

Key to species in North Europe

1. Hyphae without clamps 2
1. Hyphae with clamps 3
2. Fruitbody loosening from the substratum, ochraceous-buff, aculei cylindrical, 0.4-0.6 mm long, spores 3-3.5x2-2.5 μm 6. **S. subcrinale**
2. Fruitbody not easily loosening, cream- coloured, aculei more or less conical, 0.1-0.3 mm long, spores 3.5-4x2 μm 1. **S. cremeoalbum**
3. Fruitbody widely effuse, reddish-orange, aculei 1-3 mm long, pseudocystidia often of the metuloid type, spores 4-4.5x2.5-3 μm 5. **S. robustius**
3. Not with the combination of above characteristics 4
4. Fruitbody resupinate to pileate, ochraceous-salmon-coloured, aculei 0.5-1 mm long, not rhizomorphic 4. **S. ochraceum**
4. Fruitbody normally pale brown-violaceous or pale ochraceous, rhizomorphs present 5
5. Fruitbody loosely adnate, normally pale violaceous or grey-reddish, margin filamentous, rhizomorphs pale brown or violaceous, often several cm long, spores 3.2-3.5 x 2.2-2.5 μm , on deciduous wood 2. **S. fimbriatum**
5. Fruitbody closely adnate, white to cream- coloured, rhizomorphs often indistinct, if present then of a pale colour, spores 4.5-5 x 2-2.2 μm , normally on coniferous wood 3. **S. litschaueri**

5. *Steccherinum robustius* (John Erikss. & Lund.) John Erikss.

Symb. Bot. Ups. 16 p. 134, 1958. - *Mycoleptodon robustior* Erikss. & Lund. in Lund. & Nannf. Fung. exs. suec., no. 2147 p. 26, 1953.

Fruitbody resupinate, widely effuse, normally several dm and in some cases a meter or more in length, not reflexed or pileate but at the margin slightly loosening and detachable in pieces, hymenium odontoid to hydroid, in the living state reddish-orange, in the herbaria fading into pale orange or dirty-yellow to greyish, aculei elongate-conical, sometimes flattened, especially near the edge, crowded, (0.5-)1-3 mm long, 3-4 per mm, of firm consistency, rarely fimbriate but often verruculose along the sides, subiculum yellowish, in section whitish, thin, in dried specimens about 0.1-3 mm thick, margin yellowish, especially when fresh, 1-5 mm broad, fimbriate, rhizomorphs sparse.

Hyphal system dimitic, generative hyphae thin or slightly thick-walled, branched 3(-4) μm wide, with clamps, skeletal hyphae thick-walled, without clamps but with simple, adventitious septa, 2.5-3 μm wide, hyaline to slightly yellowish (in KOH), in the aculeal trama often present as pseudocystidia, in the subiculum transitional stages are easily observed between thin-walled and clamped generative hyphae and clampless skeletal hyphae from the marginal zone usually more or less encrusted.

Cystidia (Pseudocystidia) numerous, strongly encrusted towards the widened apex, in the thickening hymenium present as metuloids (as in *Peniophora*), usually with a distinct pale yellow colour (in KOH), encrusted part 20-30 x 8-12(-15) μm .

Basidia subclavate, 20-35 x 4.5-5 μm , with four sterigmata and a basal clamp.

Spores ellipsoid, thin-walled, smooth (3.8-)4-4.5 x (2.2-)2.5-3 μm .

Habitat and distribution. In N. Europe the species is restricted to very fertile and herb-rich natural forests with *Ulmus* and *Fraxinus*, on humid and calcareous soil. In its main distribution similar to *S. ochraceum* but much rarer, and considerably more fastidious as to the ecological conditions. It can yearly be collected in Vårdsätra Nature Park, near Uppsala from where most of the collections are known. Other Swedish localities are Skåne (Dalby Söderskog and Örups almskog), Västergötland (Kinnekulle), and Västmanland (the archipelago of Mälaren). According to Christiansen a few collections are known from Denmark (Sjælland). Not known from Norway and Finland. Outside Scandinavia we have seen material from Estonia and Russia. The specimen from Iran, reported by Hallenberg is somewhat doubtful. The aculei are coralloid and no spores have been observed.

