

THE MACROFUNGI OF THE MALTESE ISLANDS: ADDITIONS AND NOTES

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ABSTRACT

Fifty species of macrofungi are recorded for the first time from the Maltese Islands in the form of a classified annotated list. A brief history of the study of macrofungi in Malta is also given.

INTRODUCTION

The first records of macrofungi from the Maltese archipelago are those of ZERAPHA (1827 & 1831) who cites four species: *Agaricus campestris* (ZERAPHA, 1827) and *Agaricus ephemerus*, *Boletus igniarius* and *Phallus impudicus* (ZERAPHA, 1831). GRECH-DELICATA (1853) quotes Zerapha's records. GULIA (1855-56) cites Zerapha's record of *Phallus impudicus* and also gives "*Agaricus*". In a later work (GULIA, 1858-59) he records seven species, the four cited by Zerapha with revised nomenclature, and three of his own. Gulia seems to equate Zerapha's *Agaricus ephemerus* with what he calls "*Coprinus helvolus* Pers." while he also cites a "*Dermocybe helvolus* Pers." as one of his own finds. It is not clear whether he is alluding to *Cortinarius helvolus* Fries. The other two species added by Gulia are *Poliporus* [sic] *lucidus* Fries and *Daedalea unicolor* Fries. His son (GULIA, 1889-90) simply follows his father's first-cited work. BORG (1899) adds four species: *Agaricus hesperidium*, *Fomes obliquus*, *Daldinia concentrica* and *Armillaria citri* as well as two sterile states of basidiomycetous fungi: "*Ozonium auricomum*" and "*Himantia fulva*". The former may refer to a *Coprinus*, possibly *Coprinus radians* or *C. domesticus* (HEIM, 1969) while the second is possibly a corticoid species (AINSWORTH *et al.*, 1973). In a subsequent work (BORG, 1901) two species are cited of which *Polyporus fumosus* is new.

The first exhaustive lists of Maltese fungi are those of SACCARDO (1912, 1914, 1915) who records a large number of fungi the specimens of which were provided mainly by A. Caruana Gatto and J. Borg. Saccardo records 43 species of macrofungi of which 40 are new records. Saccardo also describes some new forms based on the Maltese material. These are: *Pleurotus nebrodensis* forma *minor* Sacc., *Fomes ribis* forma *tamaricis* Sacc., *Fomes robustus* forma *punicae* Sacc., *Fomes robustus* forma *amygdali* Sacc., and *Trametes hispida* forma *resupinata* Sacc.

The major work recording Malta's fungi is that of SOMMIER and CARUANA GATTO (1915) which cites and evaluates all previous records (with the exception of Gulia's *Dermocybe helvolus*) revising their names. In addition to previous records, Sommier and Caruana Gatto add a further six species of which one is in a form presumably new to science and cited as *Colus hirsutinosus* forma *minor* CG. which is not, however, accompanied by a description. Thus Sommier and Caruana Gatto record a total of 58 macrofungi (47 Hymenomycetes, 4 Gasteromycetes, 5 Discomycetes and 2 Pyrenomycetes) of which two (Borg's *Agaricus hesperidium* and *Armillaria citri*) are treated as doubtful while another two are Borg's records of sterile states. BORG (1922) cites 16 species of macrofungi of which three (all polypores) are additions to the Maltese list.

The works of Borg and of Sommier and Caruana Gatto were followed by a long hiatus in the addition of information regarding Maltese macrofungi until LANFRANCO (G.) (1954, 1957, 1959, 1961) produced a number of popular articles. No species are specifically named but these articles were accompanied by a plate depicting a number of locally observed macrofungi. These can be identified (from the plate but also on the basis of surviving herbarium material) as *Morchella vulgaris*, *Schizophyllum commune*, *Coprinus comatus*, *Paxillus panuoides*, *Agrocybe praecox* and species of *Phellinus*, *Inocybe* and *Stereum*. One of us records six new additions (LANFRANCO, 1972) and cites some previously known species (LANFRANCO, 1968, 1979). Some floristic information on Maltese macrofungi was also given in some duplicated lecture notes and field notes (LANFRANCO, 1984a, 1984b and 1984c).

