

TWO NEW MYXOMYCETES RECORDS FOR IRAN MYCOFLORA

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Abstract

This article reports two new myxomycetes genera and species from Iran. These species are collected from Lorestan province, Doroud city in west of Iran. Specimens identified by known references. This species are *Reticularia lycoperdon* Bull., *Mucilago crustacea* P. Micheli ex F.H. Wigg. Those belong to Tubiferaceae and Didymiaceae families. We added two new genera and two new species to myxomycetes flora of Iran. At last we review myxomycetes of Iran that presented in literatures. All references about other myxomycetes that recorded from Iran checked and data summarized.

Introduction

According to Stephenson & Stempen (2000) number of myxomycetes species in the world is about 750 but there are approximately 1000 myxomycetes recognized up to 2011 (Ergul & Oran, 2005). Myxomycetes studies in Iran followed by Rabenhorst (1871) (Ershad, 2009), Riedl & Ershad (1977) (Ershad, 2009), Daneshpazhuh (1995), Ghalamfarsa & Banihashemi, (2000), Saber (2000, 2002), Tajik-ghanbari (2006), Asef (2005, 2008), Asgari *et al.*, (2007), and Bujari *et al.*, (2008). According to references, number of identified taxa of Iran myxomycetes is about 35 and we can say there isn't sufficient information about Iran myxomycetes flora. In this study two new genera and species recorded for Iran from Lorestan province, Doroud city and a list of all myxomycetes that found in Iran presented in Table 1.

Material and Methods

Specimens collected in spring and autumn of 2006 from Iran, Lorestan province, Doroud city near Darband village and Pariz Mountain. Specimens after photography transferred to herbarium of Islamic Azad University, Tehran science & research campus for identification. Host or growing environments of species were recorded. Macroscopic and microscopic characters used for identification. Specimens were identified with known keys and literature (Jordan, 1995; Martin & Alexopoulos, 1969; Stephenson & Stempen, 2000). Morphological characters of species are very similar to other previously data but some features are different. Also we collect all references and papers which concern the Iranian myxomycetes. Then all records were summarized, including name of genera and species, locality and references. Finally we checked nomenclatural ambiguities in index fungorum site (Table 1).

Results and Discussion

Two genera and species found to be new for Iran myxobiota. These records are *Reticularia lycoperdon* Bull., *Mucilago crustacea* P. Micheli ex F.H. Wigg. and explained below.

***Reticularia lycoperdon* Bull.:** This species found on dead and live *Salix* sp. Trees and belong to Tubiferaceae family. Specimen found in spring in wet locations and is inedible. We have collected this specimen from Darband village (Fig. 1).

Description: cushion-like, whitish bodies breaking down to appear brownish spores mass. Fruiting body up to 5cm diameters. Peridium at first is silvery-whitish and in mature stages is brown from spore deposition. Outer wall is some thick, smooth, and then brittle. Spores are sub spherical and cluster in 25-70 batches, 9 micrometers, outer members of cluster covered with a fine network, inner members are smooth.

***Mucilago crustacea* P. Micheli ex F.H. Wigg.:** This species belong to Didymiaceae family. Specimen found on dead *Platanus orientalis* leaves and over grasses in spring and is inedible. We have collected this specimen from oak forest of Pariz Mountain (Fig. 2).

Description: fruiting body up to 10cm diameters. Irregular, very fragile and crumbly. Plasmodium stage creamy or white, aethalium irregularly branching, well two layered, outer constructed of lime crystals which crumble to give a rough surface appearance. Spores purplish-brown, sub spherical, warty, 12-14 micrometers.

References show that there are 35 species belong to 17 genera and 8 families that recorded for myxomycetes in Iran (Table 1). Trichiaceae and Stemonitis are biggest family and genus of Iran myxobiota. This number of myxomycetes is relatively very low compared with other fungi taxa studied in Iran. In study of Daneshpazhuh (1995) it's not determine precise location of specimen and he report 14 species from north of Iran (including Golestan, Mazandaran and Guilan provinces). Also other neighbor countries such as Turkey, mycologists recorded near 200 myxomycetes taxa (Ergul & Oran, 2005) and macrofungi studies have better status (Doğan *et al.*, 2005; Alkan *et al.*, 2011). As a result we added 2 new genera and two species to myxomycetes flora of Iran and it seems universities and mycologists can run projects in this field of mycology for identification of these wonderful species of life in future.

Table 1. List of Iranian myxobiota species with dispersal locality in Iran according to literatures.

