

## Macrofungi of Nakhchivan (Azerbaijan) Autonomous Republic

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**Abstract:** In this article, an attempt has been made to establish the species composition of the macrofungi of Nakhchivan Autonomous Republic of Azerbaijan. A total of 73 species of macromycetes were registered, 2 belonging to the division Ascomycota and 71 to the division Basidiomycota. The trophic structure for the fungal species is as follows: 22 lignicolous and 51 terricolous. Fifty-three species were added to the Nakhchivan Autonomous Republic mycobiota; 8 species of them were added to the mycobiota of Azerbaijan as new records.

**Key words:** Macrofungi, new record, Nakhchivan, Azerbaijan

### Introduction

Nakhchivan Autonomous Republic (AR) is a part of the Azerbaijan Republic. It is located in the south-western part of the Lesser Caucasus Mountains. The total length of the republic's border is 398 km. The region covers 5363 km<sup>2</sup> and borders Armenia (221 km) to the east and north, Iran (179 km) to the south and west, and Turkey (15 km) to the north-west. Its highest point is Gapudzhik peak (3906 m) and the lowest point of the autonomous republic (600 m) is situated on the left bank of the Aras River, at the foot of the steep slope of Soyugdag ridge.

The climate of the autonomous republic is of extreme continental type, with hot summers and severe winters. The average annual temperature is 10-14 °C. Areas located above 2300-2400 m have a mean annual air temperature below 4 °C. The maximum air temperature in the lower part of the republic is 18

°C in January and 41-43 °C in July-August. Relative humidity varies in different parts of the republic. In the city of Nakhchivan it is 74%-76% in December-February and 39%-40% in July-August. In the middle mountain zone it is 69%-78% and 52%-55% in December-February and July-August, respectively, which is similar to the foothills of the Lesser Caucasus. The main bulk of precipitation falls in spring (March-May) and the minimum in July-August. In the lowland part the annual rainfall is 210-310 mm, in the mid-mountainous area it is 365-550 mm, and in the alpine area it is 660 mm. Nakhchivan Republic is considered a separate climatic and physical-geographical region of Azerbaijan (Mirzeyev, 1972).

The soil formation is divided into the following zones: the lower zone (700-1200 m), mid-foothills zone (1200-1800 m), high foothills (1800-2400 m), and alpine zone (2400-2800 m). In view of vertical

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zoning, within each soil zone the most widely developed soil types are brown, light brown, grey-brown, grey soils, gray desert, alluvial meadow-grey desert, meadow alluvial, saline meadow, meadow-swamp carbonate, mountain-meadow-steppe, mountain-forest, brown, black soil, ore-brown, brown, etc. (Aliiev & Zeynalov, 1988).

The flora of Nakhchivan Autonomous Republic is very diverse. According to Talybov and Ibragimov (2008) here grow 2835 species of higher plants and many studies on higher plants have been carried out. However, no extensive research on fungi of the Republic has been conducted. Most studies research micromycetes, generally *Ustilaginales*, *Uredinales*, and *Erysiphales* and anamorphic fungi (Uljanishchev, 1952, 1959, 1960; Akhundov, 1979). The first data on macromycetes were recorded by Voronov (1915, 1922-1923) and Dzhafarov (1965), who published *Armillaria mellea* (Vahl.) P.Kumm., *Daedalea quercina* (L.) Pers., *Ganoderma applanatum* (Pers.) Pat., *Fomes fomentarius* (L.) J.Kickx, *Polyporus squamosus* (Huds.) Fr., *Phellinus pomaceus* (Pers.) Maire, and *Schizophyllum commune* Fr. Later, Akhundov (1979) reported *Boletus regius* Krombh., *Cortinarius armillatus* (Fr.) Fr., *Daedaleopsis confragosa* (Bolton) J.Schröt., *Hypholoma epixanthum* (Fr.) Quel., *Hapalopilus nidulans* (Fr.) P.Karst., *Inonotus radiatus* (Sowerby) P. Karst., and other species of macromycetes from the studied area.

This paper provides information on the diversity of macrofungi in Nakhchivan Autonomous Republic of Azerbaijan.

## Materials and methods

The research was conducted during the 2005-2010 period. Research was undertaken in 25 localities in Nakhchivan Autonomous Republic. Collection and storage of ascoma and basidioma were done using standard techniques (Bondartsev & Singer, 1950). The determination of the microscopic characters of the species was achieved using the light microscopes MBS-10, WF-10× DN//18 mm and IDEAL.