Since 1979, one of us (M.B.) has been undertaking a systematic exploration of likely habitats for macrofungi. This has resulted in the discovery of well over a hundred previously unrecorded species. In addition this author has kept a complete photographic record of his finds as well as both dried and preserved herbarium material. A substantial number were eventually determined (by E.L.) down to the species level and these form the basis of the present contribution. Numerous species remain incompletely determined, particularly several *Coprinus*, *Inocybe*, *Psathyrella*, *Agaricus*, *Hygrophorus*, polypores and Discomycetes. It is hoped that these will be the subject of future contributions.

SPECIES LIST

Classification is based on AINSWORTH *et al.* (1973) except that the order name Aphyllophorales has been substituted by Polyporales. Records for each species are given. Where the collector is one of the authors, the name is abbreviated (MB and EL). Names of other collectors are written in full. Numbers in parentheses refer to the designations in the authors' private herbaria. In some cases only photographs were taken; such records are distinguished by italics. In other cases the specimens were identified in the field hence the absence of a designating number for some of the records. All records are from Malta except where otherwise stated.

Division: EUMYCOTA
Sub-division: ASCOMYCOTINA
Class: DISCOMYCETES
Order: PEZIZALES
Family: HELVELLACEAE

1. *HELVELLA CRISPA* (Scopoli)Fries

Ballut tal-Wardija: 30.12.1983, under *Quercus ilex*, leg. MB (MB135);
Imġiebañ: 4.1.1985, under *Quercus ilex*, leg. MB (MB112); specimen with
brownish pileus, leg. MB (MB89).

2. *HELVELLA LACUNOSA* Afzelius ex Fries

Ballut tal-Wardija: 19.1.1984, under *Quercus ilex*, leg. MB (MB114); Ta'
Wied Rini: 12.1.1985, dwarfed specimen under *Cistus monspeliensis*, leg.
MB (MB138).

Family: PEZIZACEAE

3. *SARCOSPHAERIA EXIMIA* (Durand & Léviellé) Maire

Buskett: 30.1.1985, on pine needles, leg. MB; Verdala: 22.1.1980, under
conifers, leg. MB (EL260); 21.1.1985, leg. MB (MB144).

4. *PEZIZA MURALIS* Sowerby

Marsa: 31.5.1982, on rotting cricket knee-guards in a store room, leg.
Carmelo Briffa and MB (MB35).

Family: PYRONEMATACEAE

5. *HUMARIA HEMISPHAERICA* (Wigg.) Fuckel

Addolorata Cemetery (Marsa): 19.1.1981, leg. MB (EL258); Buskett: 28.12.
1972, among mosses, leg. EL (EL256); Verdala: 25.1.1981, leg. MB and
Stephen Schembri (EL257).

6. *ALEURIA AURANTIA* (Fries) Fuckel

Maqluba: 10.2.1985, on moist clay loams, leg. MB and EL (EL434); Tabía
(Imtarfa): 19.11.1984, along footpaths, leg. MB (MB158); Ta' Gorni: 11.
1.1971, along footpaths, leg. Mario Gauci (EL254).

Sub-division: BASIDIOMYCOTINA

Class: HYMENOMYCETES

Sub-class: HOLOBASIDIOMYCETIDAE

Order: POLYPORALES

Family: GANODERMATACEAE

7. *GANODERMA APPLANATUM* (Persoon ex Wallroth) Patouillard

Wied il-Luq (Buskett): 8.7.1976, on base of trunk of *Ulmus* sp., leg. EL
(EL272); 2.9.1985, at base of dying *Laurus nobilis*, leg. MB (MB1234);
Buskett: 29.8.1984, on old unidentified stump, leg. MB and Anthony
Valletta (MB1019/20).

Family: HYMENOGHAEETACEAE

8. *PHAEOLUS SCHWEINITZII* (Fries) Patouillard

Ballut tal-Wardija: 15.1.1980, on roots of *Ceratonia siliqua*, leg. MB (EL277); Buskett: 1.1.1972, under conifers, leg. EL and Guido Lanfranco (EL276); Verdala: 26.1.1982, on trunk base of *Ceratonia siliqua*, leg. MB; Wied Għollieqa (Kappara): 6.12.1981, on roots of *Ceratonia siliqua*, leg. MB (EL278); Wied il-Kbir (Qormi): 20.4.1986, in small cave, leg. David Dandria and EL (EL443).

