

## *Agonimia borysthenica*, a new lichen species (Verrucariales) to Switzerland

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### Résumé

*Agonimia borysthenica* n'est connu que du bassin du fleuve Dniepr en Ukraine, où il a été trouvé sur de l'écorce de chêne. *Agonimia borysthenica* a maintenant été découvert dans le canton de Zoug et est mentionné ici pour la première fois en Suisse.

### Abstract

*Agonimia borysthenica* was so far known from the Dnipro River basin in Ukraine where it was found on bark of *Quercus robur*. *Agonimia borysthenica* has recently been found in the canton of Zug and is reported here for the first time to Switzerland.

### Zusammenfassung

*Agonimia borysthenica* war bisher vom Flussgebiet des Dniepr in der Ukraine bekannt, wo die Art auf der Borke von *Quercus robur* gefunden wurde. *Agonimia borysthenica* wurde kürzlich im Kanton Zug neu für die Schweiz nachgewiesen.

During a field trip to an old-growth oak forest (Huenenberg, Canton of Zug) where the vulnerable species *Bactrospora dryina* (Ach.) A. Massal. is growing, we found the recently described species *Agonimia borysthenica*. To date, it was known only from the type locality in Ukraine. This additional locality broadens our knowledge about the ecology and distribution of this species. A revised description, which includes information about habitat requirements and the distribution of this species as well as some illustrations are presented below.

### *Agonimia borysthenica* Dymytrova, Breuss & S.Y. Kondr.

**Description:** Thallus rather thick, granular, greenish grey to dark grey. Thalline goniocysts 0.6-0.8 (-0.9) mm diam., convex, swollen to bullate, distinctly discrete or partly confluent in a granular crust. Cortical cells of goniocysts 5-10  $\mu$ m, often with small papillae. Photobiont chlorococcoid. Perithecia very small, 0.17-0.22 (-0.25) mm in diam., black, matt, smooth throughout, ovoid or pyriform, with a short smooth neck and a pale top, sessile to 1/3 immersed. Asci 8-spored, 130-140  $\times$  40-60  $\mu$ m, with minutely granular matrix. Ascospores muriform, colourless, ellipsoid, 40-55(75)  $\times$  15-24  $\mu$ m.

**Ecology:** The species grows on mosses and mossy bark of old deciduous trees, especially *Quercus* and *Fraxinus*, in shaded and humid habitats in old-growth forest stands. *Agonimia borysthenica* was found together with *Agonimia allobata* (Sti-

