

Blindia acuta, new to Belgium (Europe)

Author: Graulich, Amaury

Source: Lindbergia, 2023(1)

Published By: Dutch Bryological and Lichenological Society and Nordic Bryological Society

URL: <https://doi.org/10.25227/linbg.01173>

The BioOne Digital Library (<https://bioone.org/>) provides worldwide distribution for more than 580 journals and eBooks from BioOne's community of over 150 nonprofit societies, research institutions, and university presses in the biological, ecological, and environmental sciences. The BioOne Digital Library encompasses the flagship aggregation BioOne Complete (<https://bioone.org/subscribe>), the BioOne Complete Archive (<https://bioone.org/archive>), and the BioOne eBooks program offerings ESA eBook Collection (<https://bioone.org/esa-ebooks>) and CSIRO Publishing BioSelect Collection (<https://bioone.org/csiro-ebooks>).

Your use of this PDF, the BioOne Digital Library, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Digital Library content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne is an innovative nonprofit that sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Blindia acuta, new to Belgium (Europe)

Amaury Graulich

A. Graulich ✉ (amaurygraulich@yahoo.fr), Donceel, Belgium.

During field observations in eastern Belgium, the moss *Blindia acuta* was found on a schist outcrop along the Hoëgne stream. This is the first report of a species of this genus from Belgium. This siliceous outcrop is dominated by *Amphidium mougeotii* indicating a slight base enrichment. The nearest populations in natural sites grow in Vosges mountains (eastern France) and Black Forest mountains (western Germany).

Blindia Bruch & Schimp. is a small genus of acrocarpous mosses belonging to Seligeriaceae Schimp. (Grimmiales M. Fleisch). Two species are known from Europe: the widespread, acidophilic *Blindia acuta* (Hedw.) Bruch & Schimp. and the rare, calciphilous *Blindia caespiticia* (F. Weber & D. Mohr) Müll. Hal. (Smith 2004). *Blindia acuta* is a small, dark green or yellowish green moss with a reddish tinge. The narrow leaves (1.5–3.0 mm long) are costate. The strikingly feature of the leaves is the presence of deep orange-red patches of alar cells. These alar cells are abruptly inflated and don't reach costa (Bartlett and Vitt 1986; Fig. 1). *Blindia acuta* is dioecious and sporophytes are produced during summer (Smith 2004).

Blindia acuta is known from the Northern Hemisphere where it occurs in Europe, northern Asia and North America. This moss is widespread throughout much of northern Europe and is confined to mountains in southern Europe and Mediterranean area. *Blindia acuta* occurs on weakly acid to moderately basic rock faces that are permanently wet such as crags, streamside cliffs and gullies. It is also found in the splash zone of waterfalls. Occasionally it can grow on man-made structures (Bielsma 2007, Blockeel et al. 2014).

During a bryological survey of protected area along the Hoëgne stream in the hilly area of eastern Belgium (Ardennes massif), *Blindia acuta* was found on a schist outcrop (Belgium, Jalhay, 50°31'37"N, 05°57'14"E) along the stream at 310 m a.s.l. (herb. A. Graulich BE02/22, 15

II 2022). This outcrop has a north–east exposure and is located in a deciduous wood dominated by *Fagus sylvatica* L. and *Alnus glutinosa* (L.) Gaertn. *Amphidium mougeotii* (Bruch & Schimp.) Schimp. is the dominating species on this outcrop. Alongside *Blindia acuta*, several other bryophytes occur on the outcrop: *Atrichum undulatum* (Hedw.) P. Beauv., *Ctenidium molluscum* (Hedw.) Mitt., *Fissidens dubius* P. Beauv., *Lejeunea cavifolia* (Ehrh.) Lindb., *Plagiochila porelloides* (Torr. ex Ness) Lindenb., *Plagiothecium denticulatum* (Hedw.) Schimp., *Plagiothecium succulentum* (Wilson) Lindb., *Ptychostomum pseudotriquetrum* (Hedw.) J.R.Spence & H.P.Ramsay, *Sciuro-hypnum plumosum* (Hedw.) Ignatov & Huttunen and *Thamnobryum alopecurum* (Hedw.) Gangulee (Fig. 2). Most of these species indicate a slight base enrichment of this siliceous outcrop and also the high humidity of this sheltered site. *Blindia acuta* forms small patches all over the outcrop and grows mainly between the cushions of *Amphidium mougeotii* or on bare rocks. No sporophytes were observed in this population during summer 2022.