The specimens were identified by referring to the following sources: Švarcman and Filimonova (1970), Sosin (1973), Vasil'yeva (1973), Gorlenko et al. (1980), Moser (1983), Melik-Khachatryan

et al. (1985), Serzhanina and Zmitrovich (1986), Kovalenko (1989), Hansen and Knudsen (1992), Nezdoyminogo (1996), and Bondartseva (1998).

The names of the taxa, families, and author citations were listed according to Cannon and Kirk (2007) and Kirk et al. (2008). Family and species names are listed in alphabetical order in the text.

All specimens are deposited in the Mycological Collection of the Institute of Botany of the National Academy of Sciences of Azerbaijan (Baku).

## Abbreviations

*H.S.*: Collection number of Hamide Seyidova

\*: New record for Nakhchivan

## Results

The identified species are listed in alphabetic order of family names.

### ASCOMYCOTA

#### Morchellaceae

##### 1. \**Morchella esculenta* (L.) Pers.

Bichenek village, Shahbus area, on soil or among grass in fields or woodland clearings, 16 May 2010, *H.S.* 124; Forest Cola, Dzhulfra area, on rich soil, 19 May 2010, *H.S.* 125.

#### Pezizaceae

##### 2. *Terfezia leonis* Tul.

Nehram village, Babek area, on soil, 16 June 1963 (Akhundov, 1979); Nehram village of Babek area, on soil, 16 Apr. 2010, *H.S.* 107; Darakend village, Sharur area, on soil, 24 Apr. 2010, *H.S.* 109; Tananam village, Sharur area, on soil, 6 May 2010, *H.S.* 122.

### BASIDIOMYCOTA

#### Agaricaceae

##### 3. \**Agaricus campestris* L.: Fr.

Zeynaddin village, Babek area, on soil, 20 Oct. 2005, *H.S.* 119; near of Ganlygol, Shahbuz area, on soil, 1 July 2009, *H.S.* 113.

##### 4. \**A. silvaticus* Schaeff.

Forest Bichenek, Shahbuz area, on soil, 21 Oct. 2009, *H.S.* 117.

5. \**A. xanthodermus* Genev.

Shyhmahmud village, Babek area, on soil, 21 Oct. 2006, *H.S.* 61; Forest Bichenek Shahbuz area, on soil, 22 Sep. 2008, *H.S.* 92.

6. \**Battarrea phalloides* (Dicks.) Pers.

Aras lowland Sadarak area, on soil, 17 Oct. 2005, *H.S.* 42; near of Colani village, Shahbuz area, on the right shore of the Nakhchivan chay, in thickets of sagebrush on alumina, 27 Aug. 2006, *H.S.* 65.

7. \**Bovista plumbea* Pers.

Veysalli valley, Shahbuz area, on rich soil, 6 Oct. 2009, *H.S.* 114.

8. \**Calvatia gigantea* (Batsch) Lloyd

Near of Batabat lake of Shahbuz area, on ground in meadows, 21 May 2008, *H.S.* 92; 17 June 2010, *H.S.* 173.

9. \**Coprinus comatus* (O.F. Müll.) Pers.

Near Batabat Lake of Shahbuz area, on manure soil, 14 May 2007, *H.S.* 71; Forest Bichenek, Shahbuz area, on soil, 10 Sep. 2009, *H.S.* 117; Nakhchivan town, in the courtyard of the Institute of Bioresources, on soil, 15 Dec. 2009, *H.S.* 120.

10. \**Leucoagaricus carneifolius* (Gillet) Wasser

Zeynaddin village, Babek area, on soil, 28 Oct. 2006, *H.S.* 63; Forest Bichenek, Shahbuz area, on soil, 18 July 2008, *H.S.* 99.

11. \**L. leucothites* (Vittad.) Wasser

Zeynaddin village, Babek area, on soil, 26 Oct. 2006, *H.S.* 66; Forest Bichenek, Shahbuz area, on soil, 22 July 2008, *H.S.* 101.

12. \**L. nymphaeum* (Kalchbr.) Bon.

Forest Bichenek, Shahbuz area, on soil, 22 Sep. 2006, *H.S.* 63.

13. \**Lycoperdon decipiens* Durieu & Mont.

Güney Kyshlak village, Shahbuz area, on soil, 16 Oct. 2006, *H.S.* 69.

14. \**L. nigrescens* Wahlenb.

Güney Kyshlak village, Shahbuz area, on soil in open habitat, 16 Oct. 2006, *H.S.* 70.

15. \**L. perlatum* Pers.

