

***Bacidia etayana* on the German Baltic coast**

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Abstract: Dolnik, C. 2005. *Bacidia etayana* on the German Baltic coast. – Herzogia 18: 219–222.

The new combination *Bacidia etayana*, formerly *Woessia etayana*, is made. The second record of this species is from a barrier beach on the German Baltic coast where it was found on dune grass litter. Morphological differences to the similar *B. adastrata* are described.

Zusammenfassung: DOLNIK, C. 2005. *Bacidia etayana* an der deutschen Ostseeküste. – Herzogia 18: 219–222.

Die Neukombination *Bacidia etayana* für *Woessia etayana* wird eingeführt. Der zweite Nachweis dieser Art ist von einem Strandwall an der deutschen Ostseeküste, wo die Art auf Streu von Dünengräsern gefunden wurde. Morphologische Unterschiede zur ähnlichen Art *Bacidia adastrata* werden beschrieben.

Key words: Lichenized Ascomycetes, *Bacidia adastrata*, *Bacidina*, *Woessia*, thallus goniocysts.

Introduction

Bacidia etayana was originally described as *Woessia etayana* (VAN DEN BOOM & VĚZDA 1996). The genus *Woessia* was established by HAWKSWORTH & POELT (1986) on a sterile sample of *Bacidia arnoldiana* s. l., who did not recognize it as belonging to the genus *Bacidia* (EKMAN 1996). Later, several species of *Bacidia* and *Woessia etayana* were transferred to the genus *Bacidina* described by VĚZDA (1991). Nomenclatural remarks on the genera *Woessia* and *Bacidina* are given in SÉRUSIAUX (1995), EKMAN (1996, 2001), APTROOT & VAN HERK (1999) and COPPINS & VAN DEN BOOM (2002), and APTROOT & VAN HERK (1999) provide evidence to support the view that the name *Bacidina* should be avoided since it is a nomen illegitimum according to ICBN Art. 53.3. Apart from taxonomic difficulties, the generic delimitation of *Bacidia* and *Bacidina* by means of morphological characters is weak; therefore, both genera are often treated together (WIRTH 1995, EKMAN 1996), or, more recently, not treated as different (COPPINS 2002, VAN HERK & APTROOT 2004). To place the species *Woessia etayana* in the genus *Bacidia*, the necessary new combination is made here:

Bacidia etayana (P.Boom & Vězda) C.Dolnik **comb. nov.**

Basionym: *Woessia etayana* P.Boom & Vězda, Herzogia 12: 31 ff. (1996).

Type: France, Pyrénées-Atlantiques, ENE of St. Engrâce, Col de St. Gracie, Serre de Benou, on a wooden fence post, 1350 m, 4 August 1992, P. v. d. Boom 13453 (GZU-holotype; hb. v. d. Boom-isotype).

Morphology

B. etayana has minute apothecia and an unspectacular green sorediate thallus and therefore can be easily overlooked. It belongs to the *B. arnoldiana* group and can be separated from other species by the combination of a sorediate thallus with minute apothecia (diameter 0.1–0.12 mm), a hyaline hypothecium, a hyaline to pale brown 25–30 µm high hymenium and an exciple of the apothecium which becomes blackish with age, giving a darker margin than the disc (COPPINS & VAN DEN BOOM 2002). Recently, SPARRIUS & APTROOT (2003) described *B. adastr*, another species closely related to *B. etayana*. The two species are compared in Tab. 1.

Tab. 1: Characters separating *Bacidia etayana* and *B. adastr*.

