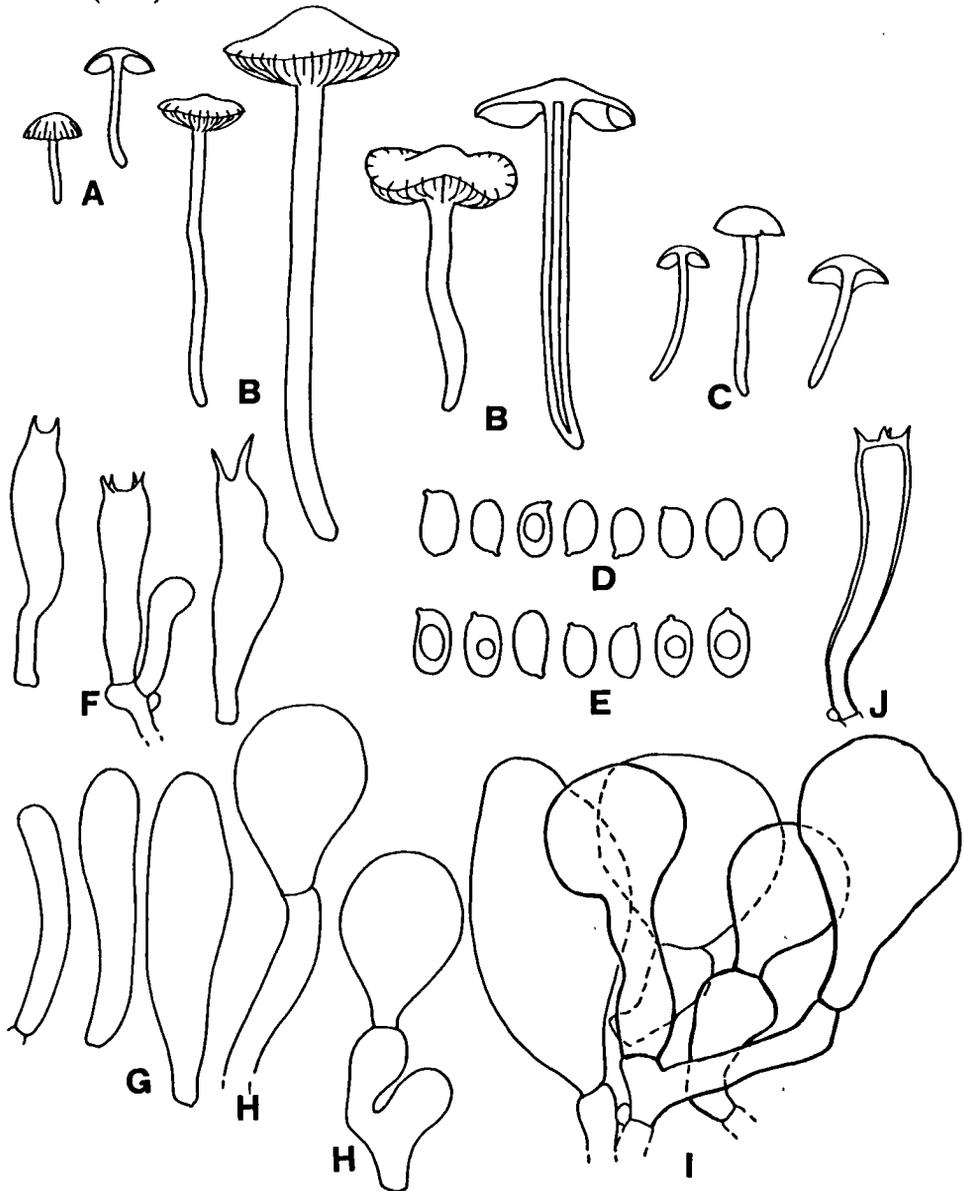


Fig. 1. *Dermoloma pseudocuneifolium*: A-C. Basidiocarps,  $\times 1$ ; D, E. spores,  $\times 1000$ ; F, J. basidia,  $\times 1000$ ; G, H. caulocystidia,  $\times 1000$ ; I. radial section through pileipellis,  $\times 1000$  (A, D, H and I from Arnolds 5328; B from Huijser s.n., 21 Oct. 1981; C, E, F, G from Schreurs s.n., 30 Oct. 1988; I from Barkman s.n., 23 Oct. 1975).

