

STUDIES IN INOCYBE—I

Revision of the new taxa of *Inocybe* described by Velenovský

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The 58 new taxa of *Inocybe* described by Velenovský have been revised. Several do not belong to the genus *Inocybe* as currently defined. Most species names are reduced to synonymy, but a few name changes are necessary. One new combination is proposed.

Professor Josef Velenovský (1858–1949) has been the author of a great number of new genera and new species, both in the Basidiomycetes and the Ascomycetes. His best known work is *Ceské Houby* (1920–1922) written in Czech language, and therefore not easily accessible to foreign mycologists. Fortunately, Pilát (1948) provided a Latin translation of all new taxa on the occasion of Velenovský's ninetieth birthday. A number of new taxa has also been described in *Novitates mycologicae* (1939) and *Novitates mycologicae novissimae* (1947).

However, to date only a part of Velenovský's new taxa has been revised, the major revisions being those by Kotlaba (1977) of new taxa in the polypores, and Svrček (1978) of new taxa in the operculate Discomycetes. Even less attention has been paid to a critical revision of his Agaricales. Besides a few revisions of smaller groups, Noordeloos (1979, 1980) studied all types of entolomatoid fungi.

It seems rather surprising that one mycologist has been responsible for the creation of so many new taxa (according to Pilát (1958) there are altogether 2727 new species). An explanation for this phenomenon has been offered by Kotlaba (1977), whose conclusions are summarized below:

1. Velenovský overestimated the importance of morphological variability typical for many fungi. Quite a lot of slightly aberrant variants were described as new species. It is therefore not surprising to discover that he described some species more than once.
2. He described many of his new species from very limited material, sometimes only a single specimen. This seriously hampers a critical evaluation of character variability.
3. The descriptions of his new species were founded primarily on macroscopical characters, as Velenovský was trained as a phanerogamist. His descriptions of microscopical characters are almost always too short, and quite often faulty, because he used a microscope of a poor quality.
4. He did not possess a good knowledge, even of the common species.
5. While collecting mushrooms, he sometimes mixed fruitbodies of different species of fungi. Some of his descriptions therefore refer to a mixture of species; this could provide an explanation for the curious set of characters of *Inocybe nuda*.

6. His knowledge of the mycological literature was limited, and he used mainly the works by Fries, Saccardo and Ricken. When he failed to find the fungus among their descriptions, he described it as new.

For that reason it comes as no surprise when after a critical revision the great majority of his new taxa are reduced to synonymy. The revision of his *Inocybes*, 57 new species and 1 new variety, does not form an exception to this rule.¹

ACKNOWLEDGEMENTS

Thanks are due to the curators of PR and PRC for putting the type-collections at my disposal. I am most grateful to Dr. Jaroslav Klán (Biological Station of Prague) for providing working facilities at his institute and generous hospitality during my stay in Prague. Dr. Machiel Noordeloos is thanked for critically reading the manuscript of this paper. The preparation and arrangement of the illustrations by Ruth van Crevel is greatly acknowledged.

Inocybe albicans—Fig. 1

Inocybe albicans Velen., České Houby: 367. 1920. — Holotypus: Velenovský, VIII. 1915, Mnichovice (PRC; bottle 151).

The type is well-preserved and shows the following microscopical characters. — Spores $7.0-8.0 \times 5.0-5.5 \mu\text{m}$, $Q = 1.3-1.5(-1.6)$, with 10–16 pronounced knobs. Pleuro- and cheilocystidia $(41-)43-50(-52) \times 11-14 \mu\text{m}$, cylindrical to subfusiform, sessile, very thick-walled, wall up to $4 \mu\text{m}$, yellow. Velipellis with thick-walled, non-en-crusting, cystidioid hyphae.

This is *I. petiginosa* (Fr.: Fr.) Gillet.

Another collection labeled *I. albicans* (PRC; bottle 149; VII. 1916, Chuchle) was not mentioned by Velenovský (1920: 368); it clearly is a determination error by the Czech mycologist, as it represents a species of Sect. *Cervicolores* Sing.

Inocybe albomarginata—Fig. 2

Inocybe albomarginata Velen., České Houby: 379. 1920. — Lectotypus (select. mihi): Velenovský, VIII.1915, Mnichovice (PRC; bottle 119).

The type-collection is heterogeneous, consisting of 4 specimens with angular spores and 1 specimen with smooth spores. This specimen is regarded here as the lectotype, showing the following microscopical characters. — Spores $6.5-8.0 \times 4.0-5.0 \mu\text{m}$, $Q = 1.6-1.7(-1.8)$, smooth, slightly inaequilateral, with obtuse apex. Pleuro- and cheilocystidia $(41-)42-54(-57) \times (13-)15-17 \mu\text{m}$, cylindrical to fusiform, slightly thick-walled, wall to $1.5 \mu\text{m}$, hyaline. Caulocystidia present almost to base of stipe, identical to cheilocystidia.

¹The magnifications in the text-figures are as follows: spores $\times 1500$, cystidia $\times 1000$.

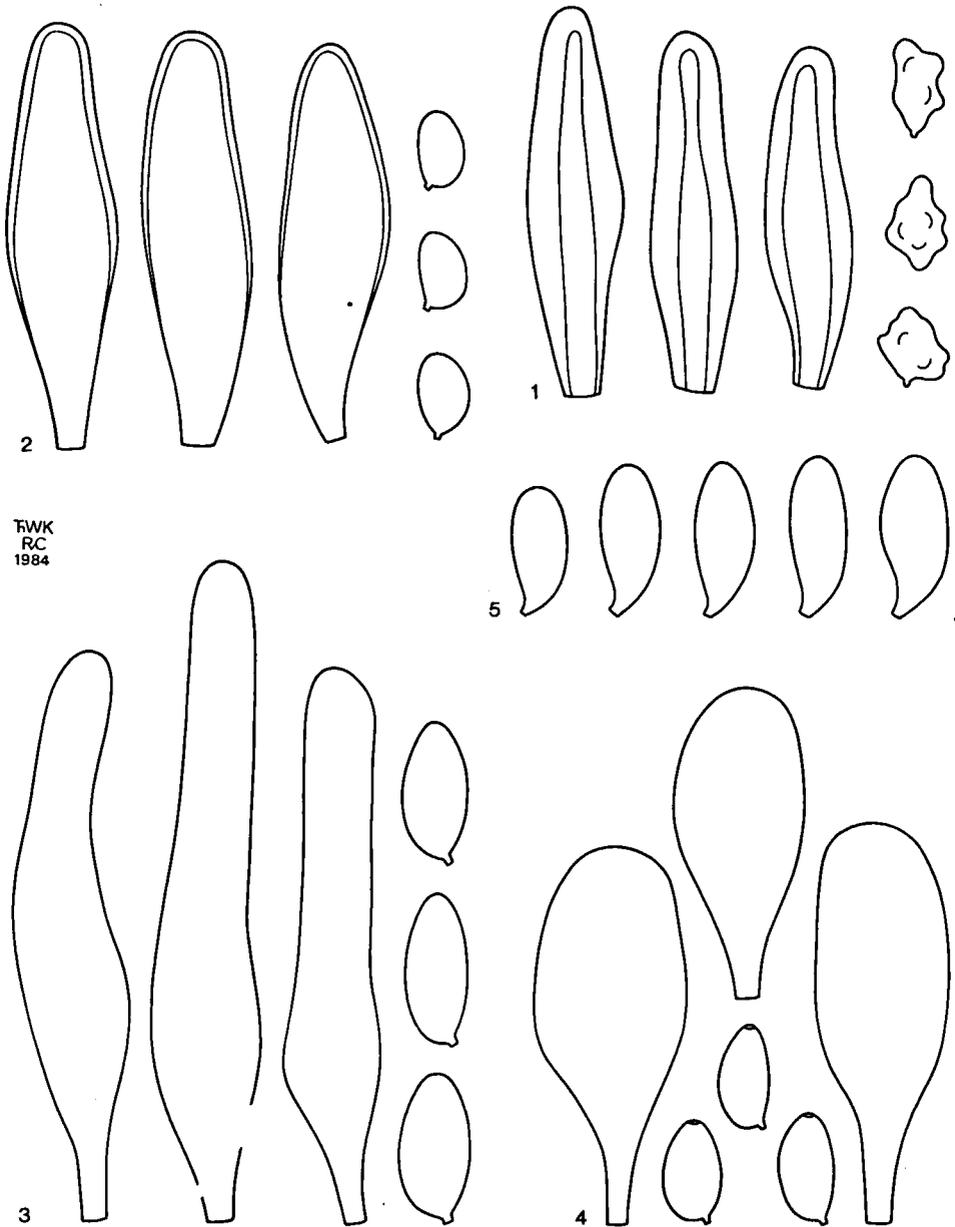


Fig. 1. *Inocybe albicans*, spores, pleurocystidia. — Fig. 2. *Inocybe albomarginata*, spores, pleurocystidia. — Fig. 3. *Inocybe annulata*, spores, pleurocystidia. — Fig. 4. *Inocybe autumnalis*, spores, pleurocystidia. — Fig. 5. *Inocybe avenacea*, spores.

The marginately bulbous stipe with caulocystidia all over, and the small spores clearly establish *I. albomarginata* as an older synonym of *I. reducta* J. Lange.

Stangl & Veselský (1973: 23) failed to locate the type and therefore designated a neotype. This neotypification must now be superseded.

Inocybe annulata — Fig. 3

Inocybe annulata Velen., České Houby: 371. 1920. — Lectotypus (select. mihi): Velenovský, VII.1919, Mnichovice (PRC; bottle 85).

One well-preserved specimen was found, at present without a ring, with the following microscopical characters. — Spores (11.0–)11.5–13.5(–14.0) × 5.5–6.5 μm, Q = 1.9–2.3, smooth, amygdaliform to limoniform, without germ-pore. Basidia 2-spored, without clamp. Cheilo- and pleurocystidia (49–)50–69(–70) × 10–14(–15) μm, cylindrical to sublageniform, thin-walled. Pileipellis a hymeniderm of clavate to spheropedunculate, colourless cells, 15–28 μm broad.

