

Measurements of Lobster *Palinurus vulgaris* from Greek Seas

by

ELLY MORAITOPOULOU-KASSIMATI

Institute Oceanographic and Fishing Research, Athens (Greece)

Résumé

Cet article concerne une étude originale systématique du homard du commerce, *Palinurus vulgaris* (Latreille 1804), se trouvant dans les mers de Grèce. A notre connaissance, aucune recherche sur ce sujet n'a été faite en ce pays.

Nous espérons dans l'avenir prochain, poursuivre ce travail pour l'améliorer, utilisant des moyens appropriés. Les résultats obtenus pourront contribuer beaucoup à l'essor de l'économie nationale grecque.

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The present work is a systematic study of the commercial lobster *Palinurus vulgaris* (Latreille, 1804), commonly spiny lobster, or astacos found in Greek Seas. So far, to our knowledge, no work has been done on this subject in Greece to date.

The data given here are based on the examination of 1) 15 groups of sample covering 210 specimens from various areas; 3 groups of samples consisting of 100 specimens from Limnos island.

We have performed the following measurements : 1) L = total body length from rostrum to telson. 2) Lc = cephalothorax length. 3) Lt = abdomen less telson. 4) T = Telson length. 5) The weight (G) in grammes. The sex was also indicated.

The total body length varies between 20-39 cm and 20-38,5 cm respectively. Maximum frequency is observed around 32 cm and 30 cm.

From the measurements of 210 individuals and those of 100 individuals we calculated the following :

Table 1. Fishing areas

$\mu L = 28,95$ cm
 $\sigma = 4,61$ cm
m = 0,32 cm
C = 1,10 %

Mean range 95 % probability :

$28,95 \pm 0,63$ cm (28,32-29,58 cm)

$\mu Lc = 11,64$ cm
 $\sigma = 1,96$ cm
m = 0,14 cm
C = 1,16 %

Mean range 95 % probability :

$11,64 \pm 0,27$ cm (11,37-11,91 cm)

$\mu Lt = 12,48$ cm
 $\sigma = 2,05$ cm
m = 0,14 cm
C = 1,13 %

Table 2. Fishing areas

$\mu L = 27,61$ cm
 $\sigma = 5,13$ cm
m = 0,52 cm
C = 1,86 %

Mean range 95 % probability :

$27,61 \pm 1,00$ cm (26,61 - 28,61 cm)

$\mu Lc = 11,05$ cm
 $\sigma = 2,21$ cm
m = 0,22 cm
C = 2,00 %

Mean range 95 % probability :

$11,05 \pm 0,43$ cm (10,62-11,48 cm)

$\mu Lt = 12,00$ cm
 $\sigma = 2,16$ cm
m = 0,22 cm
C = 1,80 %

Rapp. Comm. int. Mer Médit., 23, 2, pp. 117-119, 3 figs. (1975).

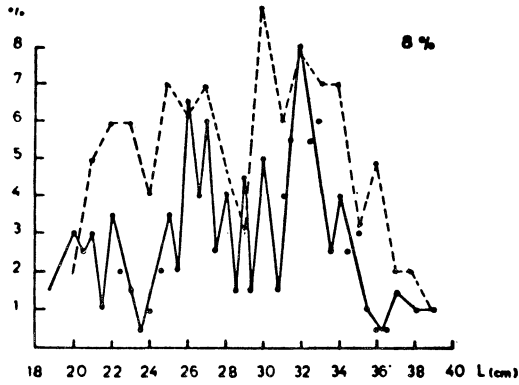


Fig. 1. Frequency distribution of the length of the specimens captured in all regions except that (around Limnos Island.)
 --- Around Limnos Island.

