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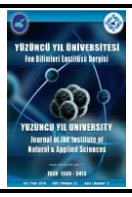

Research Article (Araştırma Makalesi)

Myxomycetes Growing on Culture Logs *Pleurotus ostreatus* (Jacq.) P. Kumm. and *Lentinula edodes* (Berk.) Pegler

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Abstract: In this study, it was aimed to identify myxomycetes that develop on natural and synthetic logs used in culture mushroom cultivation. For this study, the logs brought from three different regions (Sızma village-Konya, Hadim-Konya, Yenice-Karabük) in 2015 and the synthetic logs were applied the procedure required for culture mushroom cultivation and then the spawn of *Pleurotus ostreatus* (Jacq.) P. Kumm. and *Lentinula edodes* (Berk.) Pegler were inoculated to the logs. The inoculated logs were taken to the mushroom growing room where climatic conditions such as humidity, temperature and lighting were provided automatically. While checking the growth of the cultivated fungi, it was observed that the myxomycetes plasmodium and sporocarp also developed on the culture logs. Myxomycetes develop on organic plant debris, which is their natural environment, and are also developed in the laboratory using the moist chamber technique. In this technique, humidity, temperature and light conditions are similar to the conditions applied in cultivated mushroom cultivation. As a result, myxomycetes developed without any extra treatment on the culture logs and the synthetic culture logs. The samples collected with their substrates were placed under protection by gluing them to cardboard and placing them in boxes. As a result of the diagnostic studies, 14 myxomycetes taxa belonging to 7 genera and 5 families were determined.

Pleurotus ostreatus (Jacq.) P. Kumm. ve *Lentinula edodes* (Berk.) Pegler Kültür Kütükleri Üzerinde Gelişen Miksomisetler

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Öz: Bu çalışmada kültür mantarı yetiştiriciliğinde kullanılan doğal ve sentetik kütükler üzerinde gelişen miksomisetleri tanımlamak amaçlanmıştır. Bunun için, 2015 yılında üç farklı bölgeden (Sızma köyü-Konya, Hadim-Konya, Yenice-Karabük) getirilen kütüklere ve sentetik kütüklere kültür mantarı yetiştiriciliği için gerekli olan prosedür uygulandı ve sonra *Pleurotus ostreatus* (Jacq.) P. Kumm. ve *Lentinula edodes* (Berk.) Pegler tohumluk miselleri aşılandı. Aşılanan kütükler nem, sıcaklık ve ışıklandırma gibi klimatik şartların otomatik sağlandığı mantar yetiştirme odasına alındı. Kültür mantarlarının gelişimi takip edilirken kütükler üzerinde miksomiset plasmodium ve sporokarplarının da geliştiği gözlemlendi. Miksomisetler doğal ortamları olan organik bitki döküntüleri üzerinde geliştiği gibi laboratuvar ortamında nem odası tekniğiyle de geliştirilir. Bu teknikte nem, sıcaklık ve ışık şartları kültür mantarı yetiştiriciliğinde uygulanan şartlara benzerlik göstermektedir. Sonuç olarak kültür kütüklerine ve sentetik kültür kütüklerine fazladan herhangidir işlem yapılmadan miksomisetler gelişti. Substratlarıyla beraber toplanan örnekler mukavvalara yapıştırılıp kutulara yerleştirilerek koruma altına alındı. Teşhis çalışmaları sonucunda 7 cins ve 5 familyaya ait 14 miksomiset takson tespit edildi.

1. Introduction

The *myxomycetes*, also commonly known as plasmodial or acellular slime moulds, are the most species-rich group within the Amoebozoa (Stephenson & Schnittler, 2016). Although there are significant developments regarding the geographical distribution, physiological development and genetics of myxomycetes, the information about the ecology of myxomycetes is quite limited (Stephenson & Stempen, 1994). Myxomycetes live on the debris of the forest as well as macrofungi, insects, mosses and lichens (Stephenson & Stempen, 1994). Generally, myxomycete fruiting bodies can occur wherever there is sufficient decaying organic matter with adequate moisture and moderate temperatures (Keller &Braun, 1999; Stephenson & Rojas, 2017).

