

# Myxomycetes of the Western Black Sea Region of Turkey

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**Abstract**— The distribution and abundance of myxomycetes in parts of the western Black Sea Region of Turkey during 2000–2002 are documented. Seventy-eight species belonging to 25 genera were recorded from field and moist chamber collections. *Badhamia gontiospora*, *B. papaveracea*, *B. populina*, *Cribraria confusa*, *Dianema harveyi*, *Diderma niveum*, *Didymium sturgisii*, *Licea scyphoides*, *Macbrideola dubia*, and *Physarum globuliferum* are new for Turkey.

**Key words**—slime moulds, new records, flora

## Material and Methods

This study was carried out between 2000 and 2002. The map (Fig. 1) shows the Western Black Sea Region of Turkey and the study area. Excursions were made during the summer seasons and the vicinity of main roads was selected as sampling region. Bark of living trees and shrubs was collected and incubated in Petri dish moist chambers. In addition, some detrital material, i.e., leaves, twigs, bark on the forest floor, was also gathered. The collected bark and detrital material was incubated and examined periodically for the formation of sporocarps (Gilbert & Martin 1933, Härkönen & Ukkola 2000). In addition, all material sporulating in nature was collected. Semipermanent or permanent preparations in Hoyer's medium were made for all myxomycete sporocarps. Species list was adopted the source for correct current names to Lado (2001) and latest acception by Lado et. al. 2005. Identifications were made using the keys of Martin & Alexopoulos (1969), Farr (1976), Nannenga-Bremekamp (1991), Stephenson & Stempen (1994), Ing (1999), and Mitchell (2004). A map of the study area (Fig. 1), climograph (Fig. 2) and the checklist that provide information on distribution, collection sites, date and herbarium number were given. All specimens are deposited in the Uludag University Herbarium (BULU) and in the personal collection of Cem Ergül (CE).

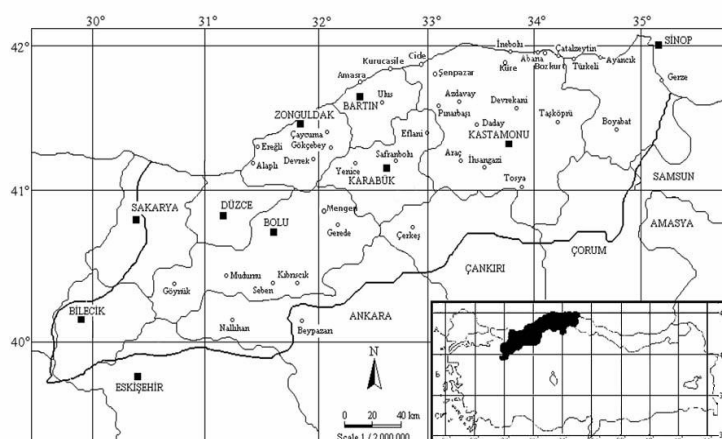


Figure 1. The Western Black Sea Region and selected collecting sites.

## List of species

\*= new records for Turkey

### Order CERATIOMYXALES

#### 1. *Ceratiomyxa fruticulosa* (O.F. Müll.) T. Macbr.

Kastamonu, ca. 25 Km on Daday-Azdavay road, Ballıdağ pass, on *Abies* sp. log, alt. 1520 m, 30.07.2001, CE301, developed naturally;  
Bolu, Dirgine-Mengen route, near the Yedigöller National Park, Demirci köyü, on decaying twig (unidentified), alt. 500 m, 22.08.2002, CE344, developed naturally.

### Order ECHINOSTELIALES

#### 2. *Echinostelium apitectum* K. D. Whitney

Safranbolu-Araç route, ca. 8 Km, on bark of living *Quercus* sp., alt. 370 m, 24.07.2001, CE250

#### 3. *Echinostelium arboreum* H.W. Keller & T. E. Brooks

İnebolu-Küre road, Çuhadaroğlu pass, on bark of living *Crateagus* sp., alt. 750 m, 27.07.2001, CE270.

#### 4. *Echinostelium minutum* de Bary in Rostafinski

Araç-Kastamonu route, Kuzyaka exit, on bark of living *Populus* sp., alt. 915 m, 25.07.2001, CE258; Sinop-Kastamonu road, Sinecan exit, on bark of living *Quercus* sp., alt. 350 m, 28.07.2001, CE278; Bartın, Ulus-Pınarbaşı route, ca. 2 Km, near the bed of a dry brook, from bark of living *Platanus* sp. alt. 190 m, 21.08.2002, CE336; Beypazarı-Kıbrısık route, ca. 14 Km, on bark of living *Populus* sp., alt. 1170 m, 18.07.2002, CE362.

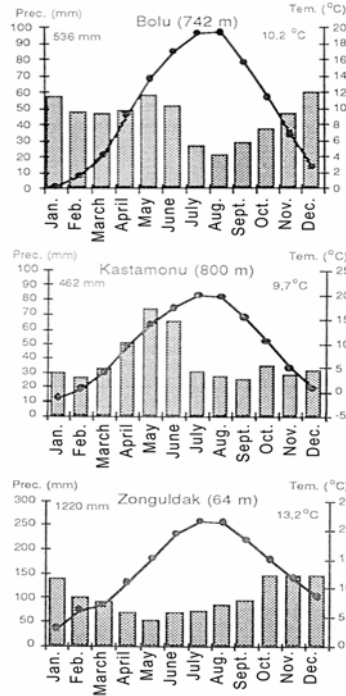


Figure 2. Climographs of some larger cities in the study region ( Atalay 2002).

#### Order LICEALES

##### 5. *Cribraria cancellata* (Batsch) Nann.-Bremek.

Bartın, Kastamonu, Ulus-Pınarbaşı route, Şirince köyü exit, ca. 2 Km, near the stream, on a wet log (unidentified), alt. 630 m, 21.08.2002, CE338, developed naturally.

##### 6. \**Cribraria confusa* Nann.-Bremek. & Y.Yamam.

Bartın, Çakraz-Kurucaşile road, Kalaycı köyü, on bark of living *Castanea* sp., alt. 30 m, 19.07.2000, CE218.

