

First record of *Eichleriella leucophaea* (Basidiomycota) from Italy

Alessandro Saitta

Department of Agricultural and Forest Sciences, Università di Palermo, Viale delle Scienze, I-90128, Palermo, Italy
E-mail: alessandro.saitta@unipa.it

Abstract: *Eichleriella leucophaea* Bres., a wood inhabiting heterobasidiomycete, is recorded for the first time in Italy. Fruiting body occurred on branch of *Quercus ilex* L. Description, distributional and ecological data of this uncommon taxon are here provided.

Key words: Heterobasidiomycetes; Mediterranean area; Sicily; wood inhabiting fungi

The genus *Eichleriella* Bres., belonging to the family *Exidiaceae* R.T. Moore, is characterized by stereoid basidiocarps and longitudinally septate metabasidia. *Eichleriella* was previously included in the genus *Exidiopsis* (Bref.) Møller by Wells (1961); later it was considered as an independent genus (Wells and Raitviir 1977). The type species of the genus *Eichleriella* is *Eichleriella incarnata* Bres., described from Poland and considered as a synonym of *Eichleriella alliciens* (Berk. & Cooke) Burt by Wells and Raitviir (1980). The genus

shows a widespread distribution and includes about fifteen species. The basidiomata of *Eichlerella* species are resupinate and often becoming detached at the marginal areas. *Eichlerella leucophaea* was described by Bresadola (1903) from Poland and later recorded in a few European countries and in North America (see discussion).

Eichlerella leucophaea was collected in February 2015 in the Niscemi Forest, a part of the Favorita Park of Palermo (northern Sicily, Italy) (Figure 1). The vegetation of this area is mainly characterized by *Arbutus unedo* L., *Quercus ilex* L., *Phyllirea latifolia* L., *Pistacia lentiscus* L., and *Viburnum tinus* L. Fresh material was identified by light microscopy (Zeiss Axioskop). Thirty basidiospores were measured in order to assess variability. Nomenclature follows Mycobank (<http://www.mycobank.org>). Voucher specimens have been deposited in the MCVE Herbarium (MCVE 28568). To identify the specimens, keys on heterobasidiomycetous fungi by Wells (1961) and Jülich (1980) were used.



Figure 1. Location of the investigated area (Sicily).