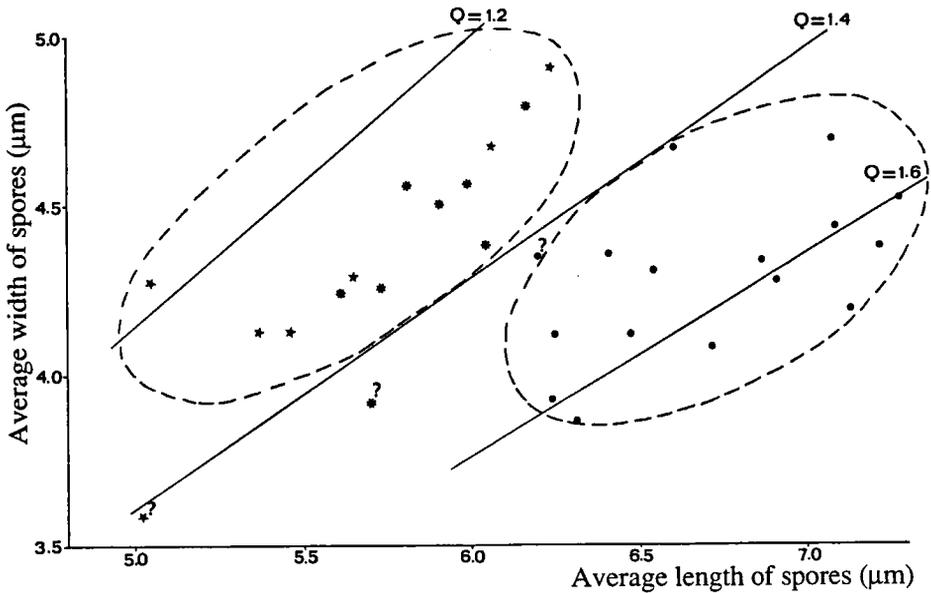


Fig. 2. Scatter diagram of average spore size in species of *Dermoloma* with amyloid spores. ★ = *D. josserandii* var. *josserandii*, \* = *D. josserandii* var. *phaeopodium*, • = *D. pseudocuneifolium*. — Each point represents the average size of at least 10 spores measured in a single basidiocarp.

*Dermoloma pseudocuneifolium* can often be recognized in the field by the relatively small and dark basidiocarps (especially lamellae) and the tendency to be more hygrophorous than other species. The relatively elongate, amyloid spores are the most characteristic microscopic feature. Shape (expressed in Q-value) appears to be more diagnostic than spore size (Fig. 2). However, collection *Groenendaal* 19 Oct. 1987 has spores which are almost intermediate between *D. pseudocuneifolium* and *D. josserandii* with an average size of  $6.2 \times 4.35 \mu\text{m}$ , av.  $Q = 1.43$ . It falls slightly outside the cluster of *D. pseudocuneifolium* in Fig. 1 (dot with ?). Collection *Barkman* 23 Oct. 1975 is interesting since it consists of two basidiocarps, one with spores  $6.5\text{--}8.5 \times 4\text{--}5 \mu\text{m}$  and exclusively 2- and 1-spored basidia, the other with spores  $(5.5\text{--})6\text{--}6.5(-7) \times 3.5\text{--}4.5 \mu\text{m}$  and, at least in part, 4-spored basidia (but most basidia collapsed).

***Dermoloma josserandii* Dennis & P.D. Orton**

*Dermoloma josserandii* Dennis & P.D. Orton, Trans. Br. mycol. Soc. 43 (1960) 226.