There can be no doubt that it represents *Agrocybe erebia* (Fr.: Fr.) Kühner, as already suggested by Svrcek (1966: 70), who was unable, however, to locate authentic material.

Inocybe autumnalis — Fig. 4

Inocybe autumnalis Velen., České Houby: 372. 1920. — Holotypus: Velenovský, X.1919, Koš (PRC; bottle 350).

As the contents of this bottle were completely dried out, the material was difficult to study. — Spores 8.0–9.5 × 5.0–5.5 μm, Q = (1.5–)1.6–1.8(–1.9), amygdaliform, with germ-pore. Basidia 4-spored, clamped. Cheilo- and pleurocystidia 53–62 × 15–20 μm, clavate to slenderly utriform, thin-walled. Pileipellis impossible to study.

On account of the conspicuously wrinkled pileus, suggesting a hymeniderm, and the microscopical characters, this species belongs in *Agrocybe*, where it keys out as *A. brunneola* sensu J. Lange. According to Watling (1983: 266) this species is in need of a new epithet, and therefore the following new combination is proposed: *Agrocybe autumnalis* (Velen.) Kuyp., *comb. nov.* (Basionym: *Inocybe autumnalis* Velen., České Houby: 372. 1920). It might be added that Velenovský (in Pilát, 1948: 124) already pointed out its resemblance to *Agrocybe erebia*.

Inocybe avenacea — Fig. 5

Inocybe avenacea Velen., České Houby: 387. 1920. — Holotypus: Velenovský, VII.1918, Mnichovice (PRC; bottle 435).

The material was completely dried out. — Spores (12.5–)13.0–15.0 × 5.5–6.5 μm, Q = (2.0–)2.2–2.4(–2.5), very pale, smooth, with a distinct hilary depression. Cheilocystidia not observed, but not metuloid.

This species belongs to *Lepiota* sect. *Lepiota*, where it keys out near *L. clypeolaria* (Bull.: Fr.) Kumm. The bad state of this collection does not permit a reliable determination, however.

Inocybe bubaci—Fig. 6

Inocybe bubaci Velen., *Ceské Houby*: 378. 1920.

No type-material was found at PRC, nor at PR. However, there exists a more recent collection made by Velenovský (X. 1937, Mnichovice, PR 153848) with the following microscopical characters. — Spores $9.0-10.0(-10.5) \times 5.5-6.0 \mu\text{m}$, $Q = 1.6-1.7(-1.8)$, smooth, subamygdaliform, with subconical apex. Cheilo- and pleurocystidia $(45-49-57(-58) \times 15-18(-20) \mu\text{m}$, subfusiform to subutriform, a few slenderly clavate, thick-walled, wall up to $4.0 \mu\text{m}$, pale yellow. Caulocystidia present at base of stipe, similar to cheilocystidia.

This collection probably represents *I. hirtella* Bres.; it could be added that Velenovský himself (in Pilát 1948: 128) stated that *I. bubaci* was related to *I. hirtella*.

Inocybe caespitosa—Fig. 7

Inocybe caespitosa Velen., *Ceské Houby*: 917. 1922. — Holotypus: Velenovský, IX.1920, near Mnichovice (PRC; bottle 97).

The type is well-preserved and showed the following microscopical characters. — Spores $8.0-10.0 \times 5.0-5.5 \mu\text{m}$, $Q = (1.5-)1.6-1.9(-2.0)$, smooth, pale brownish yellow, somewhat inaequilateral, without germ-pore. Pleurocystidia $(59-)64-79(-83) \times 14-17(-18) \mu\text{m}$, cylindrical to sublageniform, thick-walled, wall to $3.0 \mu\text{m}$. Cheilocystidia finally as pleurocystidia. Pileipellis a hymeniderm of clavate, hyaline elements, rather difficult to study.

The densely clustered habit, structure of pileipellis and the presence of metuloid cystidia are typical of *Psathyrella* sect. *Homophron*, where it keys out as *P. spadicea* (Schaeff.) Sing.

Inocybe calida—Fig. 8

Inocybe calida Velen., *České Houby*: 366. 1920. — Holotypus: Velenovský, VII.919, Mnichovice (PRC; bottle 48).

I noted the following characters on the type-collection. — Spores $9.0-11.0 \times 7.0-8.0(-8.5) \mu\text{m}$, $Q = 1.2-1.4(-1.5)$, with 10–15 distinct knobs, some spores even star-shaped. Cheilo- and pleurocystidia $(61-)64-69 \times 17-22 \mu\text{m}$, fusiform to subutriform, thick-walled, wall up to $3.0 \mu\text{m}$. Caulocystidia similar to cheilocystidia, descending to base of stipe.

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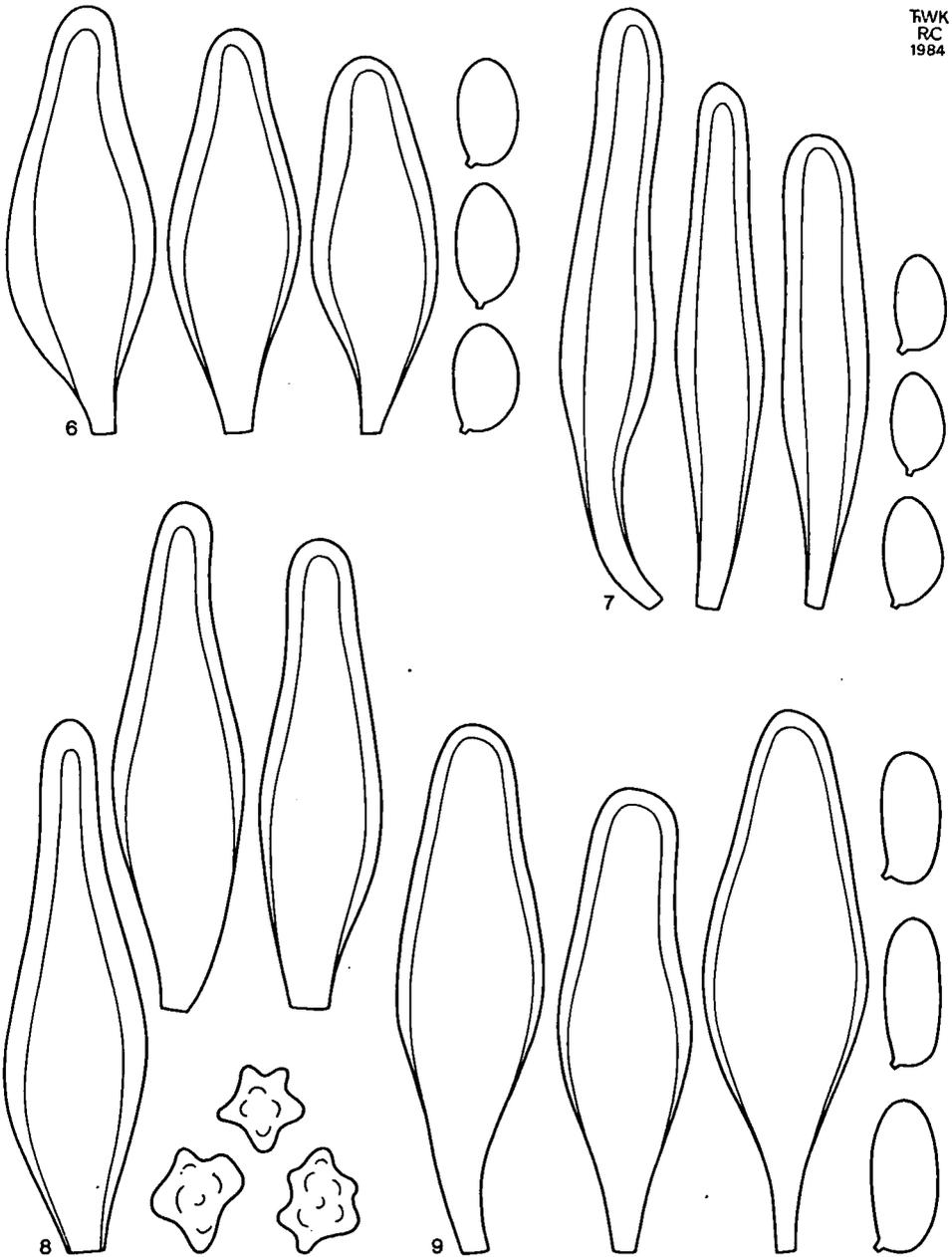


Fig. 6. *Inocybe bubaci*, spores, pleurocystidia. — Fig. 7. *Inocybe caespitosa*, spores, pleurocystidia.
Fig. 8. *Inocybe calida*, spores, pleurocystidia. — Fig. 9. *Inocybe carbonaria*, spores, pleurocystidia.

Although there are some conspicuous discrepancies with the original description, as Velenovský (in Pilát 1948: 120) described the stipe as being non-bulbous, whereas this collection has marginate bulb, I feel confident that it represents the type, and that it is identical to *I. brunneorufa* Stangl & Veselský, for which species the epithet *calida*, being the older, must stand.

Inocybe carbonaria—Fig. 9

Inocybe carbonaria Velen., České Houby: 379. 1920, non *Inocybe carbonaria* (Fr.: Fr.) Roze in Bull. Soc. bot. Fr. 23: 113. 1876.—Holotypus: Velenovský VI.1919, Běchovice (PRC; bottle 362).

As the material has been dried out completely, it was difficult to study.—Spores 11.0–13.0(–14.0) × 5.0–6.0 μm, Q = 2.0–2.3, smooth, cylindrical, with a hilary depression. Cheilo- and pleurocystidia 52–71 × 20–25(–26) μm, fusiform to utriform, with rounded apex, slightly thick-walled, wall to 1.0 μm. Covering of stipe not studied.