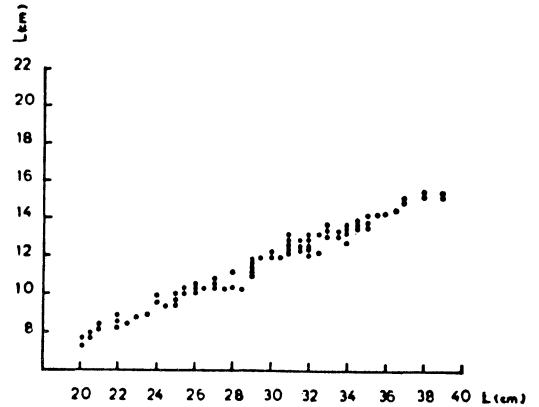
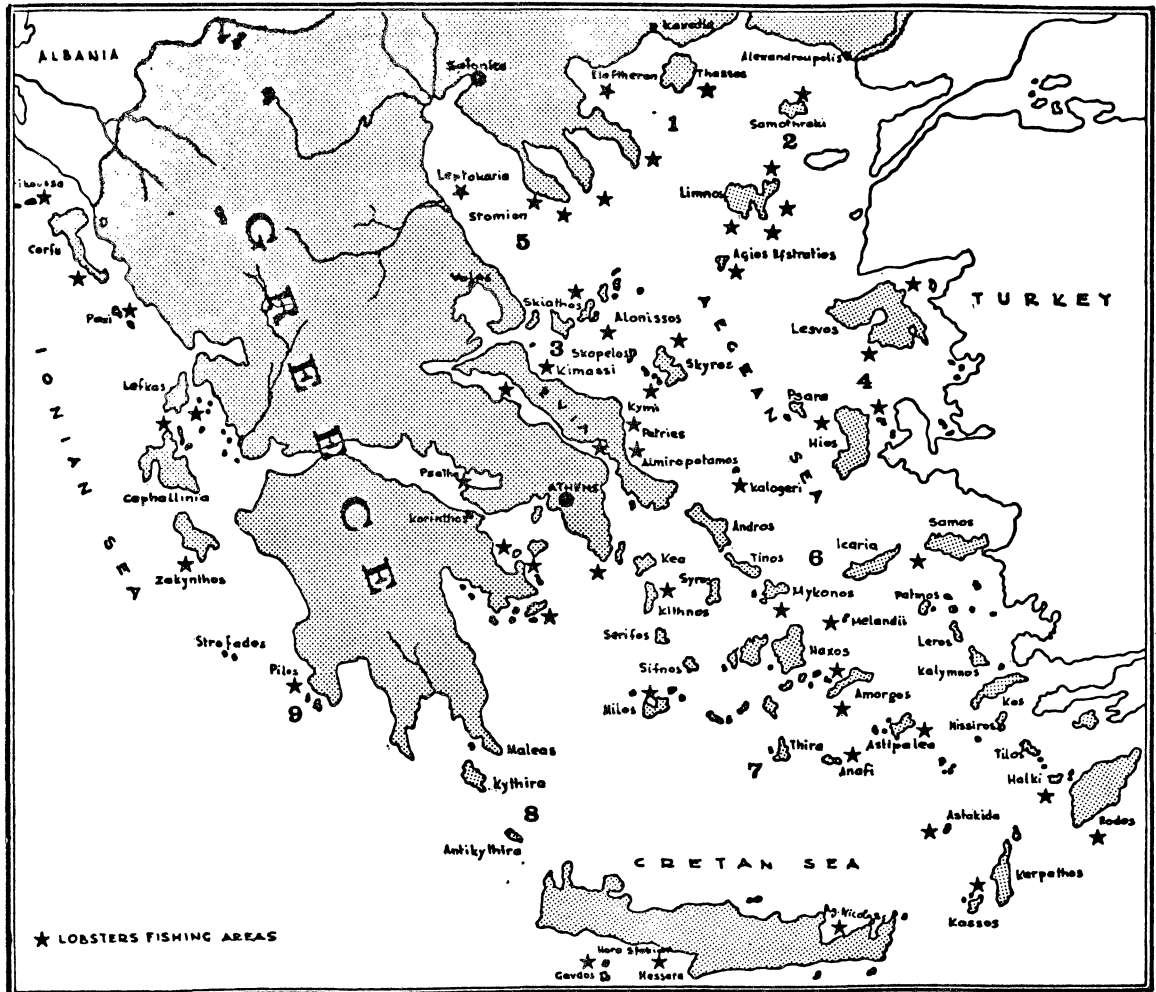


Fig. 2. Comparison between total body and cephalo-thorax lengths



Mean range 95 % probability :
 $12,48 \pm 0,27$ cm (12,21-12,75 cm)
 $\mu T = 5,01$ cm
 $\sigma = 0,69$ cm
 $C = 0,95$ %

Mean range 95 % probability :
 $12,00 \pm 0,43$ cm (11,57-12,43 cm)
 $\mu T = 5,10$ cm
 $\sigma = 0,83$ cm
 $C = 1,62$ %

Mean range 95 % probability :
 $5,01 \pm 0,10$ cm (4,91-5,11 cm)

Mean range 95 % probability :
 $5,10 \pm 0,16$ cm (4,95 - 5,26 cm).

Weight study : The weight of a specimen is proportional to the cube of its length $G = aL^3$.

The data from various areas show that the correlation coefficient between G and L^3 is 97,9 %. The best curve (G in grammes and L in cm) is : $G = 002423 L^3 - 2,76$.

The average values of weights and lengths are respectively 614,66 gr and 28,95 cm.

The following values were calculated from the data of Limnos island : Correlation coefficient between G and L^3 is 98,6 %. $G = 002412 L^3 - 5,22$. Mean values : 559,40 g and 27,61 cm.

Those results show clearly that there is no difference in the weight to the total length relationship between the various areas and that around Limnos island.

The weight fluctuations for a given length are purely accidental and may be due to moulting, feeding etc.

Also the standard variations found for different length ranges are not significantly different from that covering the whole range.

References

- MORAITOPOULOU - KASSIMATI (E.), 1973. — Distribution and Fishing of the lobster *Palinurus vulgaris* and *Homarus vulgaris* in Greece Seas. Hellenic Oceanology and Limnology. *Inst. Ocean. and Fish. Res.* **11**.

