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A NEW SPECIES, *HELISCUS ATILAE* FROM TURKEYХУСЕЙИН Э., СЕЛЬЧУК Ф., ЭКИДЖИ К. НОВЫЙ ВИД *HELISCUS ATILAE* ИЗ ТУРЦИИ

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A fungus belonging to the moniliaceous hyphomycete genus *Heliscus* was found on rotting twigs of *Rhamnus petiolaris* in Kırşehir Province of Turkey. It is described as a new species, *Heliscus atilae*, illustrated and compared with allied species.

Key words: anamorphic fungi, Anatolian peninsula, moniliaceous hyphomycetes.

Обнаружен новый вид гифального гриба рода *Heliscus* на гниющих веточках *Rhamnus petiolaris* в провинции Кыршехир Турции. Вид *Heliscus atilae* подробно описан и иллюстрирован.

Ключевые слова: анаморфные грибы, Анатолийский полуостров, гифомицеты.

Turkey has a very diverse flora, and higher plants of Turkey have been well studied, but the mycobiota has not been extensively investigated and most of the studies deal with macromycetes generally agaricoid fungi. However, during the past two decades research on micromycetes (including hyphomycetes) in the country has intensified (Hüseyinov, Selçuk, 1999; Braun et al., 2000; Hüseyin, Selçuk, 2001; Hüseyin et al., 2003, 2005; Mel'nik et al., 2004; Selçuk et al., 2009, 2014; Selçuk, Ekici, 2014; Selçuk, Hüseyin, 2014).

A new hyphomycete species was found during a trip to Kervansaray Mountain, Kırşehir Province, Central Anatolian Peninsula. This mountain lies in the Irano-Turanian phytogeographic region (Hamzaoglu, 1996). The fungus belongs to the genus *Heliscus* had been described in 1880 by Saccardo (Saccardo, 1880a).

Materials and methods

Fresh material for this paper was collected during mycological excursion from the Kervansaray mountain in Boztepe district, Kırşehir Province of Turkey in 2012. The collections were examined in distilled water and Leica DM 3000 (Axio imager 2 equipped with Nomarski differential interference contrast optics) microscope was used for microphotographs. Identification of the genus *Heliscus* Sacc. was carried out through comparison with current taxonomical works on hyphomycetous fungi under consideration (Carmichael et al., 1980; Barnett, Hunter, 1998; Seifert et

al., 2011). The current names of taxa are given according to Index Fungorum (2016). The specimen examined is deposited at the Ahi Evran University, Arts and Sciences Faculty, Department of Biology.

