

FEEDING HABITS OF *Pagellus erythrinus* (L.) (PISCES, SPARIDAE)

FROM THE MIDDLE TYRRHENIAN SEA

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RESUME - On a étudié les contenus stomacaux de 596 Pagels, *Pagellus erythrinus* (L.), capturés par chalutage le long de la côte Tyrrhénienne central pendant une année sur une profondeur entre 5 et 50 metres.

Les constituants principaux de l'alimentation de cette espèce résultent les suivants: Crustacés benthique (50,6%), Polychètes (27,3%), Bivalves (10,3%), Poissons (5 %), Echinodermes (4,7%), Céphalopodes (1,6%).

As a part of a study on the coastal bottom trawling of a Middle Tyrrhenian area, observations on the biology of the most important fish species were carried out.

The common Pandora, *Pagellus erythrinus* (L.) is one of these species with regard to number and economic value (Ardizzone 1981; Ardizzone & Pelusi 1982).

According to Larrañeta (1964) this species is abundant on sandy bottom and near rocks from 25 down to 50 meters for the adults while the young live at shallower depths.

The stomach contents of 596 individuals between 37 and 360 mm total length were analyzed.

The specimens were collected by bottom trawlers over a one year period (1981-82). The bottoms were mainly composed of sand, *Posidonia* beds and muddy-detritic, with depths from 5 down to 50 m.

Particular attention was directed toward the juveniles which are very abundant in the coastal waters.

The percentage of empty stomachs was rather elevated (Cv=48%) as has already been noted by other authors (Rijavec and Zupanovic, 1965).

The general composition of food items in the stomach contents is given in Fig.1. It was observed that Crustaceans formed the main food of this species (50.6%) followed by Polychaetes (27.3%), Bivalves (10.3%), Fishes (5 %), Echinoderms (4.7%) and Cephalopods (1.6%).

The percentage occurrence of prey in the various size groups are given in the same figure.

The average size of the prey and the prey composition change as the size of Pandora increases.

