

FEEDING HABITS OF *RHINOBATOS RHINOBATOS* IN THE GULF OF GABES

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Abstract

The stomach contents of 498 common guitarfishes, *Rhinobatos rhinobatos*, from the gulf of Gabès were examined. The number of empty stomachs was higher in juvenile than in adults (97.05% and 80.64%). Crustaceans and Teleostei were the most important prey groups (IRI% were respectively 51.44% and 47.46 %) in the diet of adults. Crustaceans were the main prey for juveniles (IRI% = 83.43%).

Keywords : Fishes, Gulf Of Gabes, Fish Behaviour.

Introduction

Rhinobatos rhinobatos is a benthic fish inhabiting soft bottoms, generally in shallow water. Data on its feeding of are scarce, concerning few specimens collected in the lagoon of ElBibans (Southern Tunisia) [1]. The present study provides data on its feeding habits in the Gulf of Gabès.

Materials and methods

A total of 498 *R. rhinobatos* landed by bottom trawl in the gulf of Gabès were examined. Specimens were divided in two categories: Juveniles (total length less than 600 mm) and adult (over than 600 mm).

Stomachs were removed, the diet composition was identified to the lowest possible taxon, and each prey was weighted to the nearest 0.1 g. The specimens with empty stomach were recorded (RI%).

To assess the relative importance of each prey item in the diet three indices were used: the numerical index (N%), the gravimetric index (M%) and the relative importance index (standardized; IRI%) [3]. The classification of prey was based on Cortes' methods [2].

We calculated also the overlap index [4] to determine the prey overlap between the two sizes class. The values of this index range from 0 to 1, with values exceeding 0.6 showing 'biologically significant' overlap in resource use [5].

Results and discussion

The RI % was relatively high: 97.05 and 70.64%, respectively, for juveniles and adults.

R. rhinobatos consumed a wide range of macrobenthic organism. Prey included shrimps (*Sicyonia carinata*, *Trachypenaeus curvirostris*), crabs (*Dorippe lanata*, *Ehtusa sp.*), fishes (represented by *Diplodus annularis*, *Serranus hepatus*, *Pagellus erythrinus*, *Engraulis encrasicolus*, *Sardina pilchardus*). *Sepia officinalis*, *Loligo vulgaris* and *Sepiola sp.* were the most abundant Mollusca.

Crustacean were the main important prey for juveniles (Table 1). For adults crustacean and teleostei were the main prey (Table 1). The diet overlap index was high, 0.9.

Tab. 1. N %, M % and IRI% for each food item for juvenile and adult of *Rhinobatos rhinobatos*.

Items	N %		M %		IRI %	
	juveniles	adults	juveniles	adults	juveniles	adults
Crustacean:	94,7	73,53	46,05	22,34	83,43	47,46
Isopods	3,51	7,1	1,9	2,8	7,9	4,9
Amphipods	12,58	9,9	3,5	1,43	9,1	5,71
Brachyurans	48,9	21,4	26,1	9,09	41,9	17,7
Macroura	25,1	29,9	12,9	8,1	21,81	16,97
Others	2,61	5,23	1,65	0,92	2,72	2,18
Teleostei:	3,05	21,11	47,16	71,83	15,63	51,44
Sparidae	1,21	7,91	15,48	29,61	6,01	18,14
Gobiidae	0,62	5,47	9,91	10,19	3,97	12,14
Serranidae	0,09	2,01	6,92	7,41	1,68	6,29
Carangidae	0,02	0,9	0,74	5,28	0,74	3,05
Cepolidae	0,17	1,18	2,91	4,18	1,01	2,91
Mullidae	0,12	1,9	1,83	3,29	0,12	3,19
Clupeidae	0,05	1,07	4,89	0,05	1,07	
Engraulidae	0,09	0,2	2,01	2,51	0,04	2,21
Others	0,68	0,47	4,98	4,47	2,01	2,44
Mollusca	1,15	2,12	4,83	4,81	0,62	0,54
Others	1,1	3,22	1,96	1,02	0,31	0,54