Remarks. *S. robustius* is easily recognized, already in the field, by its large fructifications with a bright reddish - orange colour. Microscopically recognized by the large metuloids and slightly larger spores when compared with *S. ochraceum*. Maas Geesteranus introduced a wrong application of the species and placed it in synonymy with *S. laeticolor* (Berk. & Curt.) Banker and this name has since been commonly used. After examination of the type specimen of *Hydnum laeticolor* (Herb. Berk. 1879, No. 2930, Car. Inf., deposited in Kew) we are convinced that it represents a different taxon. The consistency of *S. laeticolor* is rather loose and brittle, the aculei considerably smaller (0.5-1.5 mm long), subcylindrical to conical and distinctly ciliolate at the apices, while in *S. robustius* they are tough, not brittle, as a rule conical and smooth, generally 3 mm long. One of the most striking characteristics are the different cystidia. In *S. laeticolor* they are of nearly uniform width, not with a metuloid appearance, hyaline and with an encrustation of much smaller crystals. Furthermore, the spores of *S. robustius* are larger and ellipsoid, not narrowly ellipsoid to subcylindrical as *S. laeticolor*. Two other species were mentioned by Maas Geesteranus in the synonym-list under *S. laeticolor* viz.: *Hydnum floridanum* Berk. & Cooke and *H. parasitans* Berk. & Curt. The latter is evidently the same as *S. laeticolor* but the former is more like *S. robustius* in its macromorphology, but has smaller spores. Both specimens have grown on vertical substrata and are besides in a rather poor condition.

