

## Macromycetes Determined in Silifke (Mersin) District

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### ABSTRACT

This study was carried out on the macrofungi samples collected from Silifke district of Mersin province. As a result, 122 macromycete species belonging to 91 genera, 48 families, 18 orders, and 7 classes, within *Ascomycota* and *Basidiomycota* were determined. Including the previously reported 11 species, a total of 133 macromycete taxa were compiled from the region. The list of the taxa was provided together with their habitats, collection dates, voucher numbers, and the citations for those reported before.

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## Silifke (Mersin) Yöresinde Belirlenen Makromantarlar

### ÖZET

Bu çalışma Mersin ilinin Silifke ilçesinden toplanan makromantar örnekleri üzerinde gerçekleştirilmiştir. Sonuç olarak, *Ascomycota* ve *Basidiomycota* bölümleri içinde yer alan 7 sınıf, 18 takım, 48 familya ve 91 cinsine ait 122 makromantar türü tespit edilmiştir. Önceden rapor edilmiş 11 tür de dahil edilerek bölgeden toplamda 133 makromantar taksonu derlenmiştir. Taksonların listesi, türlerin habitatları, toplanma tarihleri, toplayıcı numaraları ve önceden rapor edilenlerin atıflarıyla birlikte verilmiştir.

### Botanik

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### Anahtar Kelimeler

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Taksonomi  
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## INTRODUCTION

Silifke is a district of Mersin province within Mediterranean Region of Türkiye (Fig. 1). It is situated between 36°05'-37°00' northern latitudes and 33°32'-34°08' eastern longitudes, and surrounded by Erdemli to the east, Mut to the north, Gülnar and Aydınçık to the west, and Mediterranean Sea to the south. The area falls in Mediterranean floristic region within Holarctic flora kingdom (Davis, 1965) with a mean annual temperature of 19.5°C and 584 kg/m<sup>2</sup> rainfall.

The altitude of the research area starts from sea level and goes up to 2050 m. The plant cover shows variations depending on altitude and the topography. Marshy and halophytic formations such as *Eucalyptus* L'Hér., *Juncus* L., *Limonium* Phil., *Phragmites* Adans., *Tamarix* L., *Tanacetum* L.,

*Chenopodium* L. are abundant at coastal dunes. Then immediately macqi formation starts generally with *Olea* L., *Arbutus* L., *Ceratonia* L., *Quercus* L., *Laurus* L., *Cistus* L., *Phillyrea* L., *Arbutus* L., *Erica* L. and *Pistacia* L. Naturally growing or planted *Pinus brutia* L. is the dominant tree vegetation especially at Göksu river basin. *Pinus nigra* Ten., *Abies cilicica* subsp. *isaurica* (Coode & Cullen) Silba, and *Juniperus excelsa* M.Bieb. populations are also visible at higher elevations. *Populus* L., *Salix* L. and *Platanus* L., species are abundant along stream and river sides.

Işıloğlu & Watling (1992) and Işıloğlu & Öder (1995) reported some macromycete taxa from Silifke district in their works both concerning with the Mediterranean region of Turkey. Some similar studies had also been carried out in neighboring regions (Öztürk et al., 2003; Doğan et al., 2007), but

the current checklist (Sesli et al., 2020) and the latest studies (Acar et al., 2021; Çetinkaya & Uzun, 2021; Doğan et al., 2021; Keleş & Kaya, 2021; Kesici & Uzun, 2021; Şelem et al., 2021) indicated that there isn't a specific work on the macrofungal biodiversity of Silifke district. The study aims to contribute to the mycobiota of Turkey by determining the macrofungal biodiversity Silifke district.

## MATERIALS and METHOD

Field surveys were carried out within the boundaries of Silifke district between 2017-2019. Morphological features such as size, color, shape and texture of the sporocarp were recorded as these features might change with drying.

During the field study, information about the ecology and geographic position of the samples was collected and they were photographed at their natural habitats. GPS data for the localities of fungi were obtained using a Magellan SporTrack Pro GPS Receiver (Table 1), and color photographs were taken by a Sony HX-400V digital camera. Microscopic investigations were carried out on dried samples. Microscopic measurements were made from preparations mounted in water or 3% KOH. A Nikon Eclipse Ci-S trinocular light microscope was used for microscopic investigations. Identification of the collected materials was confirmed using the works of Caillet & Moyne (1980), Breitenbach & Kränzlin (1984-2000), Benkert (1995, 2007), Miller & Miller (1988), Candusso & Lanzoni (1990), Wang & Kimbrough (1992), Courtecuisse & Duhem (1995), Pegler et al. (1995), Bessette et al. (1997, 2007), Cappelli (1997), Ellis & Ellis (1997), Hansen & Knudsen (1992, 1997, 2000), Heilmann-Clausen et al. (1998), Montecchi & Sarasini (2000), Arroyo et al. (2005), Kränzlin (2005), Medardi (2006), Trappe et al. (2007), Hausknecht (2009), Jaklitsch (2009), Antonín & Noordeloos (2010), Philips (2010), Thompson (2013), Beug et al. (2014), Cripps et al. (2016) and Siegel & Schwarz (2016).

Names of fungi and author's abbreviations follow indexfungorum.org (accessed on 20 December 2021). Voucher specimens are deposited in Karamanoğlu Mehmetbey University, Science Faculty, Department of Biology, Karaman.

## RESULTS

The determined taxa are listed in alphabetical order together with their habitats, localities, collection dates, and accession numbers. For the previously reported taxa, only the citations of the presenting paper were provided.