Family: CANTHARELLACEAE

9. *CANTHARELLUS CIBARIUS* Fries

Ballut tal-Wardija: 20.11.1982, grove of *Quercus ilex*, leg. MB and Salv. Fenech (MB108, EL265).

Family: CLAVARIACEAE

10. *CLAVULINOPSIS FUSIFORMIS* (Sowerby ex Fries) Corner

Buskett: 30.1.1985, under cypress, leg. MB (MB116).

Family: SPARASSIDACEAE

11. *SPARASSIS LAMINOSA* Fries

Hal-Farruġ: 8.12.1982, near burnt stump of *Ceratonia siliqua*, leg. Carmelo Briffa and MB (MB136); Wied Għollieqa (Kappara): 5.12.1983, near recently burnt stump of *Ceratonia siliqua*, leg. MB (MB950/1); Wied Hażrun: 23.11.1984, near burnt stump of *Quercus ilex*, leg. MB and Anthony Valletta.

Family: POLYPORACEAE

12. *MERIPILUS GIGANTEUS* (Persoon ex Fries) Karsten

Imġiebaħ: 26.11.1985, on apex of main trunk of *Quercus ilex*, leg. MB (MB1172/3)

13. *POLYPORUS BRUMALIS* Persoon ex Fries

Ta' Wied Rini: 3.11.1982, on old branch of *Cistus monspeliensis*, leg. MB (MB840, EL288); Plateau overlooking Dahlet Qorrot Road (GOZO): 6.2.1985, On old branch of *Cistus monspeliensis*, leg. MB (MB39).

Order: AGARICALES

Family: BOLETACEAE

14. *XEROCOMUS CHRYSENTERON* (Bulliard ex St. Amans) Quélet

Ballut tal-Wardija: 25.11.1982, under *Quercus ilex*, leg. MB (MB80, EL214); Imġiebaħ: 7.11.1984, under *Quercus ilex*, leg. MB (MB128); Ta' Wied Rini: 26.11.1982, under *Cistus monspeliensis*, leg. MB (EL215); Wied Hażrun: 2.11.1984, under *Quercus ilex*, leg. MB and EL (MB123, EL389).

Note: The specimens encountered at Wied Hażrun and Imġiebaħ have a distinctly purplish-red pileus and may be ascribable to var. *versicolor* Rostkovius. The population at Imġiebaħ is distinguished by the constant presence of a white margin to the pileus.

15. *XEROCOMUS BADIUS* (Fries) Kühner ex Gilbert

Il-Bosk (Buskett): 25.11.1984, under *Pinus halepensis*, leg. MB(MB1042).

16. *BOLETUS PULVERULENTUS* Opatowski

Buskett: 18.10.1984, under *Hedera helix*, leg. MB and Anthony Valletta, (MB1028/9, EL385).

17. *BOLETUS LURIDUS* Schaeffer ex Fries

Ta' Wied Rini: 5.11.1982, under *Cistus monspeliensis*, leg. MB (MB857-60, EL212); 4.11.1984, under *Cistus monspeliensis*, leg. MB (EL393).

Note: Highly variable. Some specimens at the above locality and at Imgiebañ show characters transitional to *Boletus calopus* Fries. These have been excluded from the records given since doubt still persists about their correct determination.

Family: HYGROPHORACEAE

18. *CAMAROPHYLLUS NIVEUS* (Scopoli ex Fries) Wünsche

Ta' Wied Rini: 27.12.1984, among *Cistus monspeliensis*, leg. MB; 7.1.1985 leg. MB (MB24b); Verdala: 4.1.1980; under conifers, leg. MB (EL192); 26.2.1982, leg. MB (MB24a); Wied id-Dis: 15.1.1985, numerous among grass, leg. MB.

19. *HYGROCYPE OVINA* (Bulliard ex Fries) Kühner

Ballut tal-Wardija: close to *Olea europaea*, leg. MB (MB143).

