Cryptogamie, Mycologie, 2009, 30 (1): 53-56

Antrodia sandaliae (*Polyporales, Basidiomycota*), an interesting polypore collected in the Iberian Peninsula

Sergio PÉREZ GORJÓN[a*] *& Annarosa BERNICCHIA*[b]

[a]*Departamento de Botánica & CIALE*
Universidad de Salamanca, Avda./ Licenciado Méndez Nieto s/n,
37007 Salamanca, Spain

[b]*Dipartimento di Scienze e Tecnologie Agroambientali, Patologia Vegetale*
Università degli Studi di Bologna, Via Fanin 42, 40127 Bologna, Italy
annarosa.bernicchia@unibo.it

Résumé – L'espèce *Antrodia sandaliae* est reportée pour la première fois en Espagne, ce qui constitue la première observation hors de Sardaigne, localité typique. L'espèce est brièvement décrite et illustrée sur base des exemplaires ibériques. *Arbutus unedo* se confirme comme le substratum typique pour cette espèce méditerranéenne.

Espagne / Méditerranée / Polypores / *Arbutus*

Abstract – *Antrodia sandaliae* is reported for the first in Spain, what constitutes the first record out of the type locality in Sardinia (Italy). A brief description and a line drawing of the species based on the Iberian specimen is given. *Arbutus unedo* is confirmed as the typical substrate for this wood-inhabiting Mediterranean species.

Spain / Mediterranean / Polypores / *Arbutus*

INTRODUCTION

The Italian island of Sardinia shares climatic and floristic similarities with other Mediterranean territories. Recently, several interesting corticioid and poliporoid fungi have been described or reported from Sardinia; so far, *Antrodia macrospora* Bernicchia & De Domincis, *Antrodiella ichnusana* Bernicchia *et al.*, *Echinodontium ryvardenii* Bernicchia & Piga**,** and *Neolentiporus squamosellus* (Bernicchia & Ryvarden) Bernicchia & Ryvarden, and several corticioid fungi, are only known from this island. Other species such as *Lenzitopsis oxycedri* Malençon & Bertault (Doğan *et al.*, 2007; Malençon & Bertault, 1963; Manjón & Moreno, 1981; Melo *et al.*, 2007; Pérez Gorjón & Bernicchia, 2008), *Phellinus juniperinus* Bernicchia & Curreli (Bernicchia, 2005), *Trametes junipericola* Manjón *et al.*, (Manjón *et al.*, 1984) or *Vararia maremmana* Bernicchia (Moreno *et al.*, 2004; Pérez Gorjón & Bernicchia, 2008) have an exclusively known Mediterranean distribution.

* corresponding author, spgorjon@usal.es

As result of a mycological study from the Natural Park and Biosphere Reserve of "Las Batuecas-Sierra de Francia" (Salamanca, Spain), *Antrodia sandaliae* Bernicchia & Ryvarden, described from Sardinia (Bernicchia & Ryvarden, 2001), has been collected on strawberry tree (*Arbutus unedo* L.). This represents the first occurrence of this species outside the type locality in Sardinia, and outside Italy. This new locality is a old growth and dense *Arbutus* forest, with tree-like specimens. The climate in the area is typically Mediterranean humid, with mild winter temperatures and a high environmental humidity due partly to the dense plant cover.

MATERIALS AND METHODS

Description of species is based on the specimen deposited in herbarium SALA (a duplicate is also deposited in HUBO). Microscopic measurements and drawings were made from microscopical sections mounted in 3% KOH; a Leica DMRD microscope provided with a video camera Leica DC100 and image analysis program Leica Qwin was used to make the line drawing.

DESCRIPTION

Antrodia sandaliae Bernicchia & Ryvarden, Mycotaxon 79(1): 58.2001 Fig. 1

Basidiome annual, resupinate, confluent, effused, very slightly pulviniform, with abrupt whitish margin; hymenophore tubular with tubes 1–2 mm long, pores round, 2–3 mm in diameter, with entire and thick dissepiments; pore surface whitish to sligthly cream (whitish to buff in Sardinian specimens), context very thin, up to 1 mm, whitish.

Hyphal system dimitic; generative hyphae clamped, thin to slightly thick-walled, 2-3.5(4) µm, hyaline, gelatinized in KOH; skeletal hyphae very rare and difficult to discern, thick-walled, 2.5-5(5.5) µm, hyaline. Cystidia absent; fusoid cystidiols 30-40(50) × (2.5)3-4(4.5) µm, thin-walled, basally clamped. Basidia clavate, sinuous, 25-30 × 5-6(7) µm, 4-sterigmate, with a basal clamp. Basidiospores cylindrical, slightly curved, 8-9.5 × 2-2.5 µm, smooth, thin-walled, hyaline, not amyloid neither dextrinoid, not cyanophilous.

DISCUSSION

Antrodia sandaliae is morphologically close to *A. infirma* Renvall & Niemelä, that has shorter and broader spores and *A. primaeva* Renvall & Niemelä, that has a trimitic hyphal system and smaller, subellipsoid spores. Furthermore, these two species are only known from Northern, boreal areas and grow exclusively on *Pinus sylvestris* L. So far, the species is only known from *Arbutus unedo*.

For further comments on related species and a key to the known European species of *Antrodia* P. Karst., see Bernicchia & Ryvarden (2001) and Bernicchia (2005).

Antrodia sandaliae was so far known from the type locality in Sardinia (Bernicchia & Ryvarden, 2001; Bernicchia, 2005). We can confirm the typical substrate as *Arbutus unedo* and the distribution range to the Mediterranean area is amplied.