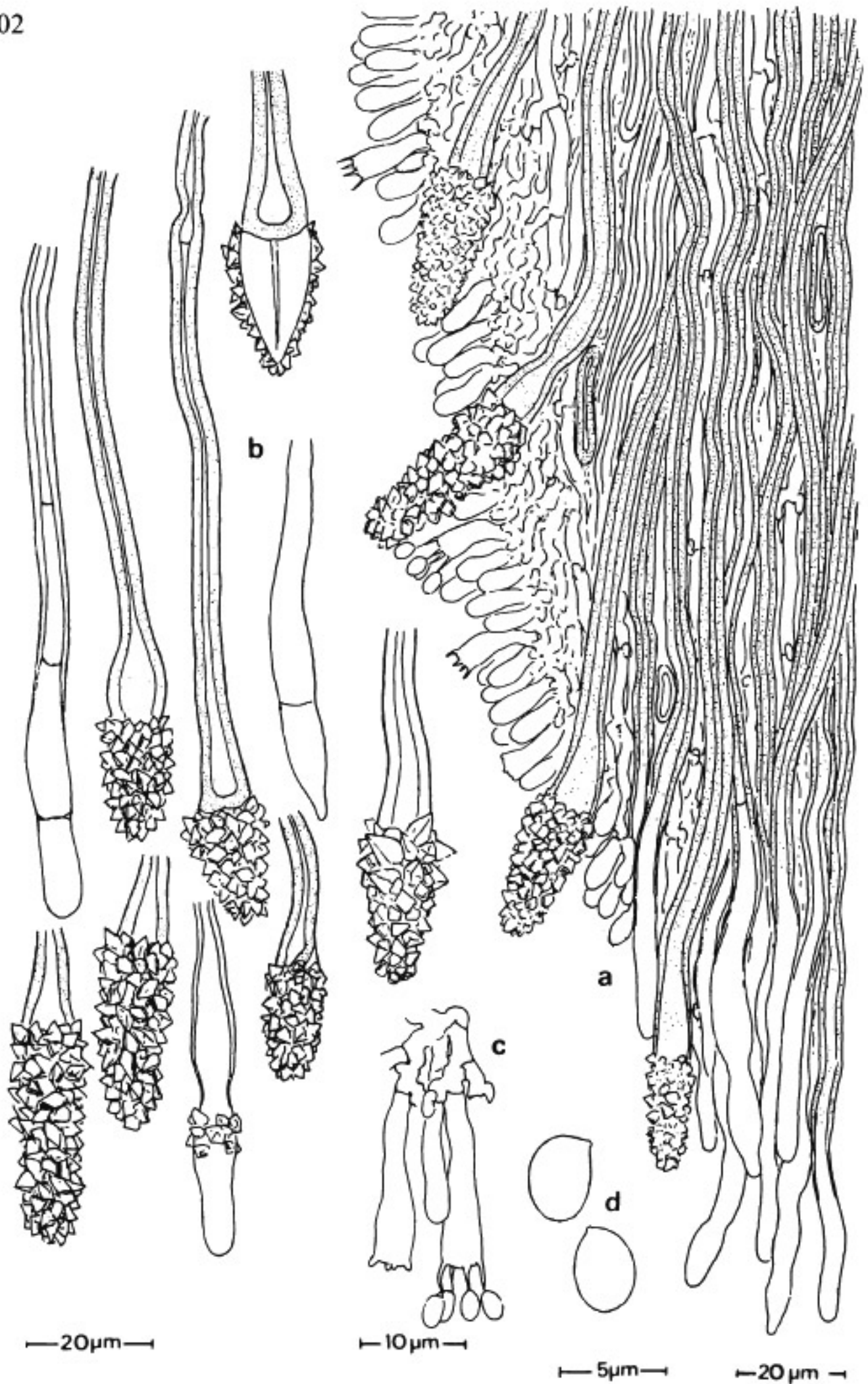


Fig 736. *Steccherinum robustius*. a) section through apical part of an aculeus
 b) pseudocystidia c) basidia d) spores. — Coll. Living material, Kinnekulle, Sweden.

