ACTA BOT. ISL. 10: 31-36, 1990.

Notes on Ascomycetes II: Discomycetes

Helgi Hallgrímsson and Henrik F. Gøtzsche

Lagarási 2, 700 Egilsstaðir, Iceland and

Institut for Sporeplanter, Øster-Farimagsgade 2D, 1353 Copenhagen K, Denmark

ABSTRACT: Sixteen species of Helotiales and Pezizales (Discomycetes) are recorded, whereof 9 species are new to the Icelandic flora: *Lachnellula suecica*, *Ciboria polygoni*, *Peziza* cf. *cerea*, *Peziza fimeti*, *Peziza granulosa*, *Geopora* sp., *Melastiza chateri*, *Otidea* cf. *alutacea* and *Tarzetta spurcata*.

HELOTIALES

Helotiaceae

ASCOCORYNE SARCOIDES (Jacq.) Groves & Wils.

The species was reported by ROSTRUP (1903, p.313) under the name *Coryne sarcoides* (Jacq.) Tul., from Hálsskógur in N-Iceland, based on a specimen collected by Ólafur Davíðsson.

It has been found many times in the Public Park in Akureyri (*AMNH 199, 9958*), growing on stumps of different trees, mainly *Betula* and *Sorbus* spp., also in Arnarhóll near Akureyri, in a garden. In SW-Iceland it has been found by Eiríkur Jensson in Fossvogur 1988, and in Vífilsstaðahlíð near Hafnarfjörður 1978. In the East it has been collected in the forests of Egilsstaðir and Hallormsstaður in 1987-1988 (*AMNH 11642, 11856*). The growing season is from late August to October. Since the species is rarely found in the ascus-state, it cannot be ascertained whether *A. cylichnum* might also be present in the material or not.

Hyaloscyphaceae

HYMENOSCYPHUS cf. *CALYCULUS* (Sow.) Phill.

The species was reported by ROSTRUP (1903, p. 315) as *Phialea virgultorum* (Vahl.) Sacc., from Hálsskógur and Hörgár-

dalur, N.-Iceland, collected by Ólafur Davíðsson on branches of *Betula pubescens* and *Salix lanata*.

H. calyculus seems to be one of the most common cup fungi on birch stumps and logs in the Icelandic forests and gardens, and it may also be found on *Salix* spp. and *Sorbus* spp. The name *H. conscriptum* (Karst.) Karst. is often used for the form on *Salix*.

In form and colour the Icelandic specimens match well with the photograph in Breitenbach & Kränzlin (1981 nr. 182), but the spores are shorter and broader (15-19 x 3.5-5 µm) and the paraphyses are somewhat clavate. (*AMNH 9331, 9553, 9959, 11221*).

LACHNELLULA OCCIDENTALIS (Hahn & Ayers) Dharne

This species was reported by the second author (GØTZSCHE 1985) as *L. hahniana* (Seaver) Dennis from Hallormsstaður 1981 (*HFG 81,35*) on *Larix russica*.

L. willkommii (Hartig) Dennis var. *hahniana* Roll-Hansen has also been reported by ROLL-HANSEN & ROLL-HANSEN 1973, on fallen twigs of Larix russica.

LACHNELLULA SUECICA (de Bary ex Fuckel) Nannf.

Three specimens (*HFG 84,52-54*) from Vaglaskógur, N.-Iceland 15. Aug. 1984, growing on *Larix russica*, have been collected and determined as this species by Gøtzsche. It is new to Iceland.

Sclerotiniaceae

CIBORIA POLYGONI (Rehm) Buchw.

Found in Laugardalur, Reykjavík 2. Aug. 1984 on *Polygonum aviculare* by H.F.Gøtzsche (*HFG 84,16*). New to Iceland.

POCULUM FIRMUM (Pers.) Dumont

(*Rutstroemia* firma (Pers.) Karst.)

First collected in Iceland by Gøtzsche in Skaftafell, SE-Iceland, and again in Hallormsstaðarskógur, E-Iceland in Aug. 1984 (*HFG 84,26-27*). In the years 1985-1988 it was collected by Helgi Hallgrímsson in Garðsárgil, Eyjafjörður and Vaglaskógur, N.-Iceland and at Hallormsstaður and Egilsstaðir in the East (*AMNH 10135, 11205, 11618, 11643, 11959 and 12092*).

