

ANNUAL MEETING - JUNE 1964Estimated Relationship of Length to Girth for Red and Silver Hake  
collected from Subarea 5 in 1963

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Pursuant to recommendation of committee on Research and Statistics of ICNAF, data on length and maximum girth of 97 red hake and 130 silver hake were collected on a research cruise in Subarea 5 during August and September, 1963.

Fork lengths were measured to the nearest centimeter using a flat measuring board. Maximum girth was measured just behind the pectoral fin with a thin, strong cord; again to the nearest centimeter. Two separate samples of silver hake from two different parts of the subarea, were measured, but analysis showed them to be similar and they were combined.

The sampled fish ranged from about 15 to 50 cm. in length. Within these limits the girth-length relationship appears linear for both species (Figs. 1A and 1B).

The average relationships between length and girth were determined by fitting the best analytical regression line, i. e., assuming both variables subject to error. They were:

Silver Hake:

$$Y = -0.31 + 0.44X$$

Red Hake:

$$Y = -0.54 + 0.49X,$$

where

$$Y = \text{maximum girth (cm.)}$$

$$X = \text{fork length (cm.)}$$

Difference between the two species is small, suggesting that if girth is the controlling factor in escapement through trawl meshes, the two species should not be dissimilar in their selection curves.

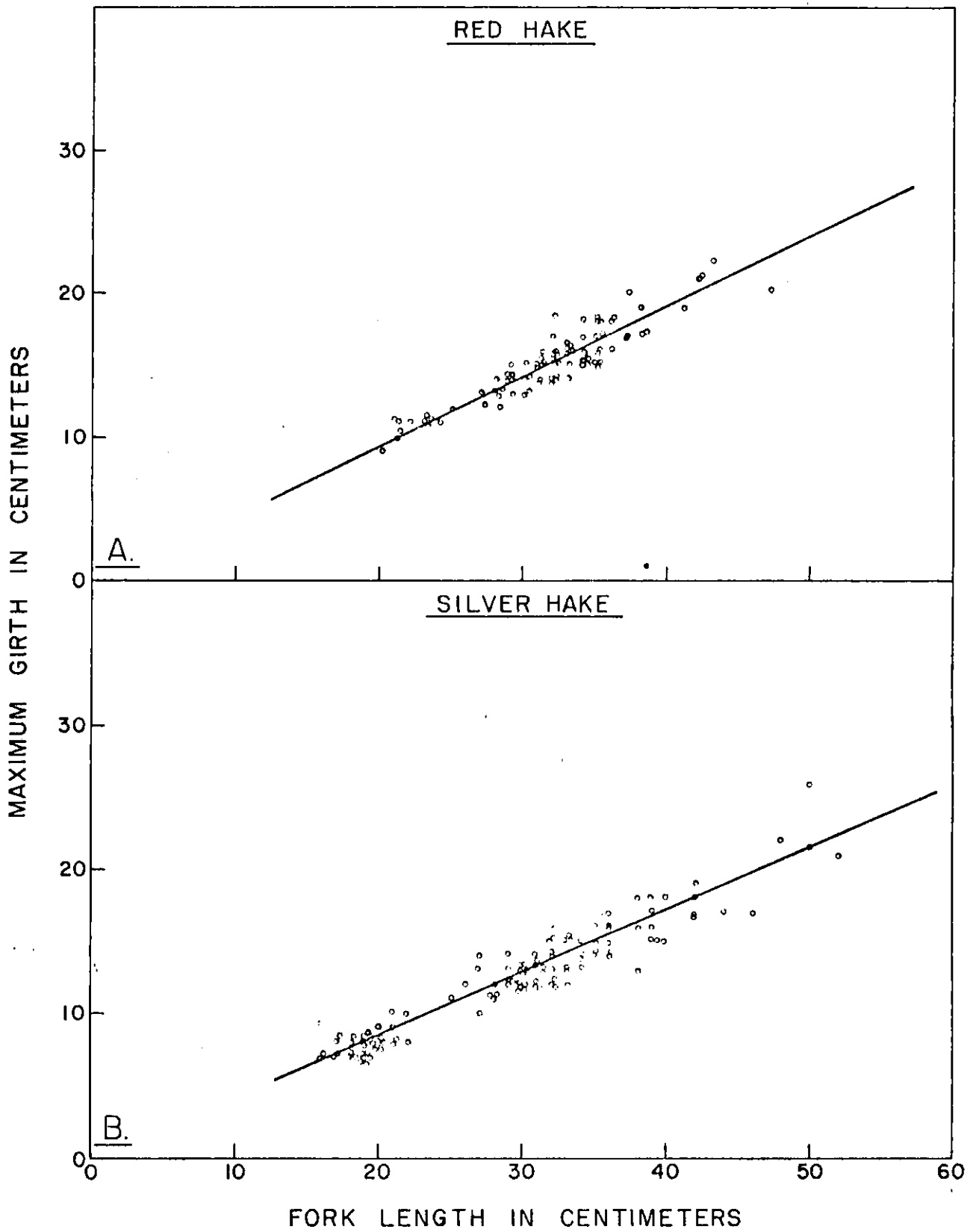


Figure 1. Length-girth relationship of (A.), Red Hake and (B.), Silver Hake, Subarea 5, 1963.