

## Spiders (Aranei) new to the fauna of Turkey. 3. Genus and species records of Hahniidae

## Пауки (Aranei) новые для фауны Турции. 3. Находки нового рода и видов Hahniidae

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КЛЮЧЕВЫЕ СЛОВА: Пауки, Hahniidae, новая находка, Турция, скутуля.

ABSTRACT. One genus with two species, *Hahnia montana* (Blackwall, 1841) and *H. ononidum* Simon, 1875 has been found in Turkey for the first time. Both species are illustrated. A new structure, scutula (pair of small sclerites posterior-lateral to the epigastral furrow) is reported for *H. ononidum* and Hahniidae for the first time.

РЕЗЮМЕ. Впервые для Турции отмечен род *Hahnia* C.L. Koch, 1841 и два вида *H. montana* (Blackwall, 1841) и *H. ononidum* Simon, 1875. Оба вида проиллюстрированы. Обнаружена новая морфологическая структура у *H. ononidum*: scutula (пара небольших склеритов за эпигастральной щелью), ранее никогда не отмечавшаяся у Hahniidae.

### Introduction

The present paper is the third in a series on the new spider records from Turkey, and is devoted to Hahniidae. In previous papers [Marusik & Kunt, 2009; Marusik et al., 2009] we reported six genera and 12 species of Theridiidae.

Hahniidae is small, globally distributed family with 238 species belonging to 26 genera [Platnick, 2009]. The actual number of species in this family may be lower because some of the genera assigned to this group (*Cryphoea* Thorell, 1870, *Dirksia* Chamberlin & Ivie, 1942 and few other) have an entirely different palp and unmodified spinnerets.

Until now five species of Hahniidae belonging to two subfamilies Hahniinae (*Antistea elegans* (Blackwall, 1841) and *Cryphoea* (four species of *Cryphoea* Thorell, 1870: *C. brignolii* Thaler, 1980, *C. pirini* (Drensky, 1921), *C. silvicola* (C.L. Koch, 1834) and *C. thaleri* Wunderlich, 1995) have been reported from Turkey [Bayram et al., 2008].

During the joint Turkish-Russian arachnological expedition in May–June 2009, we collected two species of *Hahnia* C.L. Koch, 1841. The main goal of this paper is to report on these species from Turkey.

### Material and Methods

All specimens were collected during the Turkish–Russian Arachnological expedition in May 27–June 14 2009. Eight provinces: Ankara, Bolu, Kastamonu, Bursa, İzmir, Aydın, Antalya and Artvin provinces were visited during the collection trip (Map 1). The specimens were collected by litter sifting with the help of aspirator and preserved in 70% ethanol. Specimens were photographed using an Olympus Camedia C-5050 camera attached to an Olympus SZX12 stereomicroscope. The images were montaged using "CombineZM" image stacking software. Photographs were taken in dishes of different size with paraffin in the bottom. Different sized holes were made in the bottom to keep the specimens in the right position. Each species is supplied with the most appropriate identification references (chiefly well known identification books).

Material treated herein is deposited in the Turkish Arachnological Society collection and in the Zoological Museum of the Moscow State University.

### Results

*Hahnia* C.L. Koch, 1841

*Hahnia* is large genus with 95 species distributed almost worldwide [Platnick, 2009]. Members of this genus are unknown in Australia and New Zealand. Judging from the morphology of the male palp, this genus seems paraphyletic, and can be split into several genera. Type species



Map 1. Localities studied during Turkish-Russian Arachnological trip in 2009. Arrows show localities where two *Hahnia* species have been collected.

Карта 1. Точки в которых были собраны пауки входе совместной Турецко-Российской экспедиции в 2009 г. Стрелками показаны места сборов двух видов рожа *Hahnia*.

of the genus is *H. pusilla* C.L. Koch, 1841 distributed in Europe.

### *Hahnia montana* (Blackwall, 1841)

Figs 1–2, 5, 9–10.

*H. m.*: Harm, 1966: 354, f. 23–28 (♂♀).

*H. m.*: Roberts, 1985: 168, f. 74c (♂♀).

*H. m.*: Roberts, 1995: 254, f. (♂♀).

*H. m.*: Roberts, 1998: 270, f. (♂♀).

*H. m.*: Almquist, 2005: 275, f. 259a–d (♂♀).