It always grows in birch forests, on stumps, logs or branches of *Betula pubescens* laying on the ground. It appears from late June to the first part of September. It is probably common in the forests, at least in N.- and E.-Iceland.

PEZIZALES

Pezizaceae

PEZIZA BADIA Pers.

This species was mentioned by H. KRISTINSSON (1977, p. 110) from Vaglaskógur, N.-Iceland.

Two samples (*AMNH 10781, 10645*), one from a churchyard in Akureyri, N.-Iceland, (Sept. 2nd 1962), and the other from

Hallormsstaður, E.-Iceland (Aug. 25th 1986), on peaty soil from a ditch near the forest border, have been referred to this species by Gøtzsche.

PEZIZA cf. *CEREA* Sow.

It belongs to the *P. repanda* species complex, which is much in need of revision. According to DENNIS (1968), *P. cerea* grows indoors on soil and different rotting material, and in damp cellars. Two specimens have recently been referred to this species by H. Gøtzsche. One was collected on linoleum and concrete in a cellar at Víkurbakki, Eyjafjörður, N.-Iceland Aug. 25th 1967 by Helgi Hallgrímsson (*AMNH 10768*). The largest specimens were about 20 cm in diameter, but very crimpled and split. The other was collected by Jón Bjarnason on concrete at Þórisós by Þórisvatn in the Central Highlands, at about 500 m alt., in Aug. 1972 (*AMNH 8218*). The spores of both samples are very similar, ellipsoid, smooth and hyaline, measuring 15-16 x 9 µm.

PEZIZA FIMETI (Fuck.) Seaver

This is one of the few *Peziza* species growing on dung. It was probably first collected in Iceland by Helgi Hallgrímsson in Droplaugarstaðir, Fljótsdalur, E.-Iceland (*AMNH 12184*, Sept. 4th 1960).

In 1985 and 1988 it was found again at the same locality (*AMNH 10246* and *12147*), and in Egilsstaðir, E.-Iceland in 1987 (*AMNH 11350*). A specimen from Húsavík (*AMNH 9257*, Sept. 4th 1983), has been determined as this species by Gøtzsche. The species has been found on cow-dung as well as on dung of horses. It appears to be rather common in the East.

The spores of the specimen from Húsavík (*AMNH 9257*) are ellipsoid, smooth, hyaline, 19-23 x 11-12 µm. Paraphyses filiform, ca. 3 µm broad, expanded to 7 µm at apex, with pale-yellow granular content.

The specimen *AMNH 12147* was growing profusely on a pile of horse dung. The largest fruit bodies were about 2 cm in diameter and 1 cm high. The spores were slightly smaller than in *AMNH 9257*, 19-21 x 9.5-11 µm, smooth, hyaline, but some with granular content. Paraphyses similar, but sometimes curved at apex.

PEZIZA GRANULOSA Pers. sensu Boud.

A specimen from Akureyri, N.-Iceland (*AMNH 10774*), collected on sandy soil among grasses and mosses near the river Glerá, has been determined as *Peziza granulosa* by Gøtzsche. The specimen matches rather well the description and photograph in BREITENBACH & KRÄNZLIN (1981, nr. 42). The spores are ellipsoid, 19-21 x 10-11 µm, smooth, hyaline. Paraphyses filiform, 3-4 µm broad, apices clavate up to 10 µm, with yellow granular pigment in the apical part.

PEZIZA REPANDA Pers. coll.

This species was first recorded by HALLGRÍMSSON (1979, p. 52), based on a specimen which is here referred to *P. cerea* (*AMNH 10768*). GØTZSCHE (1987, p. 29) reported the species from

Hallormsstaður, E.-Iceland (*HFG 84,39* and *84,42*). About 10 collections in AMNH have now been referred to this species group by Gøtzsche. Most of them are taken in ruderal habitats, even in houses, and may represent *P. cerea*, *P.varia* (Hedw.) Fr. or *P. domiciliana* Cooke.

