

4.3 = THE COLLECTION OF MEDICINAL MACROFUNGI OF PAVIA UNIVERSITY

CAROLINA GIROMETTA¹, ELENA SAVINO¹, MARIA GUGLIELMINETTI¹, ELISA LAGOSTINA¹, MARINELLA RODOLFI¹, PAOLA ROSSI², ANNAROSA BERNICCHIA³, CLAUDIA PERINI⁴, ELENA SALERNI⁴, ANNA MARIA PICCO¹

¹Department of Earth and Environmental Science (DSTA), University of Pavia, Via S. Epifanio 14, 27100 Pavia, Italy, elena.savino@unipv.it; ²Department of Biology and Biotechnology “L. Spallanzani”, Via Ferrata 9, 27100 Pavia, Italy; ³Department of Agricultural Sciences, University of Bologna, Via Fanin 42, 40127 Bologna, Italy; ⁴Department of Life Sciences (DSV), University of Siena, via P.A. Mattioli 4, 53100 Siena, Italy

In 2010 researchers of the University of Pavia began the collection of wood decay macrofungi strains, and among them various are medicinal mushrooms, able to develop their sporomata in the Italian environmental conditions. The culture collection, nowadays deposited at the Mycological Laboratory of DSTA of the same University, has been year after year implemented and enriched also thanks to the contribution of Bologna and Siena Universities.

This action was driven by the necessity to protect fungal species having officinal properties from the threat of extensive picking, as well as to conserve *ex situ* rare *taxa* of particular interest (1).

Indeed, culture collections play a key role in preservation and maintenance of fungal genetic resources and they are an important tool to get biological material for application purposes.

Wood-inhabiting fungi were collected from Italian Alps, Apennines, plain woods and Mediterranean areas. Particular attention has been paid towards “polyporoid and corticioid” fungi. Pure culture isolation was mostly carried out from sporomata and in a few cases from basidiospores; always by experimental sterile conditions.

During the last 5 years, 217 strains belonging to wood-decay macrofungi were obtained (Carolina Girometta, personal communication). Among these, about 50 are believed to have officinal properties, referred to scientific publications and observations from traditional medicines, mainly the Chinese one (MTC).

It must be underlined the isolation of *Fomitopsis officinalis* (Vill.) Bondartsev & Singer (syn. *Laricifomes officinalis*), well known since I Century A.D. for its medicinal properties (2). Due to the past extensive collection, it became so rare to be supposed almost extinct in Europe (3). Consequently eight European countries included it into the Red Lists of threatened species and in 2014 it was added to the Italian one too (Ministero dell’Ambiente e della Tutela del Territorio e del Mare). Thanks to programs of habitat protection together with a specific census, *F. officinalis* spread out again on the Alps (4). Noteworthy also is the recovering of *Ganoderma pfeifferi* Bres. from Teramo and *Hericium erinaceus* (Bull.) Pers. from Siena., Under assessment by the Global Fungal Red List Initiative of IUCN, this last is a fungus rich in physiologically important components and studied for its properties also at Pavia University (5).

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