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(Antalya, Turkey)

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**Phaselis' New Endemic Host: (*Alyssum macropodum* Boiss. & Balansa)
(Antalya, Turkey)**

***Phaselis'te Yeni Bir Endemik Konukçu: (*Alyssum macropodum* Boiss. & Balansa)
(Antalya, Türkiye)***

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Abstract: Phaselis was an ancient Greek and Roman city on the coast of Lycia. Its ruins are located north of the modern town Tekirova in the Kemer district of Antalya Province in Turkey. It lies between the Taurus Mountains and the forests of Olympos National Park. During a study in Phaselis antique city, the fungal species *Erysiphe cruciferarum* Opiz ex L. Junell is determined on an endemic plant species *Alyssum macropodum* Boiss. & Balansa. *E. cruciferarum* is a powdery fungus species and identified on this endemic host plant for the first time in Turkey. The study present, description, macro-microscopical characteristics features of *Erysiphe cruciferarum* on *Alyssum macropodum* were given.

Keywords: Phaselis, Microfungi, *Alyssum macropodum*, Turkey

Öz: Lykia kıyısında antik bir Hellen ve Roma kenti olan Phaselis harabeleri hâlihazırda Antalya ili Kemer ilçesinde, Tekirova'nın kuzeyinde; Toros Dağları ile Olympos Milli Parkı ormanları arasındadır. Phaselis'te yapılan bir araştırma sırasında, bir mantar türü olan *Erysiphe cruciferarum* Opiz ex L. Junell, endemik bir bitki türü *Alyssum macropodum* Boiss & Balansa üzerinde tespit edildi. Bir külleme mantarı türü olan *E. cruciferarum*'un, bu endemik konak bitki türü üzerindeki kaydı Türkiye'de ilk olup yapılan çalışmada, *A. macropodum* üzerinde *E. cruciferarum*'un tanımlaması, makro-mikroskobik özellikleri verilmiştir.

Anahtar sözcükler: Phaselis, Mikrofungi, *Alyssum macropodum*, Türkiye

Introduction

Fungi are an important group of plant pathogens. The vast majority of fungi receive some of their nutrients or the whole plant from their host plants. Mostly of all the major plants diseases are caused by fungi. But very few of the known fungi can colonize the living plants. Commonly crop and wild plants are infected by powdery mildews, which in general are hostspecific¹.

Turkey has a very diverse mycoflora and flora many studies have been carried out concerning. The first and most important control the fungal diseases in a country is to study the mycoflora and determine their hosts².

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¹ Knogge 1996; Deacon 2006.

² Farr et al. 2004; Sert et al. 2006.

In this study *Erysiphe cruciferarum* Opiz ex L. Junell is identified on an endemic plant in Phaselis Ancient city, *Alyssum macropodum* Boiss. & Balansa.

The powdery fungus is identified on this host for the first time in Turkey³.