On account of these characters the species does belong to *I. lacera* (Fr.: Fr.) Kumm. For the time being, I regard it as a minor variant, but it might deserve varietal rank because of its habitat and somewhat deviating cystidia with a rounded apex.

Inocybe carpinacea—Fig. 10

Inocybe carpinacea Velen., Novit. mycol. nov.: 60. 1947.—Holotypus: Velenovský, 4. IX.1941, Mnichovice (PR 153863).

Spores 6.5–8.0 × 5.0–6.0 μm, Q = 1.3–1.5(–1.6), angular-nodulose, with 6–10 indistinct knobs. Cheilo- and pleurocystidia (40–)42–48(–51) × 12–15 μm, cylindrical, sometimes subfusiform, sessile, thick-walled, wall to 3.5 μm, intensely yellow. Caulocystidia descending to base of stipe, similar to cheilocystidia.

This is *I. petiginosa* (Fr.: Fr.) Gillet.

Inocybe casimiri—Fig. 11

Inocybe casimiri Velen., České Houby: 369. 1920.—Holotypus: Velenovský, VII. 1916, Jevany (PRC; bottle 273).

The material is rather badly preserved, as the bottle seems to have been dried out, and refilled at a later time. I noted the following characters.—Spores 10.0–11.5 × (7.5–)8.0–9.0 μm, Q = (1.2–)1.3–1.4, nodulose, with 16–22 pronounced nodules, some spores subspines. Cheilocystidia 38–51(–54) × (9–)10–15 μm, cylindrical to subutriform, thin-walled or minutely thick-walled, wall less than 0.5 μm. Pleurocystidia absent.

This is *I. leptophylla* Atk.

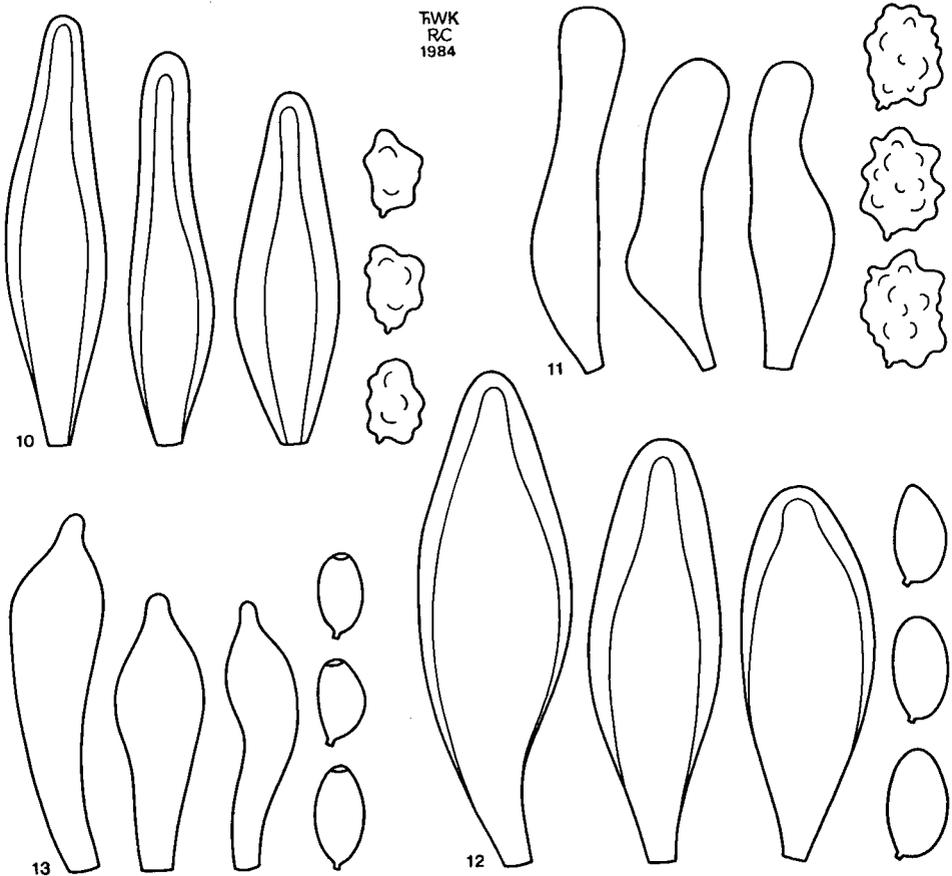


Fig. 10. *Inocybe carpinacea*, spores, pleurocystidia. — Fig. 11. *Inocybe casimiri*, spores, cheilocystidia. — Fig. 12. *Inocybe castanea*, spores, pleurocystidia. — Fig. 13. *Inocybe corcontica*, spores, chrysocystidia.

Inocybe castanea — Fig. 12

Inocybe castanea Velen., České Houby: 375. 1920, non *Inocybe castanea* Peck in Bull. N. Y. State Mus. 75: 16. 1904. — Lectotypus (select. mihi): Velenovský, VII.1916, Karlštejn (PRC; bottle 99).

The lectotype is rather well-preserved with the following characters. — Spores (8.5–)9.0–10.0 × 5.0–6.0 μm, Q = (1.5–)1.6–1.9, smooth, subamygdaliform, with almost obtuse apex. Cheilo- and pleurocystidia 48–55 × 19–22 μm, clavate to subutriform, thick-walled, wall to 3.0 μm. Stipe pruinose all over, caulocystidia similar to cheilocystidia.

This is *I. phaeoleuca* Kühner.

Another collection of *I. castanea* (V.1919, Jíloviště, PRC; bottle 306) is in a rather bad state, but is certainly conspecific.

Inocybe collivaga

Inocybe collivaga Velen., České Houby: 381. 1920.

No type-material was found at PRC, nor at PR

Inocybe corcontica—Fig. 13

Inocybe corcontica Velen., České Houby: 370. 1920.—Holotypus: Velenovský, VII.1918, Krkonoše (PRC; bottle 285).

The material is well-preserved.—Spores $7.0-8.0 \times 3.0-4.0 \mu\text{m}$, $Q = 1.9-2.3$, smooth, dark brown, with conspicuous germ-pore. Chrysocystidia $35-49 \times 9-13 \mu\text{m}$, often mucronate, thin-walled.

This is *Hypholoma sublateritium* (Fr.) Quél.

Inocybe cordae—Fig. 14

Inocybe cordae Velen., České Houby: 375. 1920.—Holotypus: Velenovský, VIII.1915, Radotín (PRC; bottle 173).

The holotype is in a rather bad state.—Spores $(8.0-8.5-10.0 \times 5.0-6.0 \mu\text{m})$, $Q = 1.6-1.8$, smooth, subamygdaliform, with subconical apex. Cheilo- and pleurocystidia $(61-63-75 \times 14-18 \mu\text{m})$, (sub)lageniform, thick-walled, wall to $3.0 \mu\text{m}$, yellow. Stipe only in apical part with caulocystidia, similar to cheilocystidia.

On account of these characters *I. cordae* is regarded a synonym of *I. flocculosa* (Berk. →) Sacc.

Inocybe demitrata—Fig. 15

Inocybe demitrata Velen., České Houby: 380. 1920.— Holotypus: Velenovský, VIII.1919, Vidrholec near Praha (PRC; bottle 153).

Spores $10.0-12.0 \times 4.5-5.5 \mu\text{m}$, $Q = 2.0-2.2(-2.5)$, smooth, cylindrical, with hilary depression. Cheilo- and pleurocystidia $(52-54-61(-64) \times (18-20-23 \mu\text{m}))$, fusiform, with subacute apex, exceptionally mucronate, somewhat thick-walled, wall less than $1.0 \mu\text{m}$. Caulocystidia absent.

This is *I. lacera* (Fr.: Fr.) Kumm.