Blindia acuta is almost absent from the lowland between the mountain ranges of western continental Europe (Bielsma 2007, Meinunger and Schröder 2007). The nearest populations are located in the Vosges mountains and Black Forest mountains (Meinunger and Schröder 2007, Frahm and Bick 2013). Further field investigations will be necessary to know if *Blindia acuta* is extremely rare in Ardennes massif or simply overlooked. As the discovery of *Blindia acuta* in eastern Belgium was long overdue (Delogne 1883), it can be argued that the species is certainly not frequent in this country. The locality in the Hoëgne valley is not threatened in the short term as it is included within a protected area of the LIFE project 'Val-lées Ardennaises'.

This work is licensed under the terms of a Creative Commons Attribution 4.0 International License (CC-BY) <<http://creativecommons.org/licenses/by/4.0/>>. The license permits use, distribution and reproduction in any medium, provided the original work is properly cited.

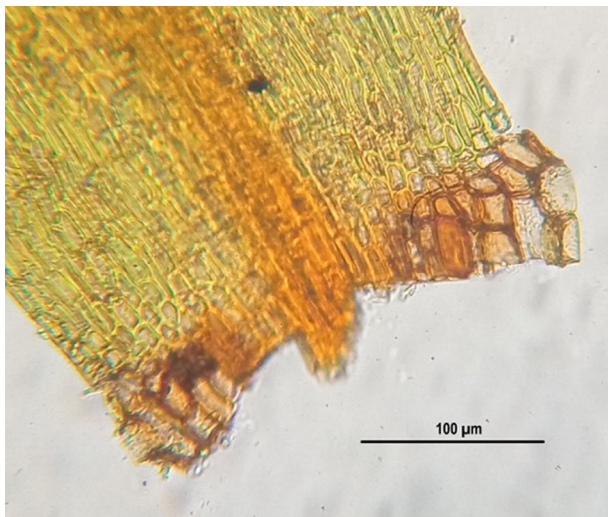


Figure 1. *Blindia acuta* (Hedw.) Burch & Schimp., basal part of a leaves showing the abruptly inflated orange-red alar cells (Jalhay, Belgium, herb. Graulich BE02/22).



Figure 2. *Blindia acuta* (Hedw.) Bruch & Schimp. and *Fissidens dubius* P. Beauv. on schist outcrop (Jalhay, Belgium, 25 June 2022).

Acknowledgement – I thank Alain Vanderpoorten for the relecture of the manuscript and for verifying the identification.

Data availability statement

There are no additional data for this paper.

References

- Bartlett, J. and Vitt, D. 1986. A survey of species in the genus *Blindia* (Bryophyta, Seligeriaceae). – N. Z. J. Bot. 24: 203–246.
- Bielsma, R.-J. 2007. Uit de nalatenschap van architect Henry van de Velde (1863–1957): *Blindia acuta* (Spettermos), nieuw voor Nederland. – Buxbaumiella 79: 11–13.
- Blockeel, T. L., Bosanquet, S. D. S., Hill, M. and Preston, C. (eds) 2014. Atlas of British and Irish bryophytes. – Pisces.
- Delogne, C.-H. 1883. Flore Cryptogamique de la Belgique. – Manceaux.
- Frahm, J.-P. and Bick, F. 2013. La bryoflore des Vosges et des zones limitrophes, 3rd edn. – Arch. Bryol. 169: 1–135.
- Meinunger, L. and Schröder, W. 2007. Verbreitungsatlas der Moose Deutschlands (Dürhammer, O. ed.). – Regensburgische Botanische Gesellschaft, Band 2.
- Smith, A. 2004. The moss flora of Britain and Ireland. – Cambridge Univ. Press.