##### 7. *Cribraria elegans* Berk. & M.A. Curtis in Berkeley

Bartın-Arıtt road, ca. 3 Km., on bark of living *Salix* sp., alt. 60 m, 18.07.2000, CE214.

##### 8. *Cribraria microcarpa* (Schrad.) Pers.

Bartın, Çakraz-Kurucaşile road, Kalaycı köyü, on bark of living *Castanea* sp., alt. 30 m, 19.07.2000, CE218.

##### 9. *Cribraria violacea* Rex

Kastamonu, Şenpazar exit, Kalaycı köyü, on bark of living *Platanus* sp., alt. 400 m, 19.07.2000, CE222; Bolu, Mengen, around Dorukhan tunnel, on bark of living *Quercus* sp., alt. 750 m, 17.07.2001, CE246; Kastamonu, İnebolu-Küre road, Çuhadaroğlu pass, on bark of living *Crateagus* sp., alt. 900 m, 27.07.2001, CE269; Sinop, Çatalzeytin exit, around Moğanaltı bridge, on bark of living *Platanus* sp., alt. 2 m, 27.07.2001, CE273; Bartın, Ulus-Pınarbaşı road, on bark of living *Platanus* sp., alt. 950 m, 21.08.2002, CE348; Bartın, Ulus-Pınarbaşı route, ca. 2 Km, from bed of the dry brook, on bark of living *Platanus* sp. alt. 190 m, 21.08.2002, CE336; Zonguldak, Gökçebey-Yenice route, near bed of the Filyos stream, ca. 15 Km, on bark of living *Platanus* sp., alt. 50 m, 22.08.2002, CE353.

##### 10. *Licea belmontiana* Nann.-Bremek.

Sinop-Boyabat route, Akçakese district, on bark of living *Crateagus* sp., alt. 1180 m, 28.07.2001, CE281; Kastamonu, Araç-Daday road, ca. 10 Km, on bark of living *Sorbus* sp., alt. 980 m, 30.07.2001, CE295; Kastamonu, Azdavay-Pınarbaşı route, Pınarbaşı entry, on bark of living *Crateagus* sp., alt. 790 m, 30.07.2001, CE305.

**11. *Licea castanea*** G. Lister

Araç-Kastamonu route, Kuzyaka exit, on bark of living *Populus* sp., alt. 915 m, 25.07.2001, CE258; Kastamonu-Devrekani route, ca. 10 Km, Kırcalar köyü, on bark of living *Populus* sp., alt. 700 m, 26.07.2001, CE261; Kastamonu, Devrekani-Bozkurt route, Yaralıgöz mountain, on bark of living *Pyrus* sp., alt. 1270 m, 26.07.2001, CE265; Kastamonu, Devrekani-Bozkurt route, Yaralıgöz mountain, on bark of living *Malus* sp., alt. 1290 m, 26.07.2001, CE267; Taşköprü-Kastamonu road, ca. 10 Km, Akdoğan köyü, on bark of living *Malus* sp., alt. 640 m, 29.07.2001, CE289; Kastamonu, Daday-Azdavay road ca. 25 Km, Ballıdağ pass, on bark of living *Abies* sp., alt. 1520 m, 30.07.2001, CE300; Bartın, İhsanoğlu köyü, on bark of living *Fraxinus* sp., alt. 150 m, 23.08.2002, CE355.

**12. *Licea inconspicua*** T. E. Brooks & H. V. Keller in Keller & Brooks

Kastamonu, Azdavay-Pınarbaşı route, Pınarbaşı entry, on bark of living *Quercus* sp., alt. 790 m, 30.07.2001, CE 304; Kastamonu, Pınarbaşı-Eflani route, in a picnic place, from bark of living *Juglans* sp., alt. 880 m, 30.07.2001, CE 306; Pınarbaşı-Ulus route, Pınarbaşı exit, ca. 4 Km, on bark of living *Pyrus* sp., alt. 800 m, 21.08.2002, CE350.

**13. *Licea kleistobolus*** G. W. Martin

Kastamonu, Devrekani-Bozkurt route, Yaralıgöz mountain, on bark of living *Malus* sp., alt. 1290 m, 26.07.2001, CE267.

**14. *Licea parasitica*** (Zukal) G. W. Martin

Kastamonu-Daday route, ca. 10 Km, Gököy first school garden, on bark of living *Malus* sp., alt. 720 m, 20.07.2000, CE224; Kastamonu, Boyabat-Taşköprü route, around Fevzi Çakmak stream, on bark of living *Morus* sp., alt. 355 m, 28.07.2001, CE283.

**15. *Licea punctiformis*** G. W. Martin in Martin & Alexopoulos

Sinop-Boyabat route, Akçakese district, on bark of living *Creteagus* sp., alt. 1180 m, 28.07.2001, CE281; Kastamonu, Taşköprü-Tosya road, on bark of living *Populus* sp., alt. 595 m, 29.07.2001, CE286; Araç-Daday road, ca. 10 Km, on bark of living *Sorbus* sp., alt. 980 m, 30.07.2001, CE295; Kastamonu, Daday-Azdavay road ca. 25 Km, Ballıdağ pass, on bark of living *Abies* sp. alt. 1520 m, 30.07.2001, CE300.

**16. *Licea pussila*** Schrad.

Kastamonu-Devrekani route, ca. 10 Km, Kırcalar köyü, on bark of living *Malus* sp., alt. 700 m, 26.07.2001, CE260.

**17. \**Licea scyphoides*** T.E.Brooks & H.W.Keller in Keller & Brooks

Bolu,Seben-Nallıhan route, Danişment köyü exit, ca. 3 Km, on bark of living *Pyrus* sp, alt. 840 m, 18.07.2002, CE365.

**18. *Licea tenera*** E. Jahn

Kastamonu, Cide-Şenpazar route, Dağlı pass, on bark of living *Carpinus* sp., alt. 850 m, 19.07.2000, CE221; Kastamonu, Azdavay-Pınarbaşı route, Azdavay exit, on bark of living *Malus* sp., alt. 800 m, 30.07.2001, CE302; Kastamonu, Pınarbaşı-Eflani route, in a picnic place, on bark of living *Malus* sp., alt. 880, 30.07.2001, CE308.