**Ascomycota** Whittaker

**Leotiomycetes** O.E. Erikss. & Winka

**Helotiales** Nannf. ex Korf & Lizoň

**Gelatinodiscaceae** S.E. Carp.

1. **Ascocoryne sarcoides** (Jacq.) J.W. Groves & D.E. Wilson: On *Populus* sp. stump, locality 33, 13.11.2019, DerKap-357; locality 34, 13.11.2019, DerKap-370.

**Rhytismatales** M.E. Barr ex Minter

**Calloriaceae** L. Marchand

2. **Stamnaria americana** Masee & Morgan: (Kaplan et al., 2021).

**Orbiliomycetes** O.E. Erikss. & Baral

**Orbiliales** Baral, O.E. Erikss., G. Marson & E. Weber

**Orbiliaceae** Nannf.

3. **Orbilium sarraziniana** Boud.: On dead *Populus* sp. twigs, locality 34, 13.11.2019, DerKap-371.

**Pezizomycetes** O.E. Erikss. & Winka

**Pezizales** J. Schröt.

**Ascobolaceae** Boud. ex Sacc.

4. **Ascobolus behntziensis** Kirschst.: On sandy soil under *Salix* sp., locality 29, 25.09.2019, DerKap-227.

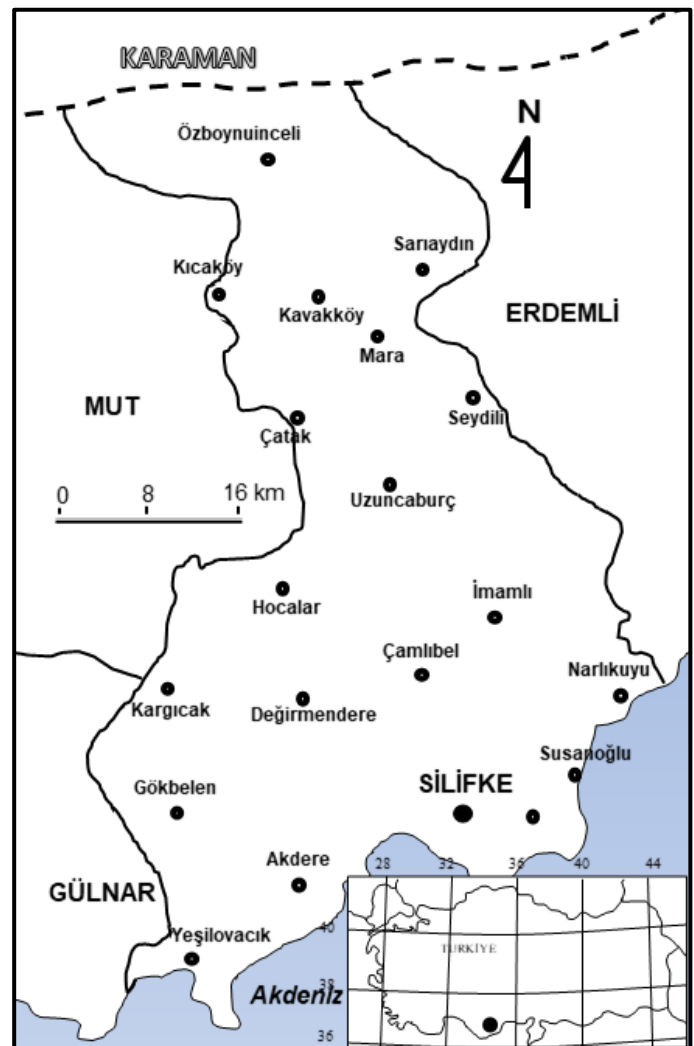


Figure 1. Map of the research area

Şekil 1. Araştırma alanının haritası

Table 1. Collection localities of the macrofungal samples  
*Çizelge 1. Makromantar örneklerinin toplanma lokaliteleri*

Loc. No	Locality name	Coordinates	Altitude (m)
1	Altinkum village	36°19'N-34°04'E	1
2	Altinkum village	36°20'N-34°03'E	5
3	Altinkum village	36°21'N-34°03'E	5
4	Atayurt village	36°23'N-34°02'E	20
5	Bahçeköy village	36°31'N-34°00'E	10
6	Boğsak village	36°15'N-33°47'E	230
7	Boğsak village	36°15'N-33°48'E	85
8	Bozağaç village	36°36'N-33°52'E	1400
9	Cambazlı village	36°31'N-33°59'E	860
10	City Centre	36°22'N-33°55'E	20
11	Çadırlı village	36°21'N-33°45'E	790
12	Çalıbozkır village	36°30'N-33°52'E	1320
13	Çamlıca village	36°20'N-33°41'E	1100
14	Değirmendere village	36°23'N-33°48'E	185
15	Değirmendere village	36°23'N-33°49'E	76
16	Değirmendere village	36°24'N-33°48'E	40
17	Değirmendere village	36°26'N-33°46'E	50
18	Evkafçiftliği village	36°27'N-33°37'E	90
19	Evkafçiftliği village	36°27'N-33°38'E	260
20	Evkafçiftliği village	36°28'N-33°38'E	355
21	Gazi Çiftliği village	36°22'N-34°02'E	5
22	Gazi Çiftliği village	36°22'N-34°04'E	1
23	Hotamış village	36°41'N-33°57'E	1395
24	Kapızlı village	36°22'N-34°04'E	5
25	Kargıcak village	36°25'N-33°38'E	90
26	Kargıcak village	36°25'N-33°39'E	230
27	Kargıcak village	36°26'N-33°38'E	110
28	Kavak village	36°42'N-33°48'E	1340
29	Kavak village	36°43'N-33°48'E	1365
30	Kayabaşı village	36°20'N-33°45'E	725
31	Kayabaşı village	36°22'N-33°50'E	320
32	Keşli Türkmenli village	36°30'N-33°57'E	845
33	Kıca village	36°42'N-33°44'E	1270
34	Kıca village	36°43'N-33°46'E	1300
35	Kırobası village	36°44'N-33°55'E	1450
36	Kocaoluk village	36°43'N-33°55'E	1300
37	Kocaoluk village	36°43'N-33°56'E	1430
38	Kocaoluk village	36°44'N-33°56'E	1320
39	Meydan village	36°31'N-33°57'E	915
40	Nuru village	36°23'N-33°34'E	850
41	Nuru village	36°24'N-33°34'E	830
42	Pelitpınarı village	36°21'N-33°35'E	990
43	Pelitpınarı village	36°22'N-33°35'E	925
44	Sarıaydın village	36°45'N-33°55'E	1320
45	Sökün village	36°19'N-34°01'E	1
46	Susanoğlu village	36°23'N-34°04'E	5
47	Uzuncaburç village	36°32'N-33°56'E	1010
48	Uzuncaburç village	36°33'N-33°55'E	1100

