## Feeding of *Physics blennoides* (Brünnich, 1768) in the Northern Thyrrhenian Sea : a preliminary note

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A total of 1218 specimens of *Phycis blennoides* were analysed ; they were collected from October 1990 to February 1992, both by trawl surveys and by samplings of commercial landing. The organisms came from the Northern Tyrrhenian Sea, between Elba and Giannutri isles : 40.1% of individuals presented everted stomach, the remaining part showed a fullness index of 0.67. A sample of 366 stomachs containing food, belonging to specimens ranging from 6 to 49 cm of total length (TL), were analyzed. Each stomach was cut out and fixed in 5% seawater formalin. Stomach contents were identified to the lowest taxonomic level possible, counted and weighted. Relative contribution of prey items to the diet was described by percentage of frequency of occurrence (F), percentage by number (N) and percentage by weight (W). A modification of IRI (index of relative importance, PINKAS *et al.*, 1971) was calculated for each prey item as follows : IRI = F(N+W).

Tab. 1

| Prey item | F | N | W | IRI | Prey item | F | N | W | IRI |
|---|---|---|---|---|---|---|---|---|---|
| POLYCHAETA n.d. | 2.7 | 1.0 | 0.2 | 3.2 | *Pasiphaea sivado* | 1.4 | 0.4 | 0.4 | 1.1 |
| PELECYPODA n.d | 0.3 | 0.1 | * | * | *Processa nouveli* | 1.4 | 0.4 | 0.7 | 1.5 |
| CEPHALOPODA | | | | | *Processa sp.* | 2.7 | 0.8 | 0.8 | 4.3 |
| *Sepietta oweniana* | 0.3 | 0.1 | 0.4 | 0.2 | *Polycheles typhlops* | 0.5 | 0.2 | 0.7 | 0.5 |
| *Heteroteuthis dispar* | 1.4 | 0.4 | 1.0 | 2.0 | *Nephrops norvegicus* | 0.5 | 0.2 | 3.1 | 1.7 |
| Sepiolidae n.d. | 0.3 | 0.1 | 0.3 | 0.1 | *Calocaris macandreae* | 36.1 | 15.4 | 11.0 | 953.0 |
| Cephalopoda n.d. | 1.9 | 0.6 | 1.5 | 4.0 | *Munida intermedia* | 1.4 | 0.4 | 0.7 | 1.5 |
| Total Cephalopoda | 3.6 | 1.2 | 3.2 | 15.8 | *Munida sp.* | 1.1 | 0.3 | 1.1 | 1.5 |
| STOMATOPODA | | | | | *Geryon longipes* | 0.3 | 0.1 | 0.1 | 0.1 |
| *Rissoides pallidus* | 5.5 | 2.0 | 8.0 | 55.0 | *Goneplax rhomboides* | 7.4 | 3.0 | 9.5 | 92.5 |
| MYSIDACEA | | | | | *Liocarcinus depurator* | 0.3 | 0.1 | 0.2 | 0.1 |
| *Lophogaster typicus* | 13.4 | 11.3 | 1.3 | 168.8 | *Monodaeus couchi* | 1.9 | 0.6 | 1.1 | 3.2 |
| Mysidacea n.d. | 3.3 | 2.0 | 0.2 | 7.3 | *Ebalia sp.* | 0.3 | 0.1 | * | * |
| Total Mysidacea | 16.1 | 13.3 | 1.5 | 238.3 | Brachyura n.d. | 0.8 | 0.2 | 0.3 | 0.4 |
| TANAIDACEA n.d | 1.1 | 0.4 | * | 0.4 | Total Decapoda | 76.5 | 50.1 | 67.7 | 9011.7 |
| ISOPODA n.d. | 25.7 | 15.5 | 4.6 | 516.6 | Crustacea n.d. | 16.1 | 6.8 | 2.3 | 146.5 |
| AMPHIPODA n.d | 12.3 | 5.7 | 0.3 | 73.8 | TUNICATA | | | | |
| DECAPODA | | | | | Thaliacea n.d. | 0.3 | 0.1 | * | * |
| Penaeidae n.d | 0.3 | 0.1 | 0.5 | 0.2 | PISCES | | | | |
| Sergestidae n.d | 2.2 | 0.9 | 0.1 | 2.2 | *Antonogadus megalokynodon* | 2.2 | 0.6 | 2.0 | 5.7 |
| *Solenocera membranacea* | 0.8 | 0.2 | 0.6 | 0.6 | *Phycis blennoides* | 1.1 | 0.4 | 1.9 | 2.5 |
| *Alpheus glaber* | 46.2 | 23.0 | 33.1 | 2591.8 | Gadiformes n.d. | 0.8 | 0.3 | 1.6 | 1.5 |
| *Chlorotocus crassicornis* | 1.6 | 0.6 | 1.7 | 3.7 | *Lesueurigobius sp.* | 2.5 | 0.7 | 1.5 | 5.5 |
| *Plesionika acanthonotus* | 0.3 | 0.1 | * | * | *Cepola rubescens* | 0.3 | 0.1 | 0.1 | 0.1 |
| *Plesionika sp.* | 3.8 | 1.2 | 0.6 | 6.8 | *Cyclothone braueri* | 0.3 | 0.1 | * | * |
| Pandalidae n.d. | 0.3 | 0.1 | * | * | *Symphurus sp.* | 0.3 | 0.1 | 0.6 | 0.2 |
| *Philocheras echinulatus* | 3.6 | 1.1 | 0.8 | 6.8 | Osteichthyes n.d | 6.3 | 1.8 | 4.4 | 39.1 |
| Crangonidae n.d | 2.2 | 0.6 | 0.6 | 2.6 | Total Pisces | 13.1 | 4.1 | 12.1 | 212.2 |

