

SUMMARY OF PRESENT KNOWLEDGE OF THE SPANISH MACKEREL (SCOMBER JAPONICUS
HOULT.) IN THE ADRIATIC

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The results refer to the Spanish mackerel length and sex distribution in the samples of commercial catches, to period and areas of spawning of the fish, as well as to the other fishes caught with the Spanish mackerel. Results dealing with the catch characteristics are also given.

Les résultats se rapportent à la répartition du maquereau espagnol quant à la taille et au sexe dans les échantillons des pêches commerciales, la période et les aires de ponte du poisson de même qu'autres poissons pêchés avec le maquereau espagnol. Les résultats touchant aux caractéristiques de la capture sont aussi présentés.

In 1921-1924 the total lengths of the fish from the Mid-Dalmatian island area ranged from 15 to 34 cm (MUŽINIĆ, 1979b, the GAST's data), and in 1954, 1955 and 1957 as a whole and even in 1955 alone from 14 to 36 cm (lower class limits) (MUŽINIĆ, 1979a). The extreme modal lengths recorded in 1921-1924 were 16 and 30 cm, and the extreme mean lengths 16.2 and 28.9 cm (MUŽINIĆ, 1979b, the GAST's data). While samples of catches from the spring-summer contained larger specimens, those from late summer included young fish (MUŽINIĆ, 1979a; 1979b, the GAST's data). Males and females were almost equally represented in the samples from 1954, 1955 and 1957 as a whole and even in 1955 alone (MUŽINIĆ, 1979a).

In the catches from the offshore Mid-Dalmatian islands, from 1921-1924, the Spanish mackerel often appeared with the horse mackerel (*Trachurus* sp.), but very rarely with the mackerel; small specimens were frequently found with the sardine and anchovy (MUŽINIĆ, 1979b, the GAST's data).

The Spanish mackerel spawning takes place in the later spring and summer, the larger specimens maturing earlier (MUŽINIĆ, 1979a; 1979b, the GAST's data). The fish spawn in the central and southern Adriatic and not only in relatively shallow fishing area, but also in waters showing greater depths (MUŽINIĆ, 1979a).

From the planktonic stages, only scarce early post-larvae have so far been recorded and that has been in the central and southern Adriatic (KARLOVAC, J., personal communication). Young fish have been noted in the inshore and offshore Mid-Dalmatian island area (MUŽINIĆ, 1979a; 1979b, the GAST's data). Larger specimens were mainly recorded closer to the greater sea bed depths (GAST, 1922; MUŽINIĆ, 1979b, the GAST's data).

The Šibenik and Split areas had the largest shares in the total Yugoslav Spanish mackerel catch (MUŽINIĆ, 1973, 1974, 1979b). These areas are close to the greater depths of the Jabuka and south Adriatic pits.

The Yugoslav Spanish mackerel catch is small and very variable. In 1947-1978 its mean value amounted to 207.1 t and the variation coefficient reached 81.3 %. With more intensive fishing in the open and deeper waters of the central and southern Adriatic, the catch could be increased.

The tendency to coincide in the fluctuations of the Spanish mackerel and anchovy annual catches with a statistically significant ($P < 0.05$) positive correlation was recorded in the Mid-Dalmatian island area in 1931-1940 (MUŽINIĆ, 1958). In 1947-1971, a tendency to coincide in the fluctuations of the Spanish mackerel and anchovy annual catches was also recorded, but only for the channels (MUŽINIĆ, 1974). In the same period, with the Spanish mackerel alone there was a tendency to coincide with a statistically highly significant ($P < 0.001$) positive correlation between the annual catch fluctuations of the Mid-Dalmatian open and channel waters.

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