5. *Ascobolus furfuraceus* Pers.: On decaying cow dung, locality 2, 12.11.2018, DerKap-072.

#### *Helvellaceae* Fr.

6. *Dissingia leucomelaena* (Pers.) K. Hansen & X.H. Wang: Among needle litter, locality 26, 11.03.2019, DerKap-164; locality 14, 24.03.2019, DerKap-173; on soil among grass, locality 32, 24.03.2019, DerKap-178.

7. *Helvella acetabulum* (L.) Quéf.: Among leaf litter under *Quercus* sp., locality 42, 19.03.2019, DerKap-169.

#### *Incertae Sedis*

8. *Psilopezia nummularia* Berk.: On sandy soil under *Populus* sp., locality 44, 21.09.2019, DerKap-202; 30.09.2019, DerKap-281; locality 36, 30.10.2019, DerKap-290.

#### *Morchellaceae* Rehb.

9. *Morchella deliciosa* Fr.: Among leaf litter under *Quercus* sp., locality 13, 22.04.2018, DerKap-027.

10. *Morchella elata* Fr.: Among needle litter under *Pinus* sp., locality 47, 07.03.2018, DerKap-024.

11. *Morchella tridentina* Bres.: Among leaf litter under *Quercus* sp., locality 47, 20.03.2019, DerKap-170.

#### *Pezizaceae* Dumort.

12. *Phylloscypha boltonii* (Quéf.) Van Vooren & Hairaud: On sand and sandy soil along streamside, locality 25, 29.10.2019, DerKap-252; locality 25, 09.11.2019, DerKap-294.

13. *Sarcosphaera coronaria* (Jacq.) J. Schröt.: Among needle litter under *Pinus* sp., locality 14, 11.03.2019, DerKap-167.

#### *Pyronemataceae* Corda

14. *Anthracobia melaloma* (Alb. & Schwein.) Arnould: On ash and fired roots of *Juncus acutus* L. locality 3, 27.01.2018, DerKap-012; locality 3, 06.01.2019, DerKap-129.

15. *Cheilymenia theleboloides* (Alb. & Schwein.) Boud.: On cow dung, locality 25, 09.11.2019, DerKap-295.

16. *Geopora arenosa* (Fuckel) S. Ahmad: On sandy soil among moss, locality 34, 13.11.2019, DerKap-379.

17. *Geopora sumneriana* (Cooke ex W. Phillips) M. Torre: Among needle litter under *Pinus* sp., locality 40, 22.04.2018, DerKap-028.

18. *Octospora gemmicola* Benkert: On *Bryum* sp., locality 12, 21.09.2019, DerKap-204.

19. *Octospora musci-muralis* Graddon: On moss along riverside, locality 38, 30.10.2019, DerKap-265.

20. *Pyronema domesticum* (Sowerby) Sacc.: On ash under *Salix* sp., locality 44, 21.09.2019, DerKap-195.

21. *Pyronema omphalodes* (Bull.) Fuckel: On ash, locality 4, 25.09.2019, DerKap-235.

22. *Scutellinia scutellata* (L.) Lambotte: On sandy soil among moss, locality 44, 21.09.2019, DerKap-198; locality 37, 07.10.2018, DerKap-053.

23. *Smardaea planchonis* (Dunal ex Boud.) Korf & W.Y. Zhuang: On sandy soil under *Populus* sp., locality 27, 09.11.2019, DerKap-298.

24. *Tarzetta cupularis* (L.) Svrček: On soil among leaf & needle litter under mixed forest, locality 16, 24.03.2019, DerKap-171.

25. *Tricharina ochroleuca* (Sacc.) Eckblad: On sandy soil under *Salix* sp., locality 44, 25.09.2019, DerKap-229.

26. *Tricharina praecox* (P. Karst.) Dennis: On sandy soil under *Populus* sp., locality 27, 09.11.2019, DerKap-299.

27. *Trichophaeopsis bicuspis* (Boud.) Korf & Erb: On sandy soil under *Populus* sp., locality 25, 25.09.2019, DerKap-218; locality 29, 25.09.2019, DerKap-228.

#### *Sarcoscyphaceae* Le Gal ex Eckblad

28. *Pithya cupressina* (Batsch) Fuckel: On dead *Cupressus* sp. leaves, locality 35, 09.11.2019, DerKap-320; locality 37, 13.11.2019, DerKap-367.

#### *Tuberaceae* Dumort.

29. *Tuber nitidum* Vittad.: In soil under *Pinus* sp., locality 14, 24.03.2019, DerKap-175.

#### *Sordariomycetes* O.E. Erikss. & Winka

#### *Diaporthales* Nannf.

#### *Valsaceae* Tul. & C. Tul.

30. *Valsa sordida* Nitschke: On *Populus* sp. stump, locality 28, 09.11.2019, DerKap-313; locality 33, 13.11.2019, DerKap-362.