Character	<i>Bacidia etayana</i>	<i>Bacidia adastr</i>
Apothecium size	0.1–0.26 mm	0.4–0.7 mm
Apothecium	flat to convex, round, translucent when wet	flat to flexuose, matt
Apothecium margin	little prominent to indistinct	prominent margin
Hymenium	25–40 µm	60–70 µm
Spores	25–37 µm	40–50 µm
Thallus	dissolving goniocysts with smooth to slightly mamillate surface, chloroplasts clearly visible	goniocysts of soredia covered by many protuberant hyphae, chloroplasts indistinct translucent

What *B. etayana* and *B. adastr* have in common is a sorediate green thallus, the colour of the apothecia with a hyaline hymenium and hypothecium as well as an apothecium margin darker than the disc which turns blackish with age (VAN DEN BOOM & VÉZDA 1996, SPARRIUS & APTROOT 2003). The two species differ in the size of the apothecia, hymenium and spores as well as in the surface of thallus granules. Observed under the microscope, the thallus of *B. etayana* is formed mostly by two- to five-celled goniocysts with a rather smooth surface giving a clear view of the chloroplast of the algae, whereas *B. adastr* has soredia covered by small protuberant hyphae that give only an indistinct translucent view of the chloroplasts. In the Baltic material, the sizes of the apothecia in *B. etayana* range from 0.1 to 0.26 mm, which are larger than those reported from the holotype (0.1–0.12 mm), but still much smaller than in *B. adastr*.

Distribution and Ecology

In 1992, *Bacidia etayana* was first discovered on a wooden fence post in the French Pyrenees at an altitude of 1350 m (VAN DEN BOOM & VÉZDA 1996) and has not been recorded since. In autumn 2004, it was found on the litter of xeromorphic dune grasses on a gravel barrier beach of the small spit Bottsand on the German Baltic coast. The locality is sometimes inundated by storm flooding, mainly during the winter season. The barrier beach, formed during storm flooding in 1992 (WOLFRAM 1996), is covered by pioneer dune vegetation of *Ammophila arenaria*, × *Calammophila baltica*, *Elymus farctus* and *Honckenya peploides*, which alternate with more open patches covered by bryophytes such as *Bryum bicolor*, *Ceratodon purpureus* and *Eurhynchium praelongum* or bare sand, shells and stone pebbles supporting lichens such as *Acarospora heppii*, *Aspicilia calcarea*, *Caloplaca holocarpa*, *Lecanora salina*, *Porpidia crustulata* and *Sarcogyne*

regularis. The litter of xeromorphic dune grasses takes more than one year to decompose, thus providing the substratum for *Bacidia etayana* and its associates *Lecanora persimilis*, *Micarea nitschkeana*, *Physcia tenella*, *Thelenella muscorum*, *Xanthoria parietina* and *X. polycarpa*.

New locality of *Bacidia etayana*: **Germany**, Schleswig-Holstein, Kreis Plön, Gemeinde Wendtorf, Nature reserve Bottsand, spit on the Baltic Sea coast, Kiel Bay, gravel barrier beach, 54°25,33'N/10°16,81'E, on litter of *Ammophila arenaria*, × *Calammophila baltica* and *Elymus farctus*, 1 m alt., 29 September 2004, C. Dolnik, conf. P. P. G. van den Boom 2005 (HBG, hb. P. van den Boom, hb. C. Dolnik).

Discussion

The new locality of *B. etayana* supports the suggestion of VAN DEN BOOM & VĚZDA (1996) that the species might occur on a wide range of substrata comparable to other related species. The new locality on a coastal gravel barrier beach does not seem to have much in common with the humid mountain area of the Pyrenees, but it probably occurs in a wide range of habitats from the sea coast to mountain areas. Annual precipitation along that part of the Baltic Sea coast is only 600 mm, but regular morning dew gives a high microsite humidity. Gravel barrier beaches are quite common along the Baltic Sea coast, but up to now *B. etayana* has only been found in one place of several square meters, where it is quite abundant. Nevertheless this record may direct our attention to small green crusts on plant litter in coastal habitats.

The new combination of the name under the genus *Bacidia* s.l. allows one to unite closely related species of the so-called “*Bacidina*” group with a valid name for checklists and keys. Studies on the molecular phylogeny of the family Bacidiaceae by EKMAN (2001) have shown that the genus *Bacidia* s.l. is still an heterogeneous group and that further studies are needed.

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