

A New Myxomycetes Record from Turkey

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Abstract

In this study the myxomycetes species were gathered from Kırıkhan (Hatay) in Turkey. After describing the macroscopic and microscopic features we decided that this species was *Paradiacheopsis longipes* Hooff & Nann.-Bremek. and it was new record for Turkey. *Paradiacheopsis longipes* can be distinguished from the other similar-looking species of *Paradiacheopsis* as follows: A gregarious sporocarps, 0.5-2 mm tall, the sporocarps of other species were scattered, solitary or in small groups and the sporocarps tall is between 0.2-0.9 mm except *Paradiacheopsis fimbriata*. Morphological, chorological and ecological characteristics of species was revealed and discussed in comparison with the support of relevant literature. In addition, the photographs belonging to new record was taken with light microscopy.

Keywords: *Paradiacheopsis longipes*, New Record, Myxomycetes, Turkey.

1. Introduction

Myxomycetes; also known as myxogastriids or plasmodial slime molds comprise a monophyletic group of amoeboid protists known to occur in most if not all terrestrial ecosystems. The life cycle of a myxomycete includes two morphologically distinct trophic stages, one consisting of uninucleate amoebae (with or without flagella), and the other consisting of a distinctive multinucleate structure, the plasmodium. The plasmodium is feeding on bacteria and fungal hyphae (Stephenson, 2003). 232 myxomycetes species have been reported from Turkey (Sesli and Denchev, 2014). *Paradiacheopsis* fruiting body a stalked sporangium. Sporotheca spherical or nearly so colour determined by the spore mass. Stalk composed of intertwined fibers. Hypothallus discoid, usually brown. Peridium fugacious, except for a small collar around the stalk. Columella typically reaching to the centre of the sporotheca and there splitting up into the main branches of the capillitium. Capillitium dichotomously branched, sparsely or not anastomosing. Spores brown (Stephenson, 2003). In this study the myxomycetes species were obtained from Kırıkhan in Turkey.

2. Materials and Methods

Samples were collected from Kırıkhan Plain including barks and debris material, bark of living trees, as well as decaying bark, wood, leaves and litters. These samples were brought to the laboratory and were put into plastic storage boxes and were added distilled water. After 24 hours before draining the water the pH was adjusted then the water was drained from the boxes (Gilbert and Martin, 1993). The moist chambers were examined day after day by stereomicroscope. When developing myxomycetes were detected, the sample was taken from moist chamber and put in petri plate to allow to dry slowly. The Myxomycetes specimen was identified according to the relevant references (Martin and Alexopoulos, 1969; Neubert et al., 1993, 1995, 2000; Sesli and Denchev, 2014; Baba, 2012). The samples were prepared as fungarium material and stored in the laboratory of Department of Biology, Faculty of Arts and Science, Mustafa Kemal University.

3. Result and Discussion

Protista

Myxomycota

Myxomycetes

Stemonitomycetidae

Stemonitales

Stemonitidaceae

Paradiacheopsis

Paradiacheopsis longipes Hooff&Nann.-Bremek. Proc.Kon.Ned.Akad.Wetensch.C 99(1-2):51 (1996)

Sporocarps gregarious, 0.5-2 mm tall. Hypothallus membranous, small, discoid, red-brown. Stalk slender, 80-90% of the total height, attenuate upwards, red-brown by reflected light, by opaque or nearly so near the apex, below translucent orange-red or red-brown, vaguely reticulate at the base, enveloped in a thin, hyaline sheath.

Sporotheca globose, pale vinaceous, 0.1-0.2 mm diam. Columella reaching to about the centre of the sporotheca. Capillitium lax, with 2-4 branches arising mostly from the columella apex, branching dichotomously 1-3(-4) times and peripherally occasionally with a few anastomoses, slender, pale brown, smooth or verruculose. Spores very pale, subglobose, (6-)7-8(-9) μm diam., with scattered pale warts (Figure 1)
Hatay Kirikhan Alan Plateau, on *Eucalyptus* sp. wood and cortex, 2014, Baba 53.

