

**TEMNORHYCHUS BAAL REICHE & SAULCY, 1856,
A NEW SPECIES FOR TURKISH FAUNA
(COLEOPTERA, SCARABAEIDAE, DYNASTINAE)**

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ABSTRACT: *Temnorhynchus baal* Reiche & Saulcy (Coleoptera: Scarabaeidae: Dynastinae) is recorded for the first time for Turkish fauna from provinces of Erzurum and İzmir. Hypothesis explaining its presence in Turkey are discussed, based on the known biogeographical history of the species.

KEY WORDS: *Temnorhynchus baal*, distribution, Turkey, new record.

The genus *Temnorhynchus* Hope counts 31 species-level taxa, mostly distributed in the Ethiopic region (including Malagasy subregion) (Krell, 1996). Only two species, closely related, reach the Palearctic region, where they are spread in the Eastern Mediterranean area and in the Arabian Peninsula.

Of these, *T. baal* Reiche & Saulcy is the species more widespread in the considered area, its occurrence being recorded from North Africa, the Levant, some Aegean Islands and Greece (Krell 1993, 1994a,b; Gillett & Gillett, 2009).

This paper present the first records of *T. baal* from Turkey, based on specimens recently collected during field research and one specimen preserved in the collection of the Erzurum University.

RESULTS

Material examined: Turkey: Erzurum, 4.VII.1997, leg. E. Dane, 1 specimen (coll. Entomology Museum, Erzurum, Turkey (EMET)); Izmir, 8 KM W Selçuk, Pamucak beach, 24.V.2011, leg. M. Uliana & R. Rattu, 51 specimens (coll. M. Uliana and R. Rattu).

Specimens from Pamucak beach were picked among several others, all of them found dead on the sand surface, in the area going from pioneer vegetation (*Cakiletum*) to the beginning of the dune (*Ammophiletum*) (fig.1). Most of them were well preserved, some being still fresh and relaxed, making us suspect that they had died the night before. Of a few specimens were found only remains, mostly missing the abdomen, apparently due to predation or to the action of scavenger animals (rodents?) feeding on dead specimens.

DISCUSSION

Temnorhynchus baal is spread in both the Ethiopic and the Palearctic regions, where it is most often observed in coastal localities, in accordance to the psammophilous habits generally recognized for the members of this genus (Krell, 1996) and for this species in particular (Krell, 1993: 283).

Krell (1996) proposed a thorough analysis of the biogeography of the genus

Temnorhynchus, where the origin and history of Mediterranean populations of *T. baal* are discussed in detail. *T. baal* is presumed to have recently originated in the area corresponding to Southern Egypt/Sudan, in a time range comprised between 28.000 and 18.000 years before present. While it is likely to have autonomously spread to the Levant coasts taking advantage of the ecological corridor represented by the Nile valley (where this species is still present) and of the periods of favorable environmental conditions, its arrival in the Aegean Islands and Macedonia was putatively put in relation to the expansion of sugar cane cultivation, occurred in these areas since the 14th century. *Temnorhynchus* beetles are known to feed on sugar canes, and a record for *T. baal* as a pest of this cultivation is also known.

Given the known occurrence of *T. baal* in the neighbouring Naxos island (Krell, 1994a; Gillett & Gillett, 2009), the presence of *T. baal* on the western coast of Turkey is not surprising: the distance between Naxos and Pamucak beach is about 170 Km, and is interspersed with other Islands. The longer distance between two of these is about 45 Km, between Donousa and Ikaria.

Considering the massive population observed in 2011, together with the absence of previous records, it seems a reasonable hypothesis that its presence in this area may be of recent origin, either due to active or passive dispersion. *Temnorhynchus* beetles are good fliers and are considered capable to colonize new habitats in short time (Krell, 1996: 212), as suggested also by the recent establishment of *T. retusus* in Australia (Krell & Hangay, 1998).

On the other hand, the record from Erzurum is difficult to interpret, since it comes from a continental area at a quite high altitude, far away from known areas of occurrence. In the Mediterranean part of its distributional range its presence in continental areas is known only from one pair collected in Greece at (Doiran [=Dojran?]) in 1921, which represent the northernmost known collecting place.

Therefore the specimen from Erzurum is most likely deriving from a passive introduction: further field investigations may ascertain whether a established population is existing or not.

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Figure 1. Pamucak Beach (İzmir), may 24, 2011: area where dead adults of *Temnorhynchus baal* were collected.