

# First report of the white rotting fungus *Sarcodontia crocea* in Armenia

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## ABSTRACT

The *Sarcodontia crocea* (Schwein.) Kotl. is recorded for the first time from Armenia. The specimen has been collected from the old fallen branch of apple tree (*Malus* sp.) and known from the single locality, the private orchard at the Vahagni village, Lori province. Herein, the collected specimen, habitat and threats are briefly described. Further inclusion to the Red Data Book of Armenia is recommended.

## KEY WORDS

apple tooth fungus, biodiversity, distribution, Polyporales, South Caucasus

## INTRODUCTION

Armenia is a mountainous and small landlocked country, located in the South Caucasus region. Being part of the Caucasus biodiversity hotspot, it is also well known for rich biodiversity and notable level of endemism (Anonymous 2014). More than 1200 species of macroscopic fungi are known from Armenia, including 40 taxa registered in the Red Data Book of Armenia (Tamanyan et al. 2010).

*Sarcodontia crocea* (Schwein.) Kotl. (syn. *S. setosa*) is a wood inhabiting basidiomycete causing white-rot. The species is recorded from a number of European, Asian and North American countries (Eriksson et al. 1981; Iršėnaitė 2019; Kotlaba 1953; Safonov 2006; Szczepkowski 2010; Szczepkowski et al. 2017). Its presence in the Caucasus region is reported by few records

from North Caucasus (Russia) and Georgia (Ghobad-Nejhad et al. 2009). *S. crocea*, a so-called xyloparasite, grows on trunks, branches or roots live trees, both wild and cultivated, predominantly on fruit trees, mainly *Malus* spp., and in frequently other tree species, including *Pyrus* spp., *Prunus* spp., *Fagus* spp., *Fraxinus excelsior*, *Quercus* spp., etc. (Szczepkowski et al. 2017; Shakhova and Volobuev 2020).

The species is widespread, but at the same time rare and threatened within its distribution range. According to the recently assessed conservation status, it is listed in the IUCN Red List of Threatened Species as Vulnerable A2c+3c+4c. The major threat is intensive orchard/garden management, which reflects in the removal of old fruit trees and subsequent decline of the species population (Iršėnaitė 2019).

In this short communication, we report the finding of *S. crocea* from Armenia, which is the first record of the species and the respective genus for the country.

## MATERIAL AND METHODS

Macroscopic features of mature basidiome were studied with light microscope and the species identification was followed by Breitenbach & Kränzlin (1986) and Bernicchia & Gorjón (2010). The voucher specimen was deposited at the herbarium of the Lichen Research and Conservation Group at the A. Takhtajyan Institute of Botany National Academy of Sciences, Republic of Armenia.

## RESULTS

*Sarcodontia crocea* (Schwein.) Kotl. (Fig. 1)



**Figure 1.** Basidiome of *Sarcodontia crocea* on fallen branch of apple tree (*Malus* sp.)

### Brief notes

The gathered fresh basidiome had a typical hymenophore characterized by bright sulphur-yellow dense spines (up to 20 mm long and 1 mm in diameter) becoming ochre-brown at a later stage. The features mentioned earlier, as well as other properties of the macroscopic and microscopic structure of the basidioma collected in the new locality, were consistent with those given by Breitenbach & Kränzlin (1986) and Bernic-

chia & Gorjón (2010). The species was discovered in the old and unmanaged fruit tree orchard, with mostly apple trees. The orchard is situated in the residential area near the temperate broad-leaf forest predominated by Oriental beech (*Fagus orientalis*), Oaks (*Quercus macranthera*, *Q. iberica*), Hornbeam (*Carpinus betulus*) and accompanied by Lime trees (*Tilia cordata*, *T. caucasica*), Ash (*Fraxinus excelsior*) and Birches (*Betula pendula*, *B. pubescens*). Some of these tree species can be host for *S. crocea*.

### Specimen examined

Private orchard of Mr. Ashot Davtyan, Vahagni village, Lori province, 40°54'09.6" N 44°36'21.3" E, 1130 m, on wood of fallen branch of apple tree, 05 July 2020, leg. A. Gasparyan, rev. A. Szczepkowski.

## CONCLUSIONS

Taking into account, that the species is globally threatened, we emphasize the implementation of urgent conservation measures locally. Following the regulations and criteria for the Red Data Book of Armenia, based on D criterion (less than 50 mature individuals), we assess the species as Critically Endangered (CR D). We also recommend to include the species in the upcoming edition of the Red Data Book of Armenia with proposal to implement further research on population size and distribution of the species in the country.

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