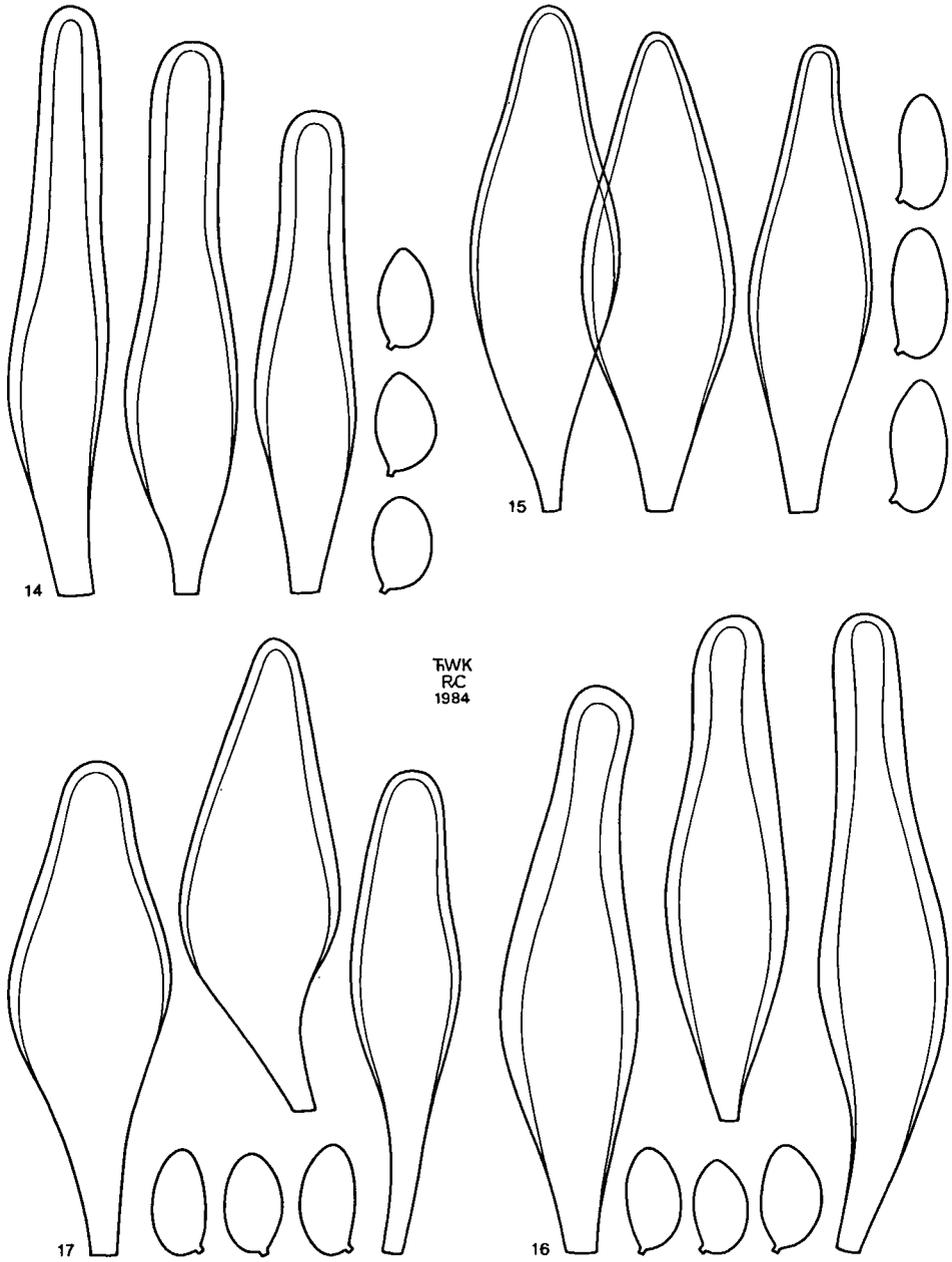


Fig. 14. *Inocybe cordae*, spores, pleurocystidia. — Fig. 15. *Inocybe demitrata*, spores, pleurocystidia. — Fig. 16. *Inocybe dentifera*, spores, pleurocystidia. — Fig. 17. *Inocybe fechtneri*, spores, pleurocystidia.

***Inocybe dentifera*—Fig. 16**

Inocybe dentifera Velen., Novit. mycol. nov.: 60. 1947. — Holotypus: Velenovský, 15.X.1941, Mnichovice (PR 153859).

The type is in a rather bad state, being damaged by a mould, with the following characters.—Spores $8.0-9.0(-9.5) \times 5.0-5.5(-6.0) \mu\text{m}$, $Q = (1.5-1.6-1.8)$, smooth, subamygdaliform, with subconical apex. Cheilo- and pleurocystidia $61-78 \times 13-18 \mu\text{m}$, (sub)lageniform, thick-walled, wall to $2.5 \mu\text{m}$, yellow. Stipe covering difficult to study, caulocystidia only at extreme apex present, more or less similar to cheilocystidia, soon changing into caulocystidioid hairs.

The most conspicuous character of this species is its dentate-spinulose pileal margin. Otherwise it comes very close to *I. flocculosa* (Berk.→) Sacc. It is tentatively regarded as an independent species.

***Inocybe fechtneri*—Fig. 17**

Inocybe fechtneri Velen., České Houby: 372. 1920. — Holotypus: Velenovský, VII.1916, Karlštejn (PRC; bottle 64).

The material is well-preserved, showing the following microscopical characters.—Spores $(8.0-8.5-10.0(-10.5)) \times 4.5-5.5 \mu\text{m}$, $Q = 1.7-1.9$, smooth, subamygdaliform, with subconical apex. Cheilo- and pleurocystidia $54-69(-73) \times (13-)15-22 \mu\text{m}$, fusiform to subutriform, thick-walled, wall to $1.5 \mu\text{m}$. Caulocystidia present in upper third part of stipe, similar to cheilocystidia.

The type corresponds in all respects to *I. pusio* P. Karst.

Inocybe fibrosa

Inocybe fibrosa Velen., Novit. mycol.: 121. 1939, non *Inocybe fibrosa* (Sow.) Gillet.

No type-material was found at PR, nor at PRC.

***Inocybe fulvidula*—Fig. 18**

Inocybe fulvidula Velen., Novit. mycol.: 120. 1939. — Lectotypus (select. mihi): Velenovský, IX.1937, Mnichovice (PR 153846).

The type is badly damaged by a mould with the following characters.—Spores $9.0-10.5 \times 5.0-6.0 \mu\text{m}$, $Q = (1.6-1.7-1.9)$, smooth, subamygdaliform, with subconical apex. Cheilo- and pleurocystidia $(54-)57-69(-71) \times 15-18 \mu\text{m}$, sublageniform to somewhat utriform, thick-walled, wall to $1.5 \mu\text{m}$, somewhat yellowish. Stipe in apical part with caulocystidia, descending to 1/6th of stipe.

This represents a rather slender and pale variant of *I. flocculosa* (Berk.→) Sacc.

Another collection, however, by Velenovský (X.1937, Mnichovice, Hubačov, PR

153847) possesses smaller spores, viz. $8.0-9.0 \times 4.5-5.0 \mu\text{m}$, more cylindrical-sublageniform pleurocystidia and caulocystidia all over. This collection represents *I. sindonia* (Fr.) P. Karst.

Inocybe fuscidula — Fig. 19

Inocybe fuscidula Velen., České Houby: 378. 1920, non *Inocybe fuscidula* Bres., Iconogr. mycol. 15: pl. 735. 1930. — Holotypus: Velenovský, VII.1918, Davle (PRC; bottle 396).

The contents of this bottle consist of about 12 species adhering to each other. From *I. fuscidula* I reconstructed the following characters. — Spores (7.5–) $8.0-9.0 \times (4.5-)$ $5.0-5.5 \mu\text{m}$, $Q = 1.6-1.8$, smooth, subamygdaliform, with subconical apex. Cheilo- and pleurocystidia $51-63(-68) \times 13-17 \mu\text{m}$, cylindrical to subutriform, sometimes subfusiform, thick-walled, wall to $2.0 \mu\text{m}$. Caulocystidia frequent in upper half of stipe, resembling cheilocystidia.

The small habit, dark brown, rimose pileus and the microscopical characters are typical for *I. brunneoatra* (Heim) P. D. Orton, for which *I. fuscidula* is priorable.

Inocybe gintliana — Fig. 20.

Inocybe gintliana Velen., České Houby: 385. 1920. — Holotypus: Velenovský, VII.1916, Roblín (PRC; bottle 122).

In this bottle I found one specimen which probably is the type of *I. gintliana* with the following characters. — Spores $9.0-10.0 \times 5.5-6.0 \mu\text{m}$, verruculose. Cheilocystidia not observed, not metuloid.

This is a species of *Cortinarius* Fr.

Inocybe glabrescens — Fig. 21

Inocybe glabrescens Velen., České Houby: 373. 1920. — Lectotypus (select. mihi): Velenovský, VIII.1915, Mnichovice (PRC; bottle 279).

The collection, designated here as the lectotype, consists of two well-preserved specimens, of which one was illustrated by Velenovský (1920: 362), with the following microscopical characters. — Spores (8.5–) $9.0-10.0 \times 5.0-5.5 \mu\text{m}$, $Q = (1.6-)$ $1.7-1.9$, smooth, subamygdaliform, with subconical apex. Cheilo- and pleurocystidia $57-64 \times 15-18 \mu\text{m}$, fusiform, sometimes subutriform to sublageniform, thick-walled, wall to $2.0-2.5 \mu\text{m}$. Caulocystidia descending to base of stipe, similar to cheilocystidia, but somewhat less thick-walled.

On account of these characters this species belongs in the relationship of *I. abietis* Kühner, from which it differs in having a paler, more distinctly rimose pileus with a conspicuous umbo, and somewhat broader cystidia. In my opinion it represents a separate species.