Pyronemataceae

COPROBIA GRANULATA (Bull.) Boud.
(*Humaria granulata* (Bull.) Quel.)
This species was reported from Iceland already 1840 by M. Vahl as *Peziza granulata*. ROSTRUP (1903, p. 314) recorded the species from Vallanes, E.-Iceland, a collection made by Helgi Jónsson, s.n. *Humaria granulata*.
The few records might be regarded as an indication of this species being rare in Iceland, but this is hardly true. At least it seems to be rather frequent in E.-Iceland, found on cow dung at Egilsstaðir, Hallormsstaður and Droplaugarstaðir (*AMNH 10199, 11868, 12122*).

GEOPORA sp.
Two collections from North-Iceland, one from Laufás, Eyjafjörður, (*AMNH 10778*, Aug. 19th 1961) and the other from Vaglaskógur, S.-Þing. (*AMNH 10780*, Aug. 13, 1961), collected on mossy soil in birch forests, originally determined as *Humaria hemisphaerica*, have been studied by Gøtzsche, who was unable to identify them with any known species.

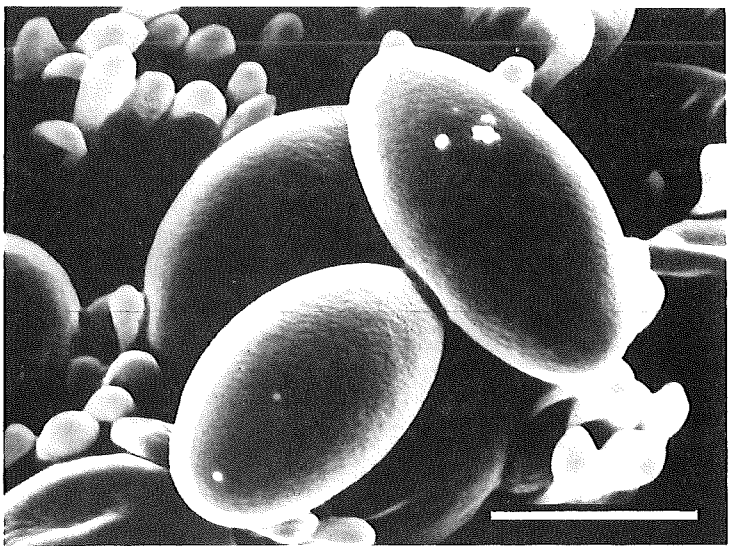

Fig. 1. *Tarzetta spurcata* (Pers.) Harmaja (*AMNH 9694*), spores. The apparent fine ornamentation on the spores is probably an artifact due to preparation. SEM, dried material. Scale bar 10 µm.

The apothecium is cup-shaped (hemisphaerical) up to 5 mm in diameter, externally brown and clad with long, stiff, dark brown hairs. Asci 8-spored. Spores ellipsoid, hyaline, with small to very delicate warts of different sizes, and with one or two guttules in rehydrated material, 22-25 x 12-13 µm. Marginal hairs up to 1100 µm long, and up to 20 µm broad at base, septate, brown, near base with walls up to 3 µm thick, which gradually become thinner towards apex, pointed or blunt.

This is most likely an undescribed species of *Geopora*.

MELASTIZA CHATERI (W.G.Smith) Boud.

On Aug. 22d 1985 a *Scutellinia*-like cup fungus was collected on bare soil under planted, about 1 m tall *Salix alaxensis*, by Helgi Hallgrímsson in Akureyri, N.-Iceland.

This specimen (*AMNH 9949*) was identified as *Melastiza chateri* by Trond Schumacher in Oslo. Later in the same summer it was found at Egilsstaðir in E.-Iceland, on wet soil in a mire (*AMNH 10008*, det. Schumacher), and again in the same locality in Sept. 1988 (*AMNH 12117*, det. H.Hallgrímsson) on soil and gravel in ruderal land.

Two collections, one from Haukadalur, Árnessýsla S.-Iceland (*AMNH 2313*, Sept. 2nd 1963), and the other from Garðsá, Eyjafjörður, N.-Iceland (*AMNH 12183*, Aug. 8th 1961), both labelled as *Aleuria aurantia* may also represent this species, especially the former. *AMNH 12117* has somewhat larger spores, 21-24 x 9.5-11 µm, with coarser warts, and could possibly be referred to *Melastiza scotica* Graddon.