#### *Hypocreales* Lindau

#### *Nectriaceae* Tul. & C. Tul.

31. *Nectria peziza* (Tode) Fr.: On decaying *Salix* sp. stump, locality 44, 30.10.2019, DerKap-279; locality 34, 13.11.2019, DerKap-377.

#### *Basidiomycota* R.T. Moore

#### *Agaricomycetes* Doweld

#### *Agaricales* Underw.

#### *Agaricaceae* Chevall.

32. *Agaricus bisporus* (J.E. Lange) Imbach: On soil in *Juniperus* sp. forest, locality 37, 13.11.2019, DerKap-365.

33. *Agaricus bitorquis* (Quéf.) Sacc.: On sandy soil among grass, locality 1, 17.12.2018, DerKap-110.

34. *Agaricus campestris* L.: On soil among mosses, locality 35, 09.11.2019, DerKap-321.

35. *Agaricus sylvicola* (Vittad.) Peck: On soil among needle litter under *Pinus* sp., locality 14, 23.12.2018, DerKap-117.

36. *Apioperdon pyriforme* (Schaeff.) Vizzini: On soil

among grass, locality 32, 24.03.2019, DerKap-176; on soil under *Juniperus* sp., locality 23, 09.11.2019, DerKap-353.

37. *Coprinus comatus* (O.F. Müll.) Pers.: On soil among grass, locality 41, 21.09.2019, DerKap-184; locality 28, 09.11.2019, DerKap-311; locality 27, 27.11.2019, DerKap-390.

38. *Crucibulum laeve* (Huds.) Kambly: On decaying woody remains in *Juniperus* sp. forest, locality 23, 09.11.2019, DerKap-348.

39. *Cyathus olla* (Batsch) Pers.: On decaying woody remains in *Juniperus* sp. forest, locality 23, 09.11.2019, DerKap-355.

40. *Cystodermella cinnabarina* (Alb. & Schwein.) Harmaja: On soil among needle litter under *Pinus* sp., locality 32, 07.01.2019, DerKap-132.

41. *Lepiota cristata* (Bolton) P. Kumm.: On soil in *Juniperus* sp. forest, locality 23, 09.11.2019, DerKap-339.

42. *Lepiota helveola* Bres.: (Işıloğlu & Öder, 1995).

43. *Leucoagaricus leucothites* (Vittad.) Wasser: In meadow, locality 41, 21.09.2019, DerKap-183.

44. *Lycoperdon excipuliforme* (Scop.) Pers.: On soil among needle litter under *Pinus* sp., locality 32, 05.11.2018, DerKap-071.

45. *Lycoperdon molle* Pers.: On soil among needle litter under *Pinus* sp., locality 39, 07.10.2018, DerKap-049; locality 32, 19.11.2018, DerKap-076.

46. *Lycoperdon nigrescens* Pers.: On soil among needle litter under *Pinus* sp., locality 11, 09.12.2018, DerKap-098.

47. *Lycoperdon perlatum* Pers.: On soil among needle litter under *Pinus* sp., locality 32, 05.11.2018, DerKap-062; 24.03.2019, DerKap-180; locality 23, 09.11.2019, DerKap-354.

48. *Macrolepiota procera* (Scop.) Singer: On soil among needle litter under *Pinus* sp., locality 32, 05.11.2018, DerKap-061.

49. *Tulostoma brumale* Pers.: On soil among mosses in *Pinus* sp. forest, locality 32, 29.01.2019, DerKap-149; 24.03.2019, DerKap-179; locality 35, 09.11.2019, DerKap-322.

50. *Tulostoma fimbriatum* Fr.: On soil at *Pinus* sp. forest clearing, locality 7, 14.01.2019, DerKap-142; locality 23, 09.11.2019, DerKap-345; on soil in *Juniperus* sp. forest, locality 35, 09.11.2019, DerKap-323; locality 37, 13.11.2019, DerKap-368.

51. *Tulostoma squamosum* (J.F. Gmel.) Pers.: On soil in *Juniperus* sp. forest, locality 36, 30.10.2019, DerKap-274.

**Amanitaceae** R. Heim ex Pouzar

52. *Amanita ovoidea* (Bull.) Link: On soil among needle litter in *Pinus* sp. forest, locality 19,

29.10.2019, DerKap-241.

**Bolbitiaceae** Singer

53. *Conocybe apala* (Fr.) Arnolds: On manured soil among grass, locality 10, 21.09.2019, DerKap-203.

54. *Conocybe deliquescens* Hauskn. & Krisai: On soil among grass, locality 9, 08.10.2018, DerKap-056.

55. *Conocybe tenera* (Schaeff.) Fayod: On soil among grass, locality 44, 30.10.2019, DerKap-285.

56. *Galeropsis desertorum* Velen. & Dvořák: On soil among mosses in *Juniperus* sp. forest, locality 35, 09.11.2019, DerKap-319.

**Cyphellaceae** Lotsy

57. *Chondrostereum purpureum* (Pers.) Pouzar: On decaying *Populus* sp. stump, locality 28, 09.11.2019, DerKap-314.

**Hygrophoraceae** Lotsy

58. *Arrhenia spathulata* (Fr.) Redhead: On mosses in *Juniperus* sp. forest, locality 36, 30.10.2019, DerKap-268; locality 35, 09.11.2019, DerKap-325.

**Hymenogastraceae** Vittad.

59. *Hygrophorus chrysdon* (Batsch) Fr.: (Işıloğlu & Watling, 1992).

60. *Galerina pumila* (Pers.) Singer: On soil in *Juniperus* sp. forest, locality 36, 30.10.2019, DerKap-267.

61. *Hebeloma sinapizans* (Paulet) Gillet: (Işıloğlu & Watling, 1992).