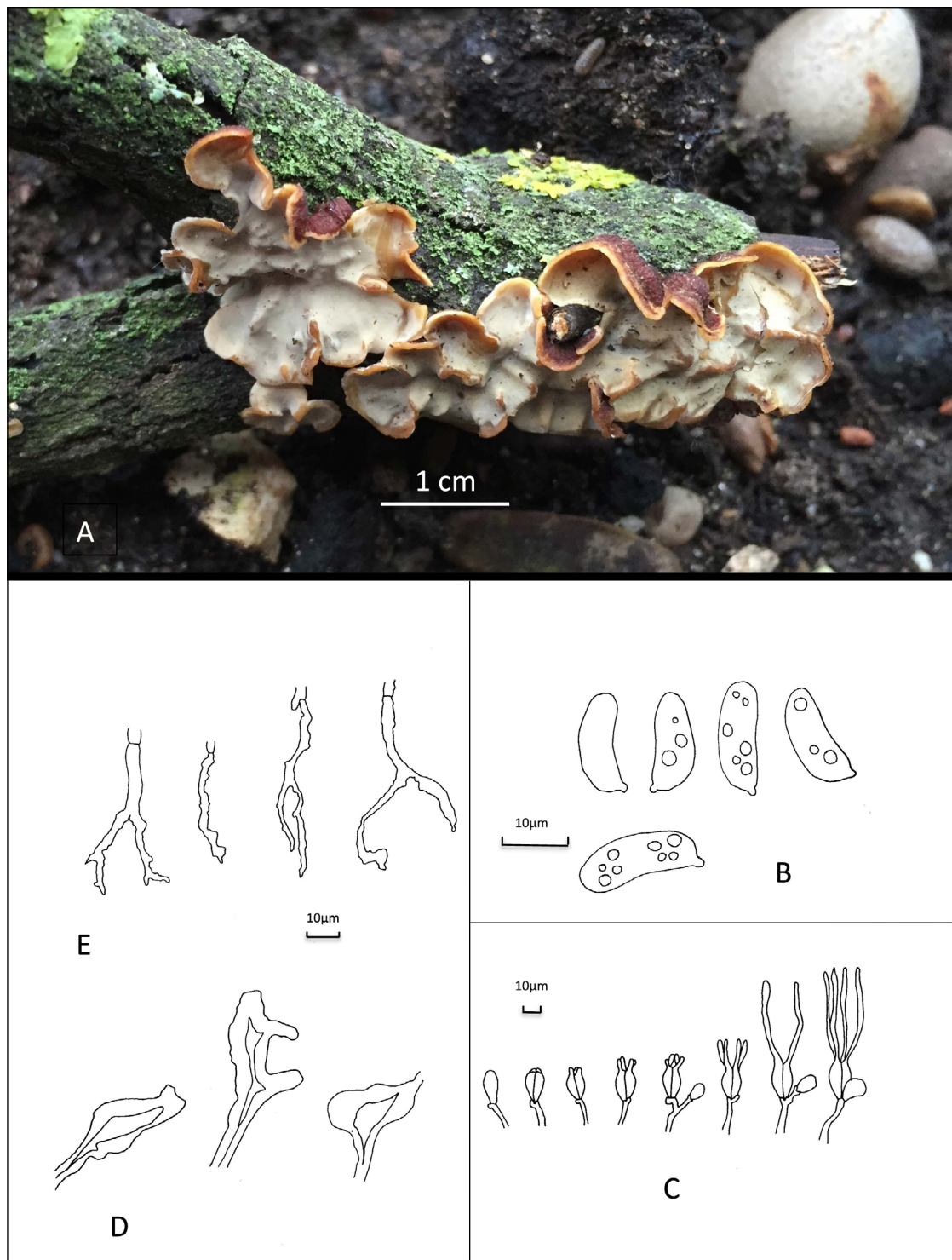


Figure 2. *Eichleriella leucophaea* (MCVE 28568). **A:** basidiomata. **B:** spores. **C:** basidia. **D:** tramal cells. **E:** dendrohyphidia.

Eichleriella leucophaea Bres. *Annales Mycologici* 1(2): 116 (1903); Figure 2.

Basidiomata orbicular, lobed, up to 2 cm in diameter, often confluent, effused up to 5–6 cm, white. Hymenial surface smooth, finely granulose, white, then light gray and cracking when dried. Margins reflexed, with ochraceous to reddish-brown, sterile surface, finely tomentose, darker near the substrate. Probasidia cylindrical to clavate. Hypobasidia oval to obovate. Epibasidia tubular, up to 60 µm long. Basidiospores smooth,

allantoid 13–16(–17.5) × 5.5–6.5(–7) µm, guttulate, hyaline, inamyloid and indextrinoid. Dendrohyphidia abundant, covering the hymenium. Tramal cells inflated and double walled, sometimes encrusted with crystals.

Specimen examined: Italy, Niscemi Wood, Palermo, 38.1619014° N, 013.3392316° E, on fallen branch of *Quercus ilex*, 50 m above sea level, 18 February 2015, coll. A. Saitta (MCVE 28568).

While studying the diversity of wood inhabiting fungi in Sicily, an uncommon heterobasidiomycete, *E. leucophaea*

was collected. *Eichleriella leucophaea* is easily recognizable macroscopically by the resupinate, reflexed basidiomata and brown-reddish, finely tomentose, sterile surface of reflexed parts. The presence of tramal cells inflated and double walled, sometimes encrusted with crystals, is a distinctive microscopical feature of this species. This first record of *E. leucophaea* in Italy widens the knowledge of the distribution and ecology of this uncommon taxon in Europe. *Eichleriella leucophaea* has so far been recorded in some European countries, i.e. Bulgaria (Pilát 1937), France (Bourdot and Galzin 1928) on *Fagus sylvatica* L., Germany (Aron et al. 2005), Norway (herbaria O, TRH, TRO) on *Salix caprea* L. and *Salix nigricans* Sm., Poland (Bresadola 1903) on *Carpinus betulus* L., and Spain (Dueñas 1997, 2002; Hernández-Crespo 2006; Prieto-García et al. 2010). In Spain, this species is considered very common, but not very well-studied (Prieto-García et al. 2010) and it grows on dead wood of *Crataegus monogyna* Jacq., *Genista scorpius* DC, *Prunus dulcis* D. A. Webb, *Quercus ballota* Desf., *Q. faginea* Ten., *Retama sphaerocarpa* Boiss. *Robinia pseudoacacia* L. (Prieto-García et al. 2010) *Morus alba* L. and *Q. ilex* (Dueñas 2002). Moreover, it was collected in Arizona (Gilbertson et al. 1976), Texas (Wells, 1961), Tadjikistan (Well and Ratviir 1980) on *Populus pruinosa* Schrenk, Turkmenistan (Wells and Ratviir 1980) on *Berberis iberica* Steven and *Colutea gracylis* Frein & Synt ex Frein. In Italy, only one *Eichleriella* species has been recorded so far, on branches of *Q. ilex* and *Q. pubescens* Willd., *E. deglubens* (Bernicchia et al. 2008; Saitta et al. 2011), which differs macroscopically from *E. leucophaea* by the basidiomata with fertile cylindrical spines and is a widespread species in Sicily, often collected on fallen branches in oak forests.