OTIDEA cf. *ALUTACEA* (Pers.) Massee

On Aug. 24th 1988 a specimen of Otidea was collected in the forest of Hallormsstaður, E.-Iceland by Helgi Hallgrímsson and Hörður Kristinsson. It was growing in a forest-path on mossy soil with scattered grass. This specimen (*AMNH 11944*) was referred to *Otidea alutacea* with some doubt.

According to DENNIS (1968), the nomenclature of this genus is highly confused. Our specimen is in good accordance with the illustrations in DENNIS (Plate VB) and in BREITENBACH & KRÄNZLIN (1981, nr. 60). The paraphyses are slender, hardly clavate, curved or hooked at the tip. The spores are hyaline, smooth, ellisoid, with one or two guttules, 12-15 x 8-10 µm, which is broader than commonly reported for this species.

TARZETTA SPURCATA (Pers.) Harmaja

On July 29th 1985 luxuriant specimens of this fungus were discovered by Helgi Hallgrímsson in the Public park in Akureyri, growing in a hedge of low birches (*AMNH 9683*). On the next day the same fungus was found again in great quantity on mossy soil with decaying leaves in a small plantation, mainly of birch trees, at the border of the town (*AMNH 9694*). Two older collections from Akureyri dated July 1980 and 1981 (*AMNH 10783* and *9270*) growing in similar habitats have also been determined as this species, as well as one specimen from Droplaugarstaðir, E.-Iceland collected on turf-wall on Sept. 8th 1961. All samples were identified by Gøtzsche, but some of them with doubt. Microscopic characters of specimens no.

9270, 9694 and 10773 deviate to some extent from the usual, especially in the shape of the paraphyses, which in these three samples are straight and hardly or not at all branched at apex.

In the oldest plant lists from Iceland (MÜLLER 1770) a fungus is mentioned with the name *Peziza cupularis*, which is a synonym for *Tarzetta cupularis* (L.) Lamb. By ROSTRUP (1903) and LARSEN (1932) this record is listed as *Geopyxis cupularis*. This old record might well represent *T. spurcata*, and *T. cupularis* should therefore be regarded as a doubtful member of the Icelandic fungus flora.

ACKNOWLEDGEMENTS

We wish to thank Henry Dissing, Copenhagen and Trond Schumacher, Oslo for their help to identify the specimens.

REFERENCES

BREITENBACH, J. & KRÄNZLIN, F. 1981. Pilze der Schweiz. Bd. 1. Ascomyceten (Schlauchpilze). Luzern.

DENNIS, R.W.G. 1968. British Ascomycetes. Lehre 1968.

GØTZSCHE, H.F. 1985. Svampeindsamlinger. In: Island. Foreningen Theophrastos bot. studierejse 1981, 49-56.

GØTZSCHE, H.F. 1987. Some operculate discomycetes (Pezizales) from Iceland. Acta Bot. Isl. 9: 19-34.

HARMAJA, H. 1974. *Tarzetta pusilla* n.sp. and *T. spurcata* (Pers.) n.comb. from Finland. Karstenia 14: 116-120.

HALLGRÍMSSON, Helgi. 1979. Sveppakverið. Garðyrkjufélag Íslands, Reykjavík.

KRISTINSSON, Hörður. 1977. Lágplöntur í íslenzkum birkiskógum. In Skógarmál, p. 97-112. Reykjavík.

LARSEN, P. 1932. Fungi of Iceland. The Botany of Iceland 2(3): 449-607.

MÜLLER, O. 1770. Enumeratio stirpium in Islandia sponte crescentum. Nova Acta Acad. CLC, Nat. Curios., Vol. 4: 203-215.

ROLL-HANSEN, F. & H. 1973. Litt om skogsykdommer og råtesopper i Island. Tidsskr. f. Skogbruk 81: 73-79.

ROSTRUP, E. 1903. Islands Svampe. Bot. Tidsskr. 25: 281-335.

VAHL, J. 1840. Liste des Plantes que l'on suppose existe en Islande, dressée par M.Vahl. In Robert E.: Mineralogie et Geologie. Voyage en Islande et au Groenland. Paris.