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First Record of *Cheimonophyllum* Singer from Turkey

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Abstract: This study deals with the first record of pleurotoid fungus *Cheimonophyllum candidissimum* (Berk. and M.A. Curtis) Singer (*Cyphellaceae*) growing on *Alnus* sp. wood from Kahramanmaraş, Turkey.

Key words: *Cheimonophyllum candidissimum, Cyphellaceae*, macrofungi, biodiversity

INTRODUCTION

The genus *Cheimonophyllum* Singer belongs to *Basidiomycota, Agaricales*, *Cyphellaceae* with three reported species (*Cheimonophyllum candidissimum* (Berk. and M.A. Curtis) Singer, *C. roseum* Segedin, *C. stypticoides* (Speg.) Singer) (http://www.indexfungorum.org). The genus was first described by Singer (1955) and is known to occur in Europe (Delivorias and Gonou-Zagou, 2008), North America (Bessette *et al*., 1997), Brazil (Putzke, 2002) and New Zeland (Segedin and Pennycook, 2001). There is no record of this genus from Turkey. The only existing member of *Cyphellaceae* in Turkey is *Chondrostereum purpureum* (Pers. : Fr.) Pouzar (Sesli and Denchev, 2008).

During a field excursion in Kahramanmaraş province, some minute pure white basidiocarps were collected and determined as *Cheimonophyllum candidissimum* (Berk. and M.A. Curtis) Singer. On the basis of the existing checklists prepared by Solak *et al*. (2007) and Sesli and Denchev (2008), the genus seems to be a new record to the Mycobiota of Turkey and presented in this study.

The research aims to make a contribution to Turkish Mycobiota.

MATERIALS AND METHODS

Macrofungi samples were collected from Kahramanmaraş Province in 2004. Standard methods for identification of the agarics were followed. During field study digital colour photographs were taken and ecological features were noted. The specimens were dried, packed in polythene bags and kept at the Fungarium of Adıyaman University. Microscopic investigations were also performed in the same fungarium in 2008. Thin sections were obtained from softened pileus and studied in 3% KOH solution. Microstructures were investigated by using a Soif binocular light microscope and measured with a previously calibrated ocular micrometer. Finally, the specimens were identified following the descriptions of Singer (1955), Segedin (1994) and Bessette *et al*. (1997).

RESULTS

Cheimonophyllum candidissimum (Berk. and M.A. Curtis) Singer:

- **Synonyms:** *Agaricus candidissimus* Berk. and M.A. Curtis
  - *Agaricus haedinus* Berk. and Curt.
  - *Geopetalum candidissimum* (Berk. and M.A. Curtis) Murrill
  - *Geopetalum haedinum* (Berk. and Curt.) Murr.
  - *Geopetalum subelatinum* Murr.
  - *Nothopanus candidissimus* (Berk. and M.A. Curtis) Kühner
  - *Pleurotellus candidissimus* (Berk. and M.A. Curtis) Konrad and Maubl.
  - *Pleurotus candidissimus* (Berk. and M.A. Curtis) Sacc.
  - *Pleurotus haedinus* (Berk. and Curt.) Sacc.

Fruit body 3-8 mm, white when young, dingy white to pale yellow brown when dry. Shell shaped to reniform, inrolled at first then becoming convex to nearly flat. Surface covered with a white layer of minute hairs. Margin incurved when young, then even to sometimes lobed or slightly striate. Flesh thin, soft and whitish. Taste and odor unknown. Hymenophore lamellate, lamellae white, moderately broad and fairly distant (Fig. 1a). Stipe 0.5-1 mm, concolorous with the cap, insignificant when mature, sometimes absent.

Basidiospores 5-6.8×4.5-6 µm (5.86 × 5.36) Q = 1.09 (on the basis of 15 measurements) (Fig. 1c), subglobose to broadly pyriform with a cylindrical apiculus, thin walled, smooth, hyaline. Basidia clavate, 2-4 spored (Fig. 1), 17-30×5-6 µm, sterigmata 2.5-7 µm.

