BLUEFISH *POMATOMUS SALTATRIX* AGAIN IN THE FISHING CATCHES IN THE NORTHERN ADRIATIC

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Abstract
A large catch of the bluefish *Pomatomus saltatrix* in the northern Adriatic region was recorded again after 16 years of the first large catch of this species in this area. The establishment of its population in the northern Adriatic region is related to changes in climate and life-history traits of the species.

Keywords: Fishes, North Adriatic Sea

Bluefish, *Pomatomus saltatrix* (Linnaeus, 1766), is a pelagic and migratory species, which inhabits coastal temperate and sub-tropical waters of all ocean basins except the eastern Pacific. It is found throughout the Mediterranean and Black seas [1], being more abundant in the south and eastern Mediterranean.

This species was fairly rare in the Adriatic, occurring mostly in the southern part [2]. In 1998 a juvenile bluefish was first recorded in the middle Adriatic, North of its usual area of distribution in the Adriatic [3]. In 2003, an unusual and surprising catch of 1,5 tonnes of *P. saltatrix* was recorded in the northern Adriatic (Tar cove, Mirna estuary) [4]. This record was verified as the northernmost record of this species in the Mediterranean area (excluding Black Sea) [4]. In January 2019 the same type of fishing as in 2003 was performed in Tarska cove for experimental purposes. Specially constructed beach seines called 'ciplarice' or 'mullet nets' were used. These nets are used only in the area of the Mirna estuary and are targeting mullet species. The total length of the net was 1450 m. They are set so as to enclose the whole bay from one side to the other (north-south). Net is 15 to 30 m deep. Mesh diameter is 22 mm. The temperature at 2 m depth was 11.4°C. A subsample of *P. saltatrix* was obtained for the analysis (N=344). Length frequency distribution (Fig. 1) and length-weight relationship (Fig. 2) of the subsample were obtained. Individuals ranged from 26 to 84 cm (mean length 46.3 cm±9.68), while weight ranged from 158 to 5200 g. The length-weight equation was: $y=0.0092x^{2.9768}$ ($R^2=0.9728$), indicating isometric growth.

Presence of the bluefish in the catches 16 years after the previous one indicates its establishment and persistence in the area. This was also confirmed by the fishermen who consider this species now as a common and abundant in the area. The establishment of the population in the northern Adriatic region seems related to changes in climate and life-history traits as already observed in this species for the area of northwestern Mediterranenan (5). The status of the bluefish in the Adriatic Sea needs to be evaluated on a continuous basis because it is becoming increasingly apparent that it can be an indicator of environmental change.

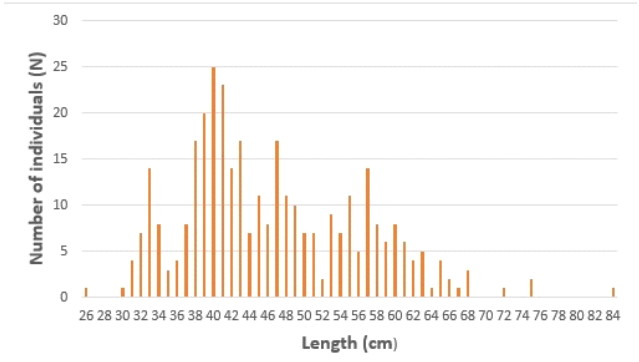

Fig. 1. Length frequency distribution of bluefish *P. saltatrix* captured in Tarska vala in 2019.

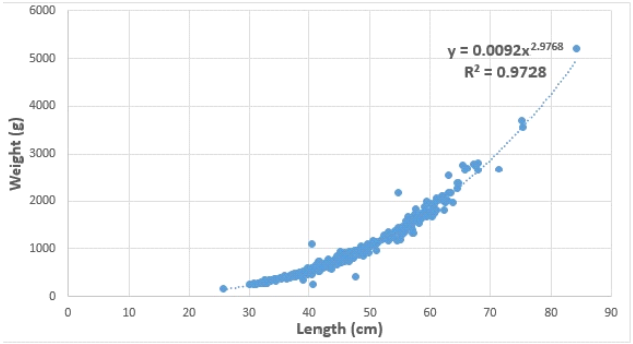

Fig. 2. Length-weight relationship of bluefish *P. saltatrix* captured in Tarska vala in 2019.

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