ACKNOWLEDGEMENTS

The author wishes to thank Dr. Cristiano Losi and Dr. Viacheslav Spirin for critical comments provided and the anonymous reviewers for critically reviewing the manuscript. He would also like to thank Dr. Stefania Paglialunga for the drawing of microscopic characters.

LITERATURE CITED

- Aron, A., H. Kahar, S. Michelitsch, H. Pidlich-Aigne and D. Prelicz. 2005. Vorläufige Rote Liste gefährdeter Großpilze der Steiermark. *Joannea* 4: 45–80.
- Bernicchia, A., A. Benni, G. Venturella, M.L. Gargano, A. Saitta and S.P. Gorjón. 2008. Aphyllophoraceous wood-inhabiting fungi on *Quercus* spp. in Italy. *Mycotaxon* 104: 445–448.
- Bourdot, H. and A. Galzin. 1928. Hyménomycètes de France. Sceaux: Marcel Bry. 761 pp.
- Bresadola, J. 1903. Fungi polonici. *Annales Mycologici* 1: 115–117.
- Dueñas, M. 1997. Bases corológicas de Flora Micológica Ibérica. *Números 1114–1223. Cuadernos de Trabajo de Flora Micológica Ibérica*. 11: 1–99.
- Dueñas, M. 2002. Annotated list of Heterobasidiomycetous fungi for the Iberian Peninsula and Balearic Islands. *Bibliotheca Mycologica* 196: 1–90.
- Gilbertson, R.L., H.H. Burdsall Jr. and E.R. Canfield. 1976. Fungi that decay mesquite in southern Arizona. *Mycotaxon* 3(3): 487–551.
- Hernández-Crespo, J.C. 2006. IMIL, Sistema de información micológica Ibérica en línea. Real Jardín Botánico de Madrid, CSIC, Proyecto Flora Micológica Ibérica I–VI. (1990–2008). Ministerio di Educación y Ciencia, España. <http://rjb.csic.es/fmi/sim.php>
- Julich, W. 1989. Guida alla determinazione dei funghi. Vol. 2. Trento: Ed. Saturnia. 597 pp.
- Pilát, A. 1937. Contribution à la connaissance des *Basidiomycetes* de la péninsule des Balkans. *Bulletin de la Société Mycologique de France* 53: 81–104.
- Prieto-García, F., G. Moreno, A. Gonzáles and J.C. Zamora J. C. 2010. *Eichleriella leucophaea*, una especie poco conocida. *Boletín de la Sociedad Micológica de Madrid* 34: 61–67.
- Saitta, A., A. Bernicchia, S.P. Gorjón, E. Altobelli, V.M. Granito, C. Losi, D. Lunghini, O. Maggi, G. Medardi, F. Padovan, L. Pecoraro, A. Vizzini and A.M. Persiani. 2011. Biodiversity of wood-decay fungi in Italy. *Plant Biosystems* 145(4): 958–968. doi: 10.1080/11263504.2011.633114
- Wells, K. 1961. Studies on some *Tremellaceae*. IV. *Exidiopsis*. *Mycologia* 53(4): 317–370.
- Wells, K. and A. Raitviir 1977. The species of *Exidiopsis* (*Tremellaceae*) of the U.S.S.R. *Mycologia* 69: 987–1007.
- Wells, K. and A. Raitviir 1980. The species of *Eichleriella* (*Tremellaceae*) of the U.S.S.R. *Mycologia* 72: 564–577.

Received: 20 August 2015

Accepted: 31 October 2015

Academic editor: Matias J. Cafaro