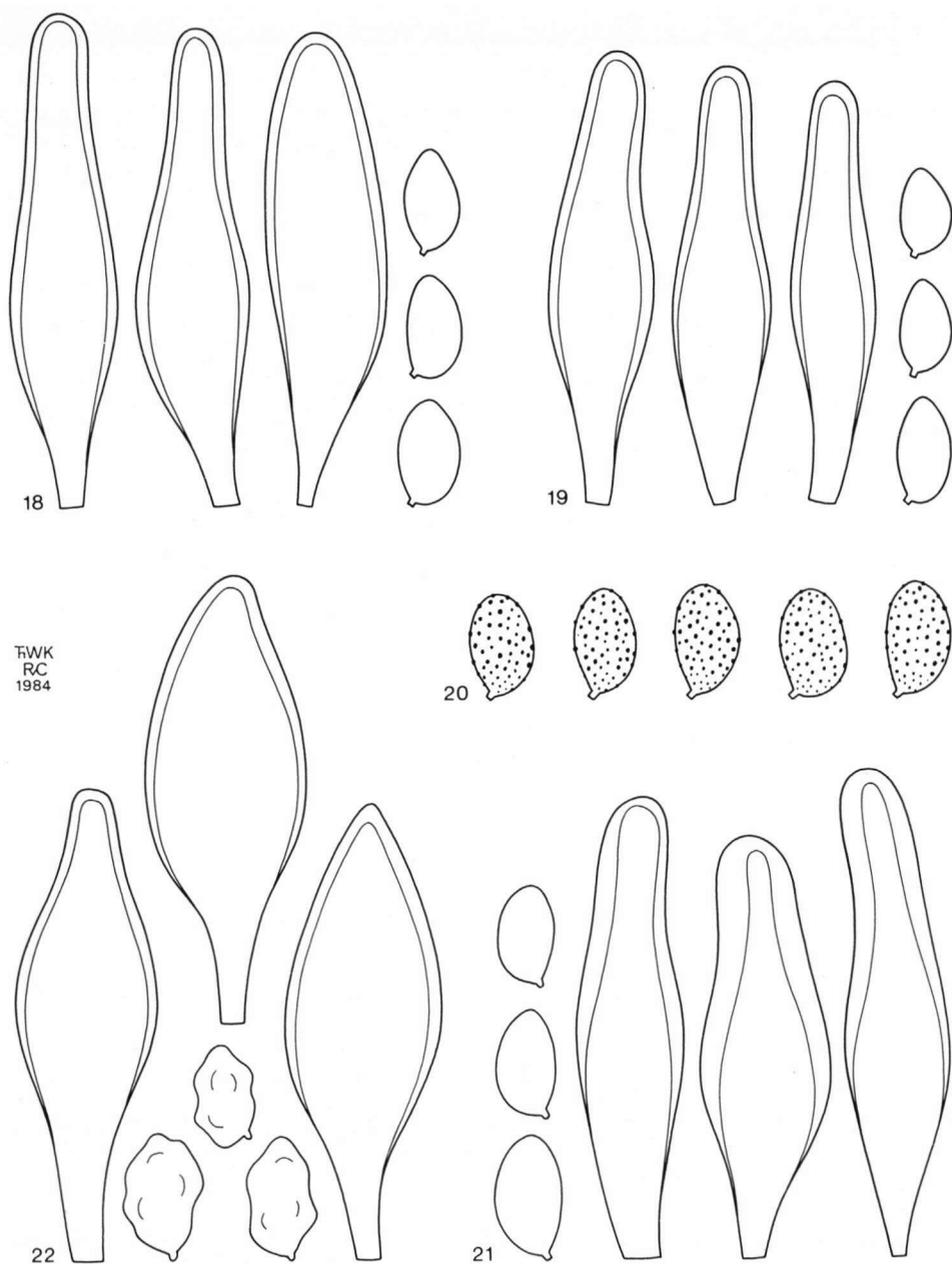


Fig. 18. *Inocybe fulvidula*, spores, pleurocystidia. — Fig. 19. *Inocybe fuscidula*, spores, pleurocystidia. — Fig. 20. *Inocybe gintliana*, spores. — Fig. 21. *Inocybe glabrescens*, spores, pleurocystidia. — Fig. 22. *Inocybe globocystis*, spores, pleurocystidia.

Another collection (Mnichovice, VI.1919, PRC; bottle 65) is in a bad state, showing the following characters. — Spores $8.5-10.0 \times 5.0-6.0 \mu\text{m}$, smooth, subamygdaliform. Cheilo- and pleurocystidia $(55-57-66 \times 15-19 \mu\text{m})$, fusiform, slightly thick-walled, wall to $1.0(-1.5) \mu\text{m}$. Caulocystidia only present in apical part of stipe, similar to cheilocystidia. This collection evidently belongs to another species, and seems to represent *I. hypophaea* Furrer-Ziogas.

Inocybe globocystis — Fig. 22

Inocybe globocystis Velen., České Houby: 368. 1920. — Holotypus: Velenovský, VII.1919, Mnichovice (PRC; bottle 48).

The material in liquid is well-preserved, showing the following microscopical characters. — Spores $(10.0-10.5-12.5(-13.0) \times 5.5-7.5 \mu\text{m})$, $Q = (1.6-1.7-1.9)$, angular-subnodulose, nodulae not pronounced and very difficult to count. Cheilo- and pleurocystidia $(49-51-57(-61) \times 20-24(-28) \mu\text{m})$, pedicellate, broadly ovoid to even subglobose in upper part, sometimes mucronate, thick-walled, wall to $1.5-2.0 \mu\text{m}$. Caulocystidia even at apex of stipe not observed.

This is *I. curvipes* P. Karst.

Inocybe infracta

Inocybe infracta Velen., České Houby: 384. 1920.

No type-collection is left at PR, nor at PRC. Judging from the description *I. infracta* comes very close to, or may be identical with *I. fastigiata* (Schaeff.) Quéf.

Inocybe inodora — Fig. 23

Inocybe inodora Velen., České Houby: 373. 1920. — Holotypus: Velenovský, VI.1920, Bilichov (PRC; bottle 156).

The type-collection is well-preserved with the following microscopical characters. — Spores $(10.5-11.0-13.0 \times 6.0-6.5(-7.0) \mu\text{m})$, $Q = (1.7-1.8-2.0(-2.1))$, smooth, subamygdaliform, often with a hilary depression, with subconical apex. Cheilo- and pleurocystidia $58-78(-80) \times (19-21-24 \mu\text{m})$, slenderly clavate, subfusiform to subutriform, thick-walled, wall to $2.5-3.0 \mu\text{m}$. Caulocystidia descending to base of stipe, similar to cheilocystidia.

These microscopical characters clearly establish the synonymy of *I. inodora* with *I. albidodisca* Kühner, for which *inodora*, being the older epithet, must stand.

Inocybe laevigata — Fig. 24

Inocybe laevigata Velen., České Houby: 367. 1920, non *Inocybe laevigata* (P. Karst.) P. Karst. in Bidr. Finl. Nat. Folk 48: 210. 1889. — Lectotypus (select. mihi): Velenovský, VI.1919, Běchovice (PRC; bottle 112).

The well-preserved lectotype showed the following microscopical characters.— Spores (7.5–)8.0–9.0(–10.0) × (5.5–)6.0–7.0(–7.5) μm , Q = 1.3–1.4, nodulose, with (6–)8–11 prominent nodulae, a few spores more angular-subnodulose. Cheilo- and pleurocystidia (51–)54–61(–64) = 18–24(–25) μm , slenderly clavate, subfusiform to sublageniform, slightly thick-walled, wall less than 1.0 μm . Caulocystidia none observed.

The smooth, even subviscid dark brown pileus with a prominent umbo, and the microscopical characters are exactly those of *I. acuta* sensu Kühn. & Bours. (1932: 130), for which the correct name is *I. striata* Bres. *Inocybe striata* differs from true *I. acuta* Boud. in being larger, having a smooth subviscid pileus and more prominently nodulose spores, and in habitat.

Inocybe leucopus

Inocybe leucopus Velen., České Houby: 373. 1920.

No type-collection was found at PR, nor at PRC.

Inocybe longicystis

Inocybe longicystis Velen., České Houby: 373. 1920, non *Inocybe longicystis* Atk. in Amer. J. Bot. 5: 213. 1918.

No type-material was found at PR, nor at PRC. As Velenovský's name was illegitimate, the new name *Inocybe velenovskyi* Bours. & Kühn. in Bull. trimest. Soc. mycol. Fr. 44: 179. 1928 was proposed.

Inocybe lutescens

Inocybe lutescens Velen., České Houby: 375. 1920.

No type-material was found at PR, nor at PRC. The species has recently been neotypified by Stangl & Veselský (1980: 159) with a collection from the Federal Republic of Germany.

Inocybe macrocystis—Fig. 25

Inocybe macrocystis Velen., České Houby: 369. 1920. — Holotypus: Velenovský, VI.1916, Hvězda near Praha (PRC; bottle 275).

Spores 7.5–8.5 × 4.5–5.0 μm , Q = (1.5–)1.6–1.8, nodulose, with 5–8 nodulae. Cheilo- and pleurocystidia 62–77(–80) × 16–20(–22) μm , cylindrical, sometimes sublageniform, very thick-walled, wall to 3.5 μm , with distinct yellow tinge. Stipe pruinose all over, caulocystidia similar to cheilocystidia.

This is *Inocybe bresadolae* Masee.

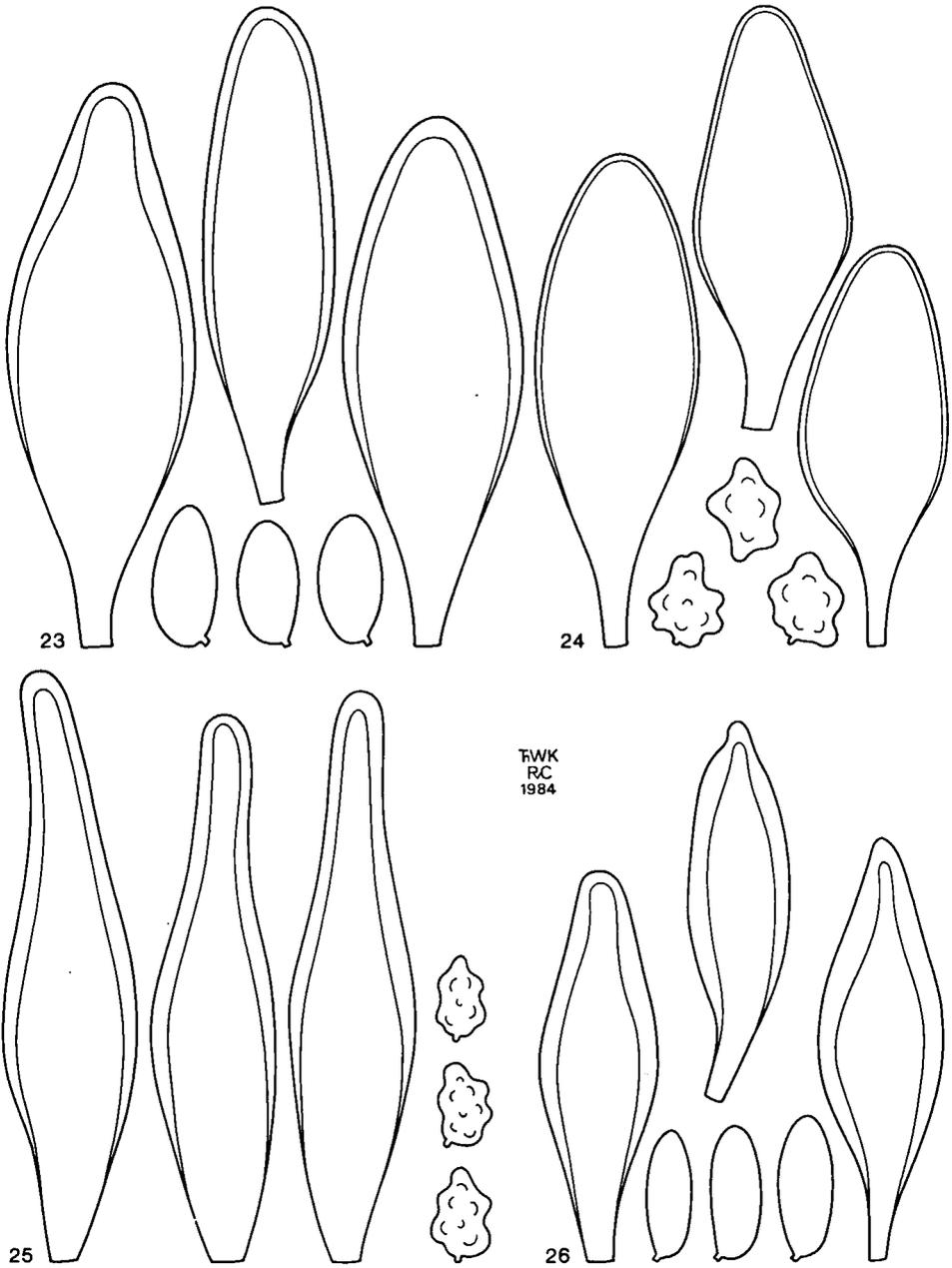


Fig. 23. *Inocybe inodora*, spores, pleurocystidia. — Fig. 24. *Inocybe laevigata*, spores, pleurocystidia. — Fig. 25. *Inocybe macrocystis*, spores, pleurocystidia. — Fig. 26. *Inocybe mammosa*, spores, pleurocystidia.

