

P E R S O O N I A

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A NEW SPECIES OF *COPRINUS* FROM THE NETHERLANDS

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Coprinus geesterani, a new species related to *C. lagopus* and therefore belonging to the subsection *Lanatulii*, is described and illustrated.

Several times a small, unknown species of *Coprinus* has been found on paths covered with wood-chips and on composted vegetable refuse. The basidiocarps of this species look like miniature fruit-bodies of *C. lagopus*. As in literature no suitable name could be found, it is described here as new.

I consider it an honour to name the species after Dr. R. A. Maas Geesteranus on the occasion of his 80th birthday.

In the following description the colour code of Munsell Color Charts (abbreviated Mu.) is used to designate colours. Other abbreviations are:

av = average	L (relating to spores) = length
B = breadth of the spores in frontal view	l = number of short lamellae (not reaching stipe)
L (relating to the lamellae) = number of lamellae reaching stipe	Q = length divided by breadth

The notation [240, 12, 8] stands for '240 spores from 12 basidiocarps from 8 collections measured'. All collections examined are deposited in the Rijksherbarium, Leiden.

Coprinus geesterani Uljé, *spec. nov.*— Figs. 1–11

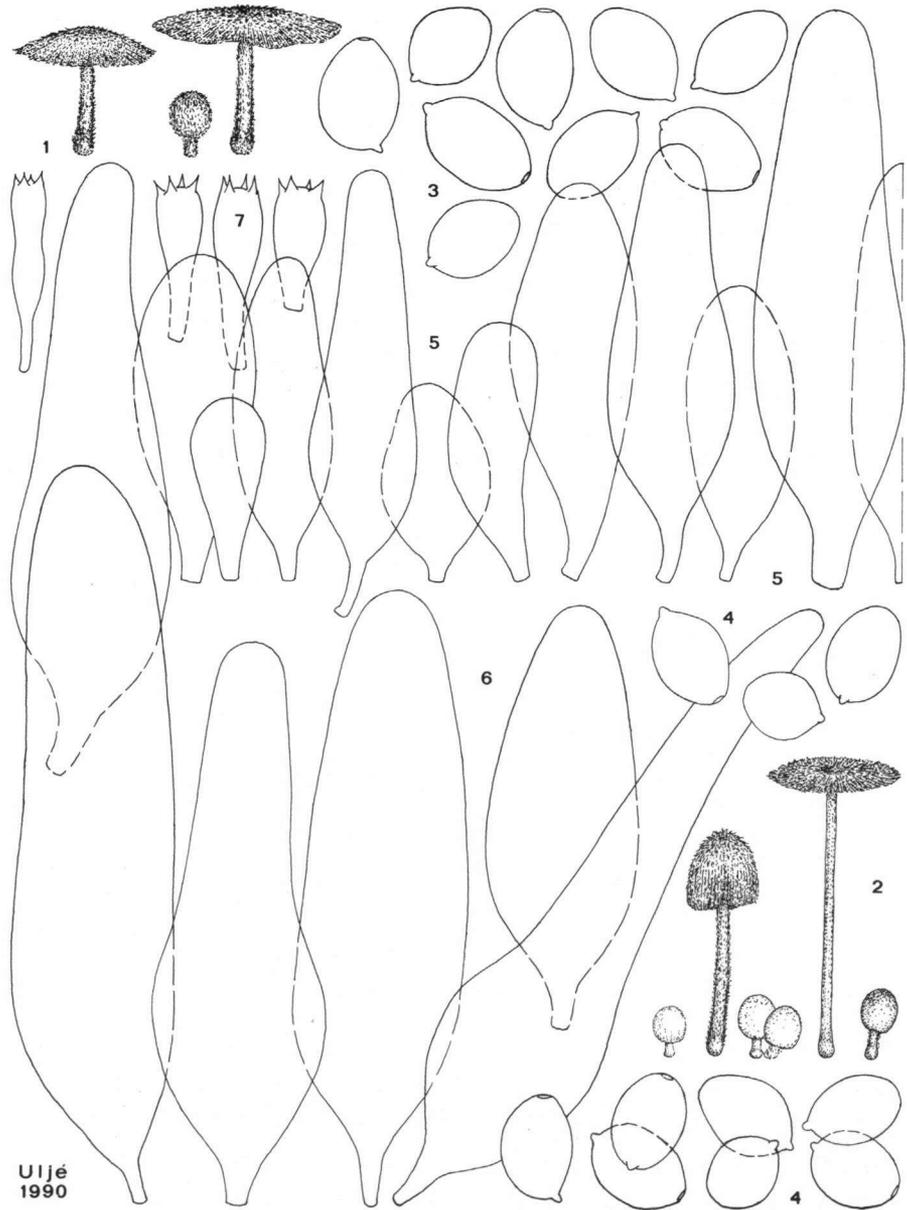
Pileus ad 27 mm latus, initio albus, postea griseus vel griseo-brunneus, velo adpresse fibrilloso vel floccoso-squarroso, albo vel griseo-brunneo obtectus. Lamellae (L = 34–40, l = 0–3) liberae, paulum confertae, initio albae, mox griseae vel nigricantes. Stipes 15–45 × 1–2 mm, sursum subattenuatus, basi clavata vel subbulbosa, cavus, albus, omnino fibrilloso-floccosus.