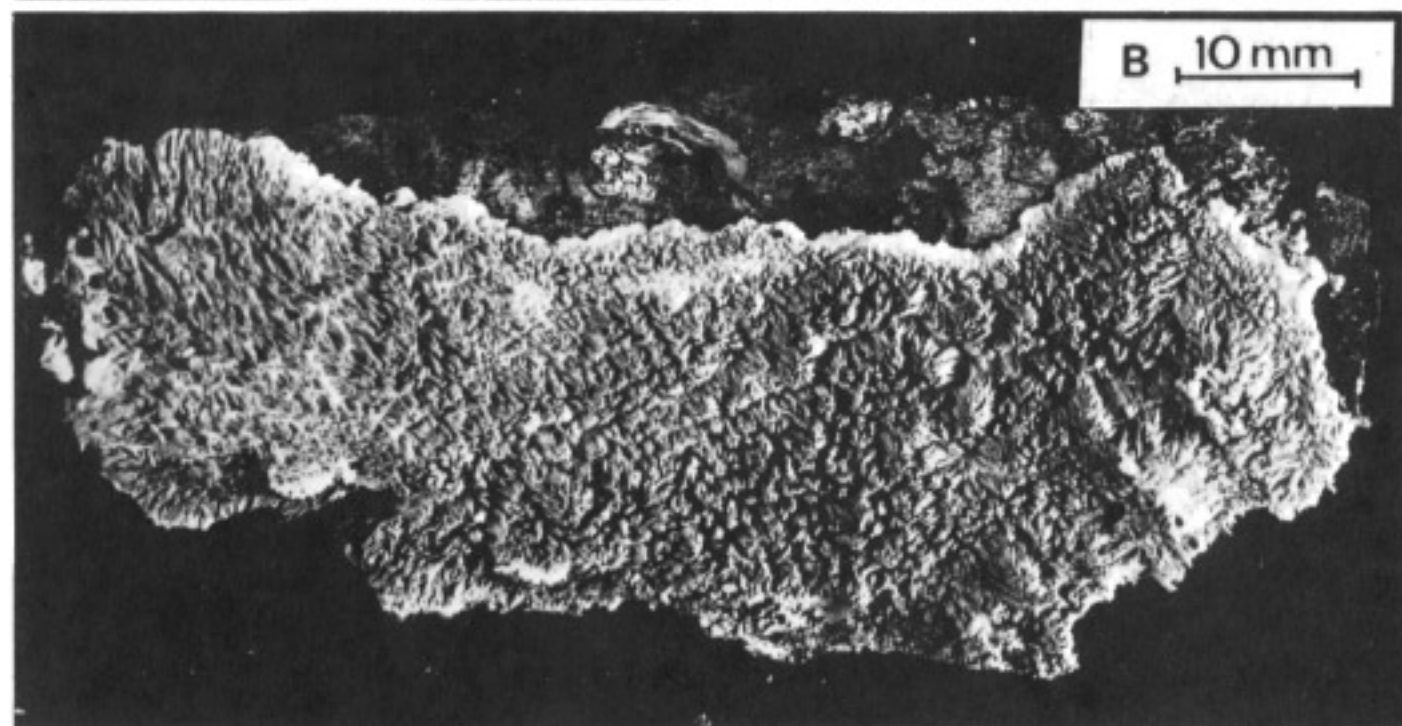
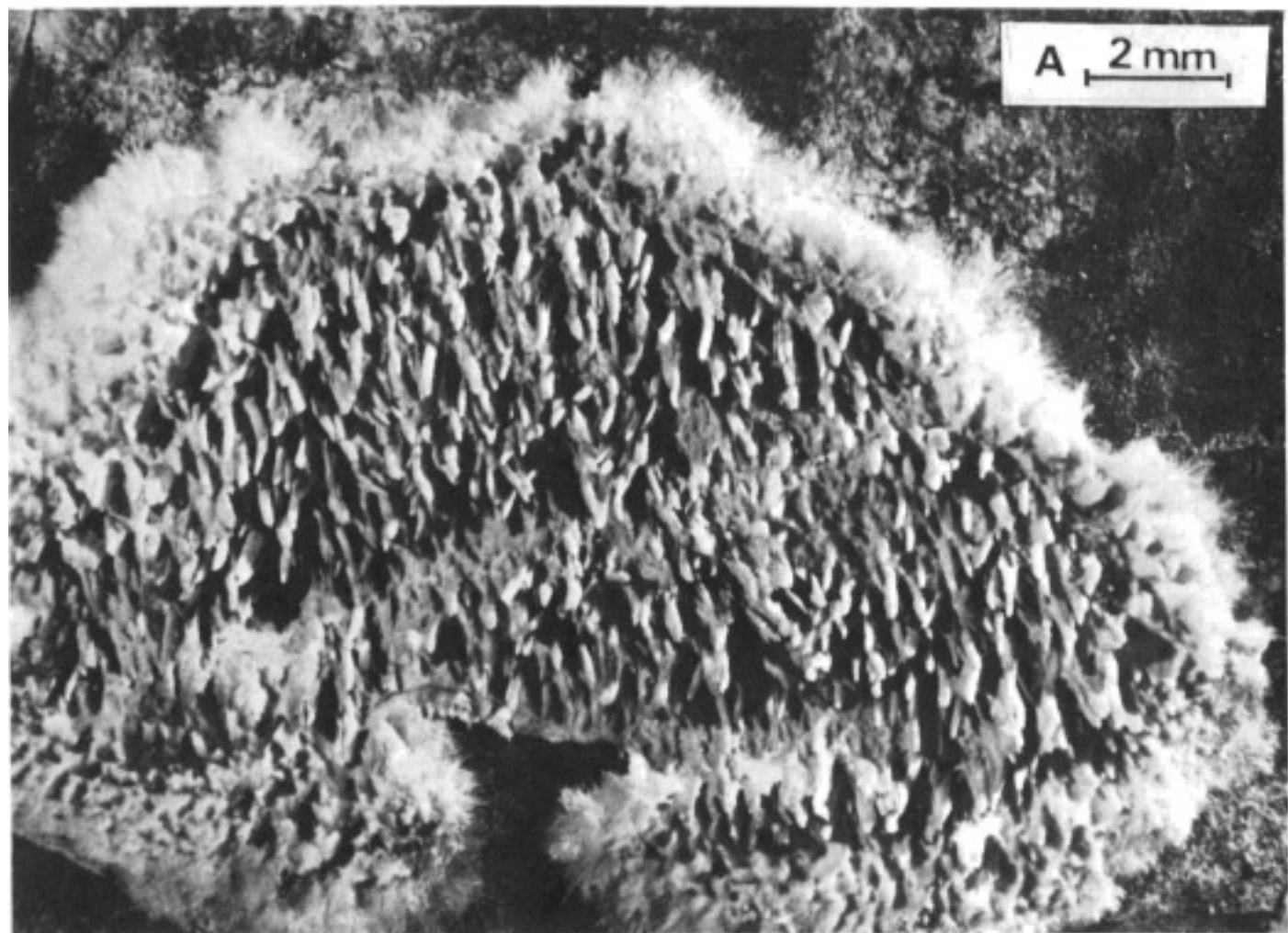


Fig. 738. *Steccherinum robustius*. Coll. A) Hjortstam 9400, B) Strid & Eriksson 10362. Photo T. Hallingbäck.