Development of myxomycetes on different culture logs was reported in different studies (Hamashima 1964; Liu 1984; Lim et al. 1990; Zheng et al. 1995 and Chung et al. 1998). Also, Desrumaux et al. (2003) reported *Stemonitis herbatica* Peck and *Physarum compressum* Alb. & Schwein grown in *Pleurotus*-cultures carried out with pasteurised substrates under hygienic and climatologically controlled conditions. Lee et al. (2014) reported as a disease, *Stemonitis splendens* Rostaf. causing bark decay of oak logs used for *Lentinula edodes* cultivation in Korea.

Myxomycetes were reported as weak diseases on fungi developing on culture logs (Chung et al., 1998; Lee et al., 2014). However, myxomycetes are not pathogenic and they consume fungal hyphae and spores as nutrients (Keller & Everhart, 2010).

With the increase of environmental problems due to rapid industrialization and population growth, there is a big decrease in productive agricultural areas. One of the most important reasons for the widespread use of mushroom cultivation is the fact that it can be produced throughout the year without requiring fertile agricultural land (Eren & Pekşen, 2016).

Although mushroom cultivation is popular all over the world, myxomycetes are not known by people. In this study, it was aimed to show that not only culture mushrooms were developed on logs, but also myxomycetes and to introduce myxomycetes.

2. Materials and Methods

Myxomycetes, which are the subject of our study, were determined from the mushroom growing rooms of Selçuk University Mushroom Application and Research Centre (KONF). These rooms were specially designed for mushroom production and have air conditioning, irrigation and ventilation systems supported by automation systems. In addition to the white culture mushrooms, exotic mushrooms are still in progress in these rooms to improve the culture environments and increase the product productivity. Tree logs are mainly used for the cultivation of exotic mushrooms *P. ostreatus* and *L. edodes*.

Different tree logs (poplar, oak, willow, cherry, peach, beech, apple), which were cut from their natural environment and brought to mushroom cultivation and research laboratory, were prepared for mushroom cultivation. From the logs on which the myxomycetes developed were brought the oaks and the wheat stalks used in synthetic logs from Sızma village (Selçuklu-Konya), the poplar from Eyiste stream (Hadim-Konya), the beech from Fındıklı (Yenice-Karabük) in 2015 (Fig. 1). The tree logs were kept in water for one week after they were brought to fungarium. Spawn obtained from stock pure tissue cultures (*P. ostreatus* and *L. edodes*), which were planned to inoculation to logs, were prepared. After proper inoculation to the logs, the humidity was kept to 80-90% and the temperature was set to 24-26˚C for 25-30 days. Then, for the logs taken into the production room, the humidity was 85-90%, the temperature was 17˚C for *L. edodes* and 22˚C for *P. ostreatus*. Then the automation system was arranged to 12 hours day, and 12 hours night and the ventilation was 10 minutes per hour ventilation and fogging with water vapour was adjusted to 5 seconds every half hour. In the moist chamber technique applied for myxomycetes, the temperature is 24-25˚C and the humidity is 80-90%. Therefore, the climatic conditions of the production room are similar to the moist chamber technique, first used by Gilbert and Martin (1933). Therefore, it was possible to come across different types of fungi and even myxomycetes in production rooms. The mushroom growing work continued for a year. During this time, myxomycetes growing on the logs were collected.

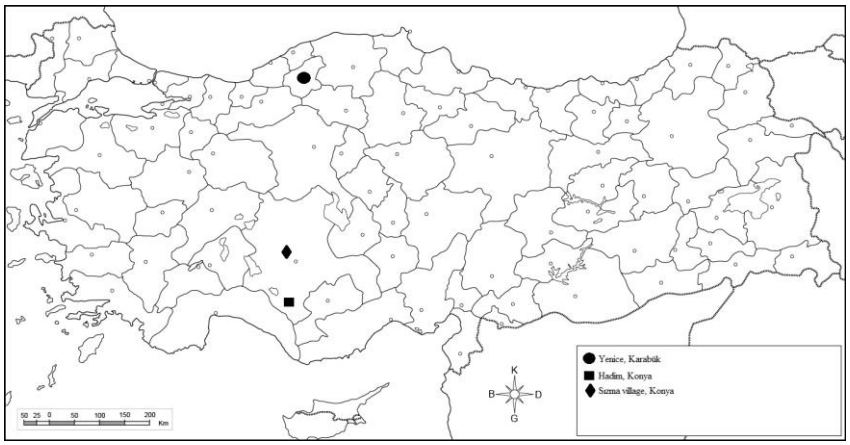

Figure 1. The places where culture logs are provided.