Bilan village, Ordubad area, 5 Oct. 1962 (Akhundov, 1979); Chaparoba, Shahbuz area, on soil, 6 Oct. 2009, *H.S.* 120; Forest Bichenek, Shahbuz area, on soil in woodland, 13 July 2010, *H.S.* 162.

16. \**L. pratense* Pers.

Forest Bichenek, Shahbuz area, on soil, 19 Sep. 2006, *H.S.* 69.

17. \**L. pyriforme* Schaeff.

Güney Kyshlak village, Shahbuz area, on soil in open habitat, 16 Oct. 2006, *H.S.* 71; Chaparoba, Shahbuz area, on the wood among mosses, 7 Oct. 2009, *H.S.* 115; Forest Bichenek, Shahbuz area, on soil in woodland, 8 Oct. 2009, *H.S.* 119.

18. \**Macrolepiota excoriata* (Schaeff.) Wasser

Güney Kyshlak village, Shahbuz area, in meadows, 16 Oct. 2006, *H.S.* 60; Forest Bichenek, Shahbuz area, on soil, 6.10.2009, *H.S.* 157.

19. \**M. fuliginosa* (Barla) Bon.

Forest Bichenek, Shahbuz area, on soil, 15 Sep. 2006, *H.S.* 33.

20. \**M. mastoidea* (Fr.) Singer

Shahbuz State Nature Reserve, on soil, 25 Nov. 2006, *H.S.* 39.

21. \**M. procera* (Scop.) Singer

Shahbuz State Nature Reserve, on soil, 25 Nov. 2006, *H.S.* 37.

22. \**Montagnea arenaria* (DC.) Zeller

Sadarak area, open habitat, on soil, 11 May 2007, *H.S.* 91; Daylakli village, Shahbuz area, on soil in open habitat, 11 May 2007, *H.S.* 92.

23. \**Mycenastrum corium* (Guers.) Desv.

Forest Bichenek, Shahbuz area, on soil, 8 Oct. 2008, *H.S.* 109.

## Amanitaceae

24. \**Amanita vaginata* (Bull.) Lam.

Forest Bichenek, Shahbuz area, on soil, 10 July 2007, *H.S.* 88.

### Boletaceae

#### 25. *Boletus regius* Krombh.

Bilav village, Ordubad area, on soil, 5 Oct. 1961 (Akhundov, 1979).

### Cantharellaceae

#### 26. \**Cantharellus cibarius* Fr.

Nakhchivan town, Central Park, on soil, 14 May 2008, *H.S.* 101; Forest Bichenek, Shahbuz area, on soil, 22 Sep. 2008, *H.S.* 123.

### Cortinariaceae

#### 27. *Cortinarius armillatus* (Fr.) Fr.

Shahbuz area, Bichenek pass, in the oak forest, on soil, 15 July 1962 (Akhundov, 19789).

#### 28. \**C. collinitus* (Pers.) Fr.

Forest Bichenek Shahbuz area, under the oak and hawthorn, on rotten wood, 8 Sep. 2009, *H.S.* 102.

#### 29. \**C. tabularis* (Fr.) Fr.

Near Gelingaya, Shahbuz area, on soil in open habitat, 17 June 2005, *H.S.* 21.

### Fomitopsidaceae

#### 30. *Daedalea quercina* (L.) Pers.

Shahbuz area, Bichenek pass, on *Quercus macranthera*, 15 Dec. 1963 (Akhundov, 1979).

### Ganodermataceae

#### 31. *Ganoderma applanatum* (Pers.) Pat.

Shahbuz area, Bichenek pass, on *Quercus macranthera*, 1 Oct. 1963 (Akhundov, 1979).

### Hygrophoraceae

#### 32. \**Hygrocybe ceracea* (Wulfen) P. Kumm.

Forest Bichenek, Shahbuz area, meadow, on soil, 17 June 2005, *H.S.* 22.

#### 33. \**H. persistens* (Britzelm.) Singer

At the edge of forest Bichenek, Shahbuz area, in meadows and grassy areas, 10 July 2007, *H.S.* 77.

34. \**H. russocoriacea* (Berk. & Jos.K. Mill.) P.D.Orton & Watling

Batabat, Shahbuz area, on forest edges, grassy areas, 18 Aug. 2006, *H.S.* 57.

#### 35. \**Hygrophorus eburneus* (Bull.: Fr.) Fr.

Batabat, Shahbuz area, on soil, 10 July 2007, *H.S.* 79.

