

Calicium pinastri new to Sweden

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Calicium pinastri is reported as new to Sweden, where it has been found corticolous and lignicolous on *Pinus sylvestris* and corticolous on *Picea abies* and *Alnus glutinosa*. Altogether nine specimens from seven localities in the provinces of Dalarna and Hälsingland have been found.

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Calicium pinastri Tibell was described in 1999 on material from Finland (11 collections), together with one collection each from the Czech republic and Germany (Tibell 1999a). The collections from Finland were made rather long ago, between the years 1852 and 1935. In spite of the increased interest in calicioid lichens during the latest decades no recent Nordic collections have been made, so the knowledge about the ecology of the species has been poor. However, the new Swedish finds presented below give more accurate information on the ecology and widen the distribution area. The notes on ecology will hopefully help other lichenologists find the species.

Calicium pinastri Tibell

C. pinastri is a very small calicioid lichen, with 0,3–0,4 mm high apothecia and with a thin, grey or immersed thallus. The stalk is rather short, shining black and lacking pruina. The capitulum is obconical to lenticular 0,1–0,2 mm in diameter. The asci are when mature cylindrical with uniseriately arranged spores, 30–35 × 4–5 μm. The spores are broadly ellipsoidal 9,5–13,5 × 5–6,5 μm, when young

smooth, when mature with an ornamentation of irregular cracks. *Calicium pinastri* is rather similar to small specimens of *C. parvum*, *C. glaucellum* and *C. abietinum*. *Calicium parvum* differs by having clavate asci, *C. abietinum* usually has brownish stalk and larger spores with an ornamentation of minute warts (Tibell 1999b). *Calicium glaucellum* usually have a rim of white pruina at the edge of the excipulum and has larger apothecia. *Calicium glaucellum* also differs in having a spore ornamentation with minute longitudinal ridges, almost spirally arranged in young spores (when mature disrupted by irregular cracks). *C. glaucellum* also contains sekikaic acid. There is a colour photo of *C. pinastri* in Tibell (1999b) and a detailed picture of the spores in Tibell (1999a).

Ecology. Almost all old collections of *C. pinastri* were made on flaking bark of pine *Pinus sylvestris*. Only once it was found bark of spruce *Picea abies*. Most of the recent collections (6 out of 9) in Sweden were also made on flaking bark of pine. In two of these cases it also grew on lignum in an injury on the trunk, and on lignum of a twig. In one case it was found to grow only on lignum, not on

bark, in an injury on a pine trunk. One finding was made on spruce bark, and one on bark on common alder *Alnus glutinosa*. The pines were rather thin with diameters at breast height of 4, 7, 7, 8, 10 and 15 cm. The pines seemed to be very slow growing with a small amount of branches and needles. The trees were probably about a hundred years old, perhaps older. In most of the localities the pines grew in rather open sites, along the edges of mires or in swamp forests. Companion lichen species were often common pine bark species such as *Hypocenomyce sorophora*, *Imshaugia aleurites*, *Japewia subaurifera*, *Lecanora* cf. *hypoptella*, *Lecidea nyländeri*, *Parmeliopsis ambigua* and *P. hyperopta*. Surprisingly *Calicium parvum* was rare on the pines that *C. pinastri* grew on, only once they were found growing together. Perhaps *C. parvum* prefers larger trees. The bark of the pines was quite loose, but may have been sitting on the trees for a long time, since the trees grow so slowly.

The localities. The nine collections were made at seven localities, five in Dalarna and two in Hälsingland. At two of the localities in Dalarna it occurred on two trees. It is likely that *C. pinastri* occur in the major part of northern Sweden since it have been found in different climate zones.

Specimens examined. **Sweden.** *Dalarna:* Hamra par., northwest part of Hägenlammsmyran, 6 km northwest of Hamra, on bark of a slow growing *Pinus sylvestris* (4 cm in diameter) with few living branches and needles, in a pine swamp forest close to a mire, 18.IX.201, F. Jonsson 2162; Svärdsjö par., 7 km west of Botjärn, 10 km northeast of Lumsheden, on bark of a leaning injured *Pinus sylvestris* slow growing pine, about 10 cm in dbh in a rather open pine dominated swamp forest, 7.VIII.2001, F. Jonsson 2163; on bark and lignum on a pine twig in a pine forest on moist ground close to a mire, 2001.08.07, F.

Jonsson 2170; Svärdsjö par., 7 km northwest of Botjärn, 8 km northeast of Lumsheden, on bark and lignum on a slow growing *Pinus sylvestris* (8 cm in diameter) in a open, thinned, about 100 years old pine forest, 7.VIII.2001, F. Jonsson 2165; Svärdsjö par., 15 km west of Järbo, 5 km northeast of Lumsheden, on bark on an injured *Pinus sylvestris* (7 cm in diameter) in a rather open pine swamp forest, 8.VIII.2001, F. Jonsson 2166; on bark on the northern side of a 15 cm in diameter pine in a pine swamp forest close to a mire, 8.VIII.2001, Fredrik Jonsson 2168; Svärdsjö par., 10 km west of Botjärn, 7 km northeast of Lumsheden, on lignum on *Pinus sylvestris* (7 cm in diameter) injured by *Lachnellula* sp. in a pine forest, 10.VIII.2001, F. Jonsson 2169. *Hälsingland:* Enånger par., Bleckbergens nature reserve, 5 km southwest of Nianfors, on bark on *Picea abies* in a more than 300 years old pine and spruce forest on a south-facing slope, X.2000, U. Nordin 2164; Nianfors par., along the small river Nianån, 10 km west of Njutånger, on bark on *Alnus glutinosa* in an open site close to the small river. 13.VIII.1999, F. Jonsson 2167. All collections are deposited at UPS.

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References

- Tibell, L. 1999a. Two new species of *Calicium* from Europe. *Mycotaxon* 70: 431–443.
 Tibell, L. 1999b. Caliciales. *Nordic Lichen Flora 1*: 20–93. Bohuslän '5, Uddevalla.