***Inocybe mammosa*—Fig. 26**

Inocybe mammosa Velen., *Ceské Houby*: 381. 1920. — Lectotypus (select. mihi): Velenovský, VII.1919, Mnichovice (PRC; bottle 120).

The material in liquid is rather well-preserved with the following microscopical characters. — Spores 11.0–14.0(–14.5) \times (4.5–)5.0–5.5 μm , $Q = 2.0\text{--}2.4\text{--}(2.5)$, smooth, cylindrical, with a hilary depression, a few spores with a minutely angular tendency. Cheilo- and pleurocystidia (45–)46–59 \times 15–20 μm , fusiform, acute towards apex, sometimes mucronate, thick-walled, wall to 2.0 μm . A few caulocystidia present at extreme apex of stipe, downwards soon disappearing.

On account of these characters *I. mammosa* is considered a synonym of *I. lacera* (Fr.: Fr.) Kumm. For the time being I regard it only as a minor variant.

Inocybe melampyri

Inocybe melampyri Velen., *Novit. mycol. nov.*: 60. 1947.

No type-material was left at PR, nor at PRC.

Inocybe mirabilis

Inocybe mirabilis Velen., *České Houby*: 363. 1920.

No type-material was left at PR, nor at PRC. Judging from the description (in Pilát 1948: 118) *I. mirabilis* is synonymous with *I. subcarpta* Kühn. & Bours. for which the name *I. mirabilis*, being the older, has priority.

***Inocybe mitracea*—Fig. 27**

Inocybe mitracea Velen., *Ceské Houby*: 130. 1920. — Holotypus: Velenovský, VI.1916, Ríp (PRC; bottle 282). — Fig. 27.

The type is well-preserved. — Spores (9.5–)10.0–12.0(–12.5) \times 4.5–5.5 μm , $Q = 2.0\text{--}2.4\text{--}(2.5)$, smooth, cylindrical, with hilary depression. Cheilo- and pleurocystidia (50–)52–63(–78) \times 13–17 μm , fusiform, with subacute apex, slightly thick-walled, wall to 1.0 μm . Caulocystidia not observed.

This is *Inocybe lacera* (Fr.: Fr.) Kumm.

***Inocybe naucoriiformis*—Fig. 28**

Inocybe naucoriiformis Velen., *Novit. mycol.*: 119. 1939. — Holotypus: Velenovský, X.1939, Mnichovice (PR 153845).

The holotype is well-preserved and shows the following characters. — Spores 8.0–10.0(–10.5) \times 5.0–6.5 μm , $Q = (1.4\text{--})1.5\text{--}1.7$, nodulose, with 5–8 rather indistinct

nodulae. Cheilo- and pleurocystidia $43-51(-58) \times (13-)15-18 \mu\text{m}$, cylindrical to subfusiform, thick-walled, wall to $2.0 \mu\text{m}$, yellow to very pale yellow. Stipe with caulocystidia all over, caulocystidia similar to cheilocystidia. Hyphae of velipellis thick-walled, not encrusting.

On account of these characters *I. naucoriiformis* is a member of sect. *Petiginosae* where it is unique because of its somewhat hygrophanous, brick red pileus.

Inocybe nitida

Inocybe nitida Velen., České Houby: 365. 1920.

No type was found at PR, nor at PRC.

Inocybe nuda — Fig. 29

Inocybe nuda Velen., České Houby: 365. 1920. — Holotypus: Velenovský, V.1920, Krc (PRC; bottle 294).

The holotype is in a very bad state, as the material has been completely dried out. — Spores $7.0-9.0(-9.5) \times 5.0-6.0(-6.5) \mu\text{m}$, $Q = (1.2-)1.3-1.6(-1.7)$, angular to subnodulose, with 6–9 rather indistinct nodulae. Cheilo- and pleurocystidia $(62-)67-82(-88) \times 18-25 \mu\text{m}$, cylindrical to (sub)lageniform, thick-walled, wall to $3.0(-4.0) \mu\text{m}$, yellow (according to Velenovský (in Pilát 1948: 122)). Covering of stipe impossible to study.

No known species of *Inocybe* seems to fit the macroscopical description and microscopical description and microscopical characters of *I. nuda*. The habitat on burned wood is completely aberrant for species of the mycorrhizal genus *Inocybe*. I consider it likely that Velenovský has mixed up material of different species, and for that reason I am inclined to regard *I. nuda* as a *nomen dubium*.

Inocybe odora — Fig. 30

Inocybe odora Velen., Novit. mycol.: 121. 1939. — Holotypus: Velenovský, 20.X.1939, Myslín (PR 153866).

Spores $(7.0-)7.5-8.5 \times 4.5-5.0 \mu\text{m}$, $Q = 1.6-1.8$, verruculose. Cheilocystidia absent.

Inocybe odora is a member of the genus *Cortinarius* Fr.

Inocybe olgae — Fig. 31

Inocybe olgae Velen., České Houby: 371. 1920. — Holotypus: Zvěřinova, X.1917, Bohnice near Praha (PRC; bottle 404).

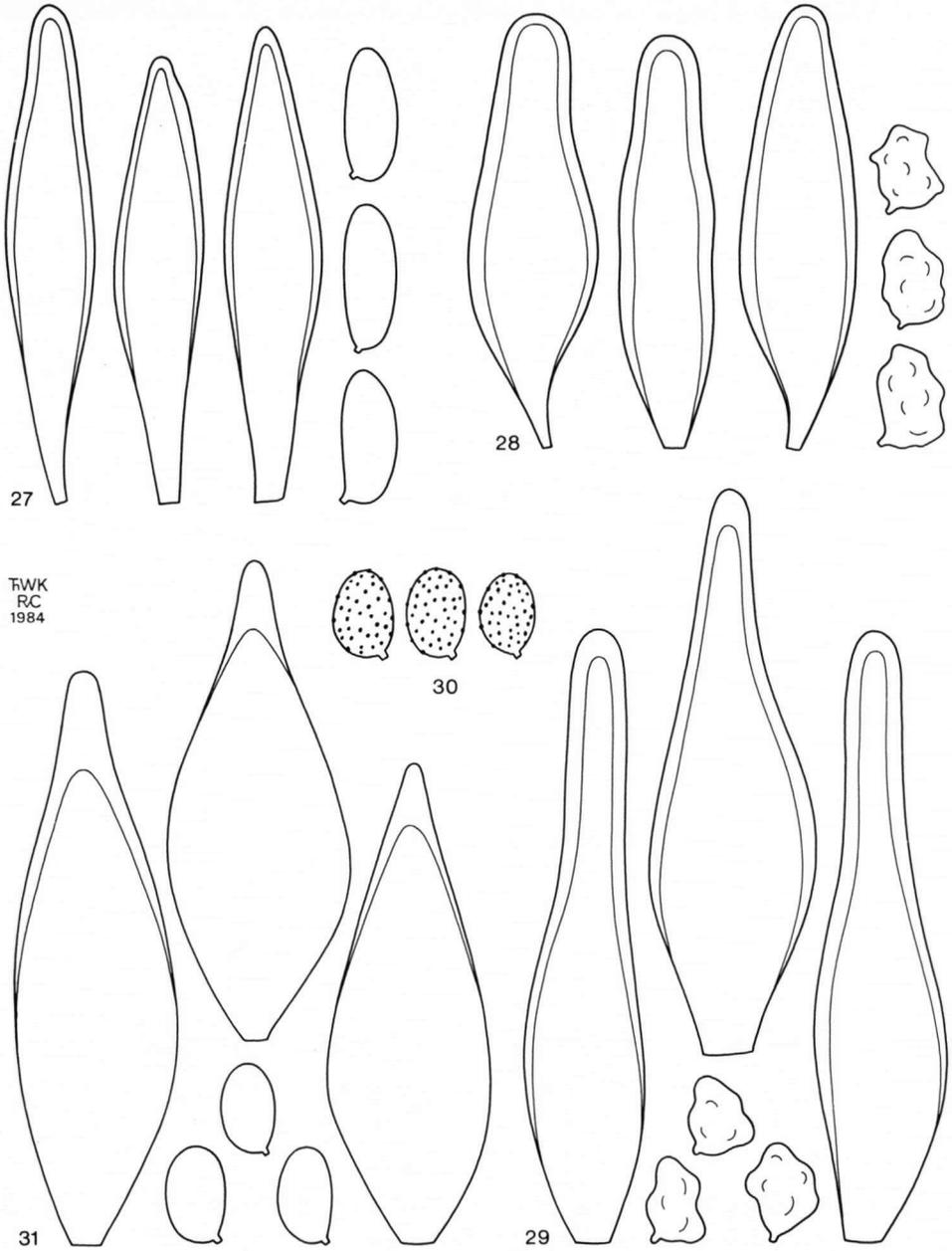


Fig. 27. *Inocybe mitracea*, spores, pleurocystidia. — Fig. 28. *Inocybe naucoriiformis*, spores, pleurocystidia. — Fig. 29. *Inocybe nuda*, spores, pleurocystidia. — Fig. 30. *Inocybe odora*, spores. — Fig. 31. *Inocybe olgae*, spores, pleurocystidia.