Results

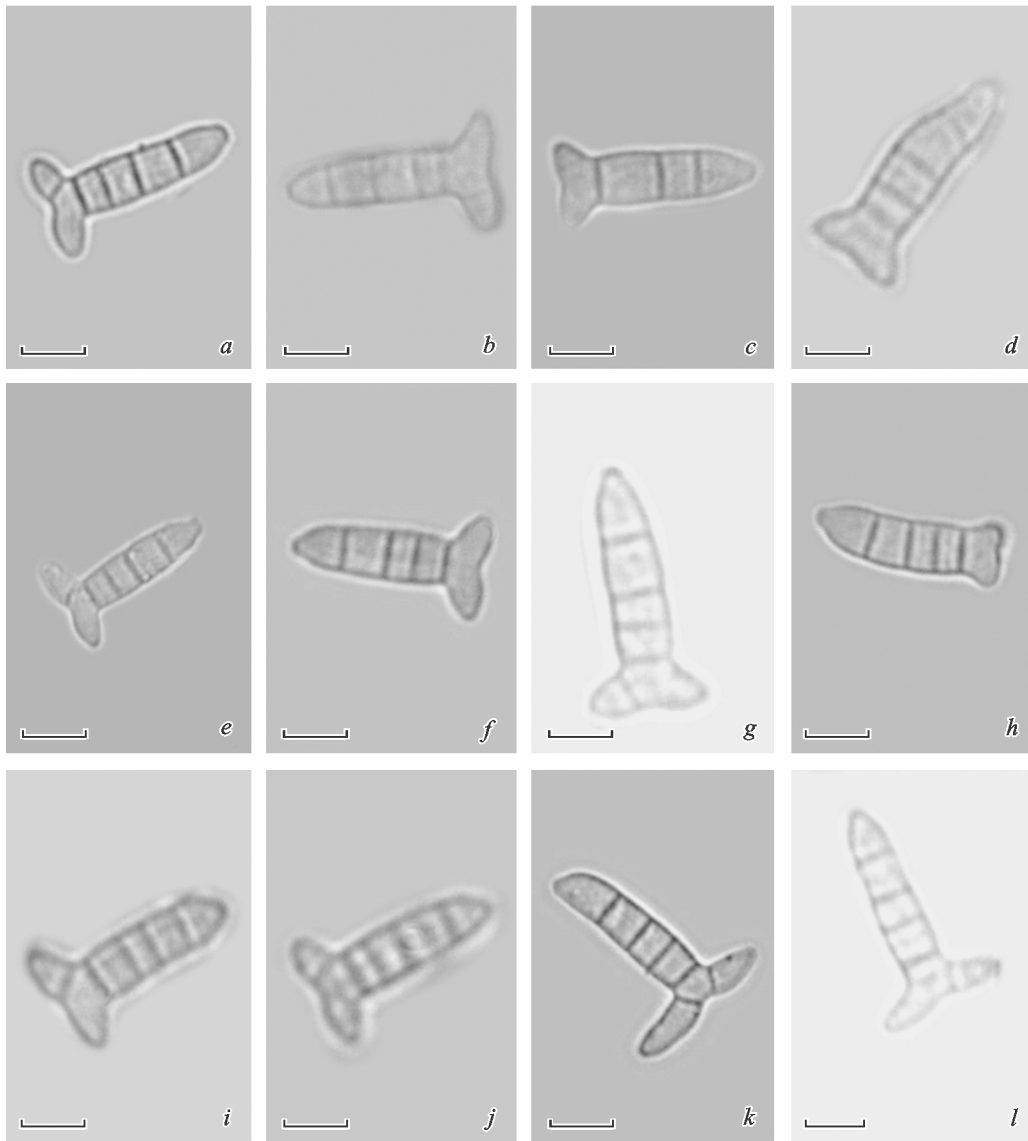
The species described as a new, differs from all known *Heliscus* species by 3—4(5)-septate conidia 20—25 × 5—5.5(6) μm, with 1(2)-septate, cylindrical or conical, rounded at the apex, 5—8 × 3—3.5 μm two arms. The following description is based on fungal material found in Central Anatolia (Turkey) on rotting twigs of *Rhamnus petiolaris* Boiss. (*Rhamnaceae*) in 2012.

Heliscus atilae E. Hüseyin, F. Selçuk et K. Ekici sp. nov. (MB 815304)

E t y m o l o g y. Atila, in honour of the grandson of the first author.

H o l o t y p e. Turkey, Kırşehir Province, Boztepe district, mountain sparse forest, on rotting twigs of *Rhamnus petiolaris* Boiss. (*Rhamnaceae*), 1320 m a. s. l., 39°13'30" N, 34°13'41" E. Coll. E. Hüseyin 02 12 2012 (EH 0196).