Family: TRICHOLOMATACEAE

20. *CRINIPPELLIS STIPITARIUS* (Fries) Patouillard

Ta' Wied Rini: 24.11.1982, on grass remains, leg. MB (MB75, EL96).

21. *MELANOLEUCA MELALEUCA* (Persoon ex Fries) Maire

Buskett: 24.1.1971, under conifers, leg. EL and Guido Lanfranco (EL101a); Verdala: 23.2.1980, leg. MB (MB514a, EL103); 2.1.1981, under conifers, leg. MB and EL (EL102).

22. *TRICHOLOMA COLOSSUM* (Fries) Quélet

Verdala: 24.2.1980, on pine needles, leg. MB (EL125); 2.1.1981, leg. EL and MB (EL124); 9.1.1981, leg. MB (MB669).

Note: Gregarious. Various specimens had a pileus up to 15 cm in diameter.

23. *TRICHOLOMA SCALPTURATUM* Fries

Imgiebañ: 26.1.1985, under *Quercus ilex*, leg. MB (EL353); 4.1.1985, leg. MB (MB147).

24. *TRICHOLOMOPSIS PLATYPHYLLA* (Persoon ex Fries) Singer

Verdala: 10.1.1980, on pine needles. leg. MB (EL89).

25. *LYOPHYLLUM LORICATUM* (Fries) Kühner

Addolorata Cemetery (Marsa): 2.12.1982, under conifers, leg. MB (EL301); 29.12.1982, leg. EL and MB (EL349); Verdala: 2.1.1981, under conifers, leg. MB and EL (EL92); 25.1.1981, leg. MB (EL91); 7.2.1982, leg. EL (EL90).

Note: This is a highly variable species which usually occurs in considerable numbers in the two localities cited. In addition to this, other species of the *Lyophyllum aggregatum* group seem to be present.

26. *CLITOCYBE INFUNDIBULIFORMIS* (Schaeffer ex Weinmann) Quélet
Verdala: 2.1.1981, under conifers, leg. EL and MB (EL87).

27. *PLEUROTUS OSTREATUS* (Jacquin ex Fries) Quélet
St. Andrews: 26.12.1972, on tree trunk, leg. John Mifsud (EL142).
Note: Only one specimen, 20 cm. in diameter, has been seen.

28. *PLEUROTUS OPUNTIAE* Durand and Lévillé
Wied Għollieqa (Kappara): 19.12.1981, on remains of *Opuntia ficus-indica*, leg. MB (EL141); 28.12.1982, leg. EL (EL350).

29. *ARRHENIA MUSCIGENA* (Bulliard ex Fries) Quélet
Verdala: 13.1.1980, on mosses, leg. MB and Salv. Fenech (EL264).

Family: CORTINARIACEAE

30. *CREPIDOTUS AMYGDALOSPORUS* Kühner
Maqluba: 21.12.1980, on twigs of *Punica granatum*, leg. MB and Joseph Cilia (EL130); Imgiebañ, 4.1.1985, on twigs of *Quercus ilex*, leg. MB.
Note: spores of Maqluba specimen 7.0 x 5.0 μ m.

31. *CREPIDOTUS HAUSTELLARIS* Fries
Wied Għollieqa (Kappara): 26.1.1982, on trunk of *Ceratonia siliqua*
leg. MB (EL129).

Family: BOLBITIACEAE

32. *AGROCYBE AEGERITA* (Briganti) Singer
Għnien il-Kbir: 25.1.1981, on trunk of *Salix alba*, leg. MB and Stephen Schembri (EL76).

Family: STROPHARIACEAE

33. *STROPHARIA CORONILLA* Bulliard
Baħrija: 6.11.1983, among grass, leg. EL (EL36); Dingli Cliffs: among grass on rocky ground, leg. Charles Camilleri (EL375); Mizieb: 10.12.1984, leg. MB; Ta' Wied Rini: 24.11.1982, 1.12.1982, among *Cistus monspeliensis*, leg. MB (MB76, EL44/229).

Family: COPRINACEAE

34. *COPRINUS ATRAMENTARIUS* (Bulliard ex Fries) Fries
Near Addolorata Cemetery: 3.2.1982, on burnt ground beneath frondose trees, leg. MB (MB8).

