

Xanthoparmelia vicentei reported for the first time from central Europe from Luxembourg

ANDRÉ APTROOT

Abstract

The lichen *Xanthoparmelia vicentei* is reported for the first time from central Europe from Luxembourg. The identity was confirmed by an almost 100% congruence in ITS sequence, but it differs from the type by the lower surface which is not yet black. This paper is meant to attract attention to the possibility that this species is more widespread in central Europe; it may have been confused with *X. angustiphylla*, or even been discarded as small and incomplete specimens of the common *X. conspersa*.

Introduction

The lichen genus *Xanthoparmelia* is in the current circumscription the largest lichen genus on earth, with around 825 accepted species (LÜCKING ET AL. 2017). Only 31 species are known to occur in Europe (HAWKSWORTH ET AL. 2008). From Germany, only 13 species are known (PRINTZEN et al. 2022) and from Great Britain only 10 (SMITH ET AL. 2009). From surrounding neighbouring countries even fewer species have been reported.

Most species in the genus are well characterized by morphological characters, but there has been a lasting disagreement about diminutive specimens that were alternately interpreted as juvenile specimens of *X. conspersa* (Ach.) Hale or as representatives of a distinct species, viz. *X. angustiphylla* (Gyeln.) Hale, which has only ever been reported from Belgium, Czech Republic, Germany, Hungary and the U.S.A. The latter species is accepted in the German checklist but reports from e.g. Belgium have been refuted. SKULT (1992) argues that this species only represents aberrant morphs of *X. conspersa*, based on his study on Scandinavian and North American specimens, so the conclusion would be that *X. angustiphylla* probably only occurs in Central Europe.

The Luxembourg specimen

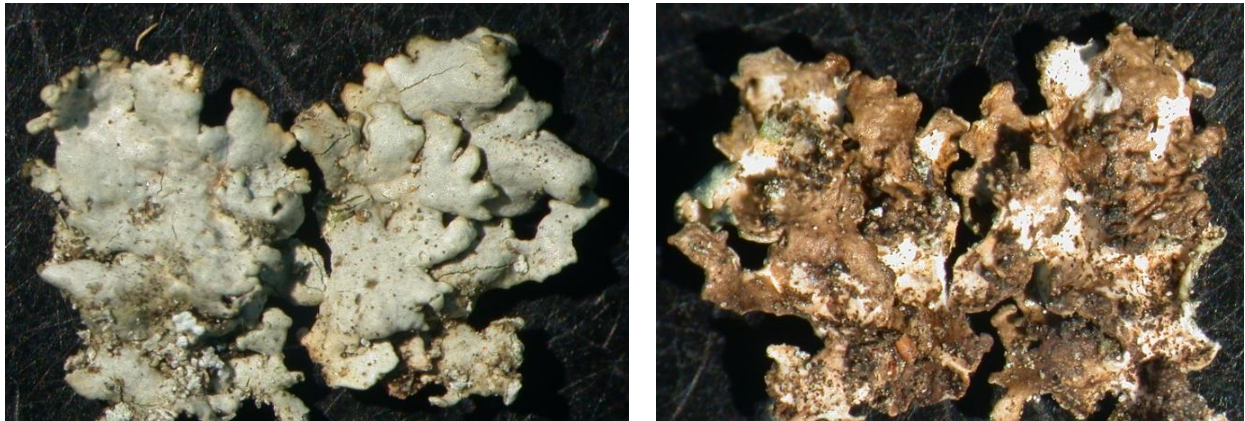
In January 2023, I collected a diminutive *Xanthoparmelia* on siliceous rock along a road close to Bourscheid. The lobes are much dissected and less than 1 mm wide. No isidia are present, and the lower surface is not black throughout but for most part brown, and somewhat canaliculate.

The specimen was sequenced, and its ITS sequence is for 99,8 % in accordance with that of *X. vicentei* (not the type specimen, but one from the type country, Spain). Obviously, identifying specimens with sequences can be risky, but given the very high similarity, it is quite certain that the Luxembourg specimen belongs to the same species as the Spanish *X. vicentei*.

Discussion

The Luxembourg specimen differs from typical *X. conspersa* in three morphological characters (see above), and in DNA sequence. Therefore it seems quite safe to identify it with *X. vicentei* Crespo et al., a species previously only known from Spain (HAWKSWORTH ET AL. 2008), with which it agrees in DNA and most of the morphology. Whether or not some or all of the previous reports of *X. angustiphylla* from Belgium and Germany are also referable to *X. vicentei* is something to be investigated still, which is one of the reasons that this small report is published.

BARCENAS-PEÑA et al. (2021) reported some incongruence between morphology and ITS sequences in Mexican *Xanthoparmelia* species, but that does not necessarily affect the present result.



Part of the specimen, upper and lower surface; pictures 10 × 7 mm.

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Literature

- BARCENAS-PEÑA, A., LEAVITT, S. D., GREWE, F., LUMBSCH, H. T. 2021. Diversity of *Xanthoparmelia* (Parmeliaceae) species in Mexican xerophytic scrub vegetation, evidenced by molecular, morphological and chemistry data. – *Anales del Jardín Botánico de Madrid* **78(1)**: e107.
- HAWKSWORTH, D. L., BLANCO, O., DIVAKAR, P. K., AHTI, T., CRESPO, A. 2008. A first checklist of parmelioid and similar lichens in Europe and some adjacent territories, adopting revised generic circumscriptions and with indications of species distributions. – *Lichenologist* **40**: 1–21.
- LÜCKING, R., HODKINSON, B. P., LEAVITT, S. D. 2017. The 2016 classification of lichenized fungi in the Ascomycota and Basidiomycota – Approaching one thousand genera. – *The Bryologist* **119**: 361–416.
- PRINTZEN, C., VON BRACKEL, W., BÜLTMANN, H., CEZANNE, R., DOLNIK, C., DORNES, P., ECKSTEIN, J., EICHLER, M., JOHN, V., KILLMANN, D., NIMIS, P.L., OTTE, V., SCHIEFELBEIN, U., SCHULTZ, M., STORDEUR, R., TEUBER, D., THÜS, H. 2022. Lichens, lichenicolous and allied fungi of Germany – a revised checklist. – *Herzogia* **35**: 193–393.
- SKULT, H. 1992. Notes on the status of *Xanthoparmelia angustiphylla* versus *X. conspersa*. – *Graphis Scripta* **3**: 132–134
- SMITH, C. W., APTROOT, A., COPPINS, B. J., FLETCHER, A., GILBERT, O. L., JAMES, P. W., WOLSELEY, P. A. (eds). 2009. *The lichens of Great Britain and Ireland*. The British Lichen Society, London, 1046 pp.

Authors address

ANDRÉ APTROOT
Dr. Kuijperkade 8, NL-1561 TD Krommenie