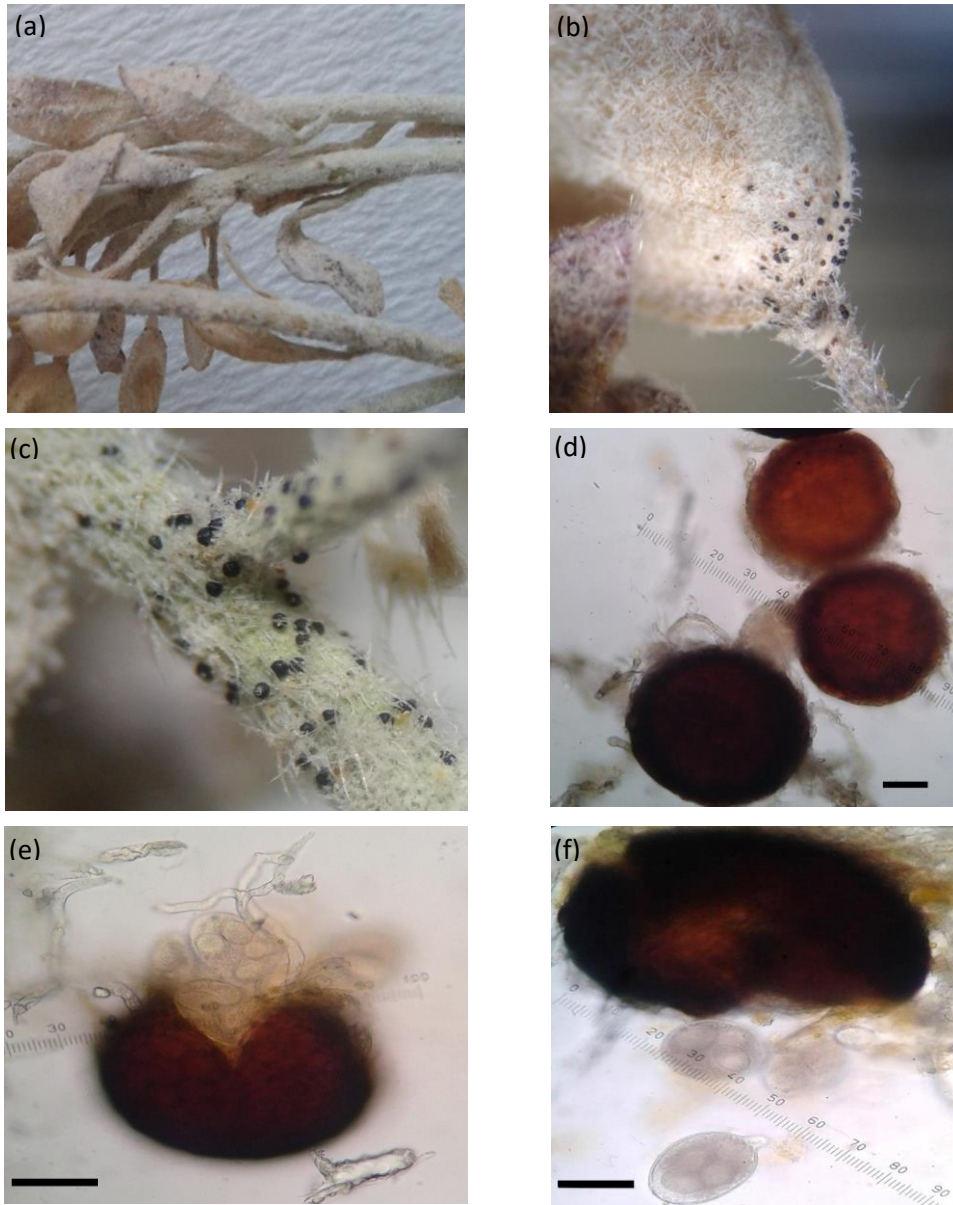


Figure 1: *Erysiphe cruciferarum* on *Alyssum macropodum*; (a, b, c) Stereo microscopic views: (a) Mycelium on leaves and stem (b, c) Chasmothecia; (d, e, f) Light microscopic views: (d) Chasmothecia, (e, f) chasmothecia and asci (Bars: d: 10 μ m, e: 20 μ m f: 20 μ m.)

³ Phaselis antique city is located in the Antalya province and is mainly in the Mediterranean phytogeo-graphical region. It was chosen as a research area, because its climatic conditions (especially high humidity) and plant distributions are very suitable for the growth of microfungi.

Material and Methods

Phaselis ancient city and surrounding plant species specimens were collected and recorded during spring and summer (2016-2017) throughout the research period. Typical symptoms of powdery mildew are observed in various parts of the plant such as fruit and leaves. The preparations were examined microscopically and the mean spores morphologies were compared with information in the literature Branderburger (1985), Braun (1995), Braun and Cook (2012), Host plants were identified with the help of *Flora of Turkey* Davis (1965-1985), Davis *et al.* (1988), Güner *et al.* (2000, 2012) *Flora of Antalya City* (Göktürk 1994). The specimens are preserved at the Akdeniz University, Manavgat Vocational School Laboratory (Antalya, Turkey).

Descriptions of Taxa

Erysiphe cruciferarum is identified on a host plant nominated *Alyssum macropodum* (Brassicaceae). *A. macropodum* is an endemic plant in one of the important antique city of Turkey, Phaselis. This powdery fungus is identified on this host for the first time in Turkey.

Erysiphaceae

Erysiphe cruciferarum Opiz ex L. Junell

Mycelium white, on stems, fruits and on both surfaces of leaves, effuse, amphigenous and persistent. Hyphal appressoria almost unlobed and solitary. Conidiophores straight, 35-75 µm long, forming conidia singly, conidia cylindrical, ellipsoid-doliiform, 12-20×7-15 µm. Chasmothecia scattered, 60-125 µm, appendages in lower half of the ascomata, 0.25-3 times, 0.5-2 times the chasmothecial diam. (about 25-230µm long), septate, walls thin, hyaline yellowish to brownish in the lower half, pale, asci, (3-)4-8(-10), almost short-stalked, obovoid, clavate-saccate, (2-)4-6(-8) spores; ascospores ellipsoid-obovoid, 5-8×9-15 µm, colourless (Fig. 1).

Specimen examined: on living stems, fruits and leaves of *Alyssum macropodum* Boiss. & Balansa, (Brassicaceae) Turkey, Antalya, Phaselis Ancient City, 2016, F.A. 3013b.

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