62. *Psilocybe coronilla* (Bull.) Noordel.: On soil among grass, locality 26, 02.12.2018, DerKap-081.

**Inocybaceae** Jülich

63. *Crepidotus calolepis* (Fr.) P. Karst.: On decaying *Populus* sp. stump, locality 18, 29.10.2019, DerKap-255; locality 25, 27.11.2019, DerKap-392.

64. *Crepidotus epibryus* (Fr.) Quél.: On decaying *Populus* sp. stump, locality 25, 27.11.2019, DerKap-396.

65. *Inocybe lacera* (Fr.) P. Kumm.: On sandy soil under *Populus* sp., locality 44, 1320m, 21.09.2019, DerKap-200; locality 25, 25.09.2019, DerKap-207; locality 34, 13.11.2019, DerKap-372.

66. *Inosperma erubescens* (A. Blytt) Matheny & Esteve-Rav.: (Işıloğlu & Öder, 1995).

67. *Pseudosperma rimosum* (Bull.) Matheny & Esteve-Rav.: On sandy soil among grass under *Salix* sp., locality 29, 25.09.2019, DerKap-222; locality 44, 25.09.2019, DerKap-234; locality 16, 09.11.2019, DerKap-302.

**Marasmiaceae** Roze ex Kühner

68. *Marasmius oreades* (Bolton) Fr.: On soil among grass, locality 26, 29.10.2019, DerKap-243.

**Mycenaceae** Overeem

69. *Atheniella flavoalba* (Fr.) Redhead, Moncalvo,

Vilgalys, Desjardin & B.A. Perry: On soil under *Juniperus* sp., locality 35, 09.11.2019, DerKap-330.

70. *Mycena seynii* Quél.: On decaying *Pinus* sp. cones, locality 32, 05.11.2018, DerKap-064; locality 19, 02.12.2018, DerKap-064.

#### *Physalacriaceae* Corner

71. *Armillaria mellea* (Vahl) P. Kumm.: Around decaying *Salix* sp. stump, locality 16, 29.10.2019, DerKap-242.

72. *Cryptomarasmius minutus* (Peck) T.S. Jenkinson & Desjardin: On decaying *Populus* sp. leaves, locality 16, 09.11.2019, DerKap-305.

#### *Pleurotaceae* Kühner

73. *Hohenbuehelia petalooides* (Bull.) Schulzer: On soil in *Pinus* sp. forest clearing, locality 31, 09.12.2018, DerKap-094

74. *Pleurotus ostreatus* (Jacq.) P. Kumm.: On decaying *Morus* L. sp. stump, locality 21, 05.11.2018, DerKap-069; on decaying *Ficus* L. sp. stump, locality 2, 05.11.2018, DerKap-70; on decaying *Populus* sp. stump, locality 44, 25.09.2019, DerKap-231; locality 34, 13.11.2019, DerKap-382.

#### *Psathyrellaceae* Vilgalys, Moncalvo & Redhead

75. *Candolleomyces candolleanus* (Fr.) D. Wächt. & A. Melzer: Around decaying *Morus* sp. stump, locality 22, 03.12.2017, DerKap-002; around decaying *Populus* sp. stump, locality 29, 25.09.2019, DerKap-22; locality 27, 29.09.2019, DerKap-253.

76. *Coprinellus disseminatus* (Pers.) J.E. Lange: Among moss on decaying stump, locality 38, 07.10.2018, DerKap-050; locality 44, 21.09.2019, DerKap-194; locality 25, 25.09.2019, DerKap-210; on soil under *Populus* sp., locality 18, 29.10.2019, DerKap-256; locality 38, 30.10.2019, DerKap-263; locality 34, 13.11.2019, DerKap-381

77. *Coprinellus micaceus* (Bull.) Vilgalys, Hopple & Jacq. Johnson: On decaying *Morus* sp. stump, locality 3, 27.01.2018, DerKap-014; on decaying *Populus* sp. stump, locality 44, 21.09.2019, DerKap-189; locality 25, 25.09.2019, DerKap-209; locality 34, 13.11.2019, DerKap-364.

78. *Coprinopsis atramentaria* (Bull.) Redhead, Vilgalys & Moncalvo: On soil under *Populus* sp., locality 27, 29.10.2019, DerKap-254; locality 34, 13.11.2019, DerKap-374.

79. *Coprinopsis lagopus* (Fr.) Redhead, Vilgalys & Moncalvo: On decaying cow dung, locality 3, 03.12.2017, DerKap-004.

80. *Coprinopsis nivea* (Pers.) Redhead, Vilgalys & Moncalvo: On decaying cow dung, locality 3, 02.12.2017, DerKap-001.

81. *Parasola galericuliformis* (Losa ex Watling) Redhead, Vilgalys & Hopple: (Işiloğlu & Öder, 1995).

82. *Parasola plicatilis* (Curtis) Redhead, Vilgalys &

Hopple: On soil among grass, locality 26, 02.12.2018, DerKap-084; on sandy soil under *Populus* sp., locality 25, 25.09.2019, DerKap-215.

83. *Psathyrella ammophila* (Durieu & Lév.) P.D. Orton: On sand, locality 17, 27.11.2019, DerKap-402.

84. *Psathyrella longipes* (Peck) A.H. Sm.: On soil under *Populus* sp., locality 28, 09.11.2019, DerKap-309.

#### *Schizophyllaceae* Quél.

85. *Schizophyllum amplum* (Lév.) Nakasone: On decaying *Populus* sp. stump, locality 25, 25.09.2019, DerKap-216; locality 38, 25.09.2019, DerKap-237; locality 28, 09.11.2019, DerKap-310; locality 33, DerKap-363; on decaying *Pinus* sp. stump, locality 17, 27.11.2019, DerKap-406.