The material in liquid is well-preserved with the following microscopical characters. — Spores (7.5–)8.0–9.0(–10.0) \times (4.0–)4.5–5.0 μm , $Q = 1.7–1.9(–2.0)$, smooth, often subphaseoliform, pale brownish yellow. Cheilo- and pleurocystidia (44–)50–66(–72) \times 14–22 μm , fusiform, distinctly ventricose, with acute, mucronate apex, with thick-walled yellow apical part.

Inocybe olgae does not belong to the genus *Inocybe* but is a synonym of *Pholiota lenta* (Pers.: Fr.) Sing.

Inocybe pallescens — Fig. 32

Inocybe pallescens Velen., Česká Houby: 377. 1920. — Holotypus: Velenovský, V.1920, Jevany (PRC; bottle 170).

The holotype is well-preserved. — Spores (11.0–)11.5–14.0 \times 4.5–5.5(–6.0) μm , $Q = 2.3–2.7(–2.8)$, smooth, cylindrical, with hilary depression, almost colourless. Cheilo- and pleurocystidia 55–68(–69) \times 17–22 μm , fusiform, with subacute apex, sometimes even submucronate, slightly thick-walled, wall to 1.0 μm . Caulocystidia not observed.

It is an unusually pale, probably semi-albinistic variant of *Inocybe lacera* (Fr.: Fr.) Kumm., which, in my opinion, does not deserve an autonomous rank. Albinistic forms are known in *I. sindonia* (Fr.) P. Karst., *I. pelargonium* Kühner, *I. asterospora* Quél., *I. lanuginosa* (Bull.: Fr.) Kumm., *I. flocculosa* (Berk.→) Sacc. and *I. lacera* (Fr.: Fr.) Kumm.

Recognition of these variants as separate taxa will ultimately result in a redoubling of *Inocybe* taxa!

Inocybe pallida — Fig. 33

Inocybe pallida Velen., Česká Houby: 366. 1920. — Holotypus: Velenovský, VII.1919, Mnichovice (PRC, bottle 48).

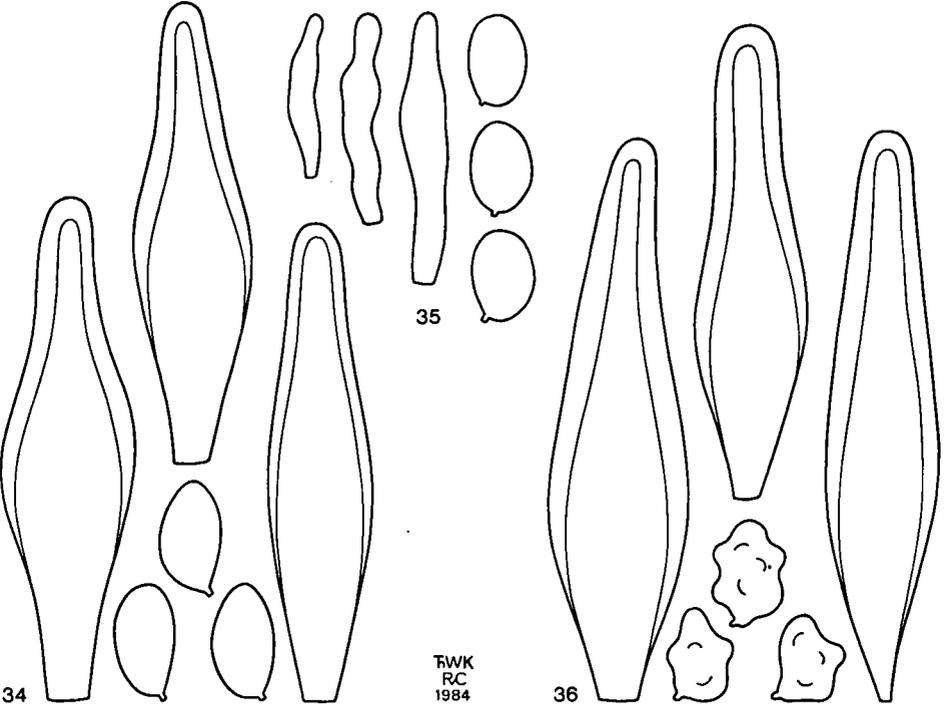
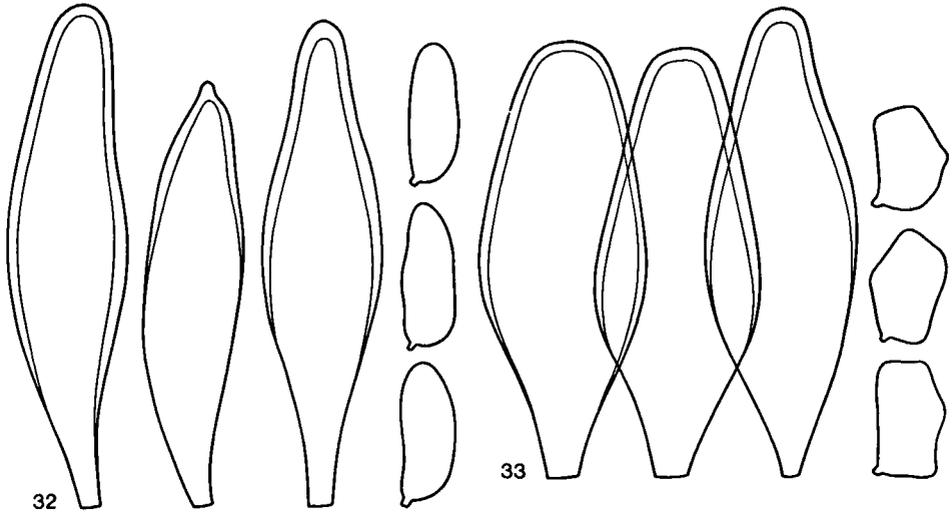
The type-collection is well-preserved. — Spores (9.0–)9.5–11.0(–11.5) \times (5.5–)6.0–6.5(–7.0) μm , $Q = 1.5–1.8(–1.9)$, angular, with indistinct nodulae. Cheilo- and pleurocystidia (50–)52–57(–63) \times 20–24(–26) μm , clavate to subutriform, thick-walled, wall to 1.5 μm . Caulocystidia descending over halfway of stipe, similar to cheilocystidia.

Inocybe pallida is a good species, related to *I. decipiens* Bres., from which it differs in having smaller, more angular spores.

Inocybe pedicellata

Inocybe pedicellata Velen., Česká Houby: 385. 1920.

No type-material was found at PR, nor at PRC.



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Fig. 32. *Inocybe pallescens*, spores, pleurocystidia. — Fig. 33. *Inocybe pallidus*, spores, pleurocystidia. — Fig. 34. *Inocybe pedunculata*, spores, pleurocystidia. — Fig. 35. *Inocybe perpusilla*, spores, cheilocystidia. — Fig. 36. *Inocybe putilla* var. *semiorbicularis*, spores, pleurocystidia.

Inocybe pedunculata — Fig. 34

Inocybe pedunculata Velen., České Houby: 374. 1920. — Holotypus: Velenovský, V.1920, Cer-nošice (PRC; bottle 370).

The holotype is completely dried out and therefore in a very bad state. — Spores (8.5–)9.0–11.0 × 5.0–6.0 μm , $Q = 1.7–1.9$, smooth, subamygdaliform, with subconical apex. Cheilo- and pleurocystidia (51–)56–68(–70) × 13–19 μm , cylindrical to sublageniform, thick-walled, wall to 3.0 μm . Covering of stipe impossible to study.

The macroscopical description and the microscopical characters indicate that *Inocybe pedunculata* is a synonym of *I. fuscidula* Velen., which name is adopted for this species.

Inocybe perpusilla — Fig. 35

Inocybe perpusilla Velen., České Houby: 388. 1920. — Holotypus: Velenovský, VII.1916, Kárlík (PR 68519).

Only a few fragments of lamellae could be found with the following characters. — Spores 7.5–8.5 × 5.0–5.5 μm , smooth, without germ-pore. Cheilocystidia 21–34(–38) × 4–7 μm , filiform, flexuose, thin-walled, hyaline. Pleurocystidia absent.

Inocybe perpusilla does not belong to the genus *Inocybe*.

Inocybe picetorum

Inocybe picetorum Velen., České Houby: 382. 1920.

No type-material was found at PR, nor at PRC. On account of Velenovský's description (in Pilát 1948: 130) I do not hesitate in referring it into the synonymy of *Inocybe conformata* P. Karst. (= *I. cincinnatula* Kühner).

Inocybe putilla var. *semiorbicularis* — Fig. 36

Inocybe putilla Bres. var. *semiorbicularis* Velen., České Houby: 365. 1920. — Holotypus: Velenovský, VII.1916, Roblín (PRC; bottle 124).

The type consists of one specimen with the following microscopical characters. — Spores (6.5–)7.0–8.0 × (4.5–)5.0–6.0 μm , $Q = 1.3–1.6$, angular-nodulose, but without pronounced nodulae. Cheilo- and pleurocystidia (63–)65–82 × (13–)15–19 μm , cylindrical to sublageniform, thick-walled, wall to 3.0 μm . Stipe with caulocystidia all over, caulocystidia similar to cheilocystidia.

Undoubtedly this is *Inocybe grammata* Quél.

***Inocybe reisneri*—Fig. 37**

Inocybe reisneri Velen., *Ceské Houby*: 384. 1920. — Holotypus: Reisner, VII.1916, Chuchle near Praha (PRC, bottle 472).

