

CUTTLEFISH TRAMMEL NET 'METIER' IN GREECE

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Abstract

The cuttlefish metier was studied in Greek waters with observations on a professional vessel during 1996-1997. Trammel nets with mesh size of 60 mm in the inner net and of 240 in the outer net were used. Cuttlefish composed 31% by number and weight of the catch. *Symphodus tinca* was the dominant by catch species (32% by number and 23% by weight). Cuttlefish presented the highest mean CPUE (4 Kg/100 fathoms of netting) with ML ranging from 85 to 235 mm. Most cuttlefish were entangled in the middle part of the net. The commercial/total catch ratio was about 0.80 by number and weight in 1996 and 0.48 by number and 0.62 by weight in 1997.

Keywords : cuttlefish, trammel nets, Greek waters

Material and methods

In the framework of the project "Selectivity of fixed gears in Mediterranean" the *Sepia officinalis* (cuttlefish) 'metier' has been studied in Greek waters. Sampling took place during April 1996 and April 1997 on a professional small scale fishery vessel in Patraikos Gulf. The duration of each mission was one week and 17 stations were sampled. The depth of the stations ranged from 2 to 12 m. A trammel net with nominal mesh size of the inner net 60 mm and nominal mesh size of the outer net 240 mm was used (full mesh). The twine of the inner net was multifilament PA 210/2 and of the outer net was multifilament PA 210/4. The height of the net was 2.5 m. The fishing practice consisted on setting the nets on the bottom 2 hours before sunset and hauling them 2 hours after sunrise (soaking time about 17.5 hours). The Catch Per Unit of Effort is expressed as number or weight of the catch per 1000 fathoms of netting.

Results

A total of 1794 specimens were caught belonging to 45 species. *Sepia officinalis* composed 30.85% or 31.15% of the total catch in terms of numbers and weight respectively (Fig. 1). Dominant by catch species was *Symphodus tinca* which composed 31.99% by number and 22.77% by weight of the catch. Other important species were *Scorpaena porcus* in terms of number (9.85%) and *Octopus vulgaris* in terms of weight (11.59%).

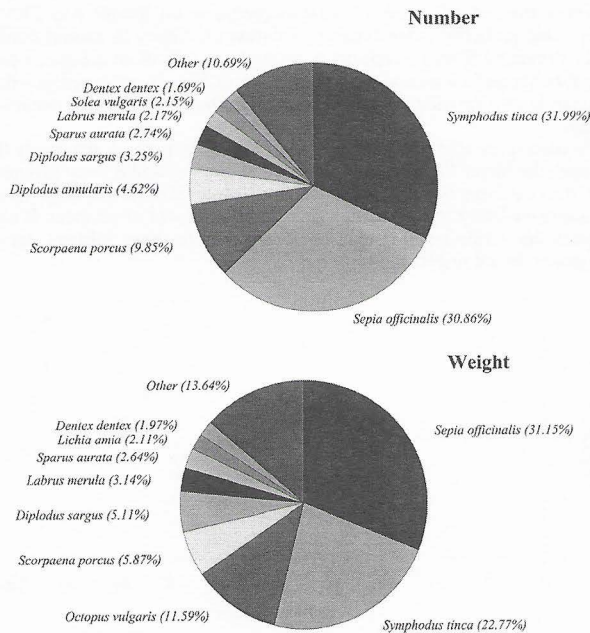


Fig. 1. Combined catch composition in cuttlefish metier (Patraikos Gulf 96-97).

Cuttlefish, *S. tinca* and *S. porcus* were caught in all stations, whereas *O. vulgaris* presented a frequency of occurrence of 64.7% (Table 1). Cuttlefish presented the highest mean CPUE by weight (4.11 Kg/1000 fathoms), while by number, it ranged second (22 specimens/1000 fathoms) with a small difference from *S. tinca* coming first (23 specimens/1000 fathoms).

The lengths of cuttlefish ranged from 85 to 235 mm (ML) in 1996 and from 85 to 205 mm in 1997. In both years, the mode appeared at 105 mm (Fig. 2). The lengths of *S. tinca* ranged between 175 and 265 mm (mode at 215 mm) and between 115 and 285 mm (mode at 205 mm) in 1997.

Table 1. Mean CPUE (number and Kg per 1000 fathoms of netting) and frequency of occurrence of main species in cuttlefish metier. Numbers in parentheses show the Standard Deviations.

Species	By Number	By Weight	Occurrence (%)
<i>Sepia officinalis</i>	22.27 (18.50)	4.11 (3.16)	100
<i>Symphodus tinca</i>	23.08 (21.05)	3.00 (2.51)	100
<i>Scorpaena porcus</i>	7.11 (6.90)	0.77 (0.65)	100
<i>Octopus vulgaris</i>	0.94 (0.85)	1.53 (1.52)	64.7
Total catch	72.16 (24.41)	13.19 (4.48)	

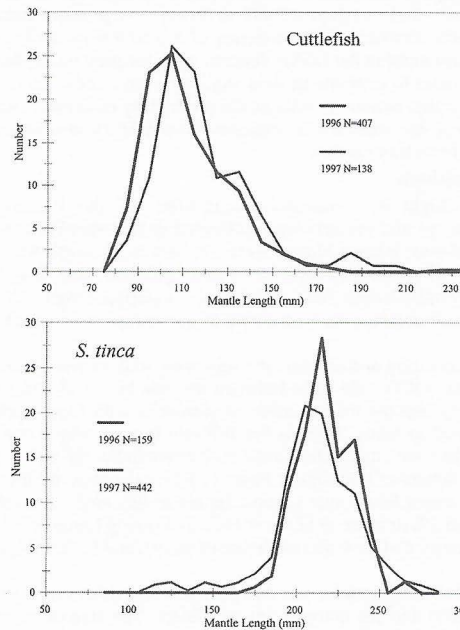


Fig. 2. Length frequency distribution of the two more abundant species in the cuttlefish metier.

The commercial/total catch ratio in 1996 was high both in terms of number and of weight (0.79 and 0.82 respectively), but in 1997 it was lower (0.48 and 0.62 respectively). The difference between the two years was due to the decrease of the catch of cuttlefish and to the increase of that of *S. tinca* during the second year.

In the middle part of the panel of the net, 100% of cuttlefish, 90% of *S. tinca* and 28% of *S. porcus* were caught, whereas in the lower part, 10% of *S. tinca* and 72% of *S. porcus*. Cuttlefish and *S. porcus* were mainly caught entangled (97% and 71%, respectively) whereas *S. tinca* gilled (71%).

Discussion

Cuttlefish metier can be considered species selective since the 5 more abundant species composed about 80% in terms of number and weight of the total catch. Moreover the marketable part of the catch composed a high proportion comparing with bottom trawl fishing (1), whereas it was similar to the sole trammel net metier and hake gill net metier (2). The main non commercial species was *S. tinca* which was mainly caught gilled opposing to cuttlefish that was caught entangled. Subsequently, the discarded part could be reduced, without important losses in the commercial part, by a small increase of the mesh size.

References

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