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Description of the female of *Cordulegaster vanbrinkae* (Lohmann, 1993) (Odonata: Anisoptera: Cordulegastridae)

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Abstract

The female of *Cordulegaster vanbrinkae* is described and illustrated, basing on four specimens collected in Gīlān and Māzandarān Provinces, northern Iran. Their characters and variability are shown and compared with females of other *Cordulegaster* species.

Key words: Odonata, dragonfly, *Cordulegaster vanbrinkae*, Iran, characteristics, variability

Introduction

Cordulegaster vanbrinkae Lohmann, 1993 was described on the basis of 1 male caught on 23.VII.1971 in Iran, Elbursgebirge (= Alborz Mountains), Veysar (sub Weyser) near Chālūs (sub Chalus) (36°40' N / 51°25' E, 1200 m a.s.l.) (leg. H. F. Paulus) (coll. Natural History Museum in Berlin, Germany). Since the description of the male, no other specimens were collected in northern Iran until Schneider *et al.* (2014) found a numerous population with 14 males identified in 2013. Outside of Iran, five males of this species were collected in 2010 in southeastern Armenia near the village of Verin Khotanan (Ananian & Tailly 2012). In 2013, this species was also found in southern Azerbaijan in the vicinity of the Azfilial settlement, where only four males were collected (Skvortsov & Snegovaya 2014).

Within the genus *Cordulegaster*, this species belongs to the *boltonii*-group, which includes eastern subgroups with both *C. heros* Theischinger, 1979, and *C. picta* Selys, 1854 (Verschuren 1989, Boudot 2001, 2014). This is the darkest of all the Palaearctic *Cordulegaster* species, with a much reduced yellow pattern on the abdomen (Lohmann 1993, Schneider *et al.* 2014).

Both Ananian & Tailly (2012) and Schneider *et al.* (2014) described the colour pattern variability of this species, based on the males they collected. However, the female remains unknown.

During a field trip in July 2014, four females of *C. vanbrinkae* were collected in northern Iran. This paper describes them and emphasizes their structural and colour characters as well as their variability.

Material examined

Iran, Gīlān Province, Fūman district, Qaleh Rudkhan, brook below the Roudkhan castle (3704' N / 4914' E), 9.VII.2014, one juvenile ♀; Gīlān Province, Tālesh district, Poonel-Shafā Rūd (3732' N / 4900' E), 18.VII.2014, one ♀; Māzandarān Province, Chālūs district, Koshkesara at the Khātīr bon stream 3 km south of Chālūs (3637' N / 5125' E), 14.VII.2014, two ♀. All collected specimens are housed in the author's collection.

Description of the female of *Cordulegaster vanbrinkae*

Head (Fig. 1). Labium beige-brown. Mandibles tawny yellow with a broad basal blotch. Labrum beige-yellow with

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