Species	Host or substrate	Locality	References
<i>Arcyria cinerea</i>	Rotten wood, mosses	Gil., Maz., Gol.	Daneshpazhuh, 1995
<i>Arcyria denudata</i>	Acer sp.	Gol.	Asgari <i>et al.</i> , 2007
<i>Arcyria incarnata</i>	Wood, mosses, <i>Platanus orientalis</i> , <i>Cornus sanguinea</i>	Gil.	Saber, 2000
<i>Badhamia ovispora</i>	Forest mosses	Maz.	Saber, 2000
<i>Badhamia</i> sp.	Rotten wood, mosses	Gil., Maz., Gol.	Daneshpazhuh, 1995
<i>Ceratiomyxa fruticulosa</i>	Rotten wood of forest trees	Gil., Maz., Gol.	Daneshpazhuh, 1995
<i>Collaria arcyrionema</i>	-	-	Asef, 2008
<i>Dictydiaethalium plumbeum</i>	Astragalus sp.	Kord.	Rabenhorst, 1871(Ershad, 2009)
<i>Didymium melanospermum</i>	Dead leave and wood	Fars	Mostofizadeh-Ghalamfarsa & Banihashemi, 2000
<i>Fuligo septica</i>	Rotten wood, mosses, <i>Alnus</i> sp., <i>Quercus</i> sp., <i>Phoenix dactylifera</i> , <i>Vulpia myuros</i>	Gil., Maz., Gol.	Daneshpazhuh, 1995; Saber, 2000
<i>Hemitrichia abietina</i>	<i>Armillaria mellea</i>	Gil.	Asef, 2005
<i>Hemitrichia calyculata</i>	-		Asef, 2008
<i>Hemitrichia clavata</i>	Rotten wood, mosses	Gil., Maz., Gol.	Daneshpazhuh, 1995
<i>Hemitrichia serpula</i>	Rotten wood, mosses	Gil., Maz., Gol.	Daneshpazhuh, 1995
<i>Lycogala epidendrum</i>	Rotten wood, mosses, <i>Alnus</i> sp., <i>Carpinus betulus</i> , <i>Quercus</i> sp.	Gil., Maz., Gol.	Daneshpazhuh, 1995; Saber, 2000
<i>Lycogala exiguum</i>	Rotten wood, mosses	Gil., Maz., Gol.	Daneshpazhuh, 1995
<i>Metatrichia vesparium</i>	Rotten wood, mosses	Maz. Gil	Saber, 2000&2002
<i>Mucilago crustacea</i> *	Dead leaves and grasses	Lor.	Current article
<i>Reticularia lycoperdon</i> *	Dead and live <i>Salix</i> sp.	Lor.	Current article
<i>Physarum cinereum</i>	<i>Trametes hirsuta</i> , <i>Populus nigra</i> , <i>Brassica napus</i>	Maz., Teh.	Tajik-Ghanbari, 2006; Saber, 2002
<i>Physarum didermoides</i>	Rotten wood, mosses		Daneshpazhuh, 1995
<i>Physarum notabile</i>	<i>Brassica napus</i> , Weed grasses	Maz.	Tajik-Ghanbari, 2006
<i>Physarum pusillum</i>	<i>Gossypium</i> sp.	Gol.	Riedl & Ershad, 1977 (Ershad, 2009)
<i>Physarum</i> sp.	Rotten wood, mosses		Daneshpazhuh, 1995
<i>Stemonitis axifera</i>	Rotten wood, mosses	Maz.	Saber, 2002
<i>Stemonitis fusca</i>	Rotten wood, <i>Alnus</i> sp.	Maz. Gil	Tajik-Ghanbari, 2006; Saber, 2000
<i>Stemonitis nigrescens</i>	Rotten wood, mosses	Gol.	Saber, 2000
<i>Stemonitis smithii</i>	<i>Alnus</i> sp.	Gil.	Bujari <i>et al.</i> , 2008
<i>Stemonitis splendens</i>	Rotten wood, mosses	Gil., Maz., Gol.	Daneshpazhuh, 1995
<i>Stemonitopsis typhina</i>	Rotten wood, mosses	Gil., Lor.	Rabenhorst, 1871 (Ershad, 2009)
<i>Trichia decipiens</i>	Rotten wood, mosses	Gil., Maz., Gol.	Daneshpazhuh, 1995
<i>Trichia favoginea</i>	Rotten wood, mosses	Gil., Maz., Gol.	Daneshpazhuh, 1995
<i>Trichia scabra</i>	Rotten wood, mosses	Gil., Maz., Gol.	Daneshpazhuh, 1995
<i>Trichia varia</i>	Acer sp.	Gol.	Asgari <i>et al.</i> , 2007
<i>Tubifera ferruginosa</i>	-	-	Asef, 2008

Abbreviations of provinces: Gil: Guilan, Gol: Golestan, Lor: Lorestan, Maz: Mazandaran, Teh: Tehran

* New records for Iran myxomycetes



Fig. 1. *Reticularia lycoperdon* Bull. Grown on *Salix* sp. trunk.



Fig. 2. *Mucilago crustacea* P. Micheli ex F.H. Wigg. Grown on dead leaves and grasses.

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