

A new myxomycete record for Turkish myxobiota: *Comatricha suksdorfii*

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Abstract. *Comatricha suksdorfii* is recorded for the first time from Turkey. It has been isolated using the moist chamber technique.

Key words: *Comatricha suksdorfii*, *Myxomycetes*, Turkish myxobiota

Introduction

Investigations of Turkish myxobiota are very recent. The first myxomycete records are in papers on macrofungi (Ergul & Dulger 2000). Detailed articles by Finnish scientists followed after a gap of twenty years (Harkonen & Uotila 1983; Uotila & Kurtto 1984; Harkonen 1988). The first specific accounts by Turkish investigators began later (Gucin & Oner 1986). In the following years, there has been an important increase in reports. Approximately 200 species have been reported from Turkey until now (Ergul & Dulger 2000; Sesli & Denchev 2005). In this study, species of myxomycetes were collected in different localities from Turkey. The macroscopic and microscopic features of these species were determined. After referring to the existing records it was realized that *Comatricha suksdorfii* was a new record for Turkish myxobiota.

Materials and Methods

Myxomycete fruiting was achieved by using the moist chamber technique in the laboratory. Several kinds of plant remains and bark from living trees were kept in an incubator

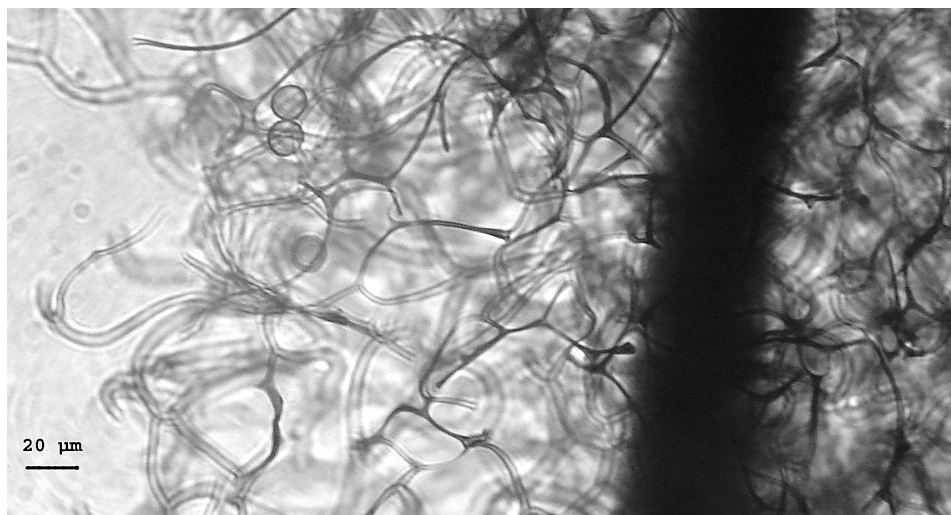
at the temperature of 25 ± 0.1 °C illuminated artificially in a 12:12 h light: dark cycle. The cultures were moistened with distilled water adjusted with KOH to pH 7. After two days the pH of the moisture in the dishes was measured with pH sticks. The moist chamber was then examined every second or third day under a dissecting microscope. When developing myxomycetes were found, the moist chamber was allowed to dry slowly and the myxomycetes were dried for a week. All the chambers were then rewetted for another four-week period and examined as before (Gilbert & Martin 1933; Martin & Alexopoulos 1969).

The specimens are preserved also as permanent slides in Hoyer's medium. Both microscopic and macroscopic observations have been conducted to determine its taxonomic status. In the meantime, some photographs of characteristic qualitative features were taken. All data have been evaluated comparatively for taxonomical aims (Martin & Alexopoulos 1969).

The myxomycete specimen was identified with the aid of the literature listed in the references (Martin & Alexopoulos 1969; Thind 1977; Nannenga-Bremekamp 1991). This specimen is stored at the Herbarium of Canakkale Onsekiz Mart University, Canakkale-Turkey.

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Fig. 1. A view of capillitium and spores of *Comatricha suksdorfii* Ellis & Everh.



Results

Stemonitaceae

Comatricha suksdorfii Ellis & Everh., Bull. Washburn Lab. Nat. Hist. 1: 5, 1884. — *C. aequalis* Peck var. *pacifica* T. Macbr. N. Am. Slime-molds, ed. 2, p. 181, 1922. — *Comatricha pacifica* (T. Macbr.) T. Macbr. in Peck & Gilbert, Am. Jour. Bot. 19: 139, 1932.

Sporangia dispersed; 2.8–3.4 mm tall, cylindrical, rounded at the apex and base; very dark brown to deep black. Hypothallus discoid under dispersed sporangia, continuous under the groups; red-brown. Stalk about half the total height; black, very shiny, opaque; netted fibres forming the stalk are visible only at the base. Peridium persistent for a while in the form of shiny flakes. Columella almost reaching to the apex of the sporangium; opaque. Capillitium without a surface net; the internal net with small meshes; about 7 meshes across the radius; evenly dark, the threads themselves thick and rigid and at the surface with loops and in places with free ends. **Spores** dark lilaceous brown in transmitted light, often paler on one side; 10.0–12.0 µm in diameter; densely and evenly covered with spinules and wartlets (Fig. 1).

Specimen examined: **TURKEY:** Canakkale, Ezine, Kara Menderes Stream around, 39°51'48.6" N, 26°18'46.2" E, alt. 39 m, on *Populus* sp. barks, 5 May 2006 (TBS-3).

Discussion

Since Gilbert & Martin (1933) accidentally discovered that the moist chamber technique was an excellent method for obtaining fructifications it has become the standard means for studies and inventories of myxomycetes, applicable to almost any kind of substrate. Cultures have yielded sporangia of species too small to be detected in the field, and several new species have been described by applying this technique (Eliasson 1991).

Comatricha suksdorfii can be recognised by the black or nearly black sporangia with persistent peridial flakes, stalks half the total height, the absence of a surface capillitial net and its seven, rigid capillitial threads. Martin & Alexopoulos (1969) cite *C. pacifica* as a synonym of *C. suksdorfii* because the types are supposed to be identical; the type has long stalks and relatively small spores.

The total height and the spore diameter of *Comatricha suksdorfii* given in the literature varies: Martin and Alexopoulos (1969) and Nannenga-Bremekamp (1991), state respectively (2–) 4–8 mm and (9–) 10–12 (–13) µm. The total size and the spore diameter of our specimen were 2.8–3.4 mm and 10.0–12.0 µm, respectively.

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