#### 36. \**H. nitidus* Berk. & M.A.Curtis.

Batabat (near Kyzylkaya), Shahbuz area, on stumps of plum tree, 29 May 2007, *H.S.* 66; Forest Bichenek, Shahbuz area, in woodland on rich soil, 08 Sep. 2009, *H.S.* 123.

### Hymenochaetaceae

#### 37. *Inonotus radiatus* (Sowerby) P. Karst.

Shahbuz area, Bichenek pass, on *Quercus macranthera*, 15 July 1962 (Akhundov, 1979).

#### 38. *Phellinus pomaceus* (Pers.) Maire

Gyanza village, Ordubad area, on *Prunus domestica*, 23 Apr. 1962 (Akhundov, 1979); Shahbuz area, Bichenek pass, on *Quercus macranthera*, 15 Sep. 1962 (Akhundov, 1979).

### Inocybaceae

#### 39. \**Inocybe asterospora* Quel.

Forest Bichenek, Shahbuz area, on soil, 10 July 2007, *H.S.* 90.

### Mycenaceae

#### 40. \**Mycena polygramma* (Bull.) Gray

Nakhchivan town, Central Park, on stumps of ash tree, 5 June 2008, *H.S.* 94; Forest Bichenek, Shahbuz area, on stumps and soil, in large groups, 22 Sep. 2008, *H.S.* 111.

#### 41. \**Xeromphalina campanella* (Batsch) Maire

Forest Cola, Dzhulfa area, on soil, 6 June 2008, *H.S.* 95; Kuku village, Shahbuz area, territory Derebogaz on soil, 1 July 2008, *H.S.* 101.

### Paxillaceae

#### 42. \**Paxillus involutus* (Batsch) Fr.

Chaparoba, Shahbuz area, on soil, in large groups, 7 Oct. 2009, *H.S.* 117.

### Physalacriaceae

#### 43. *Armillaria mellea* (Vahl.) P. Kumm.

Dirnis village, Ordubad area, on wood of living or dead broad-leaved trees, 9 Oct. 1961 (Akhundov,

1979); Forest Bichenek, Shahbuz area, on wood, stumps and other rotting parts of broad-leaved trees, 20 Oct. 2010, *H.S.* 144.

#### Pleurotaceae

##### 44. \**Pleurotus ostreatus* (Jacq.: Fr.) P.Kumm.

Shyhmahmud village, Babek area, on tree trunks, in large groups, 15 Oct. 2006, *H.S.* 70; Forest Bichenek, Shahbuz area, on tree trunks, in large groups, 21 Oct. 2006, *H.S.* 73.

#### Pluteaceae

##### 45. \**Volvariella bombycina* (Schaeff.: Fr.) Singer

Nakhchivan town, Central Park, on trunks of ash-tree, 23 May 2007, *H.S.* 89; the Botanical Garden of the Institute of Bioresources, Nakhchivan Section of the National Academy of Sciences of Azerbaijan, on trunks of ash tree, 12 June 2008, *H.S.* 96; Forest Bichenek, Shahbuz area, on trunks of oak, 8 Aug. 2008, *H.S.* 114.

##### 46. *V. volvacea* (Bull.: Fr.) Singer

Bilav village, Ordubad area, on wood of broad-leaved trees, 5 Oct. 1962 (Akhundov, 1979).

#### Polyporaceae

##### 47. *Daedaleopsis confragosa* (Bolton) J.Schröt.

Shahbuz area, Bichenek pass, on *Quercus macranthera*, 15 Sep. 1963, (Akhundov, 1979).

##### 48. *Fomes fomentarius* (L.) J.Kickx

Shahbuz area, Bichenek pass, on *Quercus macranthera*, 15 Sep. 1962 (Akhundov, 1979).

##### 49. *Hapalopilus nidulans* (Fr.) P.Karst.

Shahbuz area, Bichenek pass, on *Quercus macranthera*, 15 July 1962 (Akhundov, 1979).

##### 50. \**Lentinus tigrinus* (Bull.) Fr.

The Botanical Garden of the Institute of Bioresources, Nakhchivan Section of the National Academy of Sciences of Azerbaijan, pieces of wood, 21 Apr. 2007, *H.S.* 80; Kechili village, Shahbuz area, on dead wood of broad-leaved trees, 21 July 2007, *H.S.* 81.

##### 51. \**Neolentinus lepideus* (Fr.) Redhead & Ginns

Forest Bichenek, Shahbuz area, on the snags and stumps of wood, 26 May 2006, *H.S.* 59.