D e s c r i p t i o n. Colonies scant, loose, whitish. Mycelium superficial, branched, septate. Conidiophores sparingly branched, hyaline, bearing one or more phialides, 100—140 × 2.5—3.5 μm. Conidiogenous cells hyaline, phialidic lageniform, 10—12 × 1.5—2 μm. Conidia straight or slightly curved, slimy, solitary, hyaline, cylindrical narrowed at the base, with 3—4(5) distinct and 1—2 indis-



General view on conidia of *Heliscus atilae*: *a* — 4-septate conidium with one septated arm, *b* — conidium with two aseptate arms, *c* — 3-septate conidium with rudimentary arms, *d* — 3(4)-septate conidium with rudimentary arms, *e* — 4-septate conidium with developed arms, *f* — 4-septate conidium with unseptate arms, *g* — conidium with rudimentary septa on the arms, *h* — 4-septate conidium with rudimentary arms, *i* — 4-septate conidium with one by one septa on each arm, *j* — 5-septate conidium, *k* — 4-septate conidium with developed arms separated by septa, *l* — the same from opposite side. Scale bar — 8 μm .

tinct septa, not constricted, $20\text{--}25 \times 5\text{--}5.5(6)$ μm , with two arms on the top. Arms initially aseptate, then one or both arms 1-septate, rarely only one arm 2-septate, cylindrical or conical, rounded at the apex, $5\text{--}8 \times 3\text{--}3.5$ μm . Span of the arm is $10\text{--}15(17)$ μm (see Figure, *a*–*l*).

Discussion

The genus *Heliscus* comprises 7 species which colonize mainly decaying and rotten leaves, wood or bark of different plants. Within these species, 4 ones were transferred to other genera (Index Fungorum, 2016). *Heliscus* is distinguished by submerged, branched, septate mycelium, simple or sparingly branched hyaline conidiophores (phialides), hyaline conidiogenous cells, hyaline, unicellular or

septate with 2–3 short arms, slimy or dry, schizogenous conidia (Saccardo, 1880a; Ingold, 1975; Arx, 1981; Matsushima, 1985; Peláez et al., 1996; Barnett, Hunter, 1998; Seifert et al., 2011).

The type species of *Heliscus* is *H. lugdunensis* Sacc. et Therry. It had been described by Saccardo and Therry in 1880 from Italia and France (Saccardo, 1880b). Then Webster (1959) described its teleomorphic stage as *Nectria lugdunensis* J. Webster. Later Lombard and Crous (Lombard et al., 2014) transferred this species into *Neonectria* genus as *N. lugdunensis* (Sacc. et Terry) L. Lombard et Crous. According to Index Fungorum (2016), the current name of *Heliscus lugdunensis* is *Neonectria lugdunensis* on teleomorphic stage. In addition to the type species *Heliscus lugdunensis*, it has been known only three species of the *Heliscus* genus so far (Seifert et al., 2011; Index Fun-

Taxonomically significant characters of *Heliscus conidiogenus* apparatus highlighting a new species, *H. atilae*

Species	Conidiophores, μm	Conidia, μm	Number of septa per conidium	Arms, μm	Arms number	Number of septa per arm
<i>Heliscus atilae</i>	100—140 \times 2.5—3.5	20—25 \times 5—5.5(6)	3—4(5)	5—8 \times 3—3.5	2	1(2)
<i>H. lugdunensis</i>	50—60 \times 2.5	35—40 \times 7	1—3		3	
<i>H. submersus</i>	50—320 \times 2—4	19—40 \times 2.5—4	1	3—8 long	2	1
<i>H. tentaculus</i>	38—100 \times 3—4	45—71 \times 1.5—2		33—43 long	3	
<i>H. versailensis</i>	200—400 long	30 \times 20—25			2	

gorum, 2016) — *H. submersus* H. J. Huds. (Hudson, 1961; Marvanová et al., 2003), *H. tentaculus* Umphlett (1957, 1959) and *H. versailensis* G. Arnaud (1952).

H. atilae it is not close to any of them. The conidia of *H. lugdunensis* are large (35—40 \times 7 μm) with 1—3 septa and 3 arms. *H. submersus* has conidia 19—40 \times 2.5—4 μm bearing 1 septa and 2 arms. The conidia of *H. tentaculus* are 45—71 \times 1.5—2 μm without septa and with 3 arms. Those of *H. versailensis* are 30 \times 20—25 μm with 2 arms. The diagnostics characteristics of species discussed above are presented on Table.

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