35. *COPRINUS PICACEUS* (Bulliard) Fries

Msida: 18.11.1983, on mat of coconut fibre in a room, leg. EL; Sliema: 11.3.1982, on mat of coconut fibre, leg. Guido Lanfranco (EL19); Santa Venera: 29.10.1982, on mat of coconut fibre, leg. MB (MB49); Wied Ghollieqa (Kappara): January 1979, on decaying *Opuntia ficus-indica*, leg. MB (MB347). Also reports from Birkirkara and Dingli based on descriptions by Stephen Schembri and Michael Grima respectively, also on mats of coconut fibre.

Note: It will be seen that nearly all the records of this species are of fungi growing on mats of coconut fibre, invariably indoors. These differ from the specimens from Wied Ghollieqa in being gregarious and often tufted. The mat from which the Sliema specimen was collected was kept under observation for about 18 months during which time there was a continuous crop of basidiocarps, provided the mat was kept moist.

36. *COPRINUS PLICATILIS* Fries ex Curtis

Fiddien: 14.12.1985, several specimens among grass, leg. EL (EL349).

37. *PSATHYRELLA CANDOLLEANA* (Fries) Maire

Near Addolorata Cemetery (Marsa): 14/31.3.1982, on burnt ground under frondose trees, leg. MB and EL (EL42); Buskett: 2.1.1979, under a buttress root of *Cupressus sempervirens*, leg. EL and MB (EL52); Maqluba: 14.11.1982, under frondose trees, leg. MB, Joseph Cilia and Stephen Schembri (EL40); Sliema: March 1984, among grass on pavement strip, leg. EL; Verdala: 10.11.1982, on litter of *Cupressus*, *Olea* and *Nerium*, leg. MB (EL41); Wied il-Għasel (Mosta): 6.11.1983, on mud, leg. EL (EL361); Wied Ghollieqa (Kappara): 14.1.1985, under frondose trees, leg. MB (MB139, 140, 156); Wied ix-Xagħri (Girgenti): 12.2.1984, on leaf litter of frondose trees, leg. MB, EL and Salv. Fenech (MB115-7).

Note: This is one of the most widespread species. It is also extremely variable as a result of which a number of specimens which might be ascribable to this species have been left out since there persist doubts about their exact identity.

38. *PSATHYRELLA MELANTHINA* (Fries) sensu Kühner et Romagnesi

Ballut tal-Wardija: 16.11.1983, on *Ceratonia siliqua*, leg. MB; Ġnien il-Kbir: 3.1.1982, on *Salix alba*, leg. MB (EL24); Imġiebaħ: 4.1.1985, on *Quercus ilex*, leg. MB; Imtaħleb: 25.11.1984, on rotting softwood box, leg. EL; Magħtab: 6.11.1982, on *Opuntia ficus-indica*, leg. MB; Maqluba: 21.12.1980, on remains of *Arundo donax* and *Laurus nobilis*, leg. MB, Joseph Cilia and Patrick Schembri (EL33); Siggiewi: 13.12.1984, on *Opuntia ficus-indica*, leg. David Dandria (EL440); Tabía (Mtarfa): 19.11.1984, on *Ceratonia siliqua*, leg. MB; Ta' Braxia Cemetery (Pietà): 16.12.1982, on *Laurus nobilis*, leg. MB (MB81); Wied Ghollieqa (Kappara): January 1979, on remains of *Opuntia ficus-indica*, leg. MB (MB347); 8.12.1980, leg. MB; 23.2.1982, leg. MB (EL55); 30.12.1981, on leaf litter, leg. MB (EL54); 22.11.1983, on *Ceratonia siliqua*, leg. MB (EL371).

Note: A widespread and variable species, always associated with dead, more or less woody substrates. The Imtaħleb record was quoted in a stencilled field note (LANFRANCO, 1984c).

Family: LEPIDOTACEAE

39. *LEPIOTA NAUCINA* Fries

North of Qammieh: 12.11.1983, among grass, leg. MB (MB122).

40. *LEPIOTA CRISTATA* (Albertini et von Schweinitz ex Fries) Kummer

Qormi: on compost in a flower-pot, leg. Charles Camilleri (EL359).