KEY TO THE VARIETIES

- 1a. Pileus ivory white to beige, in centre occasionally pale grey-brown; lamellae and stipe whitish or very pale greyish brown ..... var. *josserandii*
- b. Pileus dark grey-brown to sepia brown; lamellae and stipe with greyish or brownish tinge ..... var. *phaeopodium*

var. *josserandii*. — Fig. 3

*Tricholoma hygrophorus* Joss., Bull. trimest. Soc. mycol. Fr. 74 (1958) 482 (nom. nud.). — *Dermoloma hygrophorus* (Joss. ex) Joss., Bull. mens. Soc. Linn. Lyon 39 (1970) 6. — *Dermoloma pragensis* Kubička, Česká Mykol. 29 (1975) 3. — *Dermoloma pseudocuneifolium* var. *pragensis* (Kubička) M. Bon, Doc. mycol. 17 (65) (1986) 52.

*Misapplied.* *Dermoloma cuneifolium* sensu Svrček, Česká Mykol. 20 (1966) 149.

*Excluded.* *Dermoloma pragensis* sensu Ballero & Contu, Bol. Soc. Brot., Sér. 2, 60 (1987) 115 (= var. *phaeopodium*).

*Selected literature.* Dennis & P.D. Orton, Trans. Br. mycol. Soc. 43 (1960) 226, figs. 379, 514; Gröger, Boletus 12 (1988) 29–32, figs. 1, 2; Jahn, Westf. Pilzbr. 8 (1970) 25–27, figs. 1, 2; Joss., Bull. trimest. Soc. mycol. Fr. 74 (1958) 482–491, figs. 1–4 (as *Tricholoma hygrophorus*); Svrček, Česká Mykol. 20 (1966) 149 (as *D. cuneifolium*).

Pileus 14–33 mm, convex, then plano-convex to depressed, with or without obtuse umbo, not or weakly hygrophanous, ivory-white, pale greyish ochre to beige (e.g. K&W 5B3; Munsell 10 YR 7/2, 7/3), often slightly darker and more grey-brown at centre (e.g. Munsell 10 YR 6/4, 5/3), at first smooth and submicaceous, then often cracking into small irregular patches, showing pale context in the cracks, dry, with margin sometimes translucently striate. Lamellae, L = 20–34, l = 1–3(–7), subdistant, thickish, sinuate-adenate or emarginate, often with decurrent tooth, sometimes almost subdecurrent, ventricose, up to 5 mm wide, almost white to very pale brownish or greyish buff (Munsell 10 YR 7/2, 5Y 7/3). Stipe 20–42 × 2–5 mm, subcylindrical or tapering to the base, solid, then stuffed to fistulose, pale brownish grey to whitish, smooth or appressed white-fibrillose, apex pruinose to subfloccose. Context concolorous with surface or slightly darker in stipe, rather brittle, especially in pileus. Smell strongly farinaceous when handled or cut. Taste farinaceous to slightly bitterish. Spore print 'white'.

Spores 4.5–7.0(–7.5) × 3.5–5.0 μm, av. 5.0–6.1 × 3.6–4.7 μm, Q = (1.05–)1.1–1.5, av. Q = 1.2–1.4, broadly ellipsoid to ellipsoid, in part usually slightly thick-walled, always (greyish) violet in Melzer's. Basidia 21–28 × 4.5–7.5 μm, Q = 3.5–5.5, clavate or narrowly clavate, predominantly 4-(2-)spored or 4- and 2-spored intermixed. Lamella edge fertile. Cystidia absent. Hymenophoral trama subregular, made up of ellipsoid to cylindrical elements, 45–160 × 7.5–32 μm. Pileipellis a pluristratous hymeniderm, as seen from above made up of rounded elements, in section made up of erect, branched hyphae with short, inflated elements, broader towards pileus surface, with subglobose to pyriform terminal cells, c. 20–45 × 9–20 μm, with pale grey parietal pigment. Apex of stipe with scattered to densely packed caulocystidia, often in clusters, 20–66 × 5–14 μm, narrowly to broadly clavate, thin-walled.

