Melanotus hepatochrous (Strophariaceae, Agaricales) found in Spain

F. ESTEVE-RAVENTÓS

Departamento de Biología Vegetal (Botánica), Universidad de Alcalá de Henares,
E - 28871 Alcalá de Henares, Madrid (España)

A. ORTEGA

Departamento de Biología Vegetal (Botánica), Universidad de Granada,
E - 18071 Granada (España)

J. GÓMEZ

Sociedad Micológica de las Sierras Subbéticas, C/Mesones 4,
E - 14800 Priego, Córdoba (España)

Eingegangen am 20. Oktober 1995

Esteve-Raventós, F., A. Ortega & J. Gomez (1996) - *Melanotus hepatochrous* (Strophariaceae, Agaricales) found in Spain. Z. Mykol. 62/2: 213 - 217.

Key Words: *Melanotus, Melanotus hepatochrous, Strophariaceae, Agaricales*, taxonomy, chorology.

Summary: *Melanotus hepatochrous* is described and commented. This species has been probably introduced in Spain, as its natural distribution area is limited to Australasia. The red-brown pileus, ochraceous gills and lanceolate cystidia are characteristic.

Zusammenfassung: *Melanotus hepatochrous* wird beschrieben und diskutiert. Diese Art ist wahrscheinlich in Spanien eingeschleppt worden; das natürliche Verbreitungsareal der Art ist auf Australasien beschränkt. Charakterisiert ist die Art durch rotbraunen Hut, ockerfarbene Lamellen und lanzettförmige Zystiden.

Resumen: *Melanotus hepatochrous* es descrito y comentado. Esta especie ha sido probablemente introducida en España, ya que su área de distribución natural se limita a Australasia. El pileo de color pardo-rojizo, láminas ocráceas y sus cistidios lanceolados son característicos.

Introduction

Melanotus Pat. is a member of the Strophariaceae Sing. & A.H.Smith with „crepidotoid" habit and brown spore-print with often purplish to violaceous tints. The taxonomic concept and limits of this genus have been treated and discussed by HORAK (1968) and SINGER (1975).

The species of *Melanotus* grow saprophytically on a large variety of host plants, and most of them occur in tropical and subtropical areas of the world, but also in more temperate zones. In Europe, only a few species have been registered, and still in many countries this genus has no representatives known. The small size of the fruitbodies and, in many cases, the peculiar ecology might be a reason for the sporadical data of this genus in many areas.

A monographic study of the species of *Melanotus* was published by HORAK (1977), but further contributions of new species have been made by AMMIRATI et al. (1979), REDHEAD & KROEGER (1984), ORTON (1984) and HORAK et al. (1990).

This is the first record of a *Melanotus* species in the Iberian Peninsula, though *M. phillipsii* (Berk. & Br.) Sing. has been previously registered from Morocco (MALENCON & BERTAULT 1970: 337) on *Carex* sp. *M. hepatochrous* has been probably introduced in Europe, and recorded previously from England and Norway.

Material and methods

The methods used have been the usual ones for the study of these agarics. Photographs were taken in an Olympus BX 50 microscope with incorporated photographic system. The specimens have been deposited at the Herbarium of Alcalá de Henares University (AH), and a voucher specimen at the Herbarium of the Institut für Systematische Botanik, Zürich (Z+ZT).

***Melanotus hepatochrous* (Berk.) Sing.**, Sydowia 5:472 (1951) - Figs. 1 and 2

= *Agaricus hepatochrous* Berk. in Hook., J. Bot. 7: 574 (1848)

According to HORAK (1977) also the next list of synonyms:

= *Melanotus insidiosus* Berk. in Hook., J.Bot. 7:574 (1848)
= *Melanotus cassiaecolor* (Berk.) Sing., Sydowia 15:70 (1950)
= *Agaricus* (*Crepidotus*) *turbidulus* Berk. ap. Sacc., Syll.Fung. 5: 889 (1887); 9:1891
= *Crepidotus subhaustellaris* Cleland, Toadstools ... South Australia:131 (1934)

Pileus – 30 mm in diam., orbicular to semiorbicular or reniform, convex to plano-convex, becoming expanded and sometimes depressed at the center in old fruitbodies, brown to hepatic-brown coloured, membranaceous, dry, fribrillose, margin custulate and deflexed in old carpophores, not or slightly hygrophanous, not striate. Lamellae adnate to subdecurrent, crowded, ochraceous at first, turning to brown with grey-violaceous reflection at maturity. Stipe – 5 x 2.5 mm, cylindrical, subeccentric to clearly eccentric or lateral, sometimes very reduced and inconspicuous, concolorous with pileus, pruinose-fibrillose, solid, dry. Odour and taste not distinctive. Spore print purplish-brown.

Spores (5.8–)6–7(–7.5) x 4–5 µm, ovate in frontal view, ellipsoid to subamygdaliform in profile, yellow-brown, smooth, slightly thick-walled (0.6-0.8 µm), with distinct germ pore (– 0.7 µm). Basidia 15–22 x 5.5–6.5 µm, 4-spored (some 2-spored basidia present), with long sterigmata (-4 µm), normally constricted in the middle. Cheilocystidia 18–35 x 5–6.5 µm, fusiform, ventricose with tapering neck, apex usually narrow (–2.5 µm), hyaline, smooth, forming a sterile edge; some cystidia displaced from the gill-edge but not true pleurocystidia, 15–25 x 5–6 µm, conspicuous, fairly abundant, ocassionally with digitiform apical expansions. Subhymenium cellular, formed by isodiametric cells, 6–8 µm in diam. Lamellae trama parallel, formed by filamentous hyphae, 3–10 µm in diam., showing an abundant encrusting, brownish pigment. Pileipellis a cutis of interwoven cylindrical hyphae, 3–6.5 µm in diam., with very abundant brown, encrusting,

Fig. 1: *Melanotus hepatochrous*, AH 16956 (Photo: J. Gómez)

cementing pigment, with many cylindrical, branched, terminal cells. Subcutis scarcely differentiated. Clamp-connections present in all tissues.

Material studied:

Spain: Sierra de Albayate, Cortijo La Hortichuela, Priego (Córdoba), 10.10.1992, 600 m, in rotten wood and decorticated timber, probably of *Populus* sp., together with *Hirneola auricula-judae* and *Coprinus domesticus*, leg.: J. Gómez & B. Moreno, AH 16956. Voucher specimens in ZT, and at the private Herbarium of the Sociedad Micológica de las Sierras Subbéticas n° 598.

Discussion

M. hepatochrous seems to be a widely distributed taxon in Australasia (Australia, New Zealand and Tasmania), growing on rotting bark, wood or leaves of several angiosperms (e.g. *Eucalyptus*, *Xanthorrhoea*, etc.). It is characterized by the dark reddish-brown pileus, hence the specific name (reminding the color of a liver), ochraceous lamellae when young, and microscopically, by the thin-walled spores, lanceolate cheilocystidia and pileicutis with a „rameales" structure, e.g. with branched, somewhat diverticulate elements, showing a strongly encrusting dark brown pigment.In the monographical revision carried out by HORAK (1977), we could not find the identity of our specimens at first, as the key is based mainly on continental distribution. Considering that our samples have been introduced in our country, *M. hepatochrous* constitutes the correct election. HORAK (in lett.) has been able to know the range of variation of this species from material collected by himself from Australia and Tasmania. He (umpublished notes), after checking numerous authentic specimens from E and K, considers *M. proteus* s. Watling and *M. textilis* s. Watling contaxic.