Some interesting records of lichens and lichenicolous fungi from The Netherlands IV

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Received 4. 8. 2000

Key words: Lichenized ascomycetes, lichenicolous fungi. New records. - Mycoflora of The Netherlands.

Abstract: Five lichen species, Gyalecta jenensis, Moelleropsis humida, Psammina aff. simplex, The-locarpon imperceptum and Tremella pseudophysciae are recorded for the first time for The Netherlands. Chaenotheca xyloxena and Thrombium epigaeum are recorded for the first time since the 19th century. More data are provided for Lichenoconium pyxidatae, Macentina abscondita and Stereocaulon saxatile. Notes on morphology and ecology are given.

Zusammenfassung: Fünf Flechtenarten, Gyalecta jenensis, Moelleropsis humida, Psammina aff simplex, Thelocarpon imperceptum und Tremella pseudophysciae, werden erstmals aus den Niederlanden gemeldet. Chaenotheca xyloxena und Thrombium epigaeum wurden erstmals seit dem 19. Jahrhundert wiedergefunden. Weitere Funddaten von Lichenoconium pyxidatae, Macentina abscondita und Stereocaulon saxatile werden mitgeteilt. Kurze Bemerkungen über Morphologie und Ökologie der Arten werden angefügt.

Recent lichenological excursions in the southern part of The Netherlands resulted in several interesting additions to the lichen flora of The Netherlands. The increase of growth of epiphytic macrolichens because of the recent declining of SO₂ emission is visible due to the occurence of species like Hyperphyscia adglutinata (FLÖRKE) MAYRH. & POELT, Parmelia borreri (SM.) TURNER, P. soredians NYL, and P. ulophylla (ACH.) F. WILSON, formerly rare, but now common and recently everywhere delectable in the southern part of The Netherlands, in particular in the province of Noord-Brabant. Further, also microlichens which have never been found earlier or which were very rare species in the southern provinces are now more often found, for example Bacidia neosquamulosa APTROOT & VAN HERK, Caloplaca obscurella (KÖRBER) TH. FR., Catillaria nigroclavata (NYL.) SCHULER, Chaenotheca brachypoda (ACH.) TIBELL, Macentina abscondita COPPINS & VEZDA. Mycoblastus fucatus (STIRT.) ZAHLBR., Psilolechia clavulifera (NYL.) COPPINS, and Rinodina pityrea ROPIN & MAYRH. These latter two species have been found in the city of Eindhoven in a park in large quantity, abundantly fertile. Since the beginning of the eighties, there is an intensive field study on lichens and lichenicolous fungi going on by the author, in all kinds of habitats, and in future, the results will be published as complete as possible from the province of Noord-Brabant.

However, the reason for writing the present paper is the detection of the occurrence of some very interesting terricolous lichens on a ruderal place. This hilly area with loamy soil was neglected for several years because of the delay of the construction of a controversial highway (A 50). In this area of c. 100 m², at least 16 terricolous lichen species were encountered. Three different species of *Thelidium* have been found but one of them is not yet identified because it requires further study, the others, *T. minutulum* KÖRBER and *T. zwackhii* (HEPP) MASSAL. are already known from the southern part of the country.

Specimens are deposited in the author's herbarium and some of them will be distributed as exsiccata in the future.

Chaenotheca xyloxena NÁDV.

Previously, material of this species has only been collected in the 19th century. (BRAND & al. 1988). It is known from many places in Europe, including the British Isles, however it is not known from Belgium and it is very rare in Luxemburg (DIEDERICH & SÉRUSIAUX 2000).

Ecology: on a rotting fallen decorticated trunk of *Pinus*, at a shaded spot in *Pinus* forest. The only accompanying species was *Thelocarpon intermediellum* NYL.

Locality: Noord-Brabant, Bergen op zoom, grid-ref. 49-35-53, 8 April 2000, P. V. D. BOOM 24168.

Gyalecta jenensis (BATSCH) ZAHLBR.

It is remarkable that this lichen has never been found in The Netherlands before, although in the most southern part of The Netherlands, where calcareous outcrops occur, suitable habitats are available for this species. It is widespread in Europe, from Artic Scandinavia to Mediterranean mountains, the British Isles and Canary Islands and in many places it is not rare. In Belgium it is rather common in the province of Namur and it is also known from Luxemburg (DIEDERICH & SÉRUSIAUX 2000).

Ecology: on damp brick of a wall, along a stream, rather shaded. The only accompanying species was *Conocephalum conicum* (L.) LINDB. (*Hepaticae*).

