

NOTA / NOTE

Contribution to the knowledge of *Onychogomphus costae* Selys, 1885 (Odonata: Gomphidae) in the Sevillian-Cordovan countryside, Southern Spain

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Abstract: *Onychogomphus costae* Selys, 1885 is a rare species of Anisoptera (Odonata: Gomphidae) with a very fragmented distribution in the Iberian Peninsula. This study updates its distribution in the provinces of Seville and Cordova, Southern Spain, based on a targeted survey carried out in 2016-2024 and the compilation of all available records. The species currently seems to be widespread, with a distribution concentrated in the middle section of the Guadalquivir River and its tributaries in the Sevillian-Cordovan countryside. The species barely had records in this area until 2018, mainly due to its cryptic behaviour.

Key words: Odonata, Gomphidae, *Onychogomphus costae*, new records, Cordova, Seville, Spain.

Resumen: Contribución al conocimiento de *Onychogomphus costae* Selys, 1885 (Insecta: Odonata) en la campiña sevillano-cordobesa, sur de España. *Onychogomphus costae* Selys, 1885 (Odonata: Gomphidae) es una rara especie de Anisoptera (Odonata: Gomphidae) que tiene una distribución muy fragmentada en la Península Ibérica. Este estudio actualiza su distribución en las provincias de Sevilla y Córdoba, sur de España, a partir de una investigación realizada entre 2016 y 2024. La especie parece estar extendida actualmente, con una distribución concentrada en el tramo medio del río Guadalquivir y sus afluentes en la campiña sevillano-cordobesa. La especie apenas contaba con registros en esta área hasta el año 2018, principalmente por su comportamiento críptico.

Palabras clave: Odonata, Gomphidae, *Onychogomphus costae*, nuevos registros, Córdoba, Sevilla, España.

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Onychogomphus costae Selys, 1885 is endemic to the Iberian Peninsula and the Maghreb and it is rated as rare in Europe (Boudot & Garrigós, 2015). In the Maghreb, *O. costae* is scarce and more widely distributed in northern Morocco, Tunisia and Algeria (Zebba *et al.*, 2014; Prunier, 2018; Samraoui *et al.*, 2023). Furthermore, it is ranked as "Near Threatened" in the IUCN Red List of Threatened Species in 2019 (Boudot, 2020).

In the Iberian Peninsula, few records are known from the Guadiana river basin for Portugal (Jahn, 1996; Figueiredo & Gouveia, 2001), with more observations currently being detected in Spanish Mediterranean localities (Márquez-Rodríguez & Vega-Maqueda, 2016; Prunier, 2018), especially in the Guadalquivir river basin (Boudot & Garrigós, 2015). As stated by Navás (1924a, b), in the beginning of the last century *O. costae* was already "very rare and localized" throughout the Peninsula, including Andalusia. In June 1923, A. Codina collected adults misidentified as *Mesogomphus genei* by Navás (1924b) from Baeza (Jaén) (Ferrerías-Romero & Puchol-Caballero, 1984). Much later, for the Andalusian community, the species was rediscovered at the end of the same century, in the Guadalquivir river basin and the Bajo Guadalquivir channel (Santos-Quirós, 1994). In Andalusia, this Anisoptera is currently unknown from the provinces of Almería, Huelva, and Granada (Prunier, 2018).

According to the hypothesis by Prunier (2018), who has widely tracked *O. costae* in Andalusia, its distribution is much more widespread than was known until then. However, it is a cryptic species due

to its straw color (Salamanca *et al.*, 2001). It is present in the Sevillian-Cordoban countryside, situated in southern Spain covering an area more than 6,000 km². The middle section of the Guadalquivir River runs throughout this entire area, with permanent tributaries such as the Genil River and the Corbones River. Samraoui *et al.* (2023) demonstrated the voltinistic flexibility of this species at low elevations in the Maghreb area. More research is necessary in the Andalusian countryside, increasingly affected by desertification.

The list of localities visited with new records of *Onychogomphus costae* includes:

- Loc. 1: Channel within the campus of Pablo de Olavide University (UPO) - Sevilla, 37°21'15"N 5°56'04"W. 4-06-2024, 14 h: 1♂, perched on the ground next to dry straw-colored vegetation.
- Loc. 2: Oval irrigation pond. Cortijo de San Antonio - Marchena (Sevilla), 37°22'45"N, 5°24'56"W. 18-06-2015, 12 h: 1♂ (Fig. 1); 23-06-2016, 13 h: 1♂; 26-07-2016, 13 h: 1♀.
- Loc. 3: Guadalquivir River - Hornachuelos (Córdoba), 37°44'22"N, 5°13'50"W. 19-08-2016, 12 h: 21 exuviae on the rocky substrate at a height of approximately 50 cm above the water surface.

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Fig. 1.- *Onychogomphus costae* perched on dead vegetation. Cortijo de San Antonio - Marchena (Sevilla).