**19. *Lindbladia tubulina*** Fr.

Kastamonu, Daday-Eflani route, bark of living *Quercus* sp., alt. 1040 m, 20.07.2000, CE228, developed naturally.

**20. *Lycogala epidendrum*** (L.) Fr.

Kastamonu, Ilgaz National Park entry, on an *Abies* sp. log, alt. 1600 m, 20.07.2000, CE223, developed naturally; Safranbolu-Bartın route, around of the Eflani road bifurcation, near the bed of a small stream, on the *Quercus* sp. log, alt. 500 m, 21.07.2000, CE230, developed naturally; Bolu, Dirgine-Mengen route, near the Yedigöller National Park, Demirci köyü, on a decayed twig (unidentified), alt. 500 m, 22.08.2002, CE344, developed naturally.

**21. *Lycogala flavofuscum*** (Ehrenb.) Rostaf. in Fuckel

Kastamonu, Daday-Azdavay road ca. 25 Km, Ballıdağ pass, on the *Abies* sp. log, alt. 1520 m, 30.07.2001, CE301, developed naturally.

**22. *Reticularia jurana*** Meyl.

Taşköprü-Kastamonu road, ca. 20 Km, around the bridge of Gülveren stream, on the stump of *Populus* sp., alt. 655 m, 29.07.2001, CE290, developed naturally.

**23. *Tubulifera arachnoidea*** Jacq.

Bolu, Yedigöller National Park, on a wet log (unidentified), alt. 750 m, 22.08.2002, CE342, developed naturally.

**Order PHYSALES**

**24. *Badhamia affinis*** Rostaf.

Bartın, Fırıncıoğlu resort hotel garden, on bark of living *Salix* sp., alt. 20 m, 18.07.2000, CE211; Kastamonu, Şenpazar exit, around Kalaycı köyü, on bark of living *Platanus* sp., alt. 400 m, 19.07.2000, CE222; Kastamonu-Daday route, ca. 10 Km, Gököy first school garden, on bark of living *Malus* sp., alt. 720 m, 20.07.2000, CE224; Sinop-Boyabat route, Akçakese district, on bark of living *Creteagus* sp., alt. 1180 m, 28.07.2001, CE281; Taşköprü-Kastamonu road, ca. 20 Km, around the bridge of Gülveren stream, on bark of living *Quercus* sp., alt. 655 m, 29.07.2001, CE291.

**25. *Badhamia foliicola* Lister.**

Kastamonu, Boyabat-Taşköprü route, around the Fevzi Çakmak stream, on bark of living *Morus* sp., alt. 355 m; 28.07.2001, CE283; Kastamonu, Taşköprü-Tosya road, on bark of living *Pyrus* sp., alt. 840 m, 29.07.2001, CE287; Kastamonu, Taşköprü-Tosya road, ca. 8 Km, on bark of living *Salix* sp., alt. 930 m, 29.07.2001, CE288.

**26. \**Badhamia goniospora* Meyl.**

Kastamonu, Araç-İhsangazi route, İhsangazi exit, around of Kandırmaz bridge, on bark of living *Populus* sp., alt. 870 m, 25.07.2001, CE254.

**27. *Badhamia macrocarpa* (Ces). Rostaf.**

Bolu-Göynük, Çubuk Lake around, on bark of living *Pyrus* sp., alt. 1005 m, 14.07.2000, CE207; Bartın, Fırıncıoğlu resort hotel garden, on bark of living *Salix* sp., alt. 20 m, 18.07.2000, CE211; Bolu, Mengen, Dorukhan tunnel, on bark of living *Quercus* sp., alt. 750 m, 17.07.2001, CE246; Safranbolu-Araç route, ca. 8 Km, on bark of living *Pistacia* sp., alt. 370 m, 24.07.2001, CE251; Kastamonu-Devrekani route, Oyrak pass, on bark of living *Salix* sp., alt. 1200 m, 26.07.2001, CE262; Kastamonu, Azdavay-Pınarbaşı route, Pınarbaşı entry, on bark of living *Crateagus* sp., alt. 790 m, 30.07.2001, CE305; Bartın, Ulus-Pınarbaşı route, ca. 2 Km, near bed of a dry brook, on bark of living *Salix* sp. log, alt. 190 m, 21.08.2002, CE336, developed naturally.

**28. *Badhamia nitens* Berk.**

Bartın-Safranbolu road, Kirazlıköprü district, near bed of the stream, on bark of the living *Platanus* sp., alt. 65 m, 21.08.2002, CE346.

**29. \**Badhamia papaveracea* Berk. & Ravenel in Berkeley**

Azdavay-Pınarbaşı route, Pınarbaşı entry, on bark of living *Quercus* sp., alt. 790 m, 30.07.2001, CE304.

**30. \**Badhamia populina* Lister & G.Lister**

Sinop, Ayancık exit, Yeşilyurt district, on bark of living *Quercus* sp., alt. 90 m, 27.07.2001, CE274.

**31. *Badhamia versicolor* Lister**

Safranbolu-Araç route, ca. 8 Km, on bark of living *Pistacia* sp., alt. 370 m, 24.07.2001, CE251; Sinop-Boyabat route, Esentepe district, on bark of living *Crateagus* sp., alt. 1100 m, 28.07.2001, CE279; Kastamonu, Daday-Azdavay road ca. 6 Km, Kavakyaylası place, on bark of living *Quercus* sp. alt. 1245 m, 30.07.2001, CE299.

**32. *Badhamiopsis ainoae* (Yamash.) T.E.Brooks & H.W.Keller in Keller & Brooks**

Safranbolu-Araç route, İğdir exit, on bark of living *Quercus* sp., alt. 500 m, 24.07.2001, CE252; Sinop-Boyabat route, Akçakese district, on bark of living *Quercus* sp., alt. 1180 m, 28.07.2001, CE282.