Juveniles up to 50 mm in length feed mainly on small Crustaceans

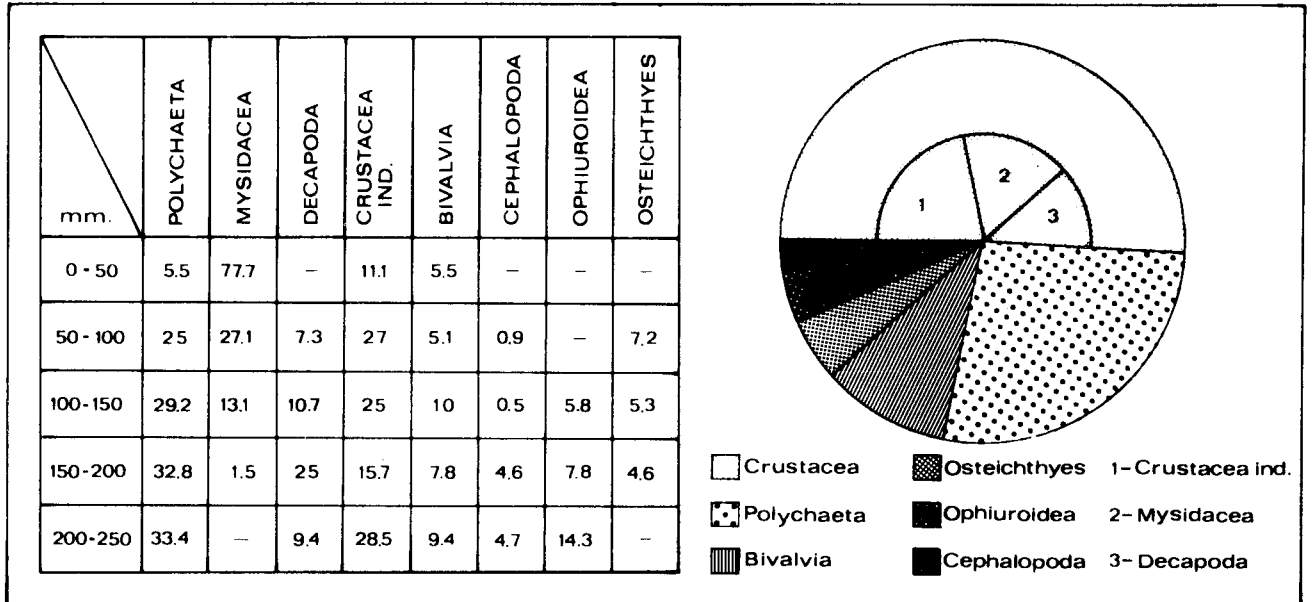


Fig.1: Percentage composition of food items for each size group (left) and general composition of food items (right)

which for the most part are Mysidacea (*Mesopodopsis slabberi*, *Acanthomysis longicornis*, *Gastrosaccus normani*, *G. sanctus*, *Leptomysis* sp.).

As *P. erythrinus* increases in size, the importance of Mysidacea in the diet gradually decreases until they finally disappear in the individuals between 200 and 250 mm in length. All other food items increase as the Mysidacea decrease.

Among Decapods *Processa* sp. and *Liocarcinus* sp. are the most common species observed in the stomach contents, while *Sthenolepis* sp. and *Glycera convoluta* are the dominant species among the Polichetes.

Most of the prey in the stomachs are benthic or benthonectonic species. This reveals that *P. erythrinus* feeds mainly on the bottom (Tab.1).

The frequent findings of sand in the stomach contents suggest the ability of *Pandora* to capture organisms that are buried in the sand. In addition, like other Sparids, they can chew their prey, as the presence of fragments of Bivalves, Ophiura and other "hard preys" reveals.

The presence of prey, belonging to different benthic communities in the stomach contents, confirms its wide-spread presence over the coastal zone from 5 to 50 m.

	IX	XI	I	II	III	IV	V	VI	VII
POLYCHAETA									
<i>Sthenolepis yhleni</i> (Malmgren) 1867			•			•			
<i>Sthenolepis</i> sp.			•			•			•
Aphroditidae ind.			•			•			•
<i>Phyllodoce</i> sp.			•						•
<i>Nephtys hombergii</i> (Savigny) 1818						•			
<i>Nephtys</i> sp.						•	•		
<i>Glycera convoluta</i> Keferstein 1862		•			•		•		•
Eunicidae ind.							•		
<i>Lumbrineris impatiens</i> (Claparède) 1868							•		
<i>Dorvillea</i> sp.							•		•
Polychaeta ind.	•	•	•	•	•	•	•	•	•
SIPUNCULIDA									
<i>Sipunculus nudus</i> Linnaeus 1766									•
CRUSTACEA									
Copepoda Harpacticoida ind.	•								
Ostracoda ind.	•								
<i>Alpheus</i> sp.		•	•				•	•	•
<i>Processa</i> sp.		•	•			•	•		•
Cranonidae ind.		•							•
<i>Philocheras sculptus</i> (Bell) 1847							•		•
<i>Philocheras</i> sp.									•
<i>Paguristes oculatus</i> (Fabricius) 1775							•		
<i>Pagurus prideauxi</i> Leach 1815					•				•
<i>Pagurus</i> sp.									•
<i>Anapagurus</i> sp.					•				
<i>Liocarcinus vernalis</i> (Risso) 1816								•	•
<i>Liocarcinus</i> sp.			•				•	•	•
Xanthidae ind.									•
<i>Gastrosaccus sanctus</i> (Van Beneden) 1861			•				•		
<i>Gastrosaccus normani</i> G.O. Sars 1887			•						
<i>Anchialina agilis</i> (G.O. Sars) 1887		•	•						
<i>Leptomysis</i> sp.			•				•		
<i>Mesopodopsis slabberi</i> (Van Beneden) 1861	•								•
<i>Acanthomysis longicornis</i> (Milne-Edwards) 1837	•	•							
Mysidacea ind.	•	•	•				•	•	•
Cumacea ind.									•
<i>Anatanais robustus</i> Moore 1901	•								
<i>Leptocheilia savignyi</i> Krøyer 1842	•						•		
Tanadaicea ind.	•								
<i>Rocinela dumerili</i> (Lucas) 1849					•				
Isopoda ind.									•
Caprellidae ind.									•
<i>Phthisica marina</i> Slabber 1749							•		
Amphipoda ind.	•						•		•
Crustacea ind.	•	•	•	•	•	•	•	•	•
MOLLUSCA									
<i>Philine aperta</i> (Linnaeus) 1758							•		
<i>Spisula subtruncata</i> (Da Costa) 1778							•		•
Pectinidae ind.			•				•		•
Solenidae ind.			•				•		•
Donacidae ind.					•		•		•
Bivalvia ind.			•		•		•		•
<i>Sepia</i> sp.	•					•	•		•
<i>Loligo vulgaris</i> Lamarck 1798							•		•
<i>Octopus vulgaris</i> (Cuvier) 1797			•						•
<i>Eledone</i> sp.							•		
ECHINODERMATA									
<i>Amphiura chiajei</i> Forbes 1843				•	•		•		
<i>Amphiura</i> sp.								•	
Ophiuroidea ind.		•	•		•	•	•		•
PISCES									
Osteichthyes ind.			•	•	•	•	•		•