##### 52. \**Panus conchatus* (Bull.) Fr.

Forest Bichenek, Shahbuz area, on soil, 10 July 2007, *H.S.* 75.

##### 53. \**Polyporus arcularius* (Batsch) Fr.

Near Paradash, Dzhulfa area, on trunks and branches of living trees, 14 May 2007, *H.S.* 60; Kechili village, Shahbuz area, on wood of living or dead broad-leaved trees, 18 May 2007, *H.S.* 62.

##### 54. *P. squamosus* (Huds.) Fr.

Gyanza village, Ordubad area, on *Prunus domestica*, 23 Apr. 1962 (Akhundov, 1979); Shyhmahmud village, Babek area, on stumps, 21 Oct. 2006, *H.S.* 68; the Botanical Garden of the Institute of Bioresources, Nakhchivan Section of the National Academy of Sciences of Azerbaijan, on stumps, 21 Apr. 2007, *H.S.* 57; Badamli village, Shahbuz area, on the rotten pieces of walnut trees, 2 July 2008, *H.S.* 106.

##### 55. *P. varius* (Pers.) Fr.

Bichenek pass, Shahbus area, on *Quercus macranthera*, 15 Dec. 1962 (Akhundov, 1979); Forest Bichenek, Shahbuz area, on wood of living or dead broad-leaved trees, 20 Oct. 2010, *H.S.* 170.

#### Psathyrellaceae

##### 56. \**Coprinellus disseminatus* (Pers.) J.E.Lange

Nakhchivan town, Central Park, on soil, 17 May 2008, *H.S.* 104; Forest Bichenek Shahbuz area, near the stumps, 22 Sep. 2008, *H.S.* 112.

57. \**C. micaceus* (Bull.) Vilgalys, Hopple & Jacq. Johnson

Forest Bichenek, Shahbuz area, on stumps and soil, 22 Sep. 2008, *H.S.* 113.

58. \**Coprinopsis atramentaria* (Bull.) Redhead, Vilgalys & Moncalvo

Nakhchivan town, Central Park, on soil under the ash-tree, 30 Apr. 2007, *H.S.* 79; near Batabat, Shahbuz area, in meadow, on soil, 21 May 2008, *H.S.* 107.

##### 59. \**Psathyrella candolleana* (Fr.) Maire

Forest Bichenek, Shahbuz area, on rotten wood, 18 Aug. 2006, *H.S.* 59.

60. \**P. subnuda* (P. Karst.) A.H.Sm.

Kechili village, Shahbuz area, on soil, 14 May 2007, H.S. 77; Near Paradash of Dzhulfa area, on soil, 14 May 2007, H.S. 78.

Russulaceae

61. *Lactarius piperatus* (L.) Pers.

Bilav village, Ordubad area, on soil, 5 Oct. 1961 (Akhundov, 1979).

62. *Russula rubra* (Fr.) Fr.

Bilav village, Ordubad area, on soil, 5 Oct. 1961 (Akhundov, 1979).

Schizophyllaceae

63. *Schizophyllum commune* Fr.

Shahbuz area, Bichenek pass, on wood of living or dead broad-leaved trees, 15 Sep. 1963 (Akhundov, 1979).

Sclerodermataceae

64. \**Scleroderma verrucosum* (Bull.) Pers.

Forest Bichenek, Shahbuz area, on soil, 10 Aug. 2007, H.S. 84.

Strophariaceae

65. \**Agrocybe pediades* (Fr.) Fayod.

Forest Bichenek, Shahbuz area, on soil, 18 Sep. 2006, H.S. 15; Sadarak area, on meadows, 11 May 2007, H.S. 69; Forest Bichenek, Shahbuz area, on soil, 22 July 2008, H.S. 95.

66. *Hypholoma epixanthum* (Fr.) Quél.

Bilav village, Ordubad area, on wood of living or dead broad-leaved trees, 26 Apr. 1962 (Akhundov, 1979).

67. \**H. fasciculare* (Huds.) P.Kumm.

Forest Bichenek, Shahbuz area, on trunks of willows, 6 Oct. 2009, H.S. 118.

68. *Pholiota aurivella* (Batsch) P.Kumm.

Bilav village, Ordubad area, 5 Sep. 1961 (Akhundov, 1979); Forest Bichenek, Shahbuz area, on stumps of willow, 8 Sep. 2009, H.S. 117.

69. \**Psilocybe semilanceata* (Fr.) P. Kumm.