Locality: Zuid-Limburg, Wijlre, Grid-ref. 62-23-53, 23 June 2000, leg. P. J. KEIZER s.n. (herbarium V. D. BOOM).

Lichenoconium pyxidatae (OUDEM.) PETR. & SYD.

Previously this species was only known from coastal areas in The Netherlands, so this is the first inland record for the country.

Ecology: on W exposed sandy face of a ditch, on squamulus and podetia of *Cladonia* spec.

Locality: Noord-Brabant, Oirschot, *Calluna* heathland, grid-ref. 51-33-32, 26 February 2000, P. V. D. BOOM 23911.

Macentina abscondita COPPINS & VĚZDA

Ecology: Two collections from The Netherlands are from damp *Salix* woodlands in rather shaded situations. However one record is from a garden and one from fissures of bark of *Sambucus* in rather exposed situation in *Calluna* heathland, where this species was growing abundantly. In DIEDERICH & SERUSIAUX (2000) it is mentioned from *Corylus*, so this species has a wider ecological amplitude as suggested in PURVIS & al. (1992).

Localities: Noord-Brabant, S of Eindhoven, Heeze, on *Salix*, grid-ref. 51-55-53, 25 February 1998, P. V. D. BOOM 19831; - Soerendonk, *Calluna* heathland, on *Sambucus*, grid-ref. 57-25-25, 21 June 2000, P. V. D. BOOM 24611. Noord-Holland, N of Alkmaar, Schoorl, on base of young *Juglans*, 7 April 1996, leg. P. J. KEIZER s.n. (herbarium V. D. BOOM).

Moelleropsis humida (KULLH.) COPPINS & P. M. JØRG.

The granular dull greyish-brown thallus contains *Nostoc* algae. On several, mostly shaded places, it was richly covered with red brown apothecia.

Ecology: This ephemeral species has been found in different situations, on sheltered and shaded but also on exposed and well-lit places. Associated species are *Peltigera didactyla* (WITH.) LAUNDON, *Placynthiella dasaea* (STIRT.) TØNSB., *Steinia geophana* (NYL.) STEIN, *Thelidium minutulum* and *Thelocarpon lichenicola* (FUCKEL) POELT & HAF. In WIRTH (1995) this species is mentioned as rare in central Europe.

Locality: Noord-Brabant, Son, near brickworks, grid-ref. 51-25-51, 18 March 2000, P. V. D. BOOM 24030.

Psammina aff. simplex EARLAND-BENNETT & D. HAWKSW.

This hyphomycete has cartwheel-like conidia and the conidial arms are $10-18 \times 2-3 \mu m$, 0-2(-3) septate. They are sometimes more septate than those in the original description in EARLAND-BENNET & HAWKSWORTH (1999).

Ecology: The dark brown to black conidial colonies are found on *Placynthiella dasaea*, on shaded N facing sand under grass and the host is dicoloured white to pinkish. There is one species (*P. stipitata* D. HAWKSW.) of this genus mentioned in the checklist of The Netherlands (APTROOT & al. 1999). This publication is based on some records in herbarium BRAND from different host species.

Locality: Noord-Brabant, Putte, Kriekelareduinen, Calluna heathland, grid-ref. 49-56-41, 6 March 2000, P. V. D. BOOM 24006.

Stereocaulon saxatile H. MAGN.

Since 1987, this species is known from the province of Noord Brabant, but these records have not been published previously. *Stereocaulon saxatile* is a red list species. During recent observations in the known localities, it appears that this species is still growing there in Corynephoretum communities, as well-developed fungi. Most interesting accompanying species are *Cladonia borealis* STENROOS, *C. pyxidata* (L.) HOFFM. s. l. and *Stereocaulon condensatum* HOFFM. Specimens of *C. pyxidata* in this communities could refer to another taxon as *C. pyxidata* s. str. This latter species is found on calcareous places in the country only (H. SIPMAN, pers. comm.). The only other locality where *Stereocaulon saxatile* is still growing in The Netherlands is Bergerheide, prov. Zuid-Limburg (APT-ROOT & al. 1998).

Ecology: Although this species is widely distributed in boreal areas, it mostly has been found on rocks, however in The Netherlands it is only known terricolous from Corynephoretum communities (BRAND & SIPMAN 1978).