**33. *Diderma chondrioderma* (de Bary & Rostaf.) G. Lister in Lister**

Araç-Kastamonu route, Kuzyaka exit, on bark of living *Populus* sp., alt. 915 m, 25.07.2001, CE258; Kastamonu, Devrekani-Bozkurt route, Yaralıgöz mountain, on bark of living *Malus* sp., alt. 1300 m, 26.07.2001, CE263; Taşköprü-Kastamonu road, ca. 20 Km, around the bridge of Gülveren stream, on a *Populus* sp. log, alt. 655 m, 29.07.2001, CE290, developed naturally; Sinop-Boyabat route, Esentepe district, on bark of living *Crateagus* sp., alt. 1100 m, 28.07.2001, CE279; Sinop-Boyabat route, Akçakese district, on bark of living *Crateagus* sp., alt. 1180 m, 28.07.2001, CE281; Kastamonu, Azdavay-Pınarbaşı route, Azdavay exit, on bark of living *Quercus* sp., alt. 800 m, 30.07.2001, CE303.

**34. *Diderma hemisphaericum* (Bull.) Hornem.**

Bolu,Beypazarı-Kıbrısık route, ca. 14 Km, on bark of living *Populus* sp., alt. 1170 m, 18.07.2002, CE362.

**35. \**Diderma niveum* (Rostaf.) T.Macbr.**

Kastamonu-Devrekani route, ca. 2 Km, on bark of living *Salix* sp., alt. 1010 m, 26.07.2001, CE259.

**36. *Diderma testaceum* (Schrad.) Pers.**

Bolu,Seben-Nallıhan route, Danışment köyü exit, ca. 3 Km, on bark of living *Pyrus* spp, alt. 840 m, 18.07.2002, CE365.

**37. *Didymium bahiense* Gottsb.**

Kastamonu, Daday-Azdavay route, Ballıdağ pass, Kavak yaylası district, on bark of living *Crateagus* sp., alt. 1245, 20.07.2000, CE227.

**38. *Didymium eximium* Peck**

Bartın, İnkum, on bark of living *Ulmus* sp., alt. 60 m, 27.07.2000, CE232.

**39. *Didymium nigripes* (Link.) Fr.**

Kastamonu, Ilgaz National Park entry, on bark of living *Abies* sp., alt. 1600 m, 20.07.2000, CE223, developed naturally.

**40. \**Didymium sturgisii* Hagelst.**

Sinop, İnceburun, on bark of living *Quercus* sp., alt. 75 m, 28.07.2001, CE275; Sinop-Kastamonu road, Sinecan exit, on bark of living *Quercus* sp., alt. 350 m, 28.07.2001, CE278; Sinop-Boyabat route, Akçakese district, on bark of living *Quercus* sp., alt. 1180 m,

28.07.2001, CE282; Kastamonu, Araç-Daday road, ca. 10 Km, on bark of living *Sorbus* sp., alt. 980 m, 30.07.2001, CE295; Kastamonu, Azdavay-Pınarbaşı route, Pınarbaşı entry, on bark of living *Quercus* sp., alt. 790 m, 30.07.2001, CE304.

**41. *Fuligo septica* (L.) F. H. Wigg.**

Bartın, Ulus-Pınarbaşı route, ca. 2 Km, near bed of a dry brook, from bark of living *Salix* sp., alt. 190 m, 21.08.2002, CE336, developed naturally; Bolu, Yedigöller National Park, on a decaying log (unidentified), alt. 850 m, 22.08.2002, CE341, developed naturally; Bolu, Dirgine-Mengen route, near the Yedigöller National Park, Demirci köyü, on a decaying twig (unidentified), alt. 500 m, 22.08.2002, CE344, developed naturally.

**42. *Physarum album* (Bull.) Chevall.**

Zonguldak, Gökçebey-Yenice route, ca. 15 Km, Kayadibi log storage area, near bank of the stream, on a decaying wet *Fagus* sp. log, alt. 120 m, 23.08.2002, CE345, developed naturally.

**43. *Physarum auriscalpium* Cooke**

Bolu-Göynük, Örencik köyü, on bark of living *Pyrus* sp., alt. 1000 m, 14.07.2000, CE209; Kastamonu, Cide-Şenpazar route, Kirengeriş forest series, on bark of living *Quercus* sp., alt. 600 m, 19.07.2000, CE220; Kastamonu-Daday route, ca. 10 Km, Gök köy first school garden, on bark of living *Robinia* sp., alt. 720 m, 20.07.2000, CE225; Safranbolu-Araç route, İğdir exit, on bark of living *Malus* sp., alt. 500 m, 24.07.2001, CE253; Araç-Kastamonu route, Kuzyaka exit, on bark of living *Salix* sp., alt. 915 m, 25.07.2001, CE256; Araç-Kastamonu route, Kuzyaka exit, on bark of living *Populus* sp., alt. 915 m, 25.07.2001, CE258; Kastamonu-Devrekani route, ca. 10 Km, Kırcalar köyü, on bark of living *Malus* sp., alt. 700 m, 26.07.2001, CE260; Kastamonu, Devrekani-Bozkurt route, Yaralıgöz mountain, on bark of living *Quercus* sp., alt. 1300 m, 26.07.2001, CE263; Sinop, İnceburun, on bark of living *Quercus* sp., alt. 75 m, 28.07.2001, CE275; Kastamonu, Taşköprü-Tosya road, on bark of living *Salix* sp., alt. 595 m, 29.07.2001, CE285; Kastamonu, Taşköprü-Tosya road, on bark of living *Populus* sp., alt. 595 m, 29.07.2001, CE286; Kastamonu, Pınarbaşı-Eflani route, in a picnic place, on bark of living *Pyrus* sp., alt. 880, 30.07.2001, CE 307; Kastamonu, Pınarbaşı, on bark of living *Quercus* sp., alt. 670 m, 21.08.2002, CE349; Bolu, Beypazarı-Kıbrısçık route, ca. 14 Km, on bark of living *Populus* sp., alt. 1170 m, 18.07.2002, CE362; Bolu, Kıbrısçık-Beypazarı route, ca. 3 Km, around Kuma stream bridge, on bark of living *Salix* sp., alt. 1060 m, 18.07.2002, CE363; Bolu, Seben-Nallıhan route, Danişment köyü exit, ca. 3 Km, on bark of living *Quercus* sp., alt. 840 m, 18.07.2002, CE364; Bolu, Nallıhan-Göynük route, ca. 5 Km, on bark of living *Quercus* sp., alt. 900 m, 18.07.2002, CE366.

