



SOME DATA ON THE ALMOST PERMANENT PRESENCE OF *VOLVARIELLA BOMBYCINA* (SCHAEFF.) SINGER (1951) IN THE FOREST OF MAMORA (MOROCCO)

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Abstract

The current state of the *Quercus suber* trees in the Mamora forest and the alignment trees of the Kenitra city promotes the development of *Volvariella bombycina*. This edible fungus, reported rare in Morocco and other countries of the world, is frequently observed on the hollow and rotten trunks of old trees. The observation during all the months of the year of a large number of carpophores can also be explained by the fact that this Basidiomycete does not undergo any exploitation for the human consumption in Morocco.

Key words : Morocco, Mamora forest, *Quercus suber*, *Volvariella bombycina*, abundance.

Introduction

Six species of Pluteaceae belonging to the genus *Volvariella* have been reported in the flora of the superior mushrooms of Morocco (Malençon & Bertault, 1975) two of them were found in the Mamora: *Volvariella murinella* and *Volvariella bombycina*. The latter species is considered rare in Morocco (Malençon & Bertault, 1975) and endangered in Switzerland (Senn-Irlet *et al.*, 2007). It has been observed in Morocco in autumn, winter and spring (June) on the dead trunks of *Quercus suber* (El-Assfour, 2002) and *Platanus acerifolia* (Yamni, 2004-2005).

In this study we tried to know the conditions that allow the almost permanent presence of *Volvariella bombycina* even in summer (June, July and August) on the trunks of *Quercus suber* of the Mamora' forest and on the trunks of other trees alignment in the boulevards of the city of Kenitra, *Platanus acerifolia* and *Celtis australis*.

Material & Methods

Description

The description of *Volvariella bombycina* (Schaeff.)

Singer (1951) (silky *Volvaria*) was made from a harvest of *Platanus acerifolia* in July (harvest of 19/07/2007).

Macroscopic Characteristics

In the cankers of the trunk of the plane tree, the globular primordia (1cm in diameter) are light yellow, slightly ochre. The color changes with age and becomes brownish yellow to pale yellow (Fig.1 A and B).

The cap (Fig. 1 C, D and E) measures 5cm just after the hatching of the general veil and reaches 8cm at maturity, a yellowish-white color, covered with long triangular and dense silky fibers, almost similar to the perfect yellowish hair. Its form is first parabolic then convex. The margin in top view shows a lobed shape, while in view of sectional profile is exceeding.

The stipe (Fig.1 D) has a length of 6cm, a diameter of 1cm, more or less equal, narrowing towards the apex (0.8cm), often curved, solid, dry, cylindrical, central and a white color. The base is encased in a thick, yellowish to brownish volva, similar to the bag. It never wears a ring.

The flesh is thin (5mm), a weak yellowish white color and has a pleasant smell.

The blades are free of foot, tight, a little ventrated, unequal with the presence of lamellae and lamellules, wide (12mm), white at first, they become pinkish at

