



First record of frigate tuna *Auxis thazard* (Osteichthyes: Scombriformes: Scombridae) in the Syrian marine waters, the Eastern Mediterranean

Первая находка макрелевого тунца *Auxis thazard* (Osteichthyes: Scombriformes: Scombridae) в морских водах Сирии, Восточное Средиземноморье

R.M. Othman*, M.Y. Galiya, H.E. Laika & Z.A. Almajid

Р.М. Отман, М.И. Галия, Х.Э. Лайка, З.А. Альмажид

Ranim M. Othman[✉], Department of Zoology, College of Sciences, Tishreen University, Lattakia, Syria. E-mail: ranimmohammadothman@tishreen.edu.sy

Mohamad Y. Galiya, Department of Zoology, College of Sciences, Tishreen University, Lattakia, Syria. E-mail: galiyamo@scs-net.org

Hussam Eddin Laika[✉], High Institute of Marine Research, Tishreen University, Lattakia, Syria. E-mail: hussamlaika18@gmail.com

Zouher A. Almajid, Department of Zoology, College of Sciences, Tishreen University, Lattakia, Syria. E-mail: zouher.almajid@gmail.com

Abstract. We report for the first time the presence of frigate tuna *Auxis thazard* (Lacepède, 1800) in the Syrian marine waters in the eastern Mediterranean Sea. A specimen of *A. thazard* was caught in Purse seine nets in the fishery for bullet tuna *A. rochei* (Risso, 1810) in Ras al-Bassit in March 2022.

Резюме. Макрелевый тунец *Auxis thazard* (Ласерёде, 1800) впервые найден в морских водах Сирии в восточной части Средиземного моря. Один экземпляр *A. thazard* был пойман кошельковым неводом при промысле скумбриевидного тунца *A. rochei* (Risso, 1810) в Рас-Альбасите в марте 2022 г.

Key words: range extension, marine fauna, Actinopterygii, Scombridae, new record

Ключевые слова: расширение ареала, морская фауна, Actinopterygii, Scombridae, новая находка

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The fish fauna in the Mediterranean Sea is subject to many changes in the quantitative and qualitative composition, as a result of the introduction of migratory species from the Red Sea through the Suez Canal or from the Western Mediterranean (Galiya, 2003; Golani et al., 2006; Stern et al., 2019; Othman et al., 2020; Othman et al., 2022; Othman et al., 2023).

*Corresponding author

The genus *Auxis* Cuvier, 1829 of the family Scombridae includes the following two species, according to Collette & Nauen (1983) and Collette & Graves (2019): bullet tuna, *Auxis rochei* (Risso, 1810) and frigate tuna, *A. thazard* (Lacepède, 1800). *Auxis rochei* is an epipelagic neritic as well as oceanic species, cosmopolitan in warm waters (Collette & Nauen, 1983; Collette & Graves, 2019). Its oceanic distribution in the Indo-Pacific



Figs 1, 2. *Auxis* spp. from Syrian marine waters. 1, *A. thazard* (Lacepède, 1800); 2, *A. rochei* (Risso, 1810). A, corselet; B, vertical line indicating where the tip of the pectoral fin reaches; C, dark wavy lines in the dorsal scaleless area.

and in the South and Central Atlantic is sympatric with a very similar species, *A. thazard*. *Auxis thazard* is usually shoaling with other Scombridae and feeds on small fish, squids, planktonic crustaceans (megalops) and stomatopod larvae (Poisson, 2006).

A single specimen of *A. thazard* (Fig. 1) was found in a catch by purse seine in Ras al-Bassit (35°51'46"N 35°48'12"E), Syria, in March 2022 and taken for further studies. The specimen had the total length of 42.1 cm and weight of 1350 g. The species was identified using the taxonomical keys of Collette & Aadland (1996) and Collette & Graves (2019). The specimen was preserved in 7% formaldehyde and deposited at the Laborato-

ry of Hydrobiology, Faculty of Sciences, Tishreen University, Lattakia, Syria.

Auxis thazard and *A. rochei* are differentiated primarily by the width of the corselet below the origin of the second dorsal fin and by the anterior extension of the dorsal scaleless area above the pectoral fin, as well as by the orientation of dark bars or lines situated dorsally above the lateral line (Collette & Nauen, 1983; Collette & Aadland, 1996; Collette & Graves, 2019).

The examined specimen of *A. thazard* was identified by a narrow corselet with a width of less than five scales below the origin of the second dorsal fin (Fig. 1, A) vs. about 10–15 scales in *A. rochei* (Fig. 2, A), the pectoral fin extending

posterior to the vertical at the anterior margin of the scaleless area above the corselet (Fig. 1, B) vs. not reaching it in *A. rochei* (Fig. 2, B), and dark wavy lines in the dorsal scaleless area oblique (Fig. 1, C) vs. nearly vertical in *A. rochei* (Fig. 2, C). These characters are in agreement with Poisson (2006), Collette & Aadland (1996) and Collette & Graves (2019) for *A. thazard*.

This is the first record of *A. thazard* from Syrian marine waters (cf. Ali et al., 2018). This species has not been mentioned by Collette (1986) and Golani et al. (2006) but it was reported from the eastern Mediterranean Sea in Lebanon by George et al. (1964) and in Libya by Elbaraasi et al. (2019).

The presence of *A. thazard* in the Mediterranean area may be a consequence of the impacts of global warming on species distribution (Perry et al., 2005). *Auxis thazard* has a more tropical distribution than *A. rochei* (Collette & Aadland, 1996) and presumably a preference for warmer waters. Hence, it can be hypothesised that the presence of *A. thazard* in the Mediterranean Sea could reflect a species distribution shift from the central-tropical Atlantic Ocean toward the northern Atlantic Ocean and the Mediterranean Sea as oceanographic conditions have changed (Lejeusne et al., 2010).

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