ACOMPANYING FAUNA OF THE SHRIMP (*ARISTEUS ANTENNATUS*) FISHERY OFF MAJORCA ISLAND (NW MEDITERRANEAN)

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The muddy bottoms in the middle slope off south Majorca between 400 and 800 m depth, have been exploited by trawling nets since the beginning of the 1960's (OLIVER & DAROCA, 1975). It is a monospecific fishery directed, almost exclusively, to the capture of red shrimp (*Aristeus antennatus*) and their landings have oscillated, since 1960, between 130 and 440 tonnes (OLIVER & CARBONELL, 1992).

A research project os this species has been carried out since 1991. This paper describes the accompanying fauna of *A. antennatus* from 12 samplings carried out on board commercial fishing boats dedicated to their exploitation. The hauls were made betweeen 400 and 750 m depth, with a duration from 360 to 450 minutes.

A total of 79 species (60% fishes, 24% crustaceans aznd 16% cephalopods) have been captured (Table 1). The majority of these species are not of commercial interest and are discarded. Others are captured very occasionally but in too small quantity to be commercial, and only some of them could be considered as a by–catch of the fishery : *P. blennoides, M. poutassou, M. merluccius, G. melastomus, A. foliacea, N. norvegicus, G. longipes* and *Plesionika* spp. However, this by–catch is of little importance if it is considered that the object species of interest represents more than 50% of the commercial capture (a mean value of 60%, between 25% and 85%), with this percentage increasing if the economic value is considered.

FISHES			
Galeus melastomus	Macroramphosus scolopax	Trachyscorpia c. echinata	Nephrops norvegicus
Dalatias licha	Coelorhyncus coelorhynchus	Peristedion cataphractum	Polycheles typhlops
Etmopterus spinax	Hymenocephalus italicus	Lepidorhombus boscii	Palinurus mauritanicus
Chimaera monstrosa	Nezumia aequalis	Symphurus ligulatus	Munida perarmata
Alepocephalus rostratus	Merluccius merluccius	Symphurus nigrescens	Paramola cuvieri
Argyropelecus hemigymnus	Gadiculus argenteus	Lophius piscatorius	Macropipus tuberculatus
Chauliodus sloani	Micromesistius poutassou		Geryon longipes
Stomias boa	Molva d. macrophthalma	CRUSTACEANS	
Chlorophthalmus agassizii	Phycis blennoides	Aristaeomorpha foliacea	CEPHALOPODS
Bathyterois mediterraneus	Lepidion lepidion	Aristeus antennatus	Neorossia caroli
Benthosema glaciale	Mora moro	Solenocera membranacea	Rondeletida minor
Lampanyctus crocodilus	Hoplostethus mediterraneus	Parapenaeus longirostris	Chtenopteryx sicula
Myctophum punctatus	Epigonus denticulatus	Funchalia woodwardi	Ancistroteuthis lichtensteinii
Evermannella balbo	Epigonus telescopus	Sergestes sp.	Histioteuthis bonnellii
Notolepis rissoi	Mullus barbatus	Pasiphaea multidentata	Illex coindetti
Paralepis coregonoides	Mullus surmuletus	Acanthephyra eximia	Todarodes sagittatus
Nemichthys scolopaceus	Pagellus acarne	Pleisionika heterocarpus	Chiroteuthis veranii
Nettastoma melanurum	Pagellus bogaraveo	Pleisionika martia	Octopus salutii
Conger conger	Lepidopus caudatus	Plasionika acanthonotus	Eledone cirrhosa
Notacanthus bonapartei	Synchiropus phaeton	Processa canaliculata	Bathypolypus sponsalis
	Helicolenus dactylopterus	Pontocaris lacazei	Argonauta argo

Table 1. Species identified in the trawling fleet catches off south Majorca, between 400 and 750m depth.

The main fishes with a regular presence in the by–catch are *P. blennoides* and *M. poutassou*, shich represent 10% (between 4% and 17%) and 7.5% (between 1% and 24%), respectively, with a size range of 9–46 cm for the first (fig. 1a) and 13–42 cm for the second (Fig. 1b). *M. merluccius* and *G. melastomus* are other species that are not always captured in important quantities. However, the majority of *M. merluccius* catches are specimens of large size (Fig. 1c) that obtain a high price on the market, and *G. melastomus* is a species that is captured in large quantities at these depths especially in areas of little exploitation (MASSUTÍ & OLIVER, 1975).

Among the crustaceans, the species of the genus *Plesionika* have a regular presence, are commercialised together, and are the main important by–catch of the fishery with a mean value of 7% and a range between 2% and 18%. *A. foliacea* is another species that in some SE areas of the Island can represent up to 15% of the shole capture, with a carapace length range between 24 and 66 mm (fig. 1d).

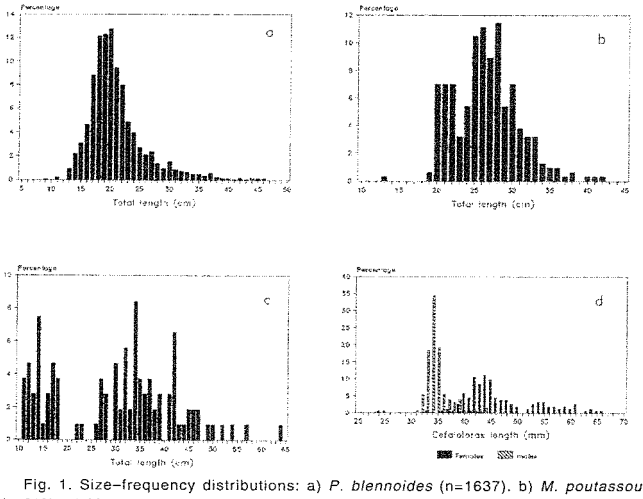

Fig. 1. Size–frequency distributions: a) *P. blennoides* (n=1637). b) *M. poutassou* (n=315). c) *M. merluccius* (n=107). d) *A. foliacea* (b=277)

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