Sporae 5.6–10.6 × 4.3–7.1 μm, elipsoideae, submitriformes vel subrhombiformes, ad basim saepe subconicae. Basidia 4-spora. Cheilocystidia 25–105 × 12–40 μm, vesiculosa, ellipsoidea oblonga clavata vel utriformia. Pleurocystidia 70–125 × 22–33 μm, elongate ellipsoidea, ovoidea vel fusiformia. Suprapellis constans ex hyphis repentibus, filiformibus. Velum cellulis elongatis catenulatis, 20–150 × 5–40 μm metientibus, compositum. Fibulae adsunt.

Typus: 'Netherlands, prov. Zuid-Holland, Alphen a/d Rijn, 4.VII.1990, C.B. Uljé 1078 (L)'.

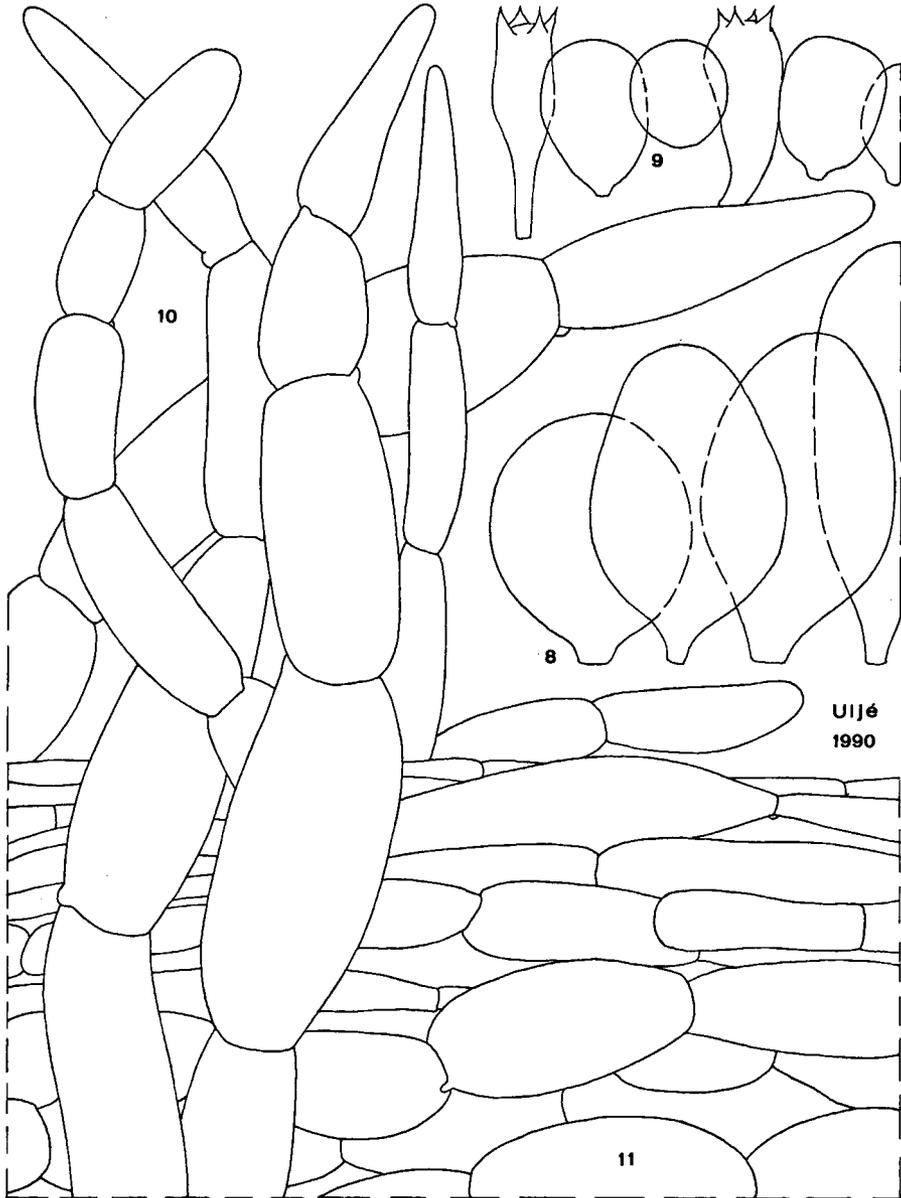
Closed pileus up to 9 × 8 mm, ellipsoid, cylindrical-ellipsoid, ovoid or (sub)globose, often somewhat conical, white in very young stage, soon becoming grey or grey-brown, the darkest (Mu. 5 YR 2.5/1, 3/2; 10 YR 3/2) at centre of pileus, expanding to campanulate or conical, then to convex or applanate, finally plano-concave with revolute margin, up to 27 mm in