86. *Schizophyllum commune* Fr.: On decaying *Pinus* sp. stump, locality 16, 11.03.2019, DerKap-166; on decaying *Populus* sp. stump, locality 44, 25.09.2019, DerKap-232; locality 27, 29.10.2019, DerKap-251; locality 28, 09.11.2019, DerKap-312.

#### *Strophariaceae* Singer & A.H. Sm.

87. *Cyclocybe cylindracea* (DC.) Vizzini & Angelini: Around *Populus* sp. stump, locality 25, 25.09.2019, DerKap-206; locality 44, 25.09.2019, DerKap-230; locality 5, 12.10.2019, DerKap-238; on *Salix* sp. stump, locality 29, 25.09.2019, DerKap-221.

88. *Deconica pratensis* (P.D. Orton) Noordel.: (Işiloğlu & Öder, 1995).

89. *Pholiota carbonaria* (Fr.) Singer: (Işiloğlu & Watling, 1992).

90. *Pholiota populnea* (Pers.) Kuyper & Tjall.-Beuk.: On *Salix* sp. stump, locality 44, 30.10.2019, DerKap-287; locality 34, 13.11.2019, DerKap-384.

#### *Tricholomataceae* R. Heim ex Pouzar

91. *Lepista nuda* (Bull.) Cooke: Among grass in *Pinus* sp. forest clearing, locality 14, 23.12.2018, DerKap-121; on sandy soil along riverside, locality 15, 23.12.2018, DerKap-124.

92. *Myxomphalia maura* (Fr.) Hora: On soil among needle litter under *Pinus* sp., locality 27, 23.12.2018, DerKap-125.

93. *Tricholoma fracticum* (Britzelm.) Kreisel: Among leaf & needle litter in mixed forest, locality 6, 14.01.2019, DerKap-144; locality 35, 09.11.2019, DerKap-329; on soil under *Juniperus* sp., locality 23, 09.11.2019, DerKap-338.

94. *Tricholoma caligatum* (Viv.) Ricken: (Işiloğlu & Watling, 1992).

95. *Tricholoma terreum* (Schaeff.) P. Kumm.: On soil among needle litter under *Pinus* sp., locality 47, 07.01.2019, DerKap-135.

96. *Tricholoma ustale* (Fr.) P. Kumm.: (Işiloğlu & Öder, 1995).

**Auricularia lés** Bromhead

**Auriculariaceae** Fr.

97. *Auricularia mesenterica* (Dicks.) Pers.: On decaying *Morus* sp. stump, locality 3, 18.03.2019, DerKap-168.

**Boletales** E.-J. Gilbert

**Boletaceae** Chevall.

98. *Boletus edulis* Bull.: Among leaf litter under *Quercus* sp., locality 43, 21.09.2019, DerKap-186.

99. *Xerocomellus chrysenteron* (Bull.) Šutara: On soil among grass in forest clearing, locality 32, 05.11.2018, DerKap-059.

**Diplocystidiaceae** Kreisel

100. *Astraeus hygrometricus* (Pers.) Morgan: On soil under *Juniperus* sp., locality 36, 30.10.2019, DerKap-273; locality 35, 09.11.2019, DerKap-328; locality 23, 09.11.2019, DerKap-333.

**Gomphidiaceae** Maire ex Jülich

101. *Chroogomphus rutilus* (Schaeff.) O.K. Mill.: Among needle litter under *Pinus* sp., locality 32, 05.11.2018, DerKap-066; locality 14, 24.03.2019, DerKap-172.

**Rhizopogonaceae** Gäum. & C.W. Dodge

102. *Rhizopogon luteolus* Fr.: In soil under *Pinus* sp., locality 32, 29.01.2019, DerKap-151.

103. *Rhizopogon roseolus* (Corda) Th. Fr.: In soil under *Pinus* sp., locality 39, 07.10.2018, DerKap-046; locality 32, 05.11.2018, DerKap-068; locality 20, 02.12.2018, DerKap-086; locality 19, 27.11.2019, DerKap-399.

**Sclerodermataceae** Corda

104. *Pisolithus arhizus* (Scop.) Rauschert: On sandy soil under *Eucalyptus* sp., locality 24, 01.10.2018, DerKap-040; 02.02.2019, DerKap-157; locality 3, 07.10.2018, DerKap-044; locality 46, 30.10.2019, DerKap-262; on soil under *Quercus* sp., locality 43, 29.10.2019, DerKap-247; locality 41, 29.10.2019, DerKap-250.

105. *Scleroderma cepa* Pers.: On sandy soil under *Eucalyptus* locality 45, 07.10.2018, DerKap-045.

**Suillaceae** Besl & Bresinsky

106. *Suillus bellinii* (Inzenga) Kuntze: (Işıloğlu & Watling, 1992).

107. *Suillus collinitus* (Fr.) Kuntze: Among needle litter under *Pinus* sp., locality 39, 07.10.2018, DerKap-047; locality 6, 14.01.2019, DerKap-145.

108. *Suillus granulatus* (L.) Roussel: Among needle litter under *Pinus* sp., locality 32, 05.11.2018, DerKap-060; locality 30, 09.12.2018, DerKap-102.

109. *Suillus luteus* (L.) Roussel: Among needle litter under *Pinus* sp., locality 19, 02.12.2018, DerKap-079.

**Geastrales** K. Hosaka & Castellano

**Geastraceae** Corda

110. *Geastrum fimbriatum* Fr.: On soil under *Juniperus* sp., locality 36, 30.10.2019, DerKap-266; on soil under *Pinus* sp., locality 8, DerKap-356.

111. *Geastrum floriforme* Vittad.: On soil under *Juniperus* sp., locality 23, 09.11.2019, DerKap-350.