MATERIAL EXAMINED. 2 ♂♂, 15 ♀♀, 1 juv. [T-04] Bolu Province, Abant, 40°40.656'N 31°28.313'E, 1308 m, litter in *Pinus* and mixed *Pinus–Fagus* forest, 28.05.2009 (Yu.M. Marusik); 4 ♀♀, 1 juv [T-04a] Bolu Province, Abant, 40°39.611'N 31°24.989'E, 888 m, litter in mixed forest, 28.05.2009 (Yu.M. Marusik); 15 ♀♀ [T-06] Kastamonu Province, Azdavay, 41°41.938'N 33°25.971'E, 975 m, litter in oak forest, 30.05.2009 (Yu.M. Marusik); 7 ♀♀ [T-09] Bursa Province, Uludağ National Park, 40°06.970'N 29°03.283'E, 648 m, mixed oak, *Fagus*, pine forest, 1.06.2009 (Yu.M. Marusik).

COMMENTS. This species has a European distribution, and is known in most of European countries north to southern Sweden and Norway [Helsdingen, 2006]. Although it is very common in Europe, it is not known in adjacent Bulgaria or Greece, but only in Romania. *H. montana* does not reach the Caucasus or the Urals in the East. This species can be easily recognized by smaller size, large receptacula, round tegulum, lack of a conductor, and the lack of a brush of spines in prolateral side of tegulum (Figs. 5, 9–10). All specimens of *H. montana* were collected in forest litter with presence of *Pinus*.

### *Hahnia ononidum* Simon, 1875

Figs 3–4, 6–8.

*H. o.*: Harm, 1966: 362, f. 46–50 (♂♀, S).

*H. o.*: Opell & Beatty, 1976: 426, f. 89–93 (♂♀).

*H. o.*: Roberts, 1998: 272, f. (♂♀).

*H. o.*: Almquist, 2005: 277, f. 261a–e (♂♀).

MATERIAL EXAMINED. 2 ♀♀ [T-01] Ankara Province, Kızılcahamam, Soğuksu National Park, Göllü, 40°27.359'N 32°35.602'E, 1800 m, dead litter in pine-spruce forest, 27.05.2009 (Yu.M. Marusik); 2 ♂♂ [T-01a] Ankara Province, Kızılcahamam. Soğuksu National Park, Göllü, 40°26.794'N 32°35.476'E, 1608 m, stony debris on steep slope among pine forest, 27.05.2009 (Yu.M. Marusik); 17 ♂♂, ♀♀, 4 juv. [T-03] Ankara Province, Kızılcahamam, Çamlıdere, 40°32.709'N 32°30.547'E, 964 m, litter in pine stand, 28.05.2009 (Yu.M. Marusik); 1 ♀ [T-07] Kastamonu Province, Between Kastamonu–Çankırı road, 29 kilometers from the Ilgaz District, 41°05.862'N 33°44.844'E, 1520 m, stones in pine forest, 31.05.2009 (Yu.M. Marusik).

COMMENTS. This species has a Circumholarctic distribution. It occurs in most of the European countries including Greece and Bulgaria, so finding of *H. ononidum* in Turkey is not surprising. It is likely that *H. ononidum* represents a group of sibling vicariating species. Species from different populations in northern Europe, Siberia and North America have different number of spines in the tegular brush. This species can be easily distinguished from another Turkish species by its larger size, epigyne with two dark small dots, and the presence of a tegular brush and a membranous conductor (see Fig. 7).

While photographing the epigyne we recognised that *H. ononidum* has postepigastral scutula (sclerotized parts) (cf Figs 6, 8). This character was not documented in Hahniidae. Such a feature is known in *Scytodes s.l.* and the term “scutula” was applied by Brignoli [1976]. Besides *H. ononidum*, scutula are present in several Asian species, such as *H. maginii* Brignoli, 1977, and several undescribed species related to *H. barbata* Bosmans, 1992. Scutula most probably serve for fixation of the palp during copulation, and is likely a palpal hook catch.

