SPECIES OF COPRINUS NEW FOR ESTONIA

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31 species of Coprinus new for Estonia were collected by the author in the years of 1982-1984 mainly from South Estonia. The taxonomy and nomenclature of the species presented here are, with some exceptions, based on P. D. Orton and R. Watling (1979). The collected specimens will be pre-

served in TAA (Herbarium Instituti Zoologici et Botanici Academiae Scientiarum R. P. S. S. Estoniae, Tartu). All investigations were carried out on the fresh material.

From the species found in Estonia and listed by Kalamees (1972, 1978), Urbonas, Kalamees, Lukin (1974), Järva, Parmasto (1980) and Kalamees, Vaasama (1984) \{*Coprinus angulatus* Peck, *C. atramentarius* (Bull.: Fr.) Fr., *C. auricomus* Pat., *C. bisporus* Lange, *C. cinereus* (Schäff.: Fr.) S. F. Gray, *C. comatus* (Müller: Fr.) S. F. Gray, *C. congregatus* (Bull.) Fr., *C. friesi* Quél. s. Redhead et Traquair 1981, *C. gonophyllus* Quél., *C. disseminatus* (Pers.: Fr.) S. F. Gray, *C. ephemerosides* (Bull.: Fr.) Fr., *C. lagopus* (Fr.) Fr., *C. macrocephalus* (Berk.) Berk., *C. micaceus* (Bull.: Fr.) Fr., *C. niveus* (Pers.: Fr.) Fr., *C. plicatilis* (Curt.: Fr.) Fr., *C. xanthotrix* Romag.] the author has not re-collected *C. auricomus*, *C. macrocephalus* and *C. xanthotrix*. The record of *C. gonophyllus* is based on the specimens which actually belong to *C. lagopus* P. Karst. The others are common or very common in South Estonia. The author has collected some taxa disagreeing with the species described since and needing further investigation, for example "*C. radicans*" with spores nearly half size \(7.2-8.1 \times 4.5-5.4 \mu m\) and two-spored "*C. phlyctidiosporus*". From the "*plicatilis* group" the most common is an unnamed taxon with large excentrally pored spores \(13-15 \times 10-12 \mu m\) growing in clusters in the grass,
V-IX (noted also by Orton and Watling, 1979: 101).


*C. lagopides* P. Karst. - Distr. Valga, Karula Forest District, not uncommon, solitary to subcaespitose on old fireplaces in forests and on burnt ground of land-improvement hills (LIH), IV-VIII. This species was gathered by G. Shtshukin as *C. gonophyllum* Quél. (vide Kalamees, 1972, 1978).


*C. tigrinellus* Boud. - Distr. Valga, Lüllemäe, by Lake Tollari, on leaf vaginas of sedge growing tussocky near water-line, 8. VI 1983.

C. truncorum (Schaeff.) Fr. - Distr. Valga, Lüllemäe, on and around the base of an old poplar (Populus alba L.), 13. VI 1983.

C. domesticus (Bolt.: Fr.) S. F. Gray. - Distr. Valga, Lustimõisa, on half-buried alder or aspen brushwood or leaf debris, 13. V 1983; Mürgi, 6. VI 1983.

C. bipellis Romag. - Distr. Valga, Lilu, on burnt ground of LIH. In one population a few specimens grew on an extinct fire-place, 9. IX 1983, in another population the underground burning of peat-soil and buried wood has been going on since August of 1983 already. The carpophores appear, sometimes in hundreds, solitary or in tufts very close to fire-holes (even only 40 cm from them) on bare warm soil (mainly ashes) and also on extinct areas long ago covered with high weeds, 10. X 1983, 29. IV-8. IX 1984.

