A
PRELIMINARY STUDY OF WILD MUSHROOMS
IN
The SHOUF CEDAR NATURE RESERVE

(Fall/Winter 2015 & Spring 2016)

By

Nadine Modad, M.Sc
(Wild Mushrooms Specialist)
American University of Beirut

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INTRODUCTION

Mushrooms are often preceded by their reputation, whether a gourmet delight or as poisonous and deadly. They are neither plants nor animals. Mushrooms (fleshy fungi) belong to the higher divisions of the fungal kingdom. They are heterotrophic and depend on organic matter for their nutrition. The term "mushroom" means any fungus which produces a fleshy fruiting body. Instead of seeds, reproduction in fungi is accomplished by means of microscopic reproductive units called spores. In this study the word mushroom will denote all larger fungi, or macromycetes. Most of the mushroom species are members of the class Basidiomycetes and a few are members of the Ascomycetes, but the two classes are closely related to each other.

Mushrooms play an important role in the environment. Most of them are saprophytes (nourished by living off dead organic tissues). It feeds itself by digesting the organic matter and at the same time returns nutrients to the soil. Others are mycorrhizal (mutualistic symbionts) aiding the growth of their plant or tree partners. Few are parasitic on living hosts. Many of the edible and poisonous genera of the basidiomycetes are mycorrhizal partners with trees and other forest plants. Additionally, a small percentage of ascomycetes also form abundant mycorrhizas in forests.

Moisture is a crucial element in the growth of wild mushrooms and abundant rainfall contributes immeasurably to the crop production.

For many people, wild mushrooms constitute an important a food source (protein and vitamins). In addition to the nutritional value of mushrooms, some species contain potential medicinal value. In recent years, edible mushrooms have not only been found to play a significant role in providing nutritious food but also in improving the environment by recycling industrial and agricultural wastes.

OBJECTIVES:

The objectives of this preliminary study consist in collecting and identifying wild mushrooms of the Shouf Cedar Nature Reserve including already available photographic collection which will be provided to me. The study will extend over two periods. The first will begin during the fall and beginning of winter seasons 2015 (October to December, 2015; depending on weather conditions) and the second will be during the spring season 2016 (March to May 2016; depending on weather conditions). The goal is to describe the species of macrofungi encountered and collected during this period and provide the best available photos for each species. This groundwork inventory work will increase knowledge of the fungal diversity in this area. To have a more complete reference of the area, it is advised to perform a study over at least a 2 to 3 years period as indicated in most references.

METHODOLOGY:

In short, the methodology to be followed during this study will be divided into two stages as follows:

- The first stage will consist of field visits and observations: including visual observations, descriptions and taking field photographs of the mushrooms in their natural habitats.
  Estimated number of field trips: 3-5

- The second stage will consist of laboratory work, including macroscopic as well as microscopic examinations to ascertain the mushroom identification.

For identification purposes no more than two fruiting bodies need be collected, one 'button' specimen, and one mature. When we pick a mushroom we are taking away the reproductive phase of the mushroom organism. The mycelium usually persists and may produce more mushrooms that season or another time. However, whatever the reason, whether scientific or culinary, an area should never be stripped bare. There is no evidence that rare species will disappear by overcollecting as is sometimes the case in the flowering plants. Nevertheless, conscientious and moderate collecting should be practiced.

Opportunistic sampling is the method that will be followed during this study. It consists of walking through the reserve and collecting mushroom fruiting bodies that are detected.

Color photographs will be taken because they are extremely valuable for documenting features and can be used in a variety of ways. They are of great help in subsequent identification, and highly needed to illustrate the collections. Color pictures of mushrooms in their natural habitat add appreciably to the value of the collection.

DELIVERABLES:

The final report at the end of the study will include:

- ***High quality photographs of fresh specimens***: Field photographs of mushrooms in their natural habitats will be taken. Every effort will be made to locate and photograph material in an optimum condition to reveal the main identifying characteristics of the species in the photographs. Color photographs of the vegetation and landscape will be taken as well whenever felt necessary.
- ***Scientific name*** (consisting of the genus and the species whenever possible); Occurrence (substrate, the habitat and date of collection or detection); Category of mushroom (Saprophytic, mycorrhizal or parasitic) and Edibility (edibility of the fruiting body mainly specified under the following possible headings 'edible', 'inedible', and 'poisonous'. Edibility will be indicated whenever a positive identification is done. If a specimen at hand was identified to genus only, then it will be described as 'undetermined'.

Results will be organized into two parts: Ascomycetes and Basidiomycetes.

- A ***digital format*** will also be provided along with the printed report.

***Nadine Modad**, M.Sc.*
Ecosystem Management, Wild Mushrooms Specialist
American University of Beirut
Faculty of Agricultural & Food Sciences
Tel. 01/350000 - Ext: 4578; Mobile: 03-886017
E-mail: nm54@aub.edu.lb; nadinemodad@gmail.com