

CATCH OF THE SPECIES *HOLOTHURIA TUBULOSA* GMELIN, 1788 ON CONTINENTAL SHELF IN THE ADRIATIC SEA

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Abstract

This paper presents data about catches of the species *Holothuria tubulosa* Gmelin during PIPETA expedition (1985-1994) on 10 profiles or 50 stations on continental shelf in the Adriatic Sea. 496 bottom trawl hauls are elaborated. The greatest amount of the catch on all profiles was at stations that are situated in the north Adriatic on "relict" sand and clayey "relict" sand at depths to 50 m.

Keywords: *Holothuria tubulosa*, catch, Adriatic Sea

Introduction

Expedition HVAR reports present data about non edible bycatch on each investigated stations (1). Only genus *Holothuria* can be found on the list, so we don't have any data about species *Holothuria tubulosa*. During PIPETA expedition for the first time non edible trawl bycatch is completely analysed in the Adriatic Sea. Catch of the species *H. tubulosa* based on PIPETA expedition (1985-1994) results is presented in this paper. Some results about non edible bycatch during this expedition are already presented (2, 3, 4).

Material and methods

Italian trawler PIPETA at 10 profiles (A – L) or 50 stations collected biological material during 11 cruises. Station planning was systematic with additional stratification (sediment, depth). The weight of the bycatch was measured by filling up a plastic box of 50x32x10.5 cm by the random sample method with epifaunal material collected by the trawl. The weight of each species was multiplied with the total number of boxes with epifauna collected during a single bottom trawl haul and the value was expressed in kg h⁻¹. Standard Italian bottom trawl was used (5).

Results and discussion

On continental shelf species *H. tubulosa* is the most abundant on "relict" sand (6). The species lives on depths to 100 m (7). The greatest presence of the species is on depths from 10 to 50 m (6). During PIPETA expedition the stations of the investigated profiles are situated at different depths and sediment types. 496 bottom trawl hauls are elaborated.

Profiles "A", "B" and "C" are situated in the north Adriatic at few different sediment types and depths to 50 m. Thus, the catch from the stations on these profiles depends on sediment type. The greatest catch was on profile "C" (Table 1). That is because more than half of the stations on this profile are on "relict" sand. This is the only profile where the species is caught on clayey silt and silty clay. Considerable catch was on profile "A" and this is the only profile where the species was caught on sand-silt-clay sediment. Negligible catch was on profile "B". It's due to fact that almost all stations are on sediments that contain silt and clay. All stations, except one, on profile "D" are situated at depths from 50 m to 70 m. Value for the average catch on this profile is similar to value for the average catch on profile "A". Considerably smaller catch was on profiles "E", "F" and "G". On profile "F" the species was noted only at two stations on "relict" sand and depths to 100 m. The species was not caught on profiles "H", "I" and "L". Almost all stations on these profiles are on depths more than 100 m and on clayey silt and silty clay sediment. Stations on these profiles that are on depth to 100 m are on sediments that are not suitable substrates for *H. tubulosa* species. The greatest amount of the catch on all profiles was at stations that are situated on "relict" sand and clayey "relict" sand. On all profiles there were hauls without this species. Standard deviations show that the species is unevenly distributed on the investigated profiles (Table 1). ANOVA-test shows that difference in catch among profiles is significant ($p < 0.01$). Tukey-test shows that difference in catches between profile "C" and all other profiles is significant ($p < 0.01$).

The greatest catches were at stations in the north Adriatic. The greatest value for the catch during one haul was at station "C6" (116.25 kg h⁻¹). Average values above 10 kg h⁻¹ were at following stations: "C5", "C6", "C7", "D7", "E6" and "E7" (Figure 1).

Table 1. Catch of the species *H. tubulosa* on profiles during PIPETA expedition.

PIPETA	Catch (kg h ⁻¹)				
	n	min	max	x	s
A	54	0	19.20	2.34	4.06
B	44	0	0.08	0.00	0.0
C	65	0	116.25	9.15	18.19
D	62	0	22.50	2.49	4.95
E	55	0	12.00	0.53	2.23
F	54	0	1.17	0.02	0.16
G	50	0	1.01	0.02	0.15
H	33	0	0	0	0
I	40	0	0	0	0
L	39	0	0	0	0

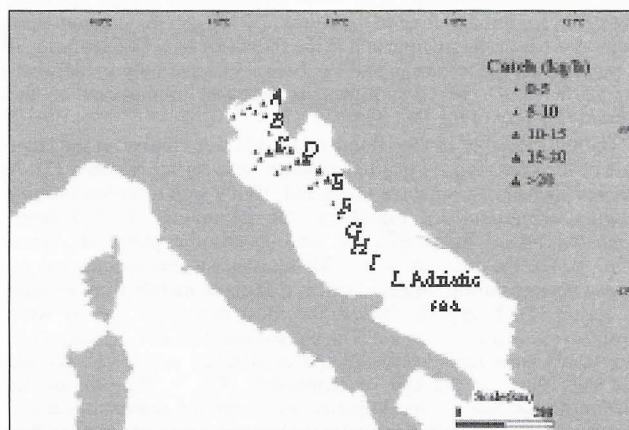


Figure 1. Catch of the species *H. tubulosa* at PIPETA expedition stations.

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