41. *HIATULA BREBISSONI* (Godey) Locquin

Hamrun: Spring 1983, hanging down from a roof with wooden beams, leg. Charles Camilleri (EL370).

Family: AGARICACEAE

42. *AGARICUS XANTHODERMUS* Geneviev

Attard: October 1983, in garden, leg. Mark Farrugia (EL441); Gwardamangia: 8.11.1982, in garden, leg. Antoine Lanfranco (EL164); Hal Farrug: 8.12.1982, open ground, leg. MB and Carmelo Briffa; Naxxar: 14.10.1985, in garden, leg. Pauline Miceli (EL442); Sliema: 27.10.1975, in garden, leg. Victor Buhagiar (EL165); Verdala: 19.11.1982, open ground, leg. MB (EL163); Tal-Virtù (Rabat): 24.10.1983, in garden, leg. Grace Agius-Bonello (EL357).

Note: This species is fairly frequent in gardens. Most of the specimens were brought to our attention by persons wishing to know whether the species is edible. A number of aberrant forms have been encountered. These have not been cited since doubt persists about their identity.

Family: AMANITACEAE

43. *AMANITA OVOIDEA* Fries ex Bulliard

Wardija (northern slope): 30.10.1985, under *Pinus halepensis*, leg. MB, Salv. Fenech and Sunny Vassallo (a local farmer) (MB169).

44. *AMANITA VERNA* (Bulliard ex Fries) Persoon ex Vittadini

Maqluba: 21.12.1980, under frondose trees, leg. MB and Joseph Cilia (EL187).

Note: Annulus not irregularly torn as seen in most illustrations.

Family: PLUTEACEAE

45. *VOLVARIELLA SPECIOSA* (Fries) Singer var. *SPECIOSA*

Argotti Botanic Gardens (Floriana): 17.12.1954, leg. Guido Lanfranco; Manoel Island: 3.3.1968, among grass, leg. Mario Gauci; Ġnejna: 12.2.1981, on clay, leg. MB (EL184); Laroka (Buskett): 19.11.1972, among grass, leg. EL (EL169); Magħtab: 17.1.1982, on open ground, leg. MB (EL179); Maqluba: 4.1.1981, under frondose trees, MB and Stephen Schembri (EL177); Msida: 22.2.1982, on grass, leg. Jeremy Lanfranco (EL175); Paola: January 1982, in public garden, leg. Mario Zammit; Qaliet (St. Julians): 13.12.1983, on grass, leg. EL (EL7390); St. George's Bay (St. Julians): 24.11.1976, among grass, leg. MB (EL171); St. Edward's College (Cottonera): 23.1.1971, in garden, leg. Guido Lanfranco (EL180); San Anton Gardens (Attard): February 1982, leg. MB (EL174); Sliema: 30.11.1982, in garden, leg. EL (EL294); Wied Ghollieqa (Kappara): 7.2.1982, among grass, leg. EL (EL169); Wied Ghomor (St. Julians): 13.12.1981, on grass among *Foeniculum vulgare*, leg. EL and MB (EL1773); 20.2.1982, leg. Guido Lanfranco (EL178); Wied il-Lunzjata (GOZO): 6.3.1984, in grass, leg. Raymond Galea; New Lyceum grounds (Msida): under *Citrus* trees., leg. EL.

Note: One of the largest and most frequently encountered fungi in the Maltese Islands. SACCARDO (1915) and SOMMIER and CARUANA GATTO (1915) record *Volvaria gloiocephala* DC. This is now usually regarded as a variety of *Volvariella speciosa* and its proper citation at the varietal level would be *Volvariella speciosa* var. *gloiocephala* (DC. ex Fries) Singer. Our experience suggests that the type is much more frequent than the variety. KÜHNER and ROMAGNESI (1953) quote M. Jossier and that one can find a whole gamut of forms linking the two varieties growing in the same site. We have experienced this at Wied Għomor where both type and variety, as well as intermediates were present. Specimens of var. *gloiocephala* which we have seen tend to be smaller than the type. Specimens of the type often attain a considerable size. Some pilei measured had a diameter of up to 14 cm. The records from Manoel Island and Gnejna refer to specimens with small basidiocarps with pileus measuring 4 cm. to 6 cm and with a relatively short stipe. In gross morphology they resemble *Volvaria media* sensu Quelet as described by KÜHNER and ROMAGNESI (1953) who give the clear impression that this is a doubtful and poorly known species. The spores of the Gnejna specimens measure 13.5 - 20.0 x 7.0 - 10.0 μm which places them in the same range as *Volvariella speciosa*. We feel that these specimens fit comfortably within the concept of *V. speciosa* var. *speciosa*.