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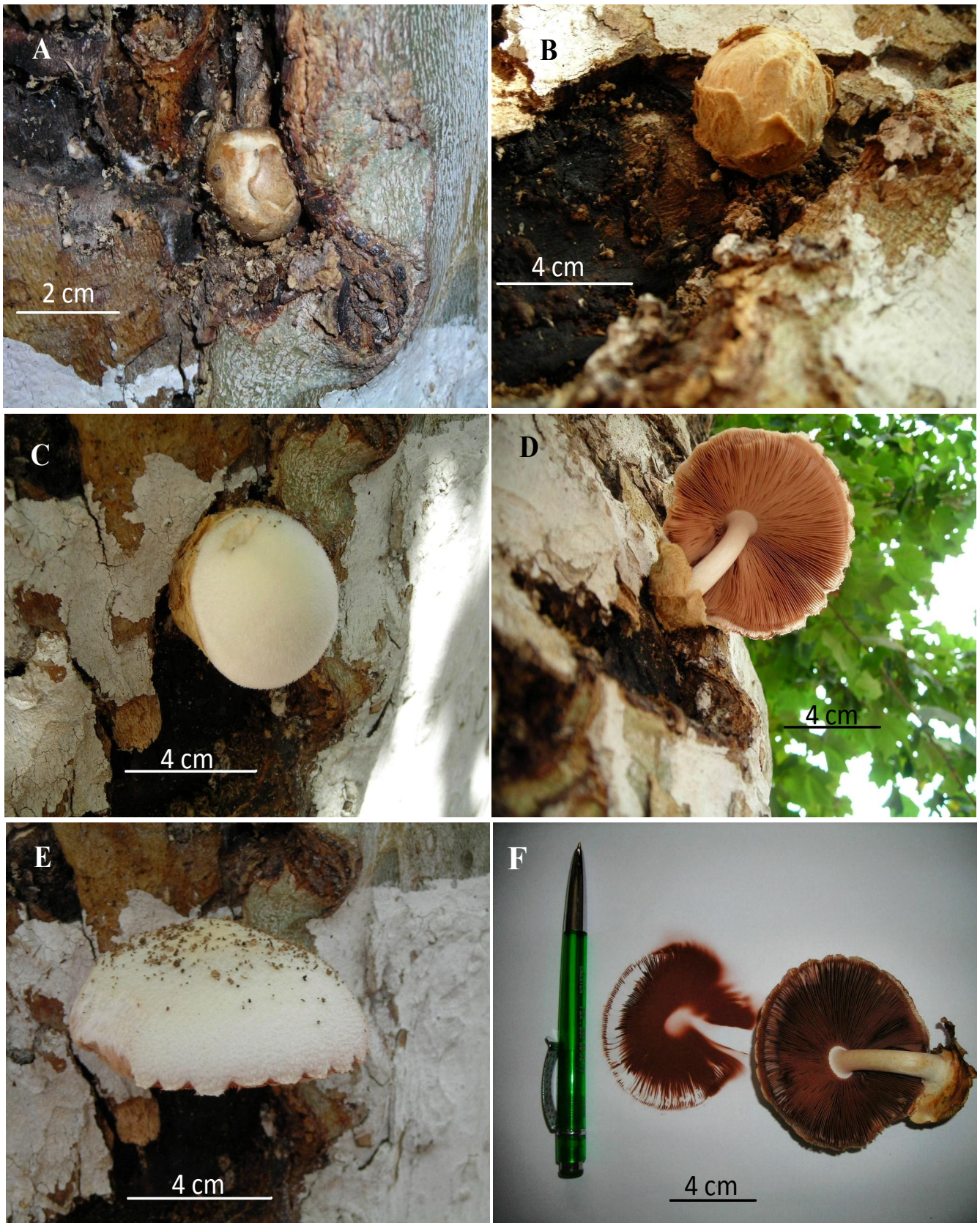


Fig.1: *Volvariella bombycina*, (A) Primordium barely visible to the naked eye, (B) Primordium shows the beginning of the hatching, (C) Cap shaped conical, (D) Top view shows: Sailing in bag, Stipe and Blades, (E) Profile view shows the convex Cap with a lobed margin, (F) Spore-print of soft purple color.

maturity.

The spore-print is sweet purple (Fig.1 F).

Microscopic Characteristics

A series of thin sections, made perpendicular to the edge of the slides (distilled water assembly), revealed clavate-shaped basidia, tetrasporic ($20-30 \times 8-11 \mu\text{m}$) and calyx-shaped or fusiform cystides under a microscope ($100 \times 10-25 \mu\text{m}$). The spores are pink, ellipsoid ($6.7-8.3 \times 3.3-5 \mu\text{m}$) (Fig. 2), smooth with a shallow membrane.

Results and Discussion

Several factors explain the presence of *Volvariella bombycina* throughout the year on the trunk of *Quercus suber*. The ecological conditions of the environment allow the development of the *Volvariella bombycina* carpophores dramatically.

The Mamora forest belongs to the stage of subhumid Mediterranean vegetation where high rainfall and occult rainfall (nocturnal dew) allow the installation of this floor.

The hollow trunks are a favorable habitat for *Volvariella bombycina*. Most of the trees in the Mamora forest have hollow trunks, which can keep a frequent humidity in the area. The subera of Mamora is a forest ecosystem made deficient by grazing, excessive removal of timber and mutilation of trees. This deficiency increases their vulnerability to parasite attack with *Lymantria dispar* (*Bombyx dispar*) (Fraval et al., 1980), *Hypoxylon mediterraneum* (Chadigan, 1987), Creeping ant that digs nests from a cork oak injury and xylophages (El Antry, 1986) that feed on wood by digging galleries. Coleoptera and Hymenoptera are the most dangerous cork oak xylophagous insects. The damage caused by the larvae of *Cerambyx cerdo* (beetle) deteriorates according to El Antry (1986) not only the cork, but also the wood which is completely perforated by galleries whose diameter sometimes reaches 5 cm.

The presence of *Volvariella bombycina* throughout the year can also be explained by the fact that this edible fungus is not exploited for human consumption. Surveys carried out in the Mamora forest have shown that mainly the boletus of the section *Edules*, *Girolles* (*Cantharellus cibarius*) and truffles that are harvested and sold by peasant women.

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