

## *Leucocoprinus* Pat.

CHRISTIAN LANGE

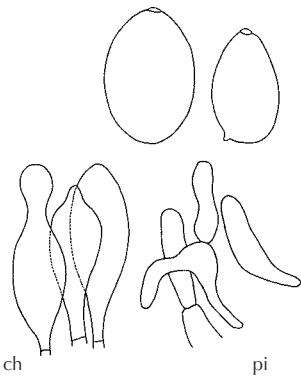
Frb lepiotoid, often with sulcate cap margin. Cap 10-60 mm, first egg- to bell-shaped, expanding to low convex to plane, granulose-tomentose, with age ± smooth, margin sulcate, thin fleshed. Gills free, medium spaced, white or yellow. Stem 15-120 x 2-6 mm, brittle, silky to pruinose, with ± clavate base, with thin, often ascending ring. Smell indistinct. Taste indistinct. Sp deposit white.

Sp ellipsoid to ± amygdaloid, hyaline, smooth, with germ pore, but hardly visible in *L. cygneus*, dextrinoid, metachromatic. Cheilocystidia clavate to lageniform, often irregular. Pleurocystidia absent. Pileipellis made of irregular or elongate, even branched cells, 5-15 x 20-30 μm. Clamps absent.

Saprotrophic; terrestrial in litter on rich soil or compost heaps. Several species only known from flower pots or hot-houses in the region are not treated in the key (*L. straminellus* (Bagl.) Narducci & Caroti, *L. ianthinus* (Cooke) P. Mohr, *L. heinemanii* Migl.), but in recent years an increasing number of records of such *Leucocoprinus* species have been registered from places outside, e.g. in the Netherlands. A similar trend is to be expected in the Nordic countries.

At least eight species in the Nordic countries, but some only known from indoor localities; five species in the key.

Lit.: Migliozi et al. 1989, Vellinga in Noordeloos et al. 2001.



Spores, cheilocystidia and pileipellis elements: *Leucocoprinus birnbaumii*.

1. Cap distinctly yellow or grey, at least at centre 2
  - Cap white or with light rose to pale grey tones, without distinct contrast between centre and edge 3
2. Frb yellow with slight brownish patches and granules at cap centre. Cap 20-60 mm; stem 20-80 x 3-7 mm, with a thin ring. Sp 8-12 x 5-9 μm (fig. 553C); cheilocystidia 25-50 x 10-15 μm, quite variable, often narrowing at the apex; pileipellis a mix of very variable elements, both elongate cellular, ± branched and swollen, 10-15(-35) μm broad. Most often in flower-pots and indoor localities, but found outdoors on compost heaps, etc.; autumn (indoor all year); occasional in temp.-hemib., rare in bore.; DK (NE), FI (LC), NO (NA), SE (LC). – B&K 4:244, FAD 14G, GBW 4:111, R&H 419, Sieniop 105, ⊙.
  - L. birnbaumii* (Corda) Singer (*Lepiota lutea* (Bolton) Godfrin, *Leucocoprinus flos-sulphuris* (Schnizl.) Cejp)
  - Frb white with mouse grey, dark grey to almost black cap centre, cracking into fine scales when expanding. Cap 20-80 mm; stem 30-80 x 2-8 mm, white, with a thin ring. Sp 8.5-13 x 5-8 μm; cheilocystidia 35-80 x 10-20 μm, clavate to lageniform; pileipellis with cylindrical, clavate to globose elements, 15-70 x 10-25 μm, ± arranged in chains. Terrestrial in nutrient rich, deciduous woods; autumn; rare in temp.-hemib., in NO only and in FI mostly in flowerpots and

greenhouses; DK (NE), FI (DD), NO (NE), SE. – B&K 4:245, C&D 705, FAD 14H, Phil 135h, ☉.  
*L. brebissonii* (Godey) Locq.

3. Cap 5-15 mm, thin-fleshed, pure white. Gills white; stem 10-30 mm x 0.5-2 mm, with thin ring, white. Sp 5-7 x 3.5-4.5  $\mu\text{m}$ , germ pore only visible after colouring; cheilocystidia 25-40 x 9-15  $\mu\text{m}$ , broadly lageniform to subcapitate; pileipellis of cylindrical, < 10  $\mu\text{m}$  broad hyphae, and chains of ellipsoid to globose cells, 15-35  $\mu\text{m}$  long. Terrestrial or on very rotten wood in deciduous forests; autumn; very rare in temp.; DK (DD). – FAD 13A, FE 4:59a, FMDS 138:9, RdM 32:18.

*L. cygneus* (J.E. Lange) Bon (*Lepiota* c. J.E. Lange, *Cystolepiota* c. (J.E. Lange) M.M. Moser)

- Cap mostly > 20 mm, more robust, white, pinkish or brownish at centre 4

4. Cap with tufts of a white to pale buff, woolly-powdery covering, not discolouring; stem woolly-granulose, of cap colour. Cap 30-90 mm; stem 20-100 x 2-15 mm, with a floccose ring; frb slightly discolouring to yellow, especially on stem. Sp 8-12 x 5.5-7.5  $\mu\text{m}$ ; cheilocystidia 30-100 x 7-20  $\mu\text{m}$ , irregularly clavate; pileipellis of very variable, elongate, branched cells, 5-10  $\mu\text{m}$  broad. On compost heaps, wood chips and in lawns; autumn; rare in hemib.; FI (DD, U), NO (NA), SE (LC). – Bol Bres 39:4,6, FE 4:60.

*L. cretaceus* (Bull.: Fr.) Locq. (*L. cretatus* Lanzoni)

- Cap with a beige brown to brown, thin, smooth to minutely granular, with age concentrically cracking cover, discolouring yellow; stem almost smooth. Cap 30-60 mm; stem 30-120 x 2-5 mm, with a thin ring with traces of cap colour. Sp 7.5-13 x 6-8  $\mu\text{m}$ ; cheilocystidia 25-60 x 8-15  $\mu\text{m}$ ,  $\pm$  clavate to irregular lageniform; pileipellis with terminal cells 30-100  $\mu\text{m}$ ,  $\pm$  lageniform with long necks. On compost heaps and piles of leaves; autumn; rare, in FI and NO only in flowerpots and greenhouses; DK (NE), FI (NE), NO (NA), SE (LC). – B&K 4:246, FAD 14F (as *Lepiota* c.), FE 4:59b, GBW 4:113.

*L. cepistipes* (Sowerby: Fr.) Pat. s. J.E. Lange