*Habitat & distribution.* Solitary or in small groups, sometimes subfasciculate, in old, unfertilized grasslands on dry, basic river clay and limestone (Arrhenatheretum elatioris, Mesobromion) and in parks and forests under deciduous trees on basic soils. In the Netherlands very rare along the big rivers, also known from Great Britain, Germany, Czechoslovakia and France, but apparently very rare everywhere. (July–)Sept.–Oct.

*Collections examined.* NETHERLANDS: prov. Zuid-Holland, Ridderkerk, Huys ten Donk, 14 Oct. 1976, F. Tjallingii s.n. (L); idem, 28 July 1984, Th. W. Kuyper (Bas 8255) (L); prov. Noord-Brabant, Dussen, Biesbosch, dike along Spijkerboor, 11 Oct. 1989, Arnolds 6051 (WAG-W). — GERMANY: Taubertal, Werbach, Boxberg, 3 Sept. 1977, W. Winterhoff 77.67 (Herb. W. Winterhoff).

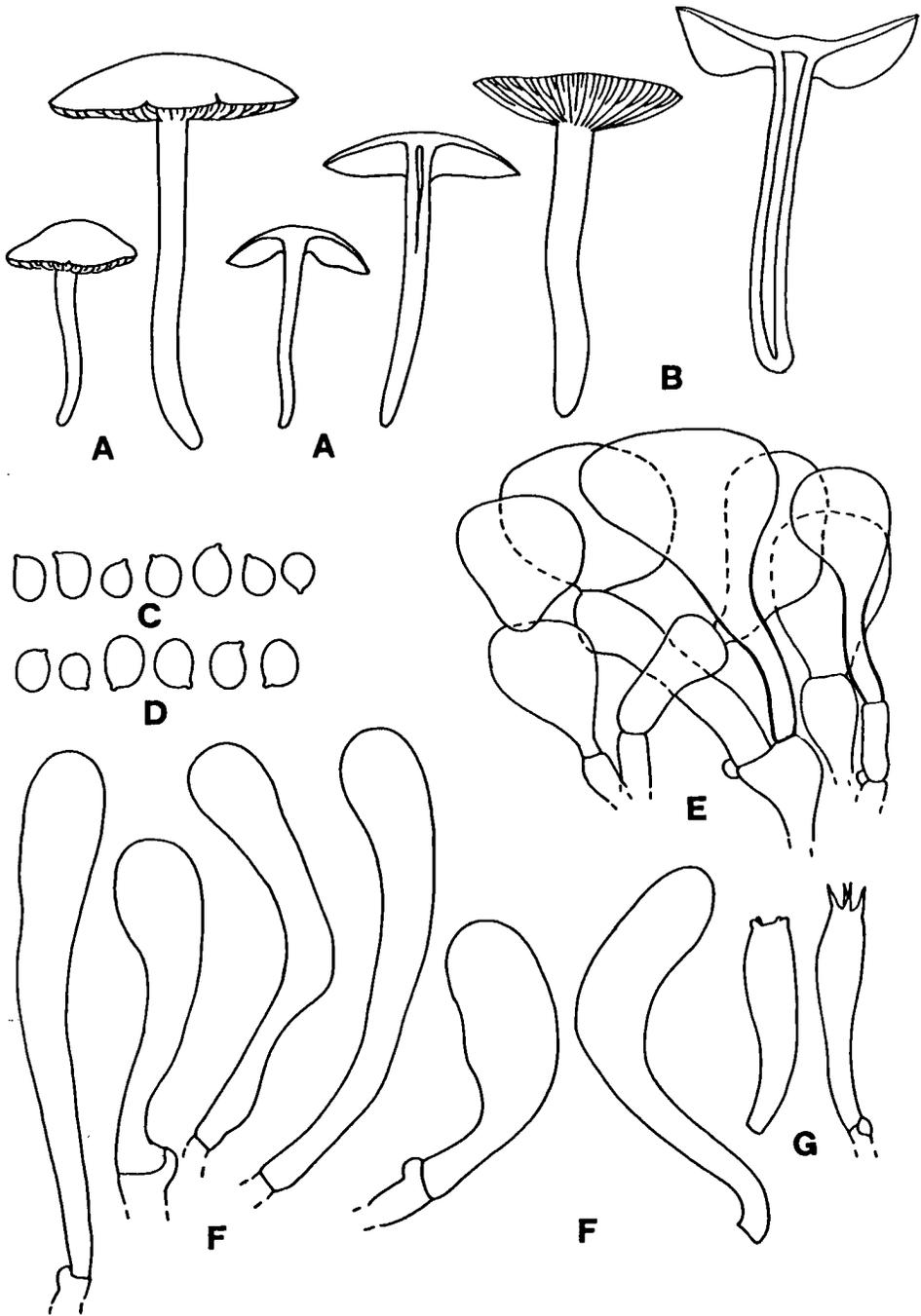


Fig. 3. *Dermoloma josserandii* var. *josserandii*. A, B. Basidiocarps,  $\times 1$ .; C, D. spores,  $\times 1000$ ; E. radial section through pileipellis,  $\times 1000$ ; F. caulocystidia,  $\times 1000$ ; G. basidia  $\times 1000$  (A, C from Tjallingii s.n., 14 Oct. 1976; B from Arnolds 6051; D–F, G from Bas 8255).

*Dermoloma josserandii* is rather variable concerning the colour of the pileus (almost white to beige or pale greyish brown), the attachment of the lamellae (from emarginate to subdecurrent), spore size (Fig. 1) and shape of caulocystidia. The spore size shows even considerable variation within a single collection. For instance, in *Bas* 8255 (28 July 1984) spores were measured by different observers as  $4.8\text{--}6.5 \times 3.6\text{--}4.8$  and  $5.6\text{--}7.0 \times 4.2\text{--}5.7$   $\mu\text{m}$ , respectively. Eight years before a collection was made in the same locality (*Tjaltingii* s.n., 14 Oct. 1976) in which spores were measured by two observers as  $4.5\text{--}5.6 \times 3.6\text{--}4.9$  and  $4.9\text{--}5.8(-6.5) \times 3.7\text{--}4.7$   $\mu\text{m}$ , respectively. The former collection had initially been identified as *D. josserandii*, the latter as *D. pragensis*.