Myxomycetes on the logs were observed as plasmodium and sporocarp. Morphological observations and measurements were conducted under a Leica S8APO stereoscopic microscope. Microscopic characteristics were observed and measured from material mounted in a water droplet under a light microscope (Leica DM 750, Switzerland). The most common fruiting body type is a stalked sporangium, usually of definite size, shape, and colour, with internal structural parts that are used to identify species. Stalked sporangia with spores propagate most species of myxomycetes, each with a combination of morphological characteristics either present or absent; externally a hypothallus and stalk, and internally a columella and a capillitium (system of threads) interspersed with spores and surrounded by an acellular peridium or wall (Stephenson & Rojas, 2017). Samples were identified with the help of the illustrated books and literature (Martin & Alexopoulos, 1969; Martin et al., 1983; Nannenga-Bremekamp, 1991; Neubert et al., 1993; 1995; 2000; Stephenson & Stempen, 1994; Ing, 1999; Poulain et al., 2011), taxonomic information from www.mycobank.org website and species names from www.eumycetozoa.com website was checked. The sporocarps were stored in KONF.

3. Results

As a result of this study, 14 taxa developed on *Populus* sp., *Fagus* sp., *Quercus* sp., and synthetic culture bags used as *Pleurotus* culture logs, and 3 taxa developed on oak used as *Lentinula* culture log. *P. didermoides* developed both on poplar bark and culture bags, while *P. depressa* developed on both poplar bark and oak bark. When we look at the distribution of species in the genus level *Physarum* 4, *Arcyria* 3, *Stemonitis* 2, *Mucilago* 1, *Perichaena* 1 were represented.

A total of 14 species were listed in (Fig 2a-n). Short descriptions, substrates and images of the taxa were given. These taxa were arranged alphabetically in each order.

Protista
Myxomycetes

Physarales
Didymiaceae
1. *Mucilago crustacea* P. Micheli ex F.H. Wigg. (Fig. 2a)

Description: Aethalia usually solitary, pulvinat, pure white to creamy white, 1-7 cm long; hypothallus well developed, membranous to spongy; cortex dense, spongy, composed of calcareous crystals; capillitium consisting of a network of dark, branching and anastomosing threads; pseudocapillitum composed of the walls of the constituent tubes; spores black in mass, bright purplish brown by transmitted light, densely and unevenly verrucose, 11-13 µm in diameter.

Substrate: On synthetic culture logs of *P. ostreatus*

Physaraceae
2. *Physarum album* (Bull.) Chevall. (Fig. 2b)

Description: Stalk sparongia, gregarious, subglobose, grayish white, 0.3-07 mm in diameter and 1-1.5 mm tall; peridium encrusted with lime, the upper portion splitting into irregular fragments; stalk non-calcareous, slender, tapering, longitudinally wrinkled, and usually dark in colour; Capillitium physaroid, consisting of a network of colourless slender threads with interspersed small, white lime nodes; spores black in mass, pale lilaceous brown by transmitted light, minutely spinulose or nearly smooth, 8-10 µm in diameter.

Substrate: On bark of *Quercus* sp. log

3. *Physarum compressum* Alb. & Schwein. (Fig. 2d)

Description: Sporangia scattered or gregarious, stipitate or less sessile, 0.8-1.5 mm in greatest diameter, fan-shaped, compressed-globose, calcareous; peridium single, thin, squamulose; stalk when present short, stout, dark brown; capillitium rather loose, the nodes white, variable in size and shape; spores purplish brown, warted, 10-12.5 µm in diameter.

Substrate: On bark of *Fagus* sp. log

4. *Physarum didermoides* (Pers.) Rostaf. (Fig. 2c)

Description: Sporangia cylindric or ovoid, 0.4-0.6 mm wide, stipitate or sessile, white, becoming blue-gray as outer is shed, the upper part of the outer wall often remaining as a prominent cap, densely aggregated, crowded; peridium double, the outer layer white, limy crustose, the inner layer membranous, translucent; stalk when present white, often flattened, connate with others through the irregularly reticulate; columella none, but pseudocolumella often present; capillitium abundant, the nodes angular, connected by hyaline tubules; spores black in mass, very dark purplish brown by transmitted light, densely spiny, 12-15 µm in diameter.

