Cephalopod remains from Blue Sharks, *Prionace glauca*, Caught in the Gulf of Taranto

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The blue shark, Prionace glauca (L., 1758) (Selachii: Carcharhinidae), is an opportunistic predator, which feeds heavily on relatively small prey, especially bony fishes and squids; much of its prey is pelagic (COMPAGNO, 1984). Blue sharks are a quantitatively important by-catch in drifting longline fishery for swordfish, Xiphias gladius, in the Ionian and Adriatic Seas.

An examination was made of the gastric content of five specimens of P. glauca captured by drifting longline at night in the Gulf of Taranto, inlet of the Ionian Sea. The first two of them (specimens nos. 1 and 2) were caught on May 26th 1985 at about 16 nautical miles off Porto Cesareo (Lecce); their size and sex are unknown. The other three sharks (nos. 3 to 5) were hooked on May 28th 1985 at about 30 nautical miles SW of Porto Cesareo. The bottom depth in the fishing zone is between 500 and 1,700 m.

The author received the whole stomach content from blue sharks nos. 3 to 5 and only the cephalopod remains from specimens nos. 1 and 2. Each of the specimens nos. 3 to 5 contained cephalopod parts and one bait-mackerel. The cephalopod remains from all stomachs consisted only of loose beaks and lenses. Thanks to the low number of beaks involved, it was possible to match each upper mandibule with a lower one. Blue shark no. 1 contained just one unpaired upper beak while no. 2 contained three pairs, no. 3 two pairs and nos. 4 and 5 one pair.

The beaks were identified according to MANGOLD & FIORONI (1966) and CLARKE (1962 and 1986), and by comparing them with "vouchers" (cf. CLARKE, 1986). The size of beaks was described by the rostral length, as suggested by CLARKE (1986). Mantle lengths were estimated from the beaks. The mantle length estimation for H. bonnelli and T. sagittatus was done by the regression equations reported by CLARKE (1986) and for H. reversa by simple proportion with beaks extracted from specimens of known mantle length.

The ommastrephid beaks from blue shark no. 2 were tentatively ascribed to T. sagittatus because of the complete lack of darkening of the upper walls and crest and lower wings, which rules out Illex coindetii (cf. CLARKE, 1962); the shape of the upper rostrum, whose ventral side is almost straight, making a downward curve only at the tip (cf. MANGOLD & FIORONI, 1966); the narrowness of the lower rostrum, which rules out Ommastrephes bartramii (cf. CLARKE, 1986).

The table reports the size and sex of P. glauca specimens, the list of the cephalopods found with their beak size and their estimated mantle length.

		Prionace glauca specimens				
		1	2	3	4	5
Cephalopoda				119 - F	143 - M	163 - M
Histioteuthis bonnellii	URL	11.9		3.5		7.5
(FERUSSAC, 1834)	LRL	-		3.2		6.5
	EML	11		4.5		7.5
Histioteuthis reversa	URL			2.0	3.6	
(VERRILL, 1880)	LRL			2.0	3.7	
	EML			4.5	8	
Ommastrephid sp. juv.	URL		2.1 2.2 2.4			
cf. Todarodes sagittatus	LRL		2.5 2.5 2.7			
(LAMARCK, 1798)	EML		9 9 10			

List of cephalopods found in the gastric content of Prionace glauca. Total length (cm) and sex of blue shark specimens nos. 3 to 5 are reported below the corresponding number. URL = upper rostral length (mm); LRL = lower rostral lenght (mm); EML = estimated mantle length (cm).

The gastric content of the examined blue sharks appeared to be rather poor and not very diverse; they had fed upon typically pelagic species. A cautious comparison between the present results -caution is due to the small number of P. glauca specimens examined- and the analysis of the stomach content of X. gladius from the same area (BELLO, 1985 and in preparation) shows a possible competition for food. Swordfish mostly prey upon T. sagittatus; they also occasionally ingest histioteuthids. Besides it is well known that P. glauca and X. gladius compete for longline hooks. For instance DE METRIO et al. (1983) report that in a two year period 2025 swordfish and 1035 blue sharks were caught by drifting longline in the Gulf of Taranto.

As to the cephalopods found in the shark stomach, T. sagittatus is abundant in the Gulf of Taranto (BELLO, 1985), whereas the occurrence of H. bonnellii and H. reversa has been rarely recorded (BELLO, 1987; D'ONGHIA et al., in press). However the analysis of predator stomach content (present results; personal observations on swordfish and cetaceans) suggests that they are not as rare as was thought. Thus, these observations can contribute to a better understanding of the teuthofauna structure of the Gulf of Taranto.

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