The holotype specimen is completely dried out.—Spores $9.0\text{--}10.0 \times 5.0\text{--}6.0 \mu\text{m}$, $Q = 1.6\text{--}1.8(-2.0)$, smooth, regular to phaseoliform. Cheilocystidia not revived. Metuloids absent.

On account of Velenovský's description (in Pilát 1948: 131) I do not hesitate in synonymizing it with *Inocybe insignissima* Romagn., for which species the name *I. reisneri*, being the older, has priority.

***Inocybe rohlenae*—Fig. 38**

Inocybe rohlenae Velen., *Ceské Houby*: 379. 1920. — Holotypus: Fechtner, V.1916, Libochovický (PRC; bottle 406).

The holotype is quite well-preserved.—Spores $(8.5\text{--})9.0\text{--}9.5 \times 4.5\text{--}5.0 \mu\text{m}$, $Q = 1.8\text{--}2.0$, smooth, subamygdaliform, with subconical apex. Cheilo- and pleurocystidia $(61\text{--})66\text{--}76(-79) \times 14\text{--}16 \mu\text{m}$, sublageniform to lageniform, thick-walled, wall to $2.0 \mu\text{m}$. Caulocystidia only present in apical part of stipe, similar to cheilocystidia, soon forming a transitional zone of caulocystidioid hairs.

This is another synonym of *Inocybe flocculosa* (Berk.→) Sacc.

Inocybe rosella

Inocybe rosella Velen., *Ceské Houby*: 387. 1920.

No type was found at PR, nor at PRC.

Judging from the description, however, it is clear that *Inocybe rosella* is not a representative of the genus.

***Inocybe rostrata*—Fig. 39**

Inocybe rostrata Velen., *Ceské Houby*: 367. 1920. — Lectotypus (select. mihi): Kavina, 1916, Revnice (PRC; bottle 284).

Spores $7.0\text{--}8.0 \times 5.0\text{--}6.0 \mu\text{m}$, $Q = (1.2\text{--})1.3\text{--}1.5$, subnodulose, with 8–11 nodulae, sometimes more subangular. Cheilo- and pleurocystidia $(48\text{--})51\text{--}61(-66) \times 16\text{--}20 \mu\text{m}$, cylindrical, subfusiform to subutriform, thick-walled, wall to $2.0 \mu\text{m}$. Stipe with caulocystidia all over, caulocystidia similar to cheilocystidia.

The small spores without pronounced nodulae and the completely pruinose stipe are distinctive for *Inocybe grammata* Quél., some minor discrepancies in the macroscopical description notwithstanding.

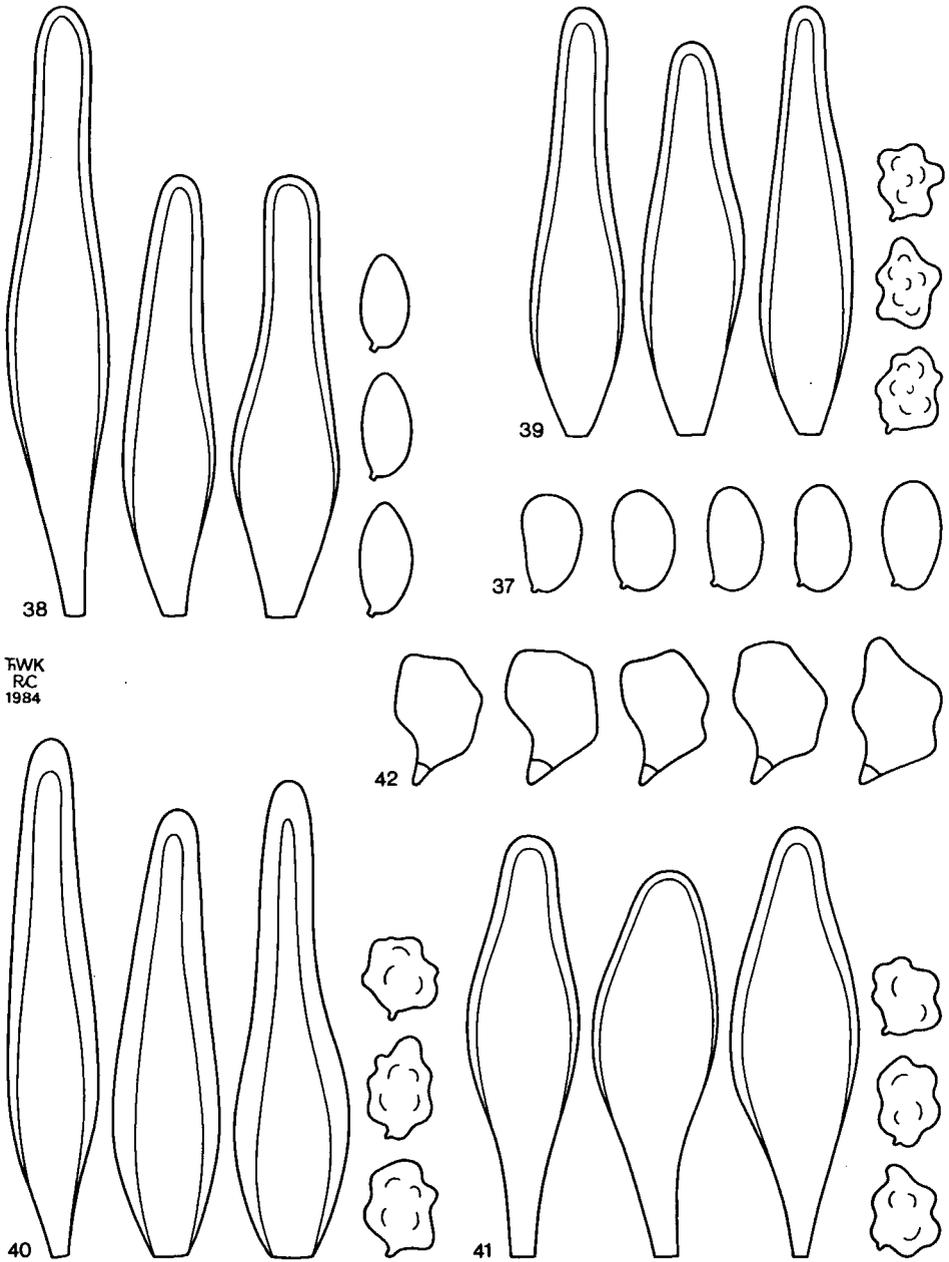


Fig. 37. *Inocybe reisneri*, spores. — Fig. 38. *Inocybe rohlenae*, spores, pleurocystidia. — Fig. 39. *Inocybe rostrata*, spores, pleurocystidia. — Fig. 40. *Inocybe sapinea*, spores, pleurocystidia. — Fig. 41. *Inocybe soluta*, spores, pleurocystidia. — Fig. 42. *Inocybe spinosae*, spores.

Another collection (VII.1915, Chlumec, PRC; bottle 103) is in a bad state and differs macroscopically in having a submarginate bulb. It also represents *I. grammata*.

Inocybe sapinea—Fig. 40

Inocybe sapinea Velen., Novit. mycol.: 119. 1939. — Holotypus: Velenovský, X.1922, Mnichovice (PRC; bottle 200).

The holotype is well-preserved. Spores (7.5–)8.0–10.0 × 6.0–8.0 μm, subnodulose, with 8–12 rather indistinct nodulae. Cheilo- and pleurocystidia (57–)61–70(–72) × (13–)14–17 μm, subfusiform to subutriform, sessile, thick-walled, wall to 2.5(–3.0) μm, almost colourless. Caulocystidia descending to base of stipe, similar to cheilocystidia. Velipellis consisting of thick-walled, non-encrusting hyphae.

Inocybe sapinea is a member of sect. *Petiginosae* Heim, closely related to *I. jacobi* Kühner. It differs from that species in having less pronounced nodulose spores, and somewhat broader cystidia with almost colourless walls.

Inocybe solida

Inocybe solida Velen., Novit. mycol.: 119. 1939.

No type-material was found at PR, nor at PRC.

Inocybe soluta—Fig. 41

Inocybe soluta Velen., České Houby: 365. 1920. — Lectotypus (select. mihi): Velenovský, VI. 1918, Krkonoše (PRC; bottle 385).

The lectotype is well-preserved, showing the following microscopical characters. — Spores 7.0–7.5(–8.0) × 5.0–6.0 μm, Q = 1.2–1.4, angular-subnodulose, with rather indistinct nodulae. Cheilo- and pleurocystidia 51–60(–64) × (15–)18–22(–23) μm, clavate to fusiform, sometimes subutriform, slightly thick-walled, wall less than 1.0 μm. Caulocystidia not observed.

The small spores and absence of caulocystidia are typical for *Inocybe brevispora* Huijsman, for which *I. soluta* is the older, and therefore correct name.

Another collection of *I. soluta* (VII.1919, Mnichovice, PRC; bottle 86) is conspecific.

Inocybe spinosae—Fig. 42

Inocybe spinosae Velen., Novit. mycol.: 120. 1939. — Holotypus: Velenovský, VIII.1939, Budišov near Mnichovice (PR 153850).

The type is in bad condition. — Spores 9.0–11.0 × 7.0–8.0 μm, Q = 1.2–1.4, 5–6-angled in side-view. Cheilocystidia present, but not sufficiently revived.

Inocybe spinosae is a synonym of *Entoloma sericellum* (Fr.: Fr.) Kumm.

Inocybe submicrospora

Inocybe submicrospora Velen., Novit. mycol. nov.: 61. 1947.

No type-material was found at PR, nor at PRC.

Inocybe turfosa

Inocybe turfosa Velen., Novit. mycol.: 120. 1939.

No type-material was found at PR, nor at PRC.

Inocybe uliginosa

Inocybe uliginosa Velen., České Houby: 374. 1920.

No type-material was found at PR, nor at PRC.

Judging from the description, however, *Inocybe uliginosa* seems conspecific with *I. sindonia* (Fr.) P. Karst.

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