Substrate: On bark of *Populus* sp. log

Trichiales

Arcyriaceae

5. *Arcyria cinerea* (Bull.) Pers. (Fig. 2e)

Description: Sporangia stipitate, scattered, gregarious subcylindrical or ovoid, 0.1-0.8 mm in diameter, 0.3-4 mm tall, pale gray or drab to pallid; peridium fugacious except for fragments which not rarely remain attached to the expanded capillitium; calyculus concolorous, rather small, sulcate below, smooth or delicately stippled within; stalk slender, concolorous or darker, often nearly black, crowded with spore-like cells, 0.2-2 mm high; capillitium concolorous, firmly attached to the cup, the meshes close, the threads of the upper part 1.5-4 µm in diameter, densely covered with blunt spinules, occasionally also with cogs, bands or reticulations; spores pale gray or yellowish in mass, colourless by transmitted light, with a few scattered, inconspicuous warts, 6-7 µm in diameter.

Substrate: On bark of *Quercus* sp. log

6. *Arcyria denudata* (L.) Wettst. (Fig. 2f)

Description: Sporangia crowded or gregarious, stalked, ovoid or short-cylindric, tapering upward, 2-6 mm tall, 0.4-1.2 mm wide when expanded, pompeian red to brick-red, weathering to brown; peridium evanescent except for the plicate calyculus; stalk dark or concolorous, striate, ascending from a small hypothallus, 0.5-1.5 mm long; capillitium elastic, usually erect, bright red or carmine, the threads 3-4 µm in diameter, marked with a series of rather distant cogs or half-rings arranged spirally apound the axis, attached to the whole inner surface of the calyculus; spores red or reddish brown in mass, colourless by transmitted light, with a few scattered warts, 6-8 µm in diameter.

Substrate: On bark of *Populus* sp. log

7[*]. *Arcyria obvelata* (Oeder) Onsberg (Fig. 2g)

Description: Sporangia crowded, cylindric, 1.5-2 mm tall, 0.3-0.5 mm broad, expanding to a length of 4-12 mm and then lax and dropping, at first bright yellow, but soon changing to pale ochraceous, short stipitate or sessile by an acute base on an extensive membranous hypothallus; peridium fugacious, leaving a shallow, translucent yellowish calyculus, spinulose-reticulate within;

[*]This species was presented as an orally at the 2nd International Eurasian Mycology Congress European (Eroğlu et al., 2019).

capillitium concolorous, extremely elastic, scarcely attached at the base, the threads 3-4 µm in diameter, marked with spines, half-rings, and irregular reticulations; spores buff or ochraceous in mass, nearly colourless by transmitted light, scattered warts, 7-8 µm in diameter.

Substrate: On basidiocarp of *Cerrena unicolor*

Trichiaceae

8. *Perichaena depressa* Lib. (Fig. 2h)

Description: Sporangia depressed-pulvinate, crowded and polygonal by mutual contact, 0.1-1 mm in diameter, chestnut to dark purplish brown; peridium double, the outer wall sometimes hoary from evaporation residue or covered with amorphous or crystalline lime, closely appressed to the membranous inner; dehiscence circumscissile, by a definite preformed lid; capillitium of slender, simple or branched, yellow threads 2-3 µm in diameter, minutely warted or spiny and often displaying numerous elliptic or globose expansions, usually abundant but sometimes rather scanty; spores deep yellow in mass, paler by transmitted light, minutely warted, 9-12 µm in diameter.

Substrate: On bark of *Quercus* sp. log and *Fagus* sp. log

9. *Trichia scabra* Rostaf. (Fig. 2i)

Description: Sporangia sessile, crowded upon a well-developed, dark hypothallus, globose or turbinate, 0.5-0.7 mm in diameter, dull orange; peridium delicate, smooth, shining; capillitium mass deep yellow to rusty orange, the elaters simple, long, 5-6 µm in width, bearing three or four closely wound, regular, spinulose spiral bands, the apices short, acuminate; spores yellow or orange in mass, yellow by transmitted light, the surface marked by a delicate, fine-meshed reticulum 10-12 µm in diameter.

Substrate: On bark of *Populus* sp. log

10. *Trichia varia* (Pers. ex J.F.Gmel) Pers. (Fig. 2j)

Description: Sporangia gregarious or crowded, globose, obovoid or somewhat elongate, 0.5-0.9 mm broad, sessile or with a short, black stalk, yellow-brown, encrusted, or membranous and then shining; capillitium of rather long, simple, 3-5 µm in diameter, bearing two or rarely three irregular spiral bands, these prominent and narrow and in places remote, the apices acute, curved, about twice the diameter in length; spores yellow-orange-yellow in mass, dull pale yellow by transmitted light, delicately warted, 12-14 µm in diameter.