Localities: Prov. Noord-Brabant, Leende, Leenderbos, *Calluna* heathland, among *Calluna* and grass, 28 February 1987, grid-ref. 57-15-34, P. V. D. BOOM 4491; - W of Soerendonk, Groote Heide, hilly *Calluna* heatland, terricoulous among *Polytrichum piliferum* SCHREB. ex HEDWIG, 19 June 1987, P. V. D. BOOM 5637; - - grid-ref. 57-25-35, 21 June 2000, P. V. D. BOOM 24608; - - grid-ref. 57-25-25 P. V. D. BOOM 24612.

Thelocarpon imperceptum (NYL.) MIG.

In POELT & VĚZDA (1977) this species is mentioned from the surroundings of Zürich (Switzerland) only. This very inconspicuous lichen has perithecia with somewhat the same colour as the loamy soil. The perithecia collected contained many mature asci, each with many spores of c. $12 \times 5 \mu m$.

Ecology: It has been found at Son in a large quantity on bare loamy soil associated with *Collema limosum* (ACH.) ACH. and several mosses viz. *Aloina aloides* (SCHULTZ) KINDB. var. *ambigua* (BRUCH & SCHIMP.) CRAIG, *Barbula convoluta* HEDW., *B. unguiculata* HEDW., *Bryum argentium* HEDW., *B. barnesii* WOOD ex SCHIMP., *B. gemmiferum* R. WILCZEK & DEMARET, *Ceratodon purpureus* (L.) BRID., *Dicranella varia* (HEDW.) SCHIMP., *Didymodon fallax* (HEDW.) R. H. ZANDER and *Funaria hygrometrica* HEDW. The collection from Udenhout contains only a few perithecia, associated with a species of *Verrucaria*. This could be *V. geophila* ZAHLBR. because the perithecia are broadly ellipsoid, 0.4-0.5 mm wide, with a dark brown thick exciple and immersed in the substratum. The ascospores are 27-37 x 9-12 μm. However there are only a few perithecia and rather badly developed.

Localities: Noord-Brabant, Son, near brickworks, grid-ref. 51-25-51, 18 March 2000, P. V. D. BOOM 24029; - Udenhout, Leemkuilen, terrestrical on sloping loamy soil along fen, grid-ref. 45-51-41, 25 March 2000, P. V. D. BOOM 24073.

Thrombium epigaeum (PERS.) WALLR.

Ecology: abundantly encountered on mainly horizontal top of exposed hills, on loamy soil, where it was associated with *Steinia geophana* (NYL.) B. STEIN, *Thelocarpon lichenicola* and sometimes with *Epigloea soleiformis* DÖBB. and *Strigula sychno-gonoides* (NITSCHKE) R. C. HARRIS. Occasionally the fungus *Omphalina obscurata* D. REID was also found in this community. In BRAND & al. (1988) *T. epigaeum* is mentioned as extinct and only known from the 19th century.

Locality: Noord-Brabant, Son, near brickworks, 18 March 2000, P. V. D. BOOM 24029.

Tremella phaeophysciae DIEDERICH & M. S. CHRIST.

This lichenicolous fungus has been discovered during a weekend excursion to Zeeuws-Vlaanderen (prov. Zeeland). Beside some rare lichens, like *Ramalina lacera* (WITH.) LAUNDON, several interesting lichenicolous fungi were collected, of which only a few are recorded for the country, as *Xanthoriicola physciae* (KALCHBR.) D. HAWKSW. (on *Xanthoria parietina*) and *Arthonia phaeophysciae* GRUBE & MATZER (on *Phaeophyscia orbicularis*).

Tremella phaeophysciae is easily recognized by the dark brown spots (galls) on the thallus of *Phaeophyscia orbicularis*. According to DIEDERICH (1996) it seems to be restricted to the host species *P. orbicularis*.

Locality: prov. Zeeland, Zeeuws-Vlaanderen, 'Zwarte Polder', dune area, on Sambucus, 21 April 2000, grid-ref. 47-58-15, P. V. D. BOOM 24223.

I am grateful to Mr HUUB VAN MELICK for identification of bryophytes mention above and to Mr MAARTEN BRAND for help of identification of some lichens. I would like to thank Dr PETER JAN KEIZER for placing his records at my disposal.

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Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: Österreichische Zeitschrift für Pilzkunde

Jahr/Year: 2000

Band/Volume: 9

Autor(en)/Author(s): Van den Boom Pieter P. G.

Artikel/Article: Some interesting records of lichens and lichenicolous fungi from

The Netherlands IV. 141-145