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Uljé
1990

Figs. 1–7. *Coprinus geesterani* — 1, 2. Basidiocarps, $\times 1$. — 3, 4. Spores, $\times 2000$. — 5. Cheilocystidia, $\times 800$. — 6. Pleurocystidia, $\times 800$. — 7. Basidia, $\times 800$. (Figs. 1, 3, 5, 6, and 7 from Uljé 830; 2 and 4 from Uljé 1078, type.)



Figs. 8–11. *Coprinus geesterani*. — 8. Cheilocystidia from basidiocarps in very young stage. — 9. Pseudoparaphyses and basidia — 10. Veil. — 11. Pileipellis. (All figs. $\times 800$; all from *Ulje 1069*.)

diam. when mature, very thin, soon wilting. Veil in primordia smooth, mat, pure white, later grey to grey-brown, covering entire pileus, soon radially splitting into hairy to fibrillose, often pointed and adpressed or — especially at centre — recurving flocks. Lamellae free, narrow, rather crowded, first white, soon grey to blackish; $L = 34-40$, $l = 0-3$. Stipe $15-45 \times 1-2$ mm, whitish, somewhat tapering towards apex, up to 3 mm wide at clavate to slightly bulbous base, hollow, hairy flocculose over the whole surface but particularly densely at lower part, becoming glabrous with age.

Spores [240, 12, 8] $5.6-10.6 \times 4.3-7.1 \mu\text{m}$ (L \times B), av. L = 6.6–9.2, av. B = 4.8–6.5 μm , Q = 1.15–1.70, av. Q = 1.35–1.45, red-brown under microscope, ellipsoid to ovoid tending to mitriform or rhomboid, towards base often slightly conical; germ pore central, 1–1.5 μm wide. Basidia $18-32 \times 7-11 \mu\text{m}$, 4-spored. Pseudoparaphyses (3–)4–5(–6) per basidium. Cheilocystidia in very young pileus vesiculose (Fig. 8), then rather elongate (Fig. 5) and ellipsoid, clavate, narrowly (conico-)utriform or oblong, $25-105 \times 12-40 \mu\text{m}$, the narrowly utriform ones 7–12 μm in diam. below apex. Pleurocystidia $70-125 \times 22-33 \mu\text{m}$, elongate-ellipsoid to ovoid, oblong or narrowly fusiform, the latter 7–13 μm wide below apex. Pileipellis consisting of short, inflated cells, covered with a thin layer of filamentous hyphae. Veil made up of hyphae consisting of sausage-like cells, $20-150 \times 5-40 \mu\text{m}$, often somewhat inflated, usually constricted at septa. Clamp-connections present.