* = < 0.1

The trophic spectrum of *P. blennoides* (Tab. 1) consists mainly of decapods; secondary preys are isopods, mysids, amphipods and fishes. Most of preys are species living below, in, or on the surface layer of the sediment (*Alpheus glaber, Calocaris macandreae, Goneplax rhomboides, Lesueurigobius* sp.); *P. blennoides* carries out its predaction activity in contact with the bottom, using the gustatory and tactile functions of the pelvic fins (GALLARDO-CABELLO, 1986). Studies carried out in the Catalan Sea (MACPHERSON, 1978) and in the Ligurian Sea (RELINI ORSI and FANCIULLI, 1981) confirm the benthophagic habits of this species.

Fig. 1

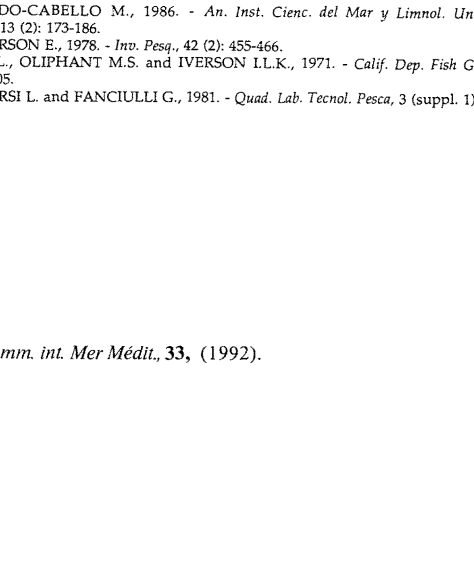


Fig. 1 shows the values of F, N, and W, for size classes, calculated for the most important taxa. Decapods represent the most important food in each size class; amphipods are important in the diet of small specimens and decrease in relative importance in larger individuals; fishes begin to appear in specimens ≥ 10 cm TL, becoming more important in individuals ≥ 20 cm TL; mysids are mainly consumed by small *P. blennoides* whereas isopods are mainly eaten by larger individuals. Further analyses on the trophic spectrum of this species are currently in progress.

## REFERENCES

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