Habitat: On decaying *Alnus* sp. twigs in mixed forest.

Distribution: Kahramanmaraş, Yaylaüstü village, 37°34' N, 36°35' E, 1290 m, 20.11.2004, K: 2592.

Fig. 1: *Cheimonophyllum candidissimum:* (a) Basidiocarps, (b) basidia and (c) basidiospores

DISCUSSION

Cheimonophyllum candidissimum is a pleurotoid, lignicolous fungus with small white basidiocarps. Though it has minute basidiocarp, it may be confused with *Crepidotus epibryus* (Fr.) Quél. and *Panellus mitis* (Pers.) Singer macroscopically, due to their similarity in shape, color and eccentrical attachment to the substrate. But the microscopic features especially shape of basidiospores distinguishes *Cheimonophyllum* from the other two genera. *Cheimonophyllum* is known to grow on branches of deciduous woods, such as *Populus*, *Alnus*, *Fraxinus*, *Corylus*, *Fagus*, *Sorbus*, *Tilia*, *Salix*, *Ilex*, *Quercus* and *Platanus* (Delivorias and Gonou-Zagou, 2008) as well as of conifers (Brown, 2008).

The macroscopic and the microscopic properties of the studied material are generally in accordance with the data given in earlier literature, except the width of the basidiospores. Delivorias and Gonou-Zagou (2008) measured it as being 5-6.5 µm while it was up to 6 µm in the studied samples.

Considering the systematic work of Kirk *et al*. (2008) and the list of the presented Turkish macrofungal taxa (Sesli and Denchev, 2008), *Cheimonophyllum* is to be the second genus of *Cyphellaceae* existing in Turkey. *Chondrostereum* Pouzar is the other genus of *Cyphellaceae* which was recorded as *Chondrostereum purpureum* (Pers. : Fr.) Pouzar from different region of Turkey.

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REFERENCES

Bessette, A.E., A.R. Bessette and W.D. Fischer, 1997. Mushrooms of Northeastern North America. Syracuse University Press, Hong Kong, ISBN: 0-8156-0388-6.

Brown, D.E., 2008. Trial Field Key to the *Pleurotoid* Species in the Pacific Northwest. Pacific Northwest Key Council, Portland.

Delivorias, P. and P. Gonou-Zagou, 2008. On cheimonophyllum candidissimum from Greece with notes on its implied aphyllophoroid ancestry. Mycotaxon, 104: 1-8.

Kirk, P.F., P.F. Cannon, D.W. Minter and J.A. Stalpers, 2008. Dictionary of the Fungi. CAB International, Wallingford, ISBN: 9780851998268.

Putzke, J., 2002. Agaricales (fungos-basidiomycota) pleurotóides No Rio grande Do Sul. I- *Anthracophyllum*, *Aphyllotus*, *Campanella*, Chaethocalathus E *Cheimonophyllum*. Caderno de Pesquisa Ser. Bio. Santa Cruz do Sul, 14: 45-66.

Segedin, B.P., 1994. Studies in the Agaricales of New Zeland: New records and new species of the genera *Cheimonomphyllum*, Mniopetalum and *Anthracophyllum* (Tricholomataceae, Collybiae). N. Z. J. Bot., 32: 61-72.

Segedin, P.B. and S.R. Pennycook, 2001. A nomenclatural checklist of agarics, boletes and related secotioid and gasteromycetous fungi recorded from New Zealand. N. Z. J. Bot., 39: 285-348.

Sesli, E. and C.M. Denchev, 2008. Checklists of the myxomycetes, larger ascomycetes and larger basidiomycetes in Turkey. Mycotaxon, 106: 65-68.

Singer, R., 1955. Type studies on Basidiomycetes 8. Sydowia, 9: 367-431.

Solak, M.H., M. Işıloğlu, E. Kalmış and H. Allı, 2007. Macrofungi of Turkey Checklist. Üniversiteliler Ofset, İzmir.