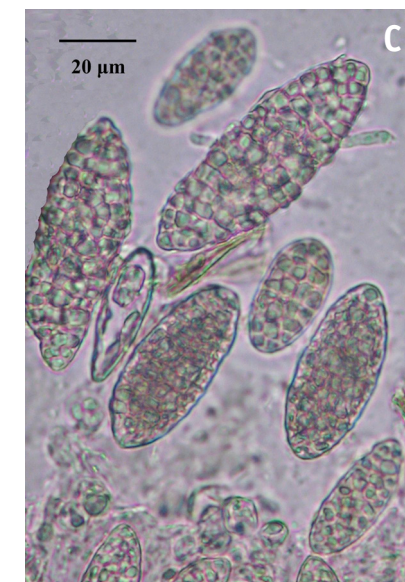
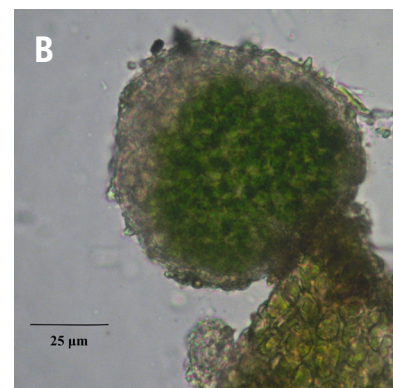
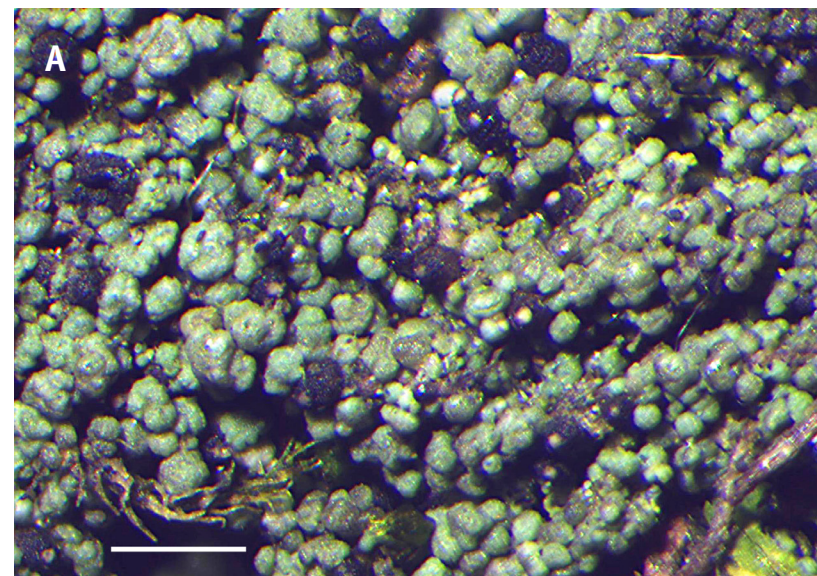


Fig. 1. *Agonimia borysthenica* Dymytrova, Breuss & S.Y. Kondr. A: thallus with perithecia (part of holotype specimens, KW, scale bar: 1 mm); B: thalline goniocyst, C: muriform ascospores.

zenb.) P. James, *Bacidia rubella* (Hoffm.) A. Massal., *B. subincompta* (Nyl.) Arnold, *Bactrospora dryina* (Ach.) A. Massal., *Dimerella pineti* (Schrad. ex Ach.) Vězda, *Verrucaria viridigrana* Breuss. in Ukraine. In Switzerland, *A. borysthenica* was found in a deciduous mixed stand managed as coppice-with-standards forest (Canton of Zug) and in a beech forest (Canton of Ticino). Characteristic epiphytic species include *Agonimia allobata*, *Lecanora subrugosa* Nyl., *Opegrapha atra* Pers., *Opegrapha vermicellifera* (Kunze) J.R. Laundon, *Pertusaria leio-*

*placa* DC and *Pyrenula nitidella* (Flörke ex Schaer.) Müll. Arg., as well as *Buellia griseovirens* (Turner & Borrer ex Sm.) Almb., *Dimerella pineti*, *Graphis scripta* (L.) Ach., *Lecanora carpinea* (L.) Vain., *L. pulicaris* (Pers.) Ach., *Lepraria elobata* Tønsberg, *L. lobificans* Nyl., *Micarea peliocarpa* (Anzi) Coppins, *Melanelixia glabrata* (Lamy) Sandler & Arup, *Parmelina tiliacea* (Hoffm.) Hale, *Phlyctis argena* (Spreng.) Flot., *Porina aenea* (Wallr.) Zahlbr., respectively.

**Distribution:** So far, *Agonimia borysthenica* was known only from the type locality, from the lowlands of Ukraine, where it is rather abundant (Dymytrova et al., 2011). This is the first record of this species from Switzerland and we list additional localities from Ukraine (Kyiv region).