**44. *Physarum decipiens* M. A. Curtis**

Bolu-Göynük, around the Çubuk lake, on bark of living *Pyrus* sp., alt. 1005 m, 14.07.2000, CE207; Bartın, Art-Amasra road, ca. 3 Km, on bark of living *Quercus* sp., alt. 60 m, 18.07.2000, CE213; Bartın-Safranbolu road, Kirazlıköprü district, near the stream, on bark of living *Platanus* sp., alt. 65 m, 18.07.2000, CE217; Kastamonu-Devrekani route, ca. 2 Km, on bark of living *Salix* sp., alt. 1010 m, 26.07.2001, CE259; Kastamonu, Araç-Daday road, ca. 10 Km, on bark of living *Quercus* sp., alt. 980 m, 30.07.2001, CE298; Beypazarı-Kıbrısçık route, ca. 14 Km, on bark of living *Populus* sp., alt. 1170 m, 18.07.2002, CE362.

**45. \**Physarum globuliferum* (Bull.) Pers.**

Bolu, Yedigöller National Park -Dirgine road, ca. 20. Km, on a decayed log of *Fagus* sp., alt. 350 m, 22.08.2002, CE343, developed naturally.

**46. *Physarum notabile* T. Macbr.**

Bartın, Abdipaşa-Ulus road, ca. 5 Km, on bark of living *Platanus* sp., alt. 120 m, 18.07.2000, CE215; Kastamonu-Devrekani route, ca. 10 Km, Kırcalar köyü, on bark of living *Populus* sp., alt. 700 m, 26.07.2001, CE261.

**Order STEMONITALES**

**47. *Collaria arcyronema* (Rostaf.) Nann.-Bremek. ex Lado**

Kastamonu-Araç road, ca. 27 Km, Kanlıgöl district, barks of living *Salix* sp., alt. 1015 m, 30.07.2001, CE293.

**48. *Comatricha laxa* Rostaf.**

Taşköprü-Kastamonu road, ca. 20 Km, around the bridge of Gülveren stream, on bark of living *Creteagus* sp., alt. 655 m, 29.07.2001, CE292.

**49. *Comatricha nigra* (Pers. ex J. F. Gmel.) J. Schröt.**

Kastamonu, Araç-İhsangazi route, İhsangazi exit, around the Kandırmaz bridge, on bark of living *Populus* sp., alt. 870 m, 25.07.2001, CE254.

**50. *Clastoderma debaryanum* A. Blytt**

Kastamonu, İnebolu-Küre road, İnebolu exit, near the Manastır bridge, on bark of living *Fagus* sp., alt. 1 m, 27.07.2001, CE271.

**51. *Macbrideola cornea* (G. Lister & Cran) Alexop.**

Kastamonu-Daday route, ca. 10 Km, Gök köy first school garden, from bark of living *Robinia* sp., alt. 720 m, 20.07.2000, CE225; Kastamonu-Daday route, Daday entry, Hasanşeyh köyü, on bark of living *Salix* sp., alt. 780 m, 20.07.2000, CE226; Bartın, Mugada,

Kızılelma district, on the bark of *Quercus* spp., alt. 70 m, 19.07.2001, CE248; Bartın, Beşköprü köyü, on bark of living *Fraxinus* sp., alt. 50 m, 19.07.2001, CE249; Kastamonu, Araç-Ihsangazi route, around Başköy bridge exit, on bark of living *Quercus* sp., alt. 690 m, 25.07.2001, CE255; Araç-Kastamonu route, Kuzyaka exit, bark of living *Salix* sp., alt. 915 m, 25.07.2001, CE256; Kastamonu-Devrekani route, ca. 2 Km, on bark of living *Salix* sp., alt. 1010 m, 26.07.2001, CE259; Kastamonu, Devrekani-Bozkurt route, Yaralıgöz mountain, on bark of living *Quercus* sp., alt. 1300 m, 26.07.2001, CE263; Kastamonu, Devrekani-Bozkurt route, Yaralıgöz mountain, on bark of living *Pyrus* sp., alt. 1270;m, 26.07.2001, CE265; Kastamonu, Devrekani-Bozkurt route, Yaralıgöz mountain, on bark of living *Malus* sp., alt. 1290 m, 26.07.2001, CE267; Kastamonu, Devrekani-Bozkurt route, Hasandağ pass, on bark of living *Quercus* sp., alt. 1270 m, 26.07.2001, CE268; İnebolu-Küre road, Çuhadaroğlu pass, on bark of living *Crateagus* sp., alt. 750 m, 27.07.2001, CE270; Sinop, İnceburun, on bark of living *Quercus* sp., alt. 75 m, 28.07.2001, CE275; Sinop, İnceburun, Abalı köyü, on bark of living *Pyrus* sp., alt. 40 m, 28.07.2001, CE276; Sinop, İnceburun, Akliman district, on bark of living *Quercus* sp., alt. 15 m, 28.07.2001, CE277; Sinop-Boyabat route, Akçakese district, on bark of living *Malus* sp., alt. 1180 m, 28.07.2001, CE280; Sinop-Boyabat route, Akçakese district, on bark of living *Crateagus* sp., alt. 1180 m, 28.07.2001, CE281; Kastamonu, Taşköprü Seka Plant garden, near bank of the stream, on bark of living *Salix* sp., alt. 500 m, 29.07.2001, CE284; Kastamonu, Taşköprü-Tosya road, on bark of living *Populus* sp., alt. 595 m, 29.07.2001, CE286; Kastamonu, Taşköprü-Tosya road, on bark of living *Pyrus* sp., alt. 840 m, 29.07.2001, CE287; Kastamonu-Araç road, ca. 27 Km, Kanlıgöl district, on bark of living *Salix* sp., alt. 1015 m, 30.07.2001, CE293; Araç-Daday road, ca. 10 Km, on bark of living *Sorbus* sp., alt. 980 m, 30.07.2001, CE295; Araç-Daday road, ca. 10 Km, on bark of living *Quercus* sp., alt. 980 m, 30.07.2001, CE296; Araç-Daday road, ca. 10 Km, on bark of living *Quercus* sp., alt. 980 m, 30.07.2001, CE298; Kastamonu, Daday-Azdavay road ca. 6 Km, Kavakyaylası place, on bark of living *Quercus* sp. alt. 1245 m, 30.07.2001, CE299; Kastamonu, Daday-Azdavay road ca. 25 Km, Ballıdağ pass, on bark of living *Abies* sp., alt. 1520 m, 30.07.2001, CE300; Kastamonu, Azdavay-Pınarbaşı route, Azdavay exit, on bark of living *Malus* sp., alt. 800 m, 30.07.2001, CE302; Kastamonu, Pınarbaşı-Eflani route, in a picnic place, on bark of living *Juglans* sp., alt. 880 m, 30.07.2001, CE 306; Kastamonu, Pınarbaşı-Eflani route, in a picnic place, on bark of living *Pyrus* sp., alt. 880, 30.07.2001, CE 307; Ulus-Pınarbaşı road, on bark of living *Quercus* sp., alt. 950 m, 21.08.2002, CE347; Zonguldak, Gökçebey-Yenice route, ca. 5 Km, on bark of living *Platanus* sp., alt. 25 m, 22.08.2002, CE352; Bartın, İhsanoğlu köyü, on bark of living *Fraxinus* sp., alt. 150 m, 23.08.2002, CE355.