*Dermoloma josserandii* was originally described by Dennis & Orton (in Orton, 1960: 226) with spores measuring  $6\text{--}8 \times 4.5\text{--}5.5$   $\mu\text{m}$ , consequently slightly larger than in the four collections described here. Dennis & Orton (l.c.) intended to rename *Tricholoma hygrophorus* Joss., which was at that time invalidly published (Josserand, 1958: 488), but later validly described by Josserand (1970: 6) as *Dermoloma hygrophorus* Joss. Jahn (1970) discovered *Dermoloma hygrophorus* in Westfalen and extensively discussed the relationship between *D. hygrophorus* and *D. josserandii*, which in his opinion were different species. This point of view was shared by Moser (1978: 185), Ballero & Contu (1987) and, with some hesitation, by Orton (1980: 324). *Dermoloma hygrophorus* was said to differ in the whitish pileus (pale grey-brown in *D. josserandii*), stouter habit with convex pileus and stipe 5–10 mm thick, smaller spores [ $5.9\text{--}6.5(-7.0) \times 4.5\text{--}5.2$   $\mu\text{m}$ ], reflexed, broad caulocystidia and habitat in grasslands (*D. josserandii* was originally described from deciduous forest). The collections studied for the present paper combine several characteristics of the two species. The basidiocarps are consistently smaller than described for *Dermoloma hygrophorus*, but the spores are in better agreement with that species and smaller than in *D. josserandii*. Caulocystidia were present in all collections, but narrower than in *D. hygrophorus* and rarely reflexed. Gröger (1988) described a collection from Eastern Germany as *D. hygrophorus* combining small basidiocarps (pileus 16–24 mm, stipe 2–5 mm thick), with a pale ochraceous pileus and an intermediate spore size [ $(5.0\text{--})5.6\text{--}7.5(-8.4) \times (3.8\text{--})4.0\text{--}5.0(-5.5)$   $\mu\text{m}$ ]. On the basis of this pattern of variability it is inevitable in my opinion to regard all collections as variants of one single taxon.