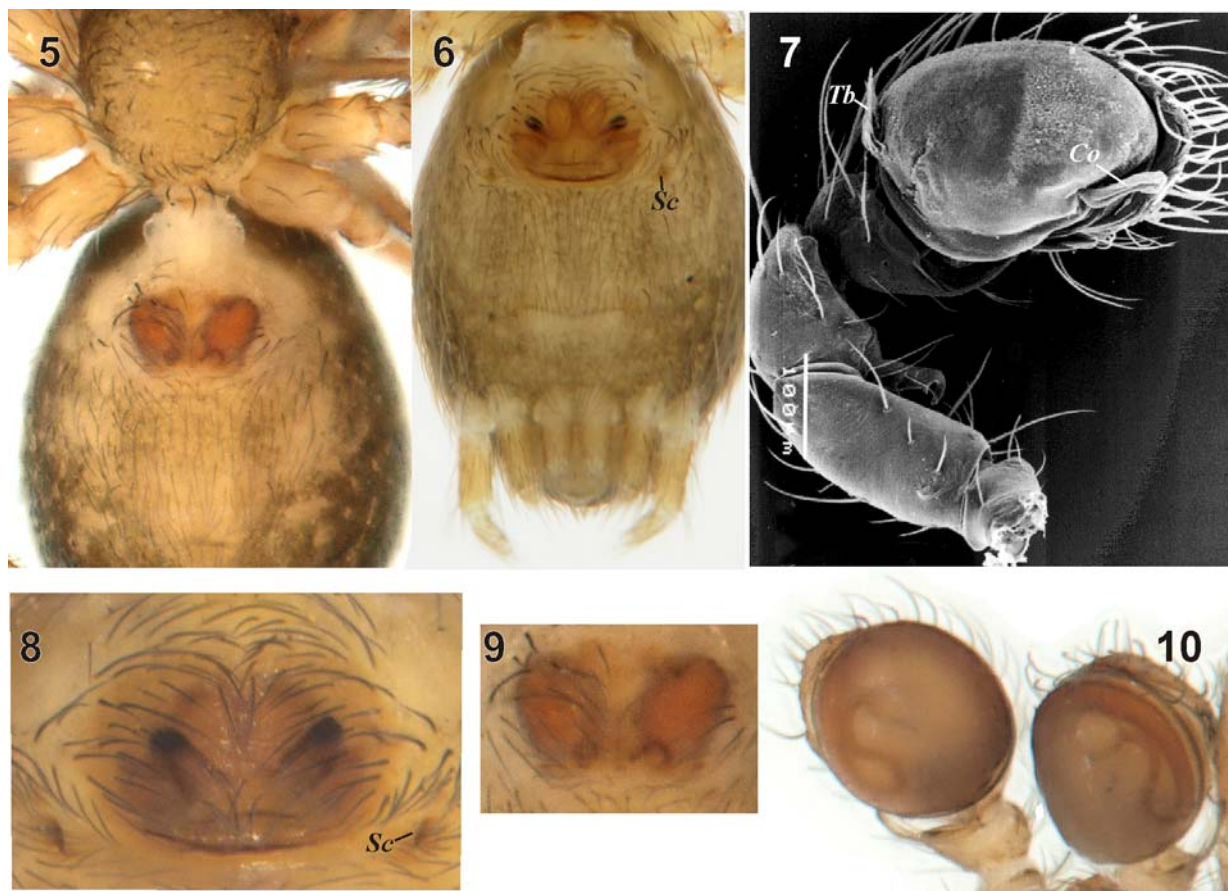


Figs 1–4. Habitus of *Hahnia montana* (1–2) and *H. ononidum* (3–4): 1, 4 — female, dorsal; 2–3 — male, dorsal.  
 Рис. 1–4. Габитус *Hahnia montana* (1–2) и *H. ononidum* (3–4): 1, 4 — самка, сверху; 2–3 — самец, сверху.

### Discussion

Although only two species of *Hahnia* have been found in Turkey, occurrence of additional species is very likely. For example *Hahnia candida* Simon, 1875, is known in adjacent Bulgaria, Greece and Israel [Levy,

2003; Helsdingen, 2006]. Another species that may occur in Turkey is *H. nava* (Blackwall, 1841). It is known from adjacent Bulgaria, Greece [Helsdingen, 2006] and Azerbaijan (personal data). Several other species that occur in Greece in Bulgaria are likely to be found in Turkey.



Figs 5–10. Copulatory organs of *Hahnina montana* (5, 9–10) and *H. ononidum* (6–8): 5–6 — female abdomen, ventral; 7, 10 — male palp, ventral; 8–9 — epigyne, ventral. 6 — from Mongolia; 7 — from Yukon Territory. Abbreviations: Co — conductor; Sc — scutula; Tb — tegular brush.

Рис. 5–10. Копулятивные органы *Hahnina montana* (5, 9–10) и *H. ononidum* (6–8): 5–6 — брюшко самки, снизу; 7, 10 — пальца самца, снизу; 8–9 — эпигина, снизу. 6 — из Монголии; 7 — из Территории Юкон. Сокращения: Co — кондуктор; Sc — скутула; Tb — тегулярная щётка.

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