

Additions to the lichen flora of North America ??.***Agonimia allobata* and *Aspicilia grisea*****Alan M. Fryday¹**

Abstract. *Agonimia allobata* and *Aspicilia grisea* are reported for the first time from North America from Michigan U.S.A.

In the summer of 2000, my son and I collected a corticolous, pyrenocarpous lichen from Wilderness State Park (Emmet Co., Michigan), which on subsequent examination proved to be *Agonimia allobata*. Also, during the preparation of the recent checklist of lichens and allied fungi from Michigan (Fryday *et al.* 2001) a specimen was discovered in the herbarium of the University of Michigan (MICH), collected from Laughing Whitefish Point (Alger Co., Michigan) and filed under 'soraliate, saxicolous crust', that was a specimen of *Aspicilia grisea*. As these taxa are not listed in recent North American Checklists (Esslinger 1997, Esslinger & Egan 1995) or, to my knowledge, in any other publication dealing with North American lichens, I consequently believe that these are the first records of these species for North America.

***Agonimia allobata* (Stizenb.) P. James – U.S.A., Michigan,** Emmet Co., Wilderness State Park, Big Stone bay, 45° 44' 47"N 84° 54' 28"W, on trunk of coniferous tree at west end of beach campground, 18 August 2000, A. (8025) & K. Fryday (MSC).

The species of *Agonimia* are characterized by having a minutely squamulose to granular thallus, with the cortical cells bearing short papillae (Purvis 1992, Dobson 2000). *Agonimia allobata* is atypical in that the thallus is often smooth, although the Michigan specimen had well-developed thalline squamules. *Agonimia allobata* has hyaline, muriform, ascospores 30-35 x 10-15µm. The only other species of *Agonimia* recorded from North America have larger ascospores (30-60µm long in *A. gelatinosa*, and 60-120µm long and only 2-spored asci in *A. tristicula*). The recently described *A. repleta* (Czarnota & Coppins 2000), known only from Europe has similar sized ascospores as *A. allobata*, but is distinguished from it by having a smooth perithecial wall.

Agonimia allobata appears to be widespread, but rare, in Europe, having been recorded from the British Isles, France, Germany, Italy, Spain, Norway, Sweden,

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Switzerland, and the Czech and Slovak Republics. The North American specimen was collected from a tree in a campground by the author and his one year-old son, Konrad, who while being carried around the campground, quickly learned the technique of removing pieces of bark from trees and putting them in his father's shirt pocket. It is remarkable that this first record of *A. allobata* from North America was made in such a casual manner in an area that was, for many years, the haunt of the notable collector of pyrenocarpous lichens, Richard C. Harris!

The identity of the phorophyte of the North American specimen is uncertain but, as records from Europe are usually from deciduous trees, it was almost certainly a member of the Cupressaceae, which have a relatively basic bark pH, and most probably *Thuja occidentalis* (Northern White Cedar), although *Juniperus virginiana* (Eastern Red Cedar) was also present at the collection site.

***Aspicilia grisea* Arnold** – U.S.A., Michigan, Alger Co., Deerton, Laughing Whitefish Point, [46°32'N 87°01'W], on shore rocks, June 17 1933, *J. L. Lowe* 2475 (MICH).

This collection was originally identified by J. Hendrick as *Pertusaria velata* (Turner) Nyl. However, that species is now known to be non-sorediate, corticolous, and has a thallus containing lecanoric acid (C+ red, K-), whereas the present specimen is sorediate, occurs on siliceous rock, and contains only norstictic acid (C-, K+ red). It was annotated "not a *Pertusaria*" by M. Dibben in 1972 and re-filed under "soraliate saxicolous crust".

The specimen agrees well with European collections and descriptions (e.g. Foucard 1990, Fryday & Coppins 1997, Purvis & Coppins 1992) in having a lead-grey, areolate thallus with a white prothallus and pale-grey to cream colored, granular soralia that are initially punctiform but coalesce to cover larger areas. Apothecia are absent from the Michigan collection and rare in European material. Even when present, mature asci or ascospores are rarely produced.

Aspicilia is badly in need of a modern taxonomic revision. The current North American checklist (Esslinger 1997) lists over 60 species of *Aspicilia* but, as far as I can ascertain, only *A. mastrucata* (Wahlenb.) Th. Fr., which has a granular thallus and is usually fertile, is both sorediate and has a thallus containing norstictic acid.

Aspicilia grisea was previously only known from northern and central Europe and its discovery in northern Michigan suggests it is probably an overlooked, circumboreal species.

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