*Dermoloma pragensis* Kubička is a third, recently described species with broadly ellipsoid, amyloid spores. Moser (1978: 185) and Bon (1986: 52) regarded it as invalidly published and the latter author intended to validate the name by providing a Latin diagnosis. However, this is superfluous since Kubička (1975: 31) provided in his key (in Latin) an extremely short – diagnosis ('Sp.  $5\text{--}6 \times 3.5\text{--}4.5$   $\mu\text{m}$ , amyloideae') and indicated a type collection. The spore size of *Dermoloma pragensis* fits into the variation of *D. josserandii* (Fig. 2) but because details on macroscopic characters are lacking in the diagnosis it is not clear at once whether it is identical with var. *josserandii* or var. *phaeopodium*. This explains why Moser (1978: 185) described the pileus of *Dermoloma pragensis* as pale grey, but Ballero & Contu (1987: 115) as greyish bistre or brown-grey. However, Kubička (1975) referred to a description of *D. cuneifolium* sensu Svrček (1966: 149), which appeared to have a pale grey pileus. Consequently, *D. pragensis* is in my opinion another synonym of *D. josserandii* var. *josserandii*.

Bon (1986: 51) claimed that *D. josserandii* is conspecific with the sanctioned name *Agaricus glauconitens* Fr.: Fr. However, Fries (1821: 116) described this fungus (as

*A. nitens*) with a blackish brown pileus ('nigrescente-umbrino') and bluish grey lamellae ('glauco-cinereis'), features that are not found in *Dermoloma josserandii* but characteristic of some variants of *D. cuneifolium* (Arnolds, 1991).

*Dermoloma murinellum* was recently described by Horak (1987: 110) from alpine grasslands in Switzerland. It seems to be closely related to *D. josserandii*, but it has smaller basidiocarps [pileus up to 12 mm, stipe up to  $15 \times 1(-1.5)$  mm] with a mouse-grey to pale grey-brown pileus and smaller, amyloid spores,  $4.5-5.5 \times 3-4 \mu\text{m}$ . Collection Arnolds 6051 has equally small spores [ $4.4-5.4(-5.6) \times (3.3-3.5-3.7(-3.9)) \mu\text{m}$ , av.  $5.0 \times 3.6 \mu\text{m}$ ,  $Q = 1.40$  (asterisk with ? in Fig. 1)], but larger basidiocarps with the pileus 27-33 mm and the stipe 5 mm thick. The taxonomic status of *D. murinellum* is not yet clear.