MATERIAL STUDIED: SPAIN: Castilla y León, Salamanca, Villa-nueva del Conde, 30TTK4687, 650 m, on *Arbutus unedo*, 01-12-2007, *leg.* S. Pérez Gorjón & B.M. Rojas Andrés, *det.* S. Pérez Gorjón, *conf.* A. Bernicchia, SALA-Fungi 2615, 2616. ITALY: Sardinia, Ogliastra, Montarbu forest, 900-950 m, on *Arbutus unedo*, 23-11-1999, HUBO 7337, 7339; *ibídem* 24-11-1999, HUBO 7340; *ibídem* 18-12-1999 HUBO 7352; *ibídem* 30-11-2000, HUBO 7486, 7488; *ibídem* 04-12-2000, HUBO 7348, 7350, 7351, 7513; *ibídem* 29-11-2003 HUBO 7803, 7804, 7784.

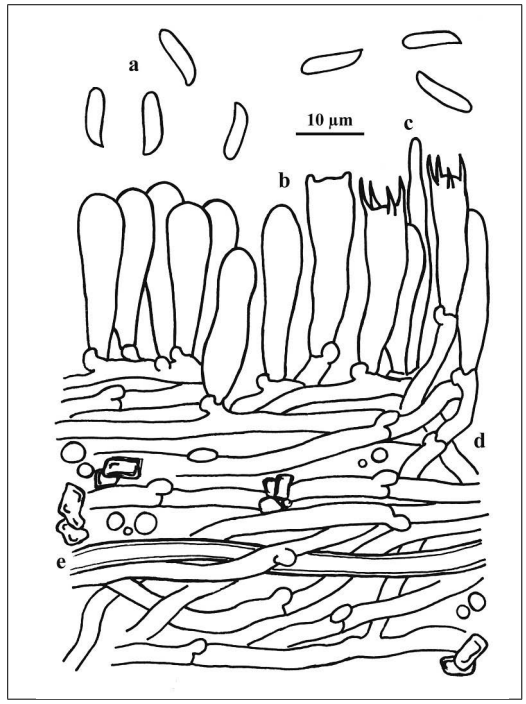

Fig. 1. *Antrodia sandaliae* (SALA-Fungi 2616): microscopical elements: a. basidiospores, b. basidia, c. cystidiols, d. generative hyphae, e. skeletal hyphae.

Acknowledgements. First author has been partly supported by a research grant co-financed by the Junta de Castilla y León and the European Social Fund; also by a brief research stay grant from the University of Salamanca; he also express his gratitude to the GPCV of CIALE for technical support and to Blanca M. Rojas Andrés for help in several field trips. C. Decock (MUCL) is acknowledged for suggestions and improvements in the manuscript.

REFERENCES

BERNICCHIA A., 1992 — Some new or rare *Basidiomycetes* (*Aphyllophorales*) from Italy. *Mycotaxon* 43: 317-326.

BERNICCHIA A., 2000 — Wood-inhabiting Aphyllophoraceous fungi on *Juniperus* spp. in Italy. *Mycotaxon* 75: 241-256.

BERNICCHIA A. & RYVARDEN L., 2001 — A new *Antrodia* species (Coriolaceae, Basidiomycetes) from Italy. *Mycotaxon* 79: 57-66.

BERNICCHIA A., 2005 — *Polyporaceae* s.l. *Fungi Europaei* 10. Ed. Candusso. 808 pp.

DOĞAN H.H., KARADELEV M., IŞILOĞLU M. & ÖZTÜRK C., 2007 — *Lenzitopsis oxycedri* Malençon & Bertault (*Thelephoraceae, Basidiomycota*), a very rare wood-decay fungus collected in Turkey. *Turkish Journal of Botany* 31: 349-352.

MALENÇON G. & BERTAULT R., 1963 — *Lenzitopsis oxycedri* Malençon et Bertault, genre nouveau et espèce nouvelle d'aphyllophorale a spores colorées. *Bulletin trimestriel de la Société Mycologique de France* 79(1): 75-82.

MANJÓN J.L., & MORENO G., 1981 — Estudios sobre *Aphyllophorales*. I. Fructificaciones sobre *Juniperus. Anales del Jardín Botánico de Madrid* 37(2): 407-416.
MANJÓN J.L. MORENO G. & RYVARDEN L., 1984 — Trametes junipericola Manjón, Moreno & Ryvarden sp. nov. *Boletín de la Sociedad Micológica Castellana* 8: 47-50.
MELO I., CARDOSO J. & TELLERÍA M.T., 2007 — Annotated list of polypores for the Iberian Peninsula and Balearic Islands. *Bibliotheca Mycologica* 203: 1-183.
MORENO G., PRIETO-GARCÍA F., & GONZÁLEZ A., 2004 — Adiciones al catálogo micológico de la zona centro peninsular. II. *Boletín de la Sociedad Micológica de Madrid* 28: 207-219.
PÉREZ GORJÓN S. & BERNICCHIA A., 2008 — Algunas especies raras o interesantes de *Aphyllophorales* s.l. que fructifican sobre *Juniperus oxycedrus* en el Parque Natural de Arribes del Duero (Salamanca, España). *Boletín Micológico de FAMCAL* 3: 61-71.
RYVARDEN L., & GILBERTSON R.L., 1993 — European Polypores. Vol. 1 (*Abortiporus* - *Lindtneria*). *Synopsis Fungorum* 6. Fungiflora, Oslo, Norway.