The carpophores appear abundant mainly after continuous rains, but some fruit bodies rise even after a long drought, growing then near fire-holes (on account owing to burning-moisture). The primordiums are in such cases covered with one-inch ash-layer. The ascending fruit body breaks through and dries up in a half-expanded state-mature, but not deliquescent. In damp cool weather the fruit body deliquesces to disk. Often, the gills deliquescent, the cap edge revolutes and then the fruit body dries up. In addition to the primary description of H. Romagnesi (1976) the following characteristics should be added. The primordium is sphaerical and covered with thick (deep) brown shaggy cotton-like veil. Before expanding the cap is broadly campanulate, at most 35 x 45 mm, with triangular gills, after expanding up to 65 mm broad, stem up
to 120 x 5-7 mm, attenuated upwards, with bulbous volvate base. As the population was strongly mixed with *C. radians*, the origin of rusty mycelioid mat remained somewhat unfixed. Sometimes, with the expanding of the cap, the veil may be lost. Usually it tears in concentrically arranged patches as a fly agaric. More rarely the veil stretches to a pretty web-like white-bordered rusty lace, the yellow cap surface seeming in lace-cells. The spores 8.5-9 x 4.5-5 µm, ellipsoid to cylindric ellipsoid, somewhat phaseoliform in side view, ellipsoid in face view, germ-pore central, apiculus barely visible. Abundant marginal cystidia vesiculose or even lemon-shaped, 20 x 40 x 15-25 µm forming contrasting white edges of mature violaceous black gills. The large ovate to cylindric ellipsoid facial cystidia 110-130 x 40-50 µm rising half above gill surface, have extremely regular arrangement. Cap cuticula of 25-40 µm wide cells. Superficial coloured incrusted veil hyphae consist of cylindric or somewhat swollen thick-walled cells 15-50 x 8-12(20) µm. In the young fruit bodies they are brown, thin-walled, but in mature fruit bodies they are yellow and thicker. Deep hyaline veil chains consist of up to 30-40 µm wide two-necked cylindric cells, swollen in centre and rarely torulose.

*C. radians* (Desm.) Fr. - Distr. Valga, Lüllemäe, Karula, Lustimõisa; Mürgi, common on soil and charcoal of LIIH, or on surface of lands improved by felling, or on leaf and brushwood debris of alder and aspen shrubberies, IV-X.


*C. poliomallus* Romag. - Distr. Valga, Lüllemäe,

*C. cothurnatus* Godey. - Distr. Valga, Lüllemäe, Karula, Madsa, common on cow dunghills and dungy straw, VI-IX.

*C. patouillardii* QuéL. s. Moser 1978. - Distr. Valga, Lüllemäe, Rebase, common on horse droppings and decaying potatoes (potato grader rests), VI-IX. The facial cystidia were observed equally in all the specimens investigated, very small or small, growing on droppings or decaying potatoes, pentagonal-spored or cordate-spored. As the fruit body size does not strictly agree with substrates, it is difficult to recognize *C. cordisporus* Gibbs until more reliable specific features will be found.

*C. narcaticus* (Batsch: Fr.) Fr. s. Lange 1938. - Distr. Valga, Lüllemäe, not uncommon on manured or unmanured soil and even on burnt ground of LIH, VII-IX.


*C. tuberosus* QuéL. - Distr. Valga, Lüllemäe, on manured peaty soil in a filmy greenhouse, 29. VI-15. VIII 1983; on peaty soil, mixed with old cow dung, 25.-27. VII 1984. Some specimens arising directly from sclerotium up to 15 mm broad. Therefore only the spore characteristics can be used in
keys to separate C. sclerotiger Watling.


C. hemerobius Fr. - Distr. Valga, Lüllemäe, not uncommon in the grass by footpaths and in pasture land, VI-IX.

C. leiocephalus Orton. - Distr. Valga, Lüllemäe, Karula, Piiri, bank-meadow of the Koiva River, not uncommon in damp shady places, V-VII.

C. miser P. Karst. - Distr. Valga, Lüllemäe, Rebase, common on horse and cow droppings an pasture land and forest, VI-X. This species was probably gathered by A. Rühl (see Järva, Parmasto, 1980) as. C. subtilis Fr.

REFERENCES

The present paper contains a list of 21 species of *Entoloma*, new for Estonia, collected by the author mainly in West-Estonia in the years of 1979-1985. The specimens collected are deposited in the personal herbarium of the author. The numbers of herbarium specimens have been given in brackets. The materials have been determined by making use of Ricken (1915), Lange (1936), Kühner, Romagnesi (1953), Kalamees (1971), Romagnesi (1978), Moser (1978) and Noordeloos (1980, 1981a, 1981b). All investigations were carried out on the fresh material.
Entoloma aeprellum (Fr.) Moser. - Distr. Kingissepp, Island of Saaremaa, Viidu, en masse on pasture land, VIII 1985 (85/161; 85/170).

E. cuneatum (Bres.) Moser. - Distr. Põlva, Karste, solitary and in small aggregates of 2-4 specimens in mixed forest, VI-VII 1982 (82/051).

E. corvinum (Kühner) Noordel. - A common summer species on western islands of Estonia, on pasture lands, in wooded meadows, juniper meadows, on lawns, mostly in aggregates, VII-IX (84/138).