**52. *Macbrideola decapillata* H.C. Gilbert**

Bolu-Göynük, around Çubuk lake, on bark of living *Pyrus* sp., alt. 1005 m, 14.07.2000, CE207; Bartın, Arıt-Amasra road, on bark of living *Quercus* sp., alt. 60 m, 18.07.2000, CE213; Bartın-Safranbolu road, Kirazlıköprü district, near bed of the stream, on bark of living *Platanus* sp., alt. 65 m, 18.07.2000, CE217; Kastamonu, Cide-Şenpazar route, Dağlı pass, on bark of living *Carpinus* sp., alt. 850 m, 19.07.2000, CE221.

**53. \**Macbrideola dubia* Nann.-Bremek. & Y. Yamam.**

Kastamonu, Daday-Azdavay road ca. 25 Km, Ballıdağ pass, on bark of living *Abies* sp., alt. 1520 m, 30.07.200, CE300.

**54. *Macbrideola scintillans* H.C. Gilbert**

Bartın-Arıt road, ca. 3 Km., on bark of living *Salix* sp., alt. 60 m, 18.07.2000, 18.07.2000, CE214.

**55. *Macbrideola synsporos* (Alexop.) Alexop.**

Sinop-Kastamonu road, Sinecan exit, on bark of living *Quercus* sp., alt. 350 m, 28.07.2001, CE278.

**56. *Stemonitis axifera* (Bull.) T. Macbr.**

Bartın, Çağlayan district, near bed of the stream, from the cavity of the living *Salix* sp. stem, alt. 30 m, 18.07.2000, CE212, developed naturally; Safranbolu-Bartın road, around of Eflani road bifurcation, near the bed of a small stream, on bark of living *Quercus* sp., alt. 500 m, 21.07.2000, CE230, developed naturally; Bartın, Ulus-Pınarbaşı route, ca. 2 Km, near bed of a dry brook, on bark of living *Platanus* sp., alt. 190 m, 21.08.2002, CE336, developed naturally; Zonguldak, Devrek, Eğerci-Yedigöller National Park route, on the log of soggy *Platanus* sp., alt. 160 m, 22.08.2002, CE339, developed naturally; Bolu, Yedigöller National Park-Dirgine road, ca. 20. Km, on a decaying *Fagus* sp. log, alt. 350 m, 22.08.2002, CE343, developed naturally; Bolu, Dirgine-Mengen route, near the Yedigöller National Park, Demirci köyü, on a decayed twig (unidentified), alt. 500 m, 22.08.2002, CE344, developed naturally; Zonguldak, Gökçebey-Yenice route, ca. 15 Km, Kayadibi log storage area, near bank of the stream, on a decaying stem of *Fagus* sp., alt. 120 m, 23.08.2002, CE345, developed naturally.

**57. *Stemonitis flavogenita* E. Jahn**

Bolu, Dirgine-Mengen route, near the Yedigöller National Park, Demirci köyü, on a decayed twig (unidentified), alt. 500 m, 22.08.2002, CE344, developed naturally.

**58. *Stemonitis herbatica* Peck**

Zonguldak, Gökçebey-Yenice route, ca. 15 Km, Kayadibi log storage area, near bank of the stream, on a decaying wet stem of *Fagus* sp., alt. 120 m, 23.08.2002, CE345, developed naturally.

**59. *Stemonitis pallida*** Wingate in Macbride

Bartın, Ulus-Pınarbaşı route, ca. 10 Km, Hoca köyü, near bank of the stream, on log of *Salix* sp., alt. 190 m, 21.08.2002, CE335, developed naturally.

**60. *Stemonitis smithii*** T. Macbr.

Bartın, Ulus-Pınarbaşı route, ca. 10 Km, Hoca köyü, near bank of the stream, on log of the *Salix* sp., alt. 190 m, 21.08.2002, CE335, developed naturally; Bartın, Ulus-Pınarbaşı route, Şirince köyü exit, the basin of the stream, on a wetted log (unidentified), alt. 630 m, 21.08.2002, CE337, developed naturally; Bolu, Yedigöller National Park, on a decaying log (unidentified), alt. 850 m, 22.08.2002, CE341, developed naturally; Zonguldak, Gökçebeş-Yenice route, ca. 15 Km, Kayadibi log storage area, near bank of the stream, on decaying wet stem of *Fagus* sp., alt. 120 m, 23.08.2002, CE345, developed naturally.

**61. *Stemonitis splendens*** Rostaf.

Bartın-Safranbolu road, Bartın exit, ca. 5 Km, on a log of *Salix* sp. log, alt. 10 m, 18.07.2000, CE216, developed naturally; Bartın, Ulus-Pınarbaşı route, ca. 10 Km, Hoca köyü, near bank of the stream, on log of the *Salix* sp., alt. 190 m, 21.08.2002, CE335, developed naturally.

**62. *Stemonitis virginiensis*** Rex

Bolu, Yedigöller National Park-Dirgine route, ca. 20 Km, on a decaying *Fagus* sp. log, alt. 350 m, 22.08.2002, CE343, developed naturally.