Near Paradash of Dzhulfa area, on meadows, on soil, 14 May 2007, H.S. 82; Forest Bichenek, Shahbuz area, on soil, 30 May 2007, H.S. 89.

Tricholomataceae

70. \**Clitocybe candida* Bres.

Forest Bichenek, Shahbuz area, among leaf litter in broad-leaved forests, 27 Oct. 2005, H.S. 16.

71. \**Gymnopus dryophilus* (Bull.) Murrill

Forest Bichenek, Shahbuz area, on soil, 22 July 2008, H.S. 119.

72. \**Lepista nuda* (Bull.) Cooke

Forest Bichenek, Shahbuz area, under pine tree, on soil, 17 June 2008, H.S. 110.

73. \**Leucopaxillus amarus* (Alb. & Schwein.) Kühner

Forest Bichenek, Shahbuz area, in among leaf litter in broad-leaved forests, 27 Oct. 2005, H.S. 21.

Discussion

The total number of recorded macrofungi species is 73. These fungi belong to the phyla Ascomycota (2 species) and Basidiomycota (71) and to 24 families, mainly Agaricaceae (21), Polyporaceae (9), Hygrophoraceae, Psathyrellaceae and Strophariaceae (5 each), Tricholomataceae (4), and Cortinariaceae (3), while the other 17 families each have 1-2 species.

Within the identified species, 1 species of Ascomycota and 52 species of Basidiomycota are new records for Nakhchivan Autonomous Republic. Eight of them, *Calvatia gigantea*, *Clitocybe candida*, *Hygrophorus nitidus*, *Leucoagaricus nympharum*, *Lycoperdon nigrescens*, *Mycenastrum corium*, *Panus conchatus*, and *Psilocybe semilanceata*, are new records for the macrofungi of Azerbaijan. Such species as *Agaricus campestris*, *Agrocybe pediades*, *Amanita vaginata*, *Armillaria mellea*, *Bovista plumbea*, *Calvatia gigantea*, *Coprinus comatus*, *Coprinellus disseminatus*, *C. micaceus*, *Coprinopsis atramentaria*, *Clitocybe candida*, *Fomes fomentarius*, *Ganoderma applanatum*, *Lactarius piperatus*, *Lentinus tigrinus*, *Lepista nuda*, *Leucoagaricus leucothites*, *Lycoperdon nigrescens*, *L. perlatum*, *Macrolepiota excoriata*, *Paxillus involutus*, *Phellinus pomaceus*, *Pleurotus ostreatus*, *Polyporus arcularius*, *P. squamosus*, *Psathyrella candolleana*, *Schizophyllum commune*, and *Xeromphalina campanella* are also

noted in neighbouring Turkey (Kaya, 2009; Kaya et al., 2009; Allı, 2011; Doğan et al., 2011).

Twenty-two of the identified macrofungi (30.04% of the total) are lignicolous species. These fungi developed on branches, stumps, trunks, stems, and wood of living or dead trees. Twelve of the lignicolous macrofungi, *Armillaria mellea*, *Daedalea quercina*, *Daedaleopsis confragosa*, *Fomes fomentarius*, *Ganoderma applanatum*, *Hapalopilus nidulans*, *Inopnotus radiatus*, *Lentinus tigrinus*, *Pleurotus ostreatus*, *Polyporus arcularius*, *P. squamosus*, and *P. varius*, are pathogens or destroyers of wood. The rest of the species can be saprobes and grow on rotten branches, trunks, and wood of trees. *Phellinus pomaceus* is a dangerous parasite on species of *Prunus*, especially on *Prunus domestica*; it has also been registered on *Quercus macranthera*. Some other species, such as *Psathyrella candolleana*, *Hypholoma epixanthum*, *Volvariella volvacea*, and *Schizophyllum commune*, usually grow on deciduous wood.

The terricolous macromycetes include 51 (69.86% of the total) species. The most frequent species are

as follows: *Armillaria mellea*, *Coprinus comatus*, *Daedalea quercina*, *Hapalopilus nidulans*, *Lycoperdon perlatum*, *Pholiota ayriivella*, *Polyporus squamosus*, *Terfesia leonis*, and *Volvariella bombycina*.

The rare species are *Calvatia gigantea*, *Clytocybe candida*, *Hygrophorus nitidus*, *Leucoagaricus nymphaeum*, *Lycoperdon nigrescens*, *Mycenastrum corium*, *Panus conchatus*, and *Psilocybe semilanceata*.

With this study, we added some important data and new species to the mycobiota of Nakhchivan Autonomous Republic and to Azerbaijan.

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