Habitat.—Solitary or (sub) fasciculate on soil mixed with pieces of wood, on decaying wood-chips and on composted vegetable refuse. Rather common.

Collections examined.—NETHERLANDS: prov. Zuid-Holland: Alphen a/d Rijn: 22 May 1988, *Uljé* 902; 17 May 1990, *Uljé* 1065; 7 June 1990, *Uljé* 1069; 4 July 1990, *Uljé* 1078 (type); 10 July 1990, *Uljé* 1087; Ter Aar: 24 Oct. 1986, *Uljé* 804; 3 Sept. 1986, *Uljé* 830; Boskoop, 12 June 1990, *Uljé* 1074.

Coprinus geesterani is characterized by small fruit-bodies and ellipsoid to ovoid spores tending to mitriform or rhomboid shapes, on the average less than 10 μm long.

Except the size of the basidiocarps species in subsection *Lanatulii* are macroscopically very similar. Therefore, microscopical characters are the most important for determinations. In *C. geesterani* the size and the shape of the spores are very useful. Small spores with an average length less than 10 μm are found only in *C. pseudoradiatus* Kühn. & Joss. ex Watling (1976: 154) and *C. lagopides* Karst. (1879: 23). *Coprinus pseudoradiatus* (Kühner & Josseland, 1944: 26), however, has predominantly cylindrical-ellipsoid spores, with a rounded, never somewhat conical base, much shorter cystidia, somewhat smaller fruit-bodies, and grows on dung. *Coprinus lagopides* has spores similar in shape and size to those of *C. geesterani* (although usually slightly broader), but that species has much larger fruit-bodies and grows generally gregariously on burnt ground.

The spore sizes of *C. geesterani* show a great deal of variation. Although spores can measure up to $8-10 \times 5-7 \mu\text{m}$, in most collections they do not exceed 8.5 μm in length. The sizes found in the collections examined are:

Coll.	Spore-size in μm	Quotient	Av. L	Av. B	Germ pore
804	7.2– 9.0 \times 5.2 – 6.1	1.36 –1.42 –1.52	8.2	5.8	c. 1.5 μm
830	5.6– 8.2 \times 4.3 – 5.4	1.16 –1.42 –1.62	7.0	5.0	c. 1.0 μm
902	7.0– 9.5 \times 5.1 – 6.8	1.30 –1.36 –1.42	8.1	6.0	c. 1.3 μm

(Continued)

Coll.	Spore-size in μm	Quotient	Av. L	Av. B	Germ pore
1065	7.0– 8.5 \times 5.1– 5.7	1.35–1.47–1.60	7.8	5.3	c. 1.0 μm
1069	8.4–10.6 \times 5.8– 7.1	1.30–1.46–1.69	9.2	6.5	c. 1.5 μm
1074	6.3– 7.8 \times 4.8– 5.3	1.31–1.42–1.53	7.2	5.0	c. 1.0 μm
1078	5.7– 7.2 \times 4.3– 5.0	1.21–1.37–1.45	6.6	4.8	c. 1.0 μm
1078	6.2– 8.0 \times 4.4– 5.2	1.34–1.47–1.63	7.2	4.9	c. 1.0 μm
1078	6.8– 8.2 \times 4.8– 5.4	1.36–1.47–1.58	7.4	5.1	c. 1.0 μm
1087	6.9– 8.2 \times 4.8– 5.8	1.40–1.47–1.60	7.5	5.1	c. 1.0 μm
1087	6.8– 8.0 \times 4.7– 4.6	1.41–1.47–1.54	7.5	5.1	c. 1.0 μm
1087	7.0– 8.8 \times 5.0– 5.9	1.33–1.45–1.58	7.9	5.4	c. 1.0 μm

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REFERENCES

- KARSTEN, P. A. (1879). Symbolae ad Mycologicam Fennicam. *In* Meddn. Soc. Fauna Fl. fenn. 5: 1–32.
 KÜHNER, R. & JOSSEMAND, M. (1944). Étude de quatre Coprins du Groupe Lagopus. *In* Bull. trimest. Soc. mycol. Fr. 60: 19–32.
 WATLING, R. (1976). The validation of two species of *Coprinus*. *In* Notes R. bot. Gdn Edinb. 35: 153–154.