

LENGTH-WEIGHT RELATIONSHIP OF BLACK SKIPJACK TUNA, *EUTHYNNUS LINEATUS*

The black skipjack is a tuna restricted exclusively to the waters of the eastern Pacific Ocean. It is sold at fresh fish markets in several Latin American countries, but it is judged to be unsuitable for canning and is of little commercial importance.

Data on the biology of the black skipjack are rather meager. Lack of even the most basic information, except for the detailed systematic description by Godsil (1954), became evident to us when we undertook preparation of a synopsis of biological data (Calkins and Klawe, 1963).

We have prepared this report to add to one facet of the vital statistics of *E. lineatus*.

Incidental to work on the yellowfin (*Thunnus albacares*) and skipjack (*Katsuwonus pelamis*) tuna the scientists of the Inter-American Tropical Tuna Commission collected specimens of *E. lineatus*. These were obtained either while participating in some of the Commission's scientific cruises, or from catches made by commercial tuna boats from waters off Baja California, Central America, and Ecuador. Since black skipjack are brought to the canneries only in exceedingly small numbers, and only as an undesirable admixture to the catches of yellowfin and skipjack tuna, they are scrupulously removed from canning lines and end among the rejects. One-hundred-and-nine specimens obtained in this manner were used in this study. They ranged from 365 to 667 mm total length, and in weight from 2 lbs. to 13 lbs. 13 oz.

The total length of each fish was measured to the nearest millimeter according to the procedure described by Marr and Schaefer (1949). Each fish was weighed to the nearest ounce. For purpose of our calculations, these weights were converted to pounds and decimal fractions.

Because of the rather small number of available specimens, no investigation was made of possible differences in the length-weight relationship between sexes or between areas. From our calculations, we derived the following relationship of the weight on length for *E. lineatus*:

$$Y = 3.0817X - 7.6155 \text{-----} (1)$$

or

$$W = (2.4237 \times 10^{-8}) L^{3.0817} \text{-----} (2)$$

In (1), Y and X represent common logarithms of the weight in pounds and the length in millimeters respectively (Figure 1), and in (2), W and L represent the weight in pounds and the length in millimeters respectively. The original data on which this study was based are available on request.

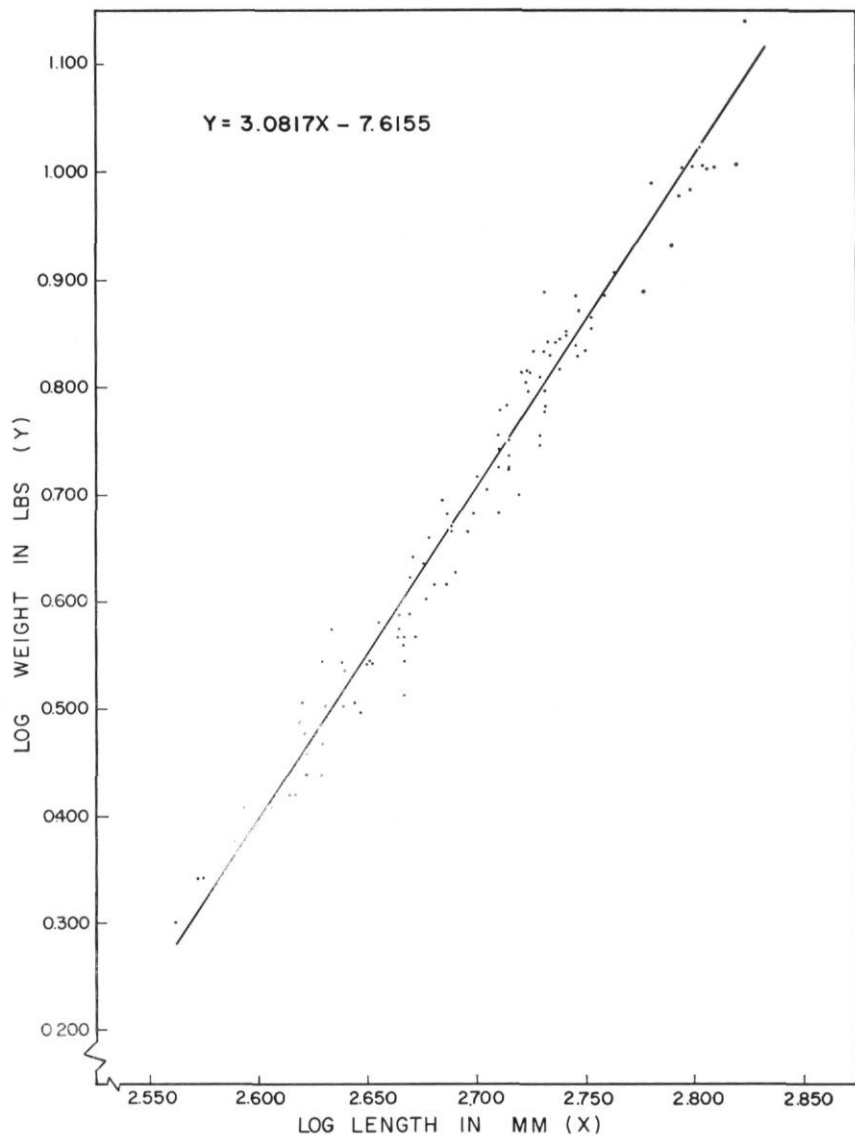


FIGURE 1. Linear regression of the logarithm of the weight on the logarithm of the length of the black skipjack tuna, *Euthynnus lineatus*.

ACKNOWLEDGMENTS

We wish to express our appreciation to the many masters and crews of the commercial tuna boats who aided us in many ways in obtaining the material used in this study. The scientific personnel of the Commission's laboratories in La Jolla and Terminal Island helped in gathering samples as well as data. Among those who rendered such help, Miss Alice A. Williams must be singled out, and our sincere and special appreciation goes to her.

RESUMEN

La relación entre la longitud y el peso de 109 barriletes negros, Euthynnus lineatus, cuyas longitudes y pesos variaron entre 365 y 667 mm y de 2 lbs. a 13 lbs. 13 oz. (libra de 454 g) respectivamente, se calculó en:

$$Y = 3.0817X - 7.6155 \text{-----} (1)$$

o bien

$$W = (2.4237 \times 10^{-8}) L^{3.0817} \text{-----} (2)$$

donde Y representa el logaritmo del peso expresado en libras, X el logaritmo de la longitud total en milímetros, W representa el peso expresado en libras y L la longitud total en milímetros.

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