112. *Geastrum pectinatum* Pers.: On soil under *Pinus* sp., locality 39, 07.10.2018, DerKap-048; on soil under *Juniperus* sp., locality 35, 09.11.2019, DerKap-327.

113. *Schenella pityophila* (Malençon & Rioussat) Estrada & Lado: Under needle litter in *Pinus* sp. forest, locality 48, 27.11.2019, DerKap-407.

**Gloeophyllales** Thorn

**Gloeophyllaceae** Jülich

114. *Gloeophyllum odoratum* (Wulfen) Imazeki: On *Ceratonia* sp. roots, locality 16, 11.03.2019, DerKap-165.

**Hymenochaetales** Oberw.

**Hymenochaetaceae** Donk

115. *Phellinus igniarius* (L.) Quél.: On *Salix* sp. stump, locality 38, 07.10.2018, DerKap-055; locality 44, 21.09.2019, DerKap-187; locality 34, 13.11.2019, DerKap-373.

**Incertae Sedis**

116. *Trichaptum abietinum* (Pers. ex J.F. Gmel.) Ryvarden: On *Pinus* sp. stump, locality 23, 09.11.2019, DerKap-346.

**Polyporales** Gäum.

**Fomitopsidaceae** Jülich

117. *Antrodia albida* (Fr.) Donk: On decaying *Populus* sp. stump, locality 34, 13.11.2019, DerKap-369; locality 27, 27.11.2019, DerKap-397.

118. *Laetiporus sulphureus* (Bull.) Murrill: On *Salix* sp. stump, locality 17, 29.04.2018, DerKap-029.

**Ganodermataceae** Donk

119. *Ganoderma adspersum* (Schulzer) Donk: On dead *Eucalyptus* sp. stump, locality 24, 01.10.2018, DerKap-041.

**Meruliaceae** P. Karst.

120. *Bjerkandera adusta* (Willd.) P. Karst.: On decaying *Populus* sp. stump, locality 25, 25.09.2019, DerKap-217; locality 44, 30.10.019, DerKap-282; locality 18, 09.11.2019, DerKap-306.

121. *Phlebia tremellosa* (Schrad.) Nakasone & Burds.: On decaying *Populus* sp. stump, locality 33, 13.11.2019, DerKap-358; locality 27, 27.11.2019, DerKap-398.

**Polyporaceae** Fr. ex Corda

122. *Fomes fomentarius* (L.) Fr.: On decaying *Populus* sp. stump, locality 44, 21.09.2019, DerKap-188.

123. *Lentinus tigrinus* (Bull.) Fr.: Around *Salix* sp.

stump, locality 38, 07.10.2018, DerKap-054; locality 25, 25.09.2019, DerKap-208; locality 44, 25.09.2019, DerKap-233; locality 17, 27.11.2019, DerKap-403; around *Eucalyptus* sp. stump, locality 21, 07.11.2019, DerKap-292.

124. *Trametes trogii* Berk.: On decaying *Salix* sp. stump, locality 44, 21.09.2019, DerKap-196; on *Populus* sp. stump, locality 44, 30.10.2019, DerKap-286; locality 25, 25.09.2019, DerKap-211; locality 28, 09.11.2019, DerKap-315; locality 34, 13.11.2019, DerKap-383.

**Russulales** Kreisel ex P.M. Kirk, P.F. Cannon & J.C. David

**Russulaceae** Lotsy

125. *Lactarius deliciosus* (L.) Gray: Among leaf and needle litter in mixed forest, locality 11, locality 14, 09.12.2018, DerKap-096; 23.12.2018, DerKap-120.

126. *Russula atropurpurea* (Krombh.) Britzelm.: On soil among needle litter under *Pinus* sp., locality 11, 09.12.2018, DerKap-100.

127. *Russula rosea* Pers.: Among needle litter under *Pinus* sp., locality 32, 05.11.2018, DerKap-063.

**Stereaceae** Pilát

128. *Stereum hirsutum* (Willd.) Pers.: On decaying *Pinus* sp. stump, locality 8, 23.06.2019, DerKap-181.

**Sebacinales** M. Weiss, Selosse, Rexer, A. Urb. & Oberw.

**Sebacinaceae** K. Wells & Oberw.

129. *Sebacina incrustans* (Pers.) Tul. & C. Tul.: On dead *Juniperus* sp. twigs, locality 36, 30.10.2019, DerKap-271.

**Thelephorales** Corner ex Oberw.

**Bankeraceae** Donk

130. *Hydnellum scabrosum* (Fr.) E. Larss., K.H. Larss. & Kõljalg: (Işiloğlu & Watling, 1992).

131. *Sarcodon imbricatus* (L.) P. Karst: On soil among leaf & needle litter, locality 30, 09.12.2018, DerKap-104.

**Dacrymycetes** Doweld

**Dacrymycetales** Henn.

**Dacrymycetaceae** J. Schröt.

132. *Dacrymyces variisporus* McNabb: On decaying *Pinus* sp. twigs, locality 19, 27.11.2019, DerKap-400.

**Pucciniomycetes** R. Bauer, Begerow, J.P. Samp., M. Weiss & Oberw.

**Pucciniales** Caruel

**Pucciniaceae** Chevall.

133. *Gymnosporangium clavariiforme* (Wulfen) DC.: On dead *Juniperus* sp. stem, locality 8, 11.03.2019, DerKap-163.