Substrate: On bark of *Populus* sp. log

Stemonitidales

Stemonitidacea*e*

11. *Comatricha alta* Preuss (Fig. 2k)

Description: Sporangia in groups, 3-6 mm tall, ovoid or shortly cylindrical, rounded at apes and base, dark brown; hypothallus discoid or continuous under a group, red-brown; stalk usually several times longer than the sporangium, black usually opaque, except at the base, where a number of opaque fibres seem intertwined; columella almost or completely reaching to the apes of the sporangium, blunt and sometimes a little widened at the end; capillitium abundant, brown, connected to the columella predominantly at the base, threads branched and forming wavy loops, hardly anastomosing, with some free, swollen ends, mainly in the base of the sporangium, when the sporangium is ripe the upper part of the capillitium falls away from the columella and extends as a long plume which often catches on the adjacent sporangia giving them a cob-web appearance; spores lilac-brown in transmitter light, 7.5-9 µm in diameter, with a small round, pale germination area and cover with very small pale warts.

Substrate: On bark of *Populus* sp. log

12. *Comatricha nigra* (Pers. ex J.F. Gmel.) J. Schröt. (Fig. 2l)

Description: Sporangia scattered or gregarious, stipitate, globose, ovate or short-cylindric, erect, black or dark brown, becoming ferruginous when blown; total height 2-8 mm; stalk black, hair-like, relatively long, usually 2-6 times the length of the sporangium; columella reaching to the middle or upper part of the sporangium, there merging into the capillitium; capillitium intricate, the threads

slender, flexuous, branching and anastomosing freely and forming a dense net; spores black in mass, dark violaceous by transmitted light, faintly warted to nearly smooth, 9-10 µm in diameter.

Substrate: On bark of *Populus* sp. log

13. *Stemonitis foliicola* Ing (Fig. 2m)

Description: Sporangia in tufts, dark brown, irregularly cylindrical, stalked, about 3 mm tall and about 0.3 mm in diameter; hypothallus continuous under the entire group, brown, membranous; stalk slender, black, in transmitted light either opaque or hollow and red-red-brown, ¼-1/3 of the total height; peridium fugacious except for some discs which remain hanging loose on the capillitium and fall off as the sporangia dry and separate; columella an extension of the stalk, opaque, irregular; capillitium connected to the columella over the whole length, internal net rather lax, flexuous with membranous expansions in the axils, gradually tapering toward the surface and merging into an irregular surface net with outwards-pointing spines and some free ending branches; spores violet-grey in transmitted light; 8-9 µm in diameter, with a small-meshed reticulum of rows of spines.

Substrate: On bark of *Populus* sp. log

14. *Stemonitis virginiensis* Rex (Fig. 2n)

Description: Sporangia cylindric or elongate-ovate, blunt or slightly acuminate above, violaceous-brown, 2-6 mm tall, gregarious in small clusters on a common hypothallus; stalk black, shining, 0.5-2 mm tall, one-fourth to one-third the total height; columella reaching the apex, giving rise to a delicate capillitium, the ultimate branches united with the small-meshed surface net which tends to fall away above; spores bright in mass, pale lilac-brown by transmitted light, marked by a sharp reticulation of narrow bands connecting prominent warts, 6-7 µm in diameter.