**63. *Stemonitopsis typhina*** (F.H. Wigg.) Nann.-Bremek.

Bartın, Kastamonu, Ulus-Pınarbaşı route, Şirince köyü exit, around the basin of the stream, on a wetted log (unidentified), alt. 630 m, 21.08.2002, CE337, developed naturally.

**Order TRICHIALES**

**64. *Arcyria cinerea*** (Bull.) Pers.

Bolu-Göynük, around Çubuk Lake, on bark of living *Pyrus* sp., alt. 1005 m, 14.07.2000, CE207; Bartın, Çakraz-Kurucaşile road, Kalaycı köyü exit, on bark of living *Salix* sp., alt. 30 m, 19.07.2000, CE219; Kastamonu-Daday route, ca. 10 Km, Gök köy first school garden, on bark of living *Robinia* sp., alt. 720 m, 20.07.2000, CE225; Karabük, Eflani-Safranbolu route, on bark of living *Quercus* sp., alt. 875 m, 20.07.2000, CE229; Bartın, Kuleyanı district, on bark of living *Vitis* sp. alt. 150 m, 25.07.2000, CE231; Kastamonu-Devrekani route, 10 Km, Kırcalar köyü, on bark of living *Malus* sp., alt. 700 m, 26.07.2001, CE260; Kastamonu-Devrekani route, 10 Km, Kırcalar köyü, on bark of living *Populus* sp., alt. 700 m, 26.07.2001, CE261; Sinop, İnceburun, on bark of living *Quercus* sp., alt. 75 m, 28.07.2001, CE275; Sinop, İnceburun, Abalı köyü, on bark of living *Pyrus* sp., alt. 40 m, 28.07.2001, CE276; Sinop, İnceburun, Aklıman district, on bark of living *Quercus* sp., alt. 15 m, 28.07.2001, CE277; Taşköprü-Kastamonu road, ca. 20 Km, around the bridge of Gülveren stream, on bark of living *Creteagus* sp., alt. 655 m, 29.07.2001, CE292; Kastamonu, Kastamonu, Daday-Azdavay road ca. 6 Km, Kavakyaylası place on bark of living *Quercus* sp., alt. 1245 m, 30.07.2001, CE299; Bartın, Durnuk (Hacıosman köyü), from bank of Bartın stream, on bark of the living *Salix* sp., alt. 1 m, 23.07.2001, CE309; Zonguldak, Devrek, Eğerci-Yedigöller National Park route, on bark of *Quercus* sp., alt. 160 m, 22.08.2002, CE339; Zonguldak, Gökçebeş-Yenice route, ca. 15 Km, in Kayadibi log storage area, on a muddy stratum with combined detritus material, near bank of the stream, alt. 120 m, 23.08.2002, CE345, developed naturally; Zonguldak, Gökçebeş-Yenice route, ca. 5 Km, on bark of living *Platanus* sp., alt. 25 m, 22.08.2002, CE352.

**65. *Arcyria denudata*** (L.) Wettst.

Bartın, Kastamonu, Ulus-Pınarbaşı route, Şirince köyü exit, near the stream, on a wet log (unidentified), alt. 630 m, 21.08.2002, CE338, developed naturally; Zonguldak, Devrek, Eğerci-Yedigöller National Park route, on *Platanus* sp. log, alt. 160 m, 22.08.2002, CE340, developed naturally.

**66. *Arcyria incarnata*** (Pers. ex J. F. Gmel.) Pers.

Bolu-Göynük, around Sünnet lake, on bark of living *Platanus* sp., alt. 920 m, 14.07.2000, CE205; Kastamonu, Cide-Şenpazar route, Kirengeriş forest series, on bark of living *Quercus* sp., alt. 600 m, 19.07.2000, CE220. Kastamonu, Daday-Azdavay road ca. 6 Km, Kavakyaylası place, on bark of living *Quercus* sp. alt. 1245 m, 30.07.2001, CE299.

**67. *Arcyria insignis*** Kalchbr. & Cooke in Kalchbrenner

Bartın, Kastamonu, Ulus-Pınarbaşı route, Şirince köyü exit, the basin of the stream, on a wetted log (unidentified), alt. 630 m, 21.08.2002, CE337, developed naturally.

**68. *Arcyria obvelata* (Oeder) Onsberg**

Bartın, Ulus-Pınarbaşı route, ca. 10 Km, Hoca köyü, on the log (unidentified), alt. 190 m, 21.08.2002, CE335, developed naturally; Bolu, Dirgine-Mengen route, near the Yedigöller National Park, Demirci köyü, on a decaying twig (unidentified), alt. 500 m, 22.08.2002, CE344, developed naturally.

**69. \**Dianema harveyi* Rex**

Safranbolu-Araç route, ca. 8 Km, on bark of living *Pistacia* sp., alt. 370 m, 24.07.2001, CE251.

**70. *Hemitrichia calyculata* (Speg.) M.L.Farr**

Safranbolu-Bartın road, around of Eflani road bifurcation, near the bed of a small stream, on bark of living *Quercus* sp., alt. 500 m, 21.07.2000, CE230, developed naturally; Bolu, Yedigöller National Park, on a soggy log (unidentified), alt. 750 m, 22.08.2002, CE342, developed naturally.

**71. *Hemitrichia minor* G.Lister**

Bartın, Mugada, Kızılelma district, on the bark of *Quercus* sp., alt. 70 m, 19.07.2001, CE248; Bartın, Beşköprü köyü, on bark of living *Fraxinus* sp., alt. 50 m, 19.07.2001, CE249; Safranbolu-Araç route, ca. 8 Km, on bark of living *Pistacia* sp., alt. 370 m, 24.07.2001, CE251; Kastamonu, Araç-İhsangazi route, Başköy bridge exit, on bark of living *Quercus* sp., alt. 690 m, 25.07.2001, CE255; Kastamonu, Boyabat-Taşköprü route, around Fevzi Çakmak stream, on bark of living *Morus* sp., alt. 355 m, 28.07.2001, CE283; Kastamonu, Taşköprü Seka Plant garden, near the stream, on bark of living *Salix* sp., alt. 500 m, 29.07.2001, CE284; Kastamonu, Taşköprü-Tosya road, on bark of living *Populus* sp., alt. 595 m, 29.07.2001, CE286; Kastamonu, Azdavay-Pınarbaşı route, Azdavay exit, on bark of living *Malus* sp., alt. 800 m, 30.07.2001, CE302; Kastamonu, Pınarbaşı-Eflani route, in a picnic place, on bark of living *Juglans* sp., alt. 880 m, 30.07.2001, CE 306.