E. excentricum (Bres.) Romag. - Common on western islands of Estonia, in juniper meadows, VIII-IX 1984 (84/125).


E. infula (Fr.) Noordel. - Distr. Valga, Lüllemäe, in aggregates on pasture land, VI 1984 (84/092); Distr. Kingissepp, Island of Saaremaa,
Audaku, in aggregates on the lawn, VIII 1985 (85/163).


_E. parkeneis_ (Fr.) Noordel. - Distr. Kingissepp, Island of Muhu, Koguva, on juniper pasture land, 2 specimens, X 1983 (83/082).


_E. rhombisporum_ (Kühner et Bours.) Horak. -

E. rusticoïdes (Gill.) Noordel. - Distr. Kingissepp, Island of Saaremaa, Karala, in juniper meadow, 3 specimens, VIII 1981 (81/024).


E. sericatum (Britz.) Sacc. - Relatively frequent all over Estonia, IX-X (83/083, 84/140, 84/154).


E. sordidulum (Kühner et Romag.) Orton. - Distr. Harju, Saue, solitary and in small aggregates of 2-3 specimens in oak forest, VIII-IX 1981 (81/027).

E. speculum (Fr.) Kumm. - Distr. Kingissepp, Island of Saaremaa, Viidu, in mixed forest, 3 specimens, VIII 1985 (85/188).

REFERENCES

The genus *Pseudoombrophila* is represented in the USSR by 3 species. *P. tetraspora* is reported first time from this country.

   
   Apothecia at first subglobose, then becoming discoid, plane or slightly concave, sessile to shortly stipitate, 3-5 mm in diameter, externally dark brown, tomentose, hymenium pale brown to reddish-purple. Asci cylindric, 120-150 x 12-14 μm. Spores ellipsoid, smooth, without oil-drops 12-16 x 8-9 μm. Paraphyses cylindrical.

   On dead herbaceous stems.

   Distribution in the USSR: Leningrad Region, Kalinin Region, Latvian SSR.

   It is evidently a rare species in the USSR.

2. *Pseudoombrophila aggregata* (Eckbl.) Harmaja (*Nannfeldtiella aggregata* Eckbl.)

   Apothecia sessile, cupulate, then shallowly cupulate, 1-4 mm in diameter, externally dark violaceous brown, minutely tomentose, hymenium dark violaceous brown. Asci cylindrical, 8-spored, 170-180-(240) x 10-12 μm. Spores ellipsoid, hyaline, containing several oil-drops, irregularly
ornamented, slightly apiculate, 15-18 x 7-8 μm with ornamentation. Paraphyses cylindrical with brownish apical cells.

On mycelial mats of *Inermisia aggregata*.

Distribution in the USSR: Estonian SSR, Latvian SSR, Moscow Region.

A common vernal species.

3. *Pseudoombrophila tetraspora* Harmaja

Apothecia sessile, densely gregarious or caespitose, deeply cupulate, 0.5-2.5 mm in diameter, totally dark reddish brown, externally minutely tomentose. Asci cylindrical 130-150 - 10-13.5 μm, 4-spored. Spores ellipsoid-fusoid, irregularly ornamented, apiculate, 19-24.5 x 7.5-10 μm with ornamentation. Paraphyses cylindrical with brownish apical cells.

On mycelial mats of *Inermisia aggregata*. Distribution in the USSR: Estonian SSR, Latvian SSR, Moscow Region.

This species is externally distinctive in its comparatively large, deeply cupulate caespitose apothecia. It is far more rare than the preceding one. Their ratio in collections is approximately 1:20.
INOCYBE OVATOCYSTIS FOUND IN ESTONIA

K. KALAMEES

K. Kalamees. Inocybe ovatocystis найден в Эстонии. На острове Хийумаа Хийумааского района впервые для Эстонской ССР установлено 3 местонахождения данного вида.

Three localities of Inocybe ovatocystis Kühner et Bours. have been established in Estonia, in District Hiiumaa, on Island of Htiiumaa (all specimens have been collected by U. Haug and K. Kalamees and determined by K. Kalamees), namely: 1) between Kauste and Meelste, in pine forest, 5. VII 1960 (TAA-71587); 2) Leimaste, on Tahkuna peninsula, in pine forest near coastal dunes, 6. VII 1960 (TAA-71598); 3) Poamaa, in coastal spruce forest, 9. VII 1960 (TAA-71616).

I. ovatocystis Kühner et Bours. differ from similar species of I. lanuginosa (Bull.: Fr.) Kumm. (=I. longicytis Atk.) and I. casimir Vel. by the presence of short oval to pyriformes cheilocystidia and pleurocystidia. The spores have numerous (>10) evident nodules. Very similar by appearance is Cortinarius pholidius (Fr.) Fr.