Substrate: On bark of *Fagus* sp. log

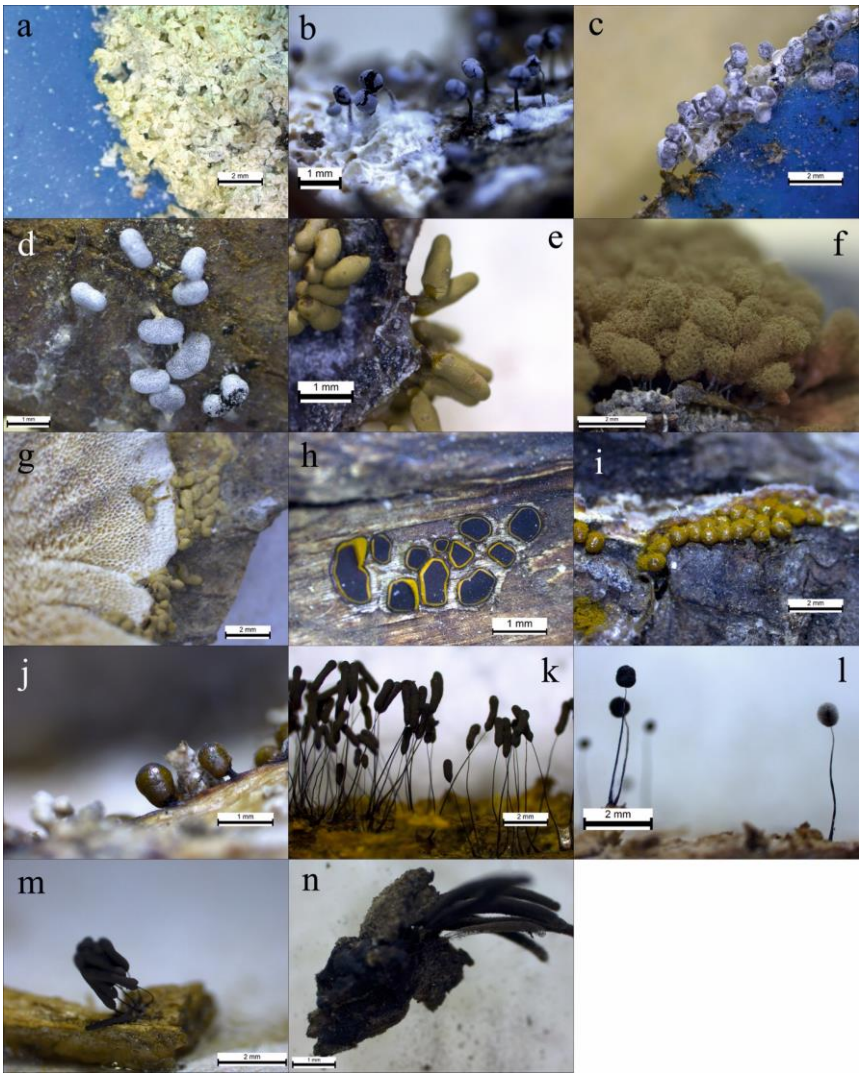

Figure 2. Sporocarps of *Myxomycetes*. a. *Mucilago crustacea* b. *Physarum album* c. *Physarum didermoides* d. *Physarum confertum* e. *Arcyria cinerea* f. *Arcyria denudata* g. *Arcyria obvelata* h. *Perichaena depressa* i. *Trichia scabra* j. *Trichia varia* k. *Comatricha alta* l. *Comatricha nigra* m. *Stemonitis foliicola* n. *Stemonitis virginiensis*

4. Discussion and Conclusion

Chung et al. (1998), *Arcyria cinerea*, *A. denudata*, *S. virginiensis* species identified on the *Lentinula* culture logs. In our study, these species developed on poplar culture logs. Only *P. album* (Chung et al., 1998) grows on oak culture stump in both studies.

A. obvelata developed on a different medium in terms of substrate as it developed on *Cerrena unicolor* (Bull.) Murrill.. *C. unicolor* developed spontaneously on *Pleurotus* culture logs. In this study, *A. obvelata* was evaluated as fungicolous myxomycete (Eroğlu et al., 2019). Again, from Turkey in the first fungicolous myxomycete *A. incarnata* were reported to develop on *Fomes fomentarius* (Yıldız & Dülger, 2015). It was also found substrates such as on decayed log of *Abies nordmanniana* subsp. *bornmuelleriana* (Ergül & Akgül, 2011), on fallen branches of *Pinus brutia* (Baba, 2012a), on decayed log of *Salix* sp., on stamp bark and wood of *Populus* sp. (Eroğlu & Kaşık, 2013b), on debris branches and leaf (Baba, 2015), on bark of living *Pinus brutia* (Oskay & Tüzün, 2015), on log barks of *Platanus orientalis* (Eroğlu et al., 2015), on dead wood (Baba et al., 2016), on wood of *C. libani* (Çağlar et al., 2016), on debris wood (Baba, 2017).

Although myxomycetes were mentioned as weak diseases on cultivated mushrooms, they were not pathogenic (Ing, 1994). In our study, no specimens developed on basidiocarp of culture fungi. It was found only on the bark of poplar, beech and oak culture logs.