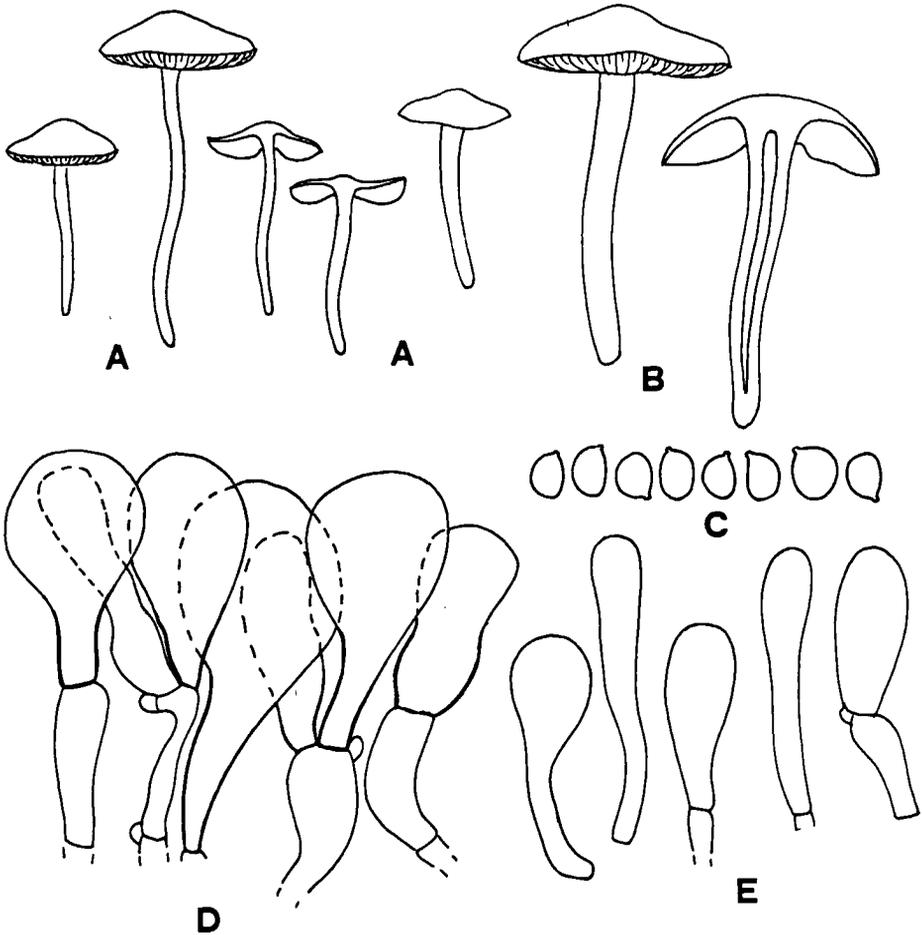


Fig. 4. *Dermoloma josserandii* var. *phaepodium*. A, B. Basidiocarps,  $\times 1$ ; C. spores,  $\times 1000$ ; D. radial section through pileipellis,  $\times 1000$ ; E. caulocystidia,  $\times 1000$  (A from Piepenbroek 1070; B-E from Groenendaal s.n., 25 Oct. 1983).

***Dermoloma josserandii* var. *phaeopodium* (P.D. Orton) Arnolds, *comb. nov.* – Fig. 4**

*Basionym.* *Dermoloma phaeopodium* P.D. Orton, Notes R. bot. Gdn Edinb. 28 (1980) 327.

*Misapplied.* *Dermoloma pragensis* sensu Ballero & Contu, Bol. Soc. Brot., Sér. 2, 60 (1987) 115.

*Selected literature:* Orton, Notes R. bot. Gdn Edinb. 28 (1980) 327–328.

Pileus 10–35 mm, broadly conical to conico-convex or convex, soon plano-convex or slightly depressed, sometimes with obtuse umbo, not to rather hygrophanous, sepia brown, dark grey-brown to dark clay-brown when young (e.g. Munsell 7.5 YR 4/4, 10 YR 4/3, 5/4; K&W 7F4, 7F5), gradually pallescent to greyish brown, clay-brown or beige with darker centre, at first smooth, dull, submicaceous, then usually cracking into many rounded or polygonate patches showing pallid cracks in between, margin in some smaller specimens short translucently striate. Lamellae, L = 18–26, l = 1–3, rather crowded to subdistant, emarginate, sinuate, adnate to nearly free, sometimes with long decurrent tooth, weakly to strongly ventricose, up to 6 mm wide, rather thin to thick, grey, grey-brown, pale clay-brown or beige, paler than the pileus. Stipe 18–48 × (1.5–)2–5 mm, subcylindrical or often tapering from the apex, stuffed or fistulose, grey-brown, grey or pale greyish brown, ± concolorous with lamellae, slightly to strongly silvery white striate lengthwise, apex whitish pruinose to subfloccose. Context pale grey, pale brown-grey or pale brown, rather brittle in pileus, fibrillose in stipe. Smell strongly farinaceous to rancid when handled or cut. Taste similar. Spore print white.

