

Biyolojik not (Biological note)

***Cheletomimus bakeri* (Ehara, 1962) (Acari: Cheyletidae),
a New Record for the Turkish Fauna**

Cheletomimus bakeri (Ehara, 1962) (Acari: Cheyletidae), Türkiye faunası için yeni bir kayıt

İbrahim ÇAKMAK^{1*} Sultan ÇOBANOĞLU²

Summary

Females and nymphs of *Cheletomimus bakeri* (Ehara, 1962) (Acari: Cheyletidae) were collected from the colony of *Tetranychus cinnabarinus* (Boisduval) (Acari: Tetranychidae) in the rearing room at the department of Plant Protection, Faculty of Agriculture, University of Adnan Menderes, Aydın, Turkey. This is a new record for the Turkish fauna.

Key words: *Cheletomimus bakeri*, Cheyletidae, predatory mite, *Tetranychus cinnabarinus*, Tetranychidae

Özet

Cheletomimus bakeri (Ehara, 1962) (Acari: Cheyletidae)' nin dişi ve nimf dönemleri, Adnan Menderes Üniversitesi Ziraat Fakültesi Bitki Koruma Bölümü iklim odalarında kitle üretimi yapılan *Tetranychus cinnabarinus* (Boisduval) (Acari: Tetranychidae) üzerinden elde edilmiştir. *Cheletomimus bakeri* Türkiye faunası için yeni kayıttır.

Anahtar sözcükler: *Cheletomimus bakeri*, Cheyletidae, avcı akar, *Tetranychus cinnabarinus*, Tetranychidae

¹ Department of Plant Protection, Faculty of Agriculture, Adnan Menderes University, 09100, Aydın, Turkey

² Department of Plant Protection, Faculty of Agriculture, Ankara University, 06110 Ankara, Turkey

* Sorumlu yazar (Corresponding author) e-mail: icakmak@adu.edu.tr

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Introduction

The Cheyletidae family has a cosmopolitan distribution across the world and it includes more than 370 described species and 72 genera (Bochkov & Fain, 2001). The species of Cheyletidae family may roughly be separated into two groups, parasites and predators. The parasitic taxa occur on mammals, birds or insects. The predators occur on plants and in the soil as well as in vertebrate nests and stored products, feeding on mites or small insects (Gerson et al., 2003). Thirteen cheyletid species namely *Acaropsella volgini* (Gerson), *Acaropsis sollers* Kuzin, *Bothrocheyla paulovskyi* (Volgin), *Cheletogenes ornatus* (Canestrini & Fanzago), *Cheletomimus bregetovae* (Volgin), *Chelotomimus wellsii* (Baker), *Cheletomorpha lepidopterorum* (Shaw), *Cheyletus eruditus* (Schrank), *Cheyletus malaccensis* Oudemans, *Cheyletus tenuipilis* Fain, *Cheyletus trouessarti* Oudemans, *Hypopicheyla elongata* Volgin and *Microcheyla granifera* Kuznetsov (= *M. ozkani* Koç & Ayyıldız) were recorded in Turkey (Özer et al., 1986; Madanlar, 1991; Koç & Ayyıldız, 1995; 1996; Çobanoğlu, 1996; Koç, 1998; Gültekin & Özkan, 1999; Doğan & Ayyıldız, 2004; Kumral, 2005; Bayram & Çobanoğlu, 2006). Previous studies on cheyletids in Turkey did not report the presence of *Cheletomimus bakeri* (Ehara) (Acari: Cheyletidae). In this study, females and nymphs of *C. bakeri* were collected from the colony of *Tetranychus cinnabarinus* (Boisduval) (Acari: Tetranychidae) in the rearing room at the department of Plant Protection, Agriculture Faculty, Adnan Menderes University, Aydın, Turkey. This is a new record for the Turkish fauna.

Material and Methods

Specimens were mounted in Hoyer's medium on microscope slides. Identification was based on Summers & Price (1970). The voucher specimens were deposited in the mite collection of I. Cakmak at the Department of Plant Protection, Agriculture Faculty, Adnan Menderes University, Aydın, Turkey.

Results and Discussion

Cheletomimus bakeri (Ehara, 1962)

Synonyms:

Paracheyletia bakeri Ehara, 1962

Hemicheyletia bakeri (Ehara, 1962)

Hemicheyletia tumidus Qayyum & Chaudhri, 1979

Female: Quite large eyes. Dorsomedian setae similar shape in dorsolaterals. Hysterosomal plate bears at least 3 pairs of dorsolateral setae. Two pairs of dorsomedian setae place on propodosomal shield. Hysterosoma plate has one pair of dorsomedian setae. First pair of dorsolateral hysterosoma setae on separate plates.

Palpus has 7 basal teeth. Outer comb have 16, inner comb have 20 teeth. Dorsal plate has microtuberculate pattern. Legs: Guard setae is not clear. Ventral setae smooth.

Material examined: Aydın, 7.III.2008, 24♀♀.

Distribution: *Cheletomimus bakeri* was found on juniper in Canada (E.W. Baker in Ehara, 1962), *Hibiscus rosasinensis* and citrus plants in Japan (Ehara, 1962; Razaq et al., 2001), chrysanthemum in greenhouses and citrus plants in the USA (Muma, 1964; Kanavel & Selhime, 1967; Laing, 1973).

This species is a new record for the Turkish fauna.

Biology: Females and nymphs of *Cheletomimus bakeri* were collected from the colony of *Tetranychus cinnabarinus* in rearing room at the department of Plant Protection, Faculty of Agriculture, University of Adnan Menderes, Aydın, Turkey. The observations indicated that *C. bakeri* fed on all

immature stages, except eggs, and adults of *T. cinnabarinus*. Similar results were reported by Laing (1973) who observed that *C. bakeri* did not feed on the eggs of *T. urticae*. Kanavel & Selhime (1967) showed that *C. bakeri* fed and reproduced on *Eotetranychus sexmaculatus* (Riley), *Panonychus citri* (McGregor), *Eutetranychus banksi* (McGregor) (Acari: Tetranychidae), *Tyrophagus* sp. (Acari: Acaridae), *Typhlodromalus peregrinus* (Muma), *Typhlodromus rickeri* Chant (Acari: Phytoseiidae) and *Aonidiella citrina* (Coquillet) (Hemiptera: Diaspididae) that were offered as food. This predator is considered a general feeder (Kanavel & Selhime, 1967).

Kanavel & Selhime (1967) and Laing (1973) reported that all postembryonic stages of *C. bakeri* captured and consumed prey in the same passive manner and preferred to ambush their prey. When a prey mite passed nearby, the predator grasped one of the prey's appendages (usually a leg) between its pedipalps, inserted its chelicerae into the appendage, and began to feed. *C. bakeri* immobilized its prey with a toxin injected into the prey's body (Laing, 1973). This mode of capture enables even the larvae of *C. bakeri* to feed on prey several times larger than their own size. Similar observations were seen in the present study.

Cheletomimus bakeri is thelytokous parthenogenesis. No males were observed by Ehara (1962), Muma (1964), Kanavel & Selhime (1967) or Laing (1973), and in the present study females produced only female offspring.

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