NAT. CROAT. | VOL. 35 | No 1 | 229-233 | ZAGREB | July 31, 2026

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short communication/kratko priopćenje
DOI 10.20302/NC.2026.35.2

FIRST RECORD OF *XIPHYDRIA PROLONGATA* (GEOFFROY, 1785) (HYMENOPTERA: XIPHYDRIIDAE) IN GREECE

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Gastouniotis, G.: First record of *Xiphydria prolongata* (Geoffroy, 1785) (Hymenoptera: Xiphydriidae) in Greece. Nat. Croat., Vol. 35, No. 1, 229-233, Zagreb, 2026.

Xiphydria prolongata (Geoffroy, 1785) is reported in Greece for the first time, from a mixed riparian forest in the northeastern Peloponnese. The species' distribution, ecology, and the characteristics of the collection site are briefly discussed and documented with habitat and specimen photographs.

Keywords: Xiphydriidae, faunistics, riparian areas, biodiversity

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Xiphydria prolongata (Geoffroy, 1785) zabilježena je prvi puta u Grčkoj, u miješanoj šumi uz riječnu obalu na sjeveroistočnom Peloponezu. Ukratko se raspravlja o rasprostranjenosti vrste, ekologiji i karakteristikama mjesta sakupljanja, potkrijepljeno fotografijama staništa i primjerka.

Ključne riječi: Xiphydriidae, faunistika, riječne obale i rubovi, biodiverzitet

INTRODUCTION

Xiphydria prolongata (Geoffroy, 1785) is a sawfly species of the family Xiphydriidae, widely distributed throughout the Palaearctic region and also introduced to North America (Smith, 1983). Its known distribution includes: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Iran, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Sweden, Switzerland, Turkey, Ukraine, USA, Serbia and Montenegro (Taeger *et al*., 2018). The larvae develop within the stems of various broadleaved trees, predominantly willows (*Salix* spp.), poplars (*Populus* spp.), and elms (*Ulmus* spp.) (Liston, 1995). This species does not infest living trees, utilizing for reproduction only very recently dead wood. Females lay eggs with their ovipositors in small clusters beneath the bark during July (in England). Upon hatching, the larvae bore into the sapwood, typically reaching a depth of 2.5 to 5 cm. The life cycle is completed in one year (British Forestry Commission, 1958).

The presence of *Xiphydria longicollis* (Geoffroy, 1785) in Greece has been reported, but without any specific locality or examined material (Smith, 1978). Subsequent literature (Liston, 1995; van Achterberg *et al*., 2009; Taeger *et al*., 2018; Lacourt, 2020) does not mention this species in Greece. Since the discovery of *X. prolongata* represents the

first confirmed record of the genus *Xiphydria* Latreille, 1802 in Greece, it also constitutes the first record of the family Xiphydriidae in the country.

MATERIALS AND METHODS

The specimen was obtained by direct examination of fallen branches and tree trunks. The single *Xiphydria* specimen was identified by the distinct black abdomen with terga 3-6 (and partly terga 7-8) reddish with white spots laterally (Fig. 1), a combination unique among the seven European species of this genus (Lacourt, 2020). The specimen is preserved pinned and dry in the author's personal collection.

RESULTS AND DISCUSSION

Family: XIPHYDRIIDAE Leach, 1815

Genus: *Xiphydria* Latreille, 1802

Xiphydria prolongata (Geoffroy, 1785) (Fig. 1)

Material examined: Greece, Peloponnese, Korinthia, near Nemea (Agios Georgios) in Asopos riverbank, 37°51′03.4″N 22°38′35.2″E, 265 m.; 9 May 2024, 1 ♀, on fallen branch of *Populus nigra*; coll. & det. G. Gastouniotis.



Fig. 1. The collected female individual of *Xiphydria prolongata* (Geoffroy, 1785), dorsal view.

The body, excluding the ovipositor, measures 14 mm in length, with a forewing length of 9.6 mm. The head is black with a long white post-ocular stripe, a white spot behind each eye on the occipital carina (most visible in lateral view), and a white malar area. The antennae are black with flagellomere 1 twice the length of flagellomere 2. The thorax is black, with white posterior corners on the pronotum and a white spot at each cenchrus. The wings are clear, hyaline, slightly infuscated in the apical

third, with veins and stigma black, except the basal part of veins A and C which are orange. The abdomen is black except for terga 3-6 being orange with a red posterior margin, and terga 7-8 brownish orange with a black posterior margin; sterna 3-5 and the basal part of sternum 6 are also reddish orange. Lateral white spots are present on terga 4-8, with the spot on tergum 8 being the largest. The legs are reddish orange, with black coxae and trochanters. The tibiae of mid- and hind-legs are dark reddish to brown, with the basal one-third white. The apical three tarsomeres in fore-legs and the apical four in the mid- and fore-legs, are black. The ovipositor sheath is black, as long as the hind tibia.

The collection site is a mixed riparian forest buffer along the Asopos river (Agios Georgios river), near Nemea (Agios Georgios) in Korinthia, characterized by a diverse composition of plant species (Fig. 2). This includes *Platanus orientalis* L. (some planted), *Populus nigra* L. (probably mostly planted), *Cupressus sempervirens* L. (planted for roof timber in the past), *Juglans regia* L., *Salix alba* L., *Salix amplexicaulis* Bory & Chaub, and *Ulmus minor* Mill. This unique plant composition distinguishes it from other described riparian zones in Greece (Zogaris *et al*., 2007). The riparian area of the Asopos river appears to be the only location in the regional unit of Korinthia known to support all three host plant genera (*Salix*, *Populus*, and *Ulmus*) of *X. prolongata*, with *Ulmus* being particularly scarce in other parts of the Peloponnese. The co-occurrence of these host trees in this fragmented habitat likely provides the essential resources for a viable population of *X. prolongata*, together with another xylophagus species of Symphyta, *Tremex fuscicornis* (Fabricius, 1787) (Gastouniotis & Kakiopoulos, 2024). Along other rivers of the Peloponnese, the arboreal composition predominantly includes *P. orientalis* (e.g., parts of Acheloos), a combination of *Populus alba* L. with *S. alba* (e.g., parts of Eurotas), *Tamarix* sp. (e.g., parts of Vouraikos), or even planted *Eucalyptus* (e.g., parts of Erasinos).

The record of *X. prolongata* in Greece from the northeastern Peloponnese extends the known range of this species within the Palaearctic region and represents one of the southernmost records in Europe. This finding presents an interesting biogeographical case because while many species are expanding northwards due to climate change (Parmesan & Yohe, 2003), this record may indicate a southward range extension. An alternative hypothesis is that the individual from Asopos represents a previously-undetected relict population of this widespread Palaearctic species, surviving in a climatically-suitable riparian refugium (Seavy *et al*., 2009). Considering the widespread presence of *Populus* spp. (both planted and natural) and *Salix* spp. in riparian ecosystems across Greece, it is plausible that *X. prolongata* could also be present in other parts of the country. This discovery also underscores the ecological richness and potential undiscovered biodiversity within the riparian zones of Greece, even in small rivers like Asopos, which dries out significantly every summer (at least during recent decades) and is largely surrounded by intensively-managed vineyards (Fig. 2).



Fig. 2. The mixed riparian forest habitat along the Asopos river, surrounded by vineyards in the upland valley of Nemea (Agios Georgios), Korinthia.

ACKNOWLEDGEMENTS

I am highly grateful to Robert S. Jacobson (Ohio, USA) for reviewing a draft of this paper and offering suggestions regarding linguistic changes, and the anonymous reviewer for their constructive comments.

Received February 5, 2025

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