Family: RUSSULACEAE

46. *LACTARIUS SANGUIFLUUS* Paulet

Ta'Wied Rini: 23.11.1982, under *Cistus monspeliensis*, leg. MB (MB106/120, EL226); 27.12.1984, leg. MB, 7.11.1985, leg. MB.

Note: Residents of the locality collect this species for food, calling it "FAQQIEH TAD-DEMM" which translates as "Blood Mushroom".

47. *RUSSULA LEPIDA* Fries

Ta' Wied Rini: 7.11.1982, under *Cistus monspeliensis*, leg. MB (MB54, EL221); 4.11.1984, 3.12.1984, leg. MB (EL425).

Note: The cuticle of the pileus varies from light red to nearly white. The stipe is usually flushed pinkish but this colour occasionally disappears.

48. *RUSSULA XERAMPHELINA* (Schaeffer ex Secretan) Fries

Ballut tal-Wardija: 20.11.1982, under *Quercus ilex*, leg. MB (EL225).

Note: Grows together with very large Russulae with pileus often reaching 21 cm. in diameter. These vary from typical *R. xerampelina* in that the pileus cuticle is ochre-yellow to greyish-brown (in younger specimens). These did not respond to the ferrous sulphate test.

Class: GASTEROMYCETES

Order: LYCOPERDALES

Family: LYCOPERDACEAE

49. *CALVATIA EXCIPULIFORME* (Persoon) Perdeck

Ballut tal-Wardija: 20.11.1982, under *Quercus ilex*, leg. MB (MB876).

Order: NIDULARIALES

Family: NIDULARIACEAE

50. *CYATHUS OLLA* Persoon

Pietà: 11.2.1981, in a flower-pot, leg. EL and Hubert Spiteri (EL6063);
Verdala: 2.1.1981, under *Pistacia lentiscus*, leg. EL, MB, Patrick Schembri
and Stephen Schembri (EL228).

CONCLUSION

The recent discovery of such a large number of species is due to the fact that there has been little systematic effort to investigate the macrofungi. Most previous work has tended to stress the phytopathological species while there is little interest locally in the use of indigenous macrofungi for gastronomic purposes; indeed only *Pleurotus nebrodensis* and *Agaricus campestris* have been recorded as appearing for sale in market-places (SOMMIER and CARUANA GATTO, 1915).

As can be seen from the records in this paper, macrofungi have been seen in various localities and habitats. It is evident that certain areas have a richer macromycoflora than others. Among the most favoured localities are the Buskett/Verdala area which is a semi-artificial evergreen wood dominated by conifers, especially *Pinus helepensis* and *Cupressus sempervirens*; Ta' Wied Rini in which the main habitat is a low maquis dominated by *Cistus monspeliensis* and Wied Ghollieqa, a small valley dominated by *Ceratonia siliqua* and *Opuntia ficus-indica* which lies in a highly urbanized area and is much subject to human interference. Several trees at Wied Ghollieqa have been recently destroyed and this has resulted in a substantial decrease in the mycoflora. To these localities one may add the few residual populations of *Quercus ilex* at Ballut tal-Wardija, Imġiebañ, Wied Ħażrun and Il-Bosk (in the Buskett area). As may be expected open ground species are extremely sporadic as a result of lack of water and shelter.

The accumulated information is now making it possible to assess the relative frequency of macrofungal species and it appears that the most widespread are *Agaricus xanthodermus*, *Volvariella speciosa*, *Psathyrella melanthina* and *Psathyrella candolleana*. It is odd that none of these species had been recorded previously. Some undetermined species of *Coprinus*, *Psathyrella* and *Inocybe* also seem to be frequent. Of the major genera, only *Cortinarius* does not seem to be well represented.

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