**Specimens examined:** **Switzerland**, Canton of Zug, Huenenberg, Zoll\_Ischlag., 47°11' N 8°25' E (Swiss coordinates: 674000, 226500), alt. 400 m, on bark of *Fraxinus*, 28.10.2011, leg. L. Dymytrova (KW-L 69478); Canton of Ticino, Bogno, 46°5.085' N, 9°4.085' E (Swiss coordinates: 726000, 105000), alt. 1090 m, on bark of *Fagus sylvatica* L. in beech forest, 25.09.1996, leg. I. Roth, Nr. 7203. **Ukraine**, Kyiv region, c. 15 km S of Kyiv-city, «Holosiivskiy» National Nature Park, «Lisnyky» Botanical Reserve, river basin broad leaved forest with maple, oak and ash trees, over mosses and on bark of old *Quercus robur* L., 50°17.483' N, 30°33.246' E, alt. 91 m, plot no. 074, 11.04.2010, leg. L. Dymytrova (KW-L – holotype, W – isotype); *ibid.*, on bark of *Fraxinus excelsior* L., 50°17' 33.9" N 30°33' 18.7" E, alt. 102 m, plot no. A5, 07.10.2010, leg. L. Dymytrova & S. Kondratyuk (KW-L 67558, 67559).

### Acknowledgements

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### References

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## Spuren des Urner Naturforschers Anton Gisler (1820-1888) im Flechtenherbar von Fintan Greter (1899-1984) am Natur-Museum Luzern (NMLU) - *Lithographa tesserata* (DC.) Nyl. im 19. Jh. in der Schweiz nachgewiesen

Michael Dietrich & Karl Bürgi-Meyer  
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### Abstract

Fintan Greter (1899-1984), monk at the Benedictine monastery in Engelberg (Obwalden, Central Switzerland), is well known for his bryological studies. In addition, he also collected and studied intensively the lichens, especially those of the upper valley of Engelberg. In order to evaluate the valuable data, all the specimens of his herbarium at the Museum of Natural History Lucerne (NMLU) were investigated and digitized. The examination revealed many interesting specimens. Among them, several well conserved samples originating out of the herbarium of Anton Gisler (1820-1888), the excellent naturalist who studied the canton of Uri (Central Switzerland) in all deepness. His catalogue of lichens and his collection show, that he not only collected macrolichens, the crustose species are documented in similar and almost complete extent. The investigated specimens enclose *Lithographa tesserata* (DC.) Nyl., new to Switzerland, and *Mycoporum elabens* (Schaer.) Flot. ex Nyl. which, in contrast to other statement is shown to be lichenised. In addition, the investigation revealed valuable sampling data for various other interesting species, including extinct lichens.

### Das Flechtenherbar von Fintan Greter

Im Rahmen der Inventarisierung der Flechtenbelege am Natur-Museum Luzern (NMLU) konnten bereits sämtliche Funde aus dem Kanton Luzern bearbeitet werden (Dietrich & Bürgi-Meyer 2008). Nun steht auch die Sichtung und Inventarisierung der Flechtenbelege des aus dem luzernischen Ebikon stammenden Biologen Fintan Greter (1899-1984), Pater im Benediktinerkloster Engelberg (Kanton Obwalden, Zentralschweiz), vor ihrem Abschluss.

Fintan Greter ist vor allem wegen seiner fundierten Mooskenntnissen und seines Werkes „Die Laubmoose des oberen Engelbergertales“ (Greter 1936) bekannt. Weniger vertraut ist, dass er sich auch ausgiebig mit Flechten befasste und dabei ein umfangreiches Herbar anlegte (Dietrich 2008), wobei sein hauptsächliches Untersuchungsgebiet ebenfalls das obere Engelbergertal war. Zusammen mit dem ca. 9000 Belege umfassenden Moosherbar konnte die Flechtensammlung 1990 vom Kloster Engelberg ans Natur-Museum Luzern überführt werden, wo sie in das dort bestehende Flechtenherbar integriert wurde (Ruoss 1991). Das Flechtenherbar von Greter umfasst gegen 3100 Belege. Die grosse Mehrheit wurde von ihm selbst gesammelt und herbarisiert. Neben wenigen Aufsammlungen von Eduard Frey (1888-1974) finden sich insbesondere etliche Belege, welche ursprünglich aus dem Herbar von Anton Gisler in Altdorf stammen.