Spores (4.5–)5.0–6.5(–7.5) × 3.5–5.0(–6.0) μm, av. 5.6–6.2 × 3.9–4.8 μm, Q = 1.15–1.5, av. Q = 1.2–1.4(–1.45), broadly ellipsoid to ellipsoid, in part often slightly thick-walled, always distinctly amyloid, violet in Melzer's. Basidia 23–31 × 6–7 μm, Q = 3.6–4.9, clavate to narrowly clavate, 4-spored or a few 2-spored. Lamella edge fertile. Cystidia absent. Hymenophoral trama subregular. Pileipellis a pluristratous hymeniderm, made up of erect, branched hyphae with clavate, pyriform and spheropedunculate terminal cells, 18–46(–56) × 7–24 μm, smooth, with pale brown parietal pigment, especially lower part of cell walls often slightly thickened. Stipitipellis a dry cutis, made up of repent hyphae 2–5 μm wide, hyaline or pale brown, smooth or minutely encrusted. Apex of stipe with scattered or clustered caulocystidia, 16–44 × 4.5–11 μm, narrowly to broadly clavate, often in part slightly thick-walled, smooth, hyaline or pale brown. Clamp-connections frequent.

*Habitat & distribution.* Solitary or in small groups in poor, unfertilized pastures and hayfields on dry, weakly acid to basic clay, loam, sand and limestone (*Arrhenatheretum elatioris*; *Galio-Koelerion*; *Mesobrometum*). In the Netherlands very rare in the coastal dunes, on dikes in the western part of the country and along the big rivers. Also known from Great Britain, Germany and Switzerland, but apparently very rare. Oct.–Nov.

*Collections examined.* NETHERLANDS: prov. Noord-Holland, Callantsoog, Zwanenwater, 1 Nov. 1981, *H. Huijser s.n.* (Herbarium F. Benjaminsen); Texel, polder Ceres, 25 Oct. 1983, *M. Groenendaal s.n.* (WAG-W); Texel, dike along Waddensea, 31 Oct. 1981, *H. Huijser s.n.*, (Herbarium H. Huijser); Texel, Oudeschild, Ankerpark, 28 Oct. 1984, *M. Groenendaal s.n.* (WAG-W); prov. Overijssel, Olst, dike along IJssel near estate 'Haere', 28 Nov. 1977, *Piepenbroek 1070* (L). — GERMANY: Schwäbische Alb, Eselsburger Tal, 8 Oct. 1984, W. Winterhoff 84580 (Herb. W. Winterhoff). — SWITZERLAND: Uri, Gurtellen, 24 Sept. 1981, *E. Arnolds 4530* (WAG-W).

*Dermoloma josserandii* var. *phaeopodium* is characterized by the combination of dark basidiocarps and small, ellipsoid, amyloid spores. Macroscopically it is often similar to

*D. cuneifolium*, but that species has inamyloid spores. It is very close to *D. josserandii* and the only difference seems to be the much darker colours of the basidiocarps. The collection *Piepenbroek 1070* is almost intermediate, the pileus being described as pale clay brown (Munsell 10 YR 6/4) with dark brown centre (10 YR 4/3–5/4). In view of these features *D. phaeopodium* is reduced to a variety of *D. josserandii*.

Orton (1980: 327) originally described *Dermoloma phaeopodium* with spores 5–7 × 3.5–4.5 µm and regarded the spore width as a distinctive character with regard to *D. pseudocuneifolium* and *D. josserandii*. However, on the basis of my observations it appears that spore size in *D. phaeopodium* is much more variable and comparable to that in *D. josserandii* (Fig. 2).

*Dermoloma pseudocuneifolium* has usually smaller, more slender basidiocarps with darker lamellae and in addition longer, more elongate spores. Collection *Arnolds 4530* is exceptional in its relatively narrow spores (average 5.7 × 3.9 µm, Q = 1.46; asterisk with ? in Fig. 2), and is in that respect a transition to *Dermoloma pseudocuneifolium*, but the spores in the latter species are usually longer (Fig. 2).

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