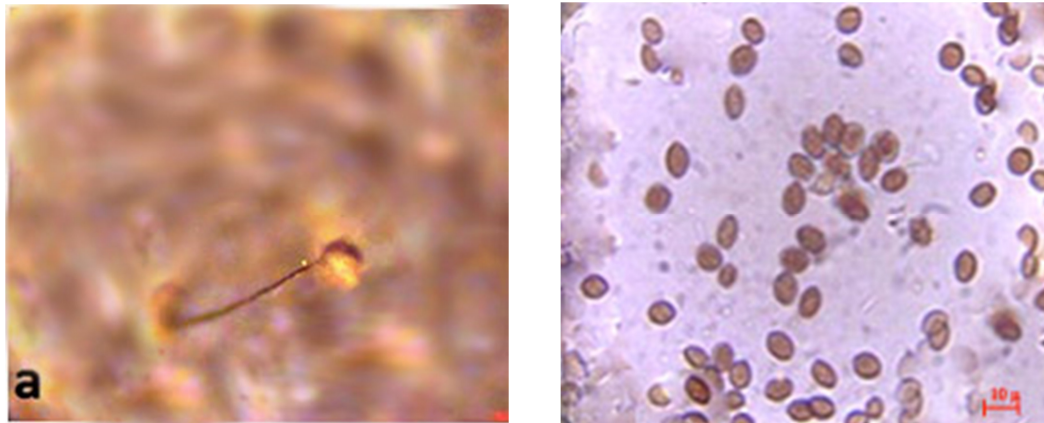


Figure 1. *Paradiacheopsis longipes* Nann -Bremek a) Sporangium (b) Spores

The number species of *Paradiacheopsis* found in Turkey is 6. (Sesli and Denchev, 2014). This number is quite low when compared to other species. *Paradiacheopsis* was classified in Stemonitidaceae family which is belong to the Stemonitales order. Member of the Stemonitales, like Physarales typically have a dark colored spore mass, but in very few example the spore mass is ferruginous. The predominant type of fruiting body produced by the member of this order is stalked sporangium. The capillitium is always present and many species have a prominent columella. The most common expression is for the capillitium to consist of a network of smooth dark threads (Stephenson and Stempfen, 1994). *Paradiacheopsis longipes* can be distinguished from the other similar-looking species of *Paradiacheopsis* as follows: Sporocarps gregarious, 0.5-2 mm tall, in other species the sporocarps scattered, solitary or in small groups and the sporocarps tall is between 0.2-0.9 mm except *P. fimbriata*. The spores of this species strongly distinguishable, they are smaller than to other species spores and very pale, subglobose, (6-)7-8(-9) μm diam., with scattered pale warts. The columella reaches to the center of the sporotheca and branching in some species, the columella of *P. longipes* is reached to the center of the sporotheca but not dividing to capillitial branching.

References

- Gilbert, F.A., Martin, G.W.(1993) *Myxomycetes found on the bark of living trees* univ. Iowa Studies in Natural History.
- Neubert, H., Nowotny W., and Baumann, K. (1993) *Die Myxomyceten (Band I)* Gomaringen: Karlheinz Baumann Verlag.
- Neubert, H., Nowotny W., and Baumann, K. (1995) *Die Myxomyceten (Band II)* Gomaringen: Karlheinz Baumann Verlag.
- Neubert, H., Nowotny W., and Baumann, K. (2000) *Die Myxomyceten (Band III)* Gomaringen: Karlheinz Baumann Verlag.
- Sesli, E., and Denchev, C. M. (2014) Checklists of the myxomycetes, larger ascomycetes, and larger basidiomycetes in Turkey, *Mycotaxon*, 1-136
- Stephenson, S.L. and Stempfen, H. (1994). *Myxomycetes: A Handbook of Slime Molds*. Timber Press, Portland, Oregon, USA.
- Stephenson, S.L. (2003). *Myxomycetes of New Zealand, Fungal diversity*
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