When we investigated the information given in other studies of the 14 taxa, given in our study, it was observed that they developed on very different substrates. When looking at the studies, it was seen that *Physarum album*, *P. didermoides*, *Arcyria cinerea*, *Comatricha nigra* and *Perichaena depressa*.

Physarum album was determined on decaying log of *Abies nordmanniana* subsp. *bornmuelleriana* Mattf (Ergül & Akgül, 2011), on *Pinus brutia* Ten. (Oskay & Tüzün, 2015), (Zümre et al., 2019), on debris barks of *Pinus* sp. L., *Quercus* sp. L., *Cupressus* sp. L. (Baba et al., 2018).

P. didermoides was determined on barks of living *Juniperus* sp. L., *Ulmus* sp. L., *Cerasus* sp. L., *Juniperus foetidissima* Wild., on debris barks of *Cedrus libani* A. Rich., *Cerasus* sp., *J. foetidissima*, *J. oxycedrus* L. subsp. *oxycedrus*, *Morus* sp. L., *Pinus nigra* Arnold, *Populus* sp. L., *Quercus* sp. and *Quercus trojana* Webb (Eroğlu & Kaşık, 2013b).

Arcyria cinerea is the most identified species in most studies. *A. cinerea* was found on barks of living *Pinus* sp. (Eroğlu & Kaşık, 2013a; Eroğlu et al., 2014; Baba et al., 2018), *Abies nordmenniana* subsp. *bornmuelleriana* (Ergül & Akgül, 2011), *Acer* sp. (Baba, 2012b), on barks of *Quercus* sp. (Baba et al., 2012; Baba et al., 2018), on barks of living *Cerasus*, on log wood of *Platanus* sp., on debris wood of *Populus* sp., *Quercus* sp., *Salix* sp., on *Cedrus libani* (Eroğlu & Kaşık, 2013a), on debris wood of *Populus* sp., *Cupressus* sp. (Baba et al., 2018), on debris wood of *Pinus brutia* (Zümre et al., 2019).

Comatricha nigra is the second most detected taxon on different substrates. These substrates were on debris of *Pinus nigra* (Eroğlu & Kaşık, 2013a), on debris wood of *Pinus brutia*, (Baba et al., 2012), on barks of *Cedrus libani*, on barks of *Juniperus foetidissima*, on debris of *Juglans* sp. L., on barks of *Juniperus* sp., on barks of *Pyrus elaeagnifolia* Pall., *Quercus* sp., on log of *Salix* sp., on debris wood of *Pinus* sp. (Eroğlu & Kaşık, 2013a), on debris wood of *Pinus* sp. (Eroğlu et al., 2015), on banches of *P. brutia* (Oskay & Tüzün, 2015), on debris of *Quercus* sp., on debris wood of *Pinus* sp., *Cupressus* sp., *Cirsium* sp. Mill. (Baba et al., 2018), *Quercus* sp., *P. brutia* (Zümre et al., 2019).

Perichaena depressa was reported to develop on almost any substrate. *P. depressa* was identified on *Acer* sp. L. (Baba, 2012b), on debris of *Prunus armeniaca* L., *Cedrus libani*, *Cerasus* sp., *Cydonia* sp. L., *Ficus* sp. L., *Juniperus foetidissima*, *J. oxycedrus* subsp. *oxycedrus* sp., *Malus* sp. Mill., *Morus* sp., *P. nigra*, *Persica* sp., *Platanus* sp., *Populus* sp., *Pyrus* sp., *Quercus cerris* var. *cerris* (Willd.) Loudon, *Q. trojana*, *Rosa* sp. L., *Salix* sp., *Vitis* sp. (Eroğlu & Kaşık, 2013a), on debris wood on *Cupressus* sp., *Pinus* sp., *Quercus* sp. (Baba et al., 2018).

1050 myxomycetes taxa have been identified in the world (Lado, 2005-2020), while 286 taxa have been identified in Turkey (Baba and Sevindik, 2019). In the investigation of myxomycetes of a region, hundreds (150-500) of materials can be collected in field studies and at least 20 to 50 samples can be determined as a result of laboratory studies (individual studies). Identifying 14 taxa on approximately 20 culture logs without a moisture chamber technique preparation step is quite good for study. In conclusion, our study is the first study about developing myxomycete in the culture of *Pleurotus* and *Lentinula* mushroom growing room in Turkey. The myxomycete samples were stored in KONF.

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