**DISCUSSION and CONCLUSION**

A list of 133 macrofungi species was compiled from Silifke district. Thirty-one of the existing taxa (%23.31) belong to *Ascomycota* and 102 (%76.69) to *Basidiomycota*. The taxa are distributed in 7 classes (*Agaricomycetes* 100, *Pezizomycetes* 26, *Leotiomycetes* 2, *Sordariomycetes* 2, *Dacrymycetes* 1, *Orbiliomycetes* 1, *Pucciniomycetes* 1) and 18 orders. The order-wise distribution of the determined taxa is presented in Figure 2. The taxa are distributed in 48 families and 96 genera. Forty eight percent (64) of the existing taxa are distributed within the most crowded 5 families (*Agaricaceae*, *Pyronemataceae*, *Psathyrellaceae*, *Tricholomataceae* and *Inocybaceae* with 29, 14, 10, 6 and 5 taxa respectively). *Agaricus*, *Lycoperdon*, *Suillus* and *Tricholoma*, were found to be the most crowded genera each with 4 taxa. Six of the genera (*Conocybe*, *Coprinopsis*, *Geastrum*, *Morchella*, *Tulostoma*) are represented with 3 taxa, 15 of them (*Ascobolus*, *Coprinellus*, *Crepidotus*, *Geopora*, *Inocybe*, *Lepiota*, *Octospora*, *Parasola*, *Pholiota*, *Psathyrella*, *Pyronema*, *Rhizopogon*, *Russula*, *Schizophyllum*, *Tricharina*) are represented with 2 taxa while the other genera are represented in the region with only one taxon.

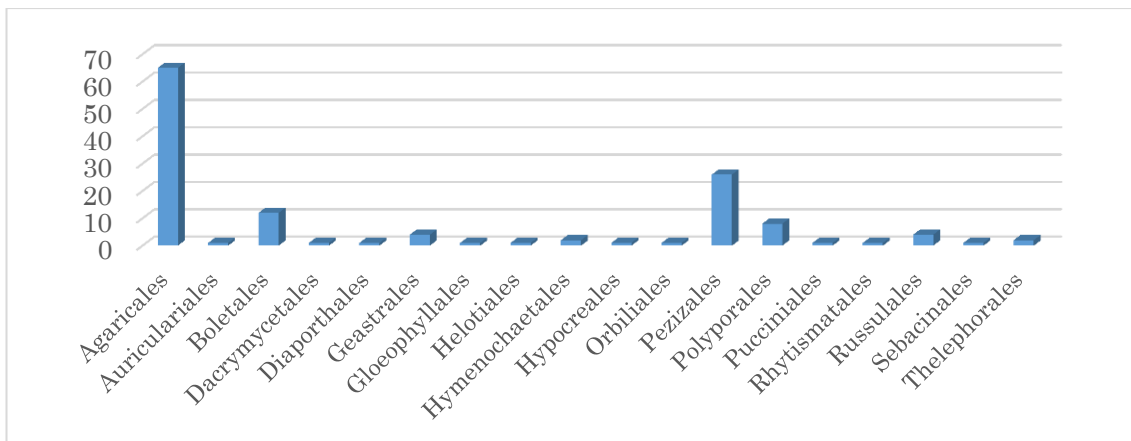


Figure 2. Order-wise distribution of the macrofungi taxa existing in Silifke  
Şekil 2. Silifke’de bulunan taksonların takım bazında dağılımı



One hundred and twenty two of the existing taxa are new for Silifke district while 11 of them (*Lepiota helveola*, *Hydnellum scabrosum*, *Hygrophorus chrysodon*, *Hebeloma sinapizans*, *Inosperma erubescens*, *Parasola galericuliformis*, *Pisolithus arhizus*, *Deconica pratensis*, *Pholiota carbonaria*, *Suillus bellinii*, *Tricholoma caligatum* and *Tricholoma ustale*) were presented in previous studies (Işiloğlu & Watling, 1992; Işiloğlu & Öder, 1995).

Thirty-nine (%29.32) of the taxa are edible. Five of them are collected and consumed by local public. Among the consumed taxa, *Pleurotus ostreatus* is known as “kavak mantarı”, *Morchella deliciosa*, *M. elata* and *M. tridentina* are known as “kuzu göbeği”, and *Lactarius deliciosus* is known as “çıntar mantarı”. Except *P. ostreatus*, all of the locally

consumed taxa also have regional economic importance. Eighty eight of the existing taxa are regarded as inedible while six (*Coprinopsis atramentaria*, *Hebeloma sinapizans*, *Inocybe lacera*, *I. rimosa*, *Lepiota cristata*, *L. helveola*) are more or less poisonous.

Seventy five of the total taxa are terricolous, 34 are lignicolous, 4 are bryophilous, 4 are coprophilous, 4 are herbicolous and 3 are pyrophilous, while five are hypogeous or semi-hypogeous.

The existing taxa were also compared with the studies carried out in mediterranean and neighboring regions and some similarities were observed. These studies and the similarity percentages are given in Table 2. The reason for this similarity may be the common climate and vegetation.

Table 2. Similarity percentages of Silifke district with the studies performed in neighbouring regions  
*Çizelge 2. Silifke ile komşu bölgelerde gerçekleştirilen çalışmaların benzerlik yüzdeleri*

	Province/ District	# of Identical taxa	Total taxa	Similarity (%)
Gezer (2000)	Antalya	33	81	40.74
Aktaş et al. (2003)	Konya	23	74	31.08
Öztürk et al. (2003)	Antalya	31	188	16.49
Doğan & Öztürk (2006)	Karaman	43	202	21.29
Doğan et al. (2007)	Mersin	27	95	28.42
Kaya (2009)	Gaziantep	35	105	33.33
Kaya et al. (2009)	Kahramanmaraş	36	110	32.73
Doğan et al. (2012)	Adana	29	186	15.19
Solak et al. (2014)	Antalya	37	136	27.21
Kaya (2015)	Şanlıurfa	41	122	33.61

### Author's Contributions

Authors declare the contribution of the authors is equal.

### Statement of Conflict of Interest

The authors have declared no conflict of interest.

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