**72. *Perichaena chrysosperma* (Curr.) Lister**

Kastamonu, Araç-İhsangazi route, İhsangazi exit, around Kandırmaz bridge, on bark of living *Populus* sp., alt. 870 m, 25.07.2001, CE254; Sinop, Çatalzeytin exit, around Moğanaltı bridge, on bark of living *Platanus* sp., alt. 2 m, 27.07.2001, CE273; Kastamonu, Pınarbaşı-Ulus route, Pınarbaşı exit ca. 19 Km, on bark of living *Malus* sp., alt. 590 m, 21.08.2002, CE351.

**73. *Perichaena corticalis* (Batsch) Rostaf.**

Kastamonu, Şenpazar exit, Kalaycı köyü around, on bark of living *Platanus* sp., alt. 400 m, 19.07.2000, CE222; Kastamonu-Daday route, ca. 10 Km, Gök köy first school garden, on bark of living *Malus* sp., alt. 720 m, 20.07.2000, CE224; Sinop-Boyabat route, Akçakese district, on bark of living *Malus* sp., alt. 1180 m, 28.07.2001, CE280; Kastamonu, Taşköprü-Tosya road, on bark of living *Pyrus* sp., alt. 840 m, 29.07.2001, CE287; Kastamonu, Taşköprü-Tosya road, ca. 8 Km, on bark of living *Salix* sp., alt. 930 m, 29.07.2001, CE288; Araç-Daday road, ca. 10 Km, on bark of living *Quercus* sp., alt. 980 m, 30.07.2001, CE296; Kastamonu, Kastamonu, Daday-Azdavay road ca. 6 Km, Kavakyaylası place, on bark of living *Quercus* sp. alt. 1245 m, 30.07.2001, CE299; Kastamonu, Azdavay-Pınarbaşı route, Pınarbaşı entry, on bark of living *Quercus* sp., alt. 790 m, 30.07.2001, CE 304; Kastamonu, Pınarbaşı-Eflani route, in a picnic place, on bark of living *Pyrus* sp., alt. 880, 30.07.2001, CE 307; Kastamonu, Ulus-Pınarbaşı road, on bark of living *Platanus* sp., alt. 950 m, 21.08.2002, CE348; Kastamonu, Pınarbaşı centrum, on bark of living *Quercus* sp., alt. 670 m, 21.08.2002, CE349; Zonguldak, Gökçebeş-Yenice route, ca. 5 Km, on bark of living *Platanus* sp., alt. 25 m, 22.08.2002, CE352; Zonguldak, Gökçebeş-Yenice route, near bed of the Filyos stream, 15 Km, on bark of living *Platanus* sp., alt. 50 m, 22.08.2002, CE353.

**74. *Perichaena tessellata* G.Lister**

Kastamonu, Devrekani-Bozkurt route, Yaralıgöz mountain, on bark of living *Pyrus* sp., alt. 1270 m, 26.07.2001, CE265; Sinop, Helaldı (Güzelyurt)-Ayancık road, near İkisu bridge, on bark of living *Platanus* sp., alt. 80 m, 27.07.2001, CE272; Kastamonu, Taşköprü-Tosya road, on bark of living *Salix* sp., alt. 595 m, 29.07.2001, CE285; Taşköprü-Kastamonu road, ca. 10 Km, Akdoğan köyü, on bark of living *Malus* sp., alt. 640 m, 29.07.2001, CE289; Pınarbaşı-Ulus route, Pınarbaşı exit, ca. 4 Km, on bark of living *Salix* sp., alt. 800 m, 21.08.2002, CE350.

**75. *Perichaena vermicularis* (Schwein.) Rostaf.**

Bolu-Göynük, around Örencik köyü, on bark of living *Pyrus* sp., alt. 1000 m, 14.07.2000, CE206; Bolu, near Abant lake, on bark of living *Crateagus* sp., alt. 1600 m, 15.07.2000, CE210; Kastamonu-Daday route, ca. 10 Km, Gök köy first school garden, on bark of living *Malus* sp., alt. 720 m, 20.07.2000, CE224; Kastamonu-Daday route, Daday entry, Hasanşeyh köyü, on bark of living *Salix* sp., alt. 780 m, 20.07.2000, CE226; Bartın, Kuleyanı district, on bark of living *Vitis* sp., alt. 150 m, 25.07.2000, CE231; Safranbolu-Araç route, İğdir exit, on bark of living *Quercus* sp., alt. 500 m, 24.07.2001, CE252; Araç-Kastamonu route, Kuzyaka exit, on bark of living *Salix* sp., alt. 915 m, 25.07.2001, CE256; Kastamonu-Araç road, ca. 27 Km, Kanlıgöl place, on bark of living *Salix* sp., alt. 1015 m, 30.07.2001, CE293; Kastamonu, Araç-Daday road, ca. 10 Km, on bark of living *Sorbus* sp., alt. 980 m, 30.07.2001, CE295.

**76. *Trichia contorta*** (Ditmar) Rostaf.

Kastamonu, Pınarbaşı-Eflani route, in a picnic place, on bark of living *Malus* sp., alt. 880, 30.07.2001, CE 308; Bolu, Seben-Nallıhan route, Danişment köyü exit, ca. 3 Km, on bark of living *Pyrus malus*, alt. 840 m, 18.07.2002, CE365.

**77. *Trichia decipiens*** (Pers.) T. Macbr.

Bartın, Ulus-Pınarbaşı road, on bark of living *Platanus* sp., alt. 950 m, 21.08.2002, CE348.

**78. *Trichia varia*** (Pers. ex J. F. Gmel.) Pers.

Kastamonu, Devrekani-Bozkurt route, Yaralıgöz mountain, on bark of living *Pyrus* sp., alt. 1270 m, 26.07.2001, CE265.

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