Tab.1: Prey composition in each sample

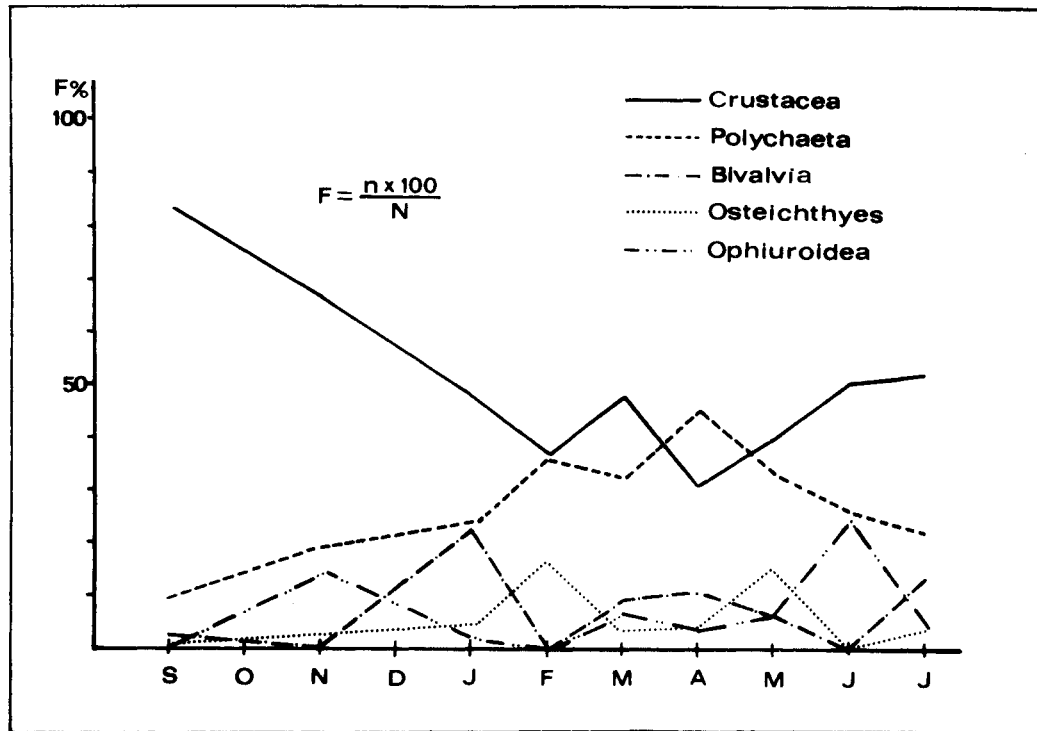


Fig.2: Percentage prey frequency pattern during the year

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