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The study of numerous samples taken from the fish-stock of a certain area may aim at ascertaining the age-composition of that stock, and from the results the following main points in the natural history of the fish may be elucidated: (1) the age at which maturity occurs; (2) the

Age-composition of the stock of fishes.

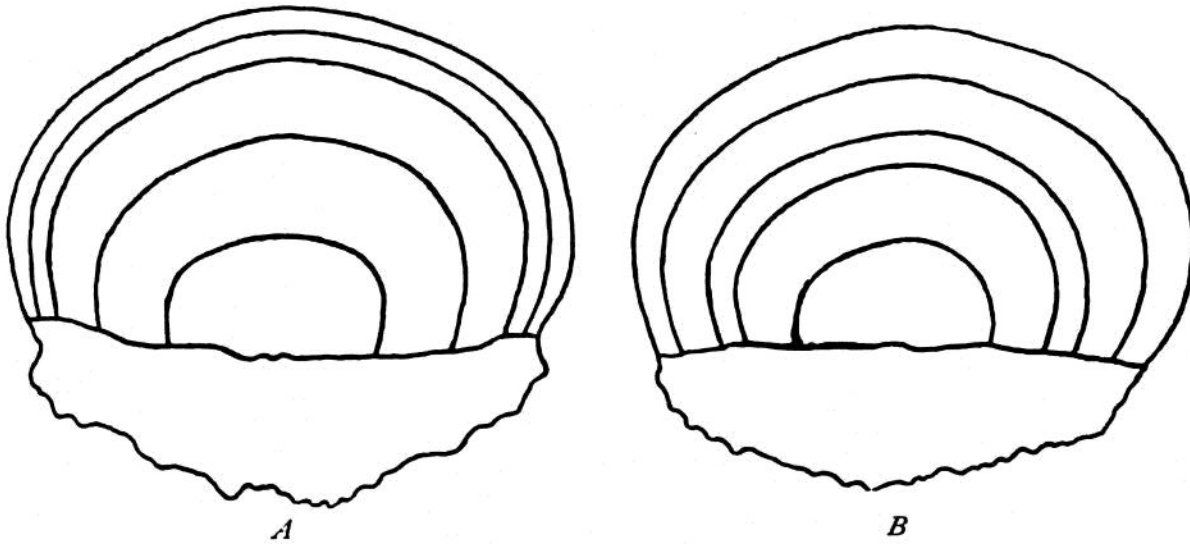


FIG. 560.

Two scales of five-year-old herrings. *A*, growth under normal conditions; *B*, abnormal growth in the third zone.

duration of life; and (3) the variations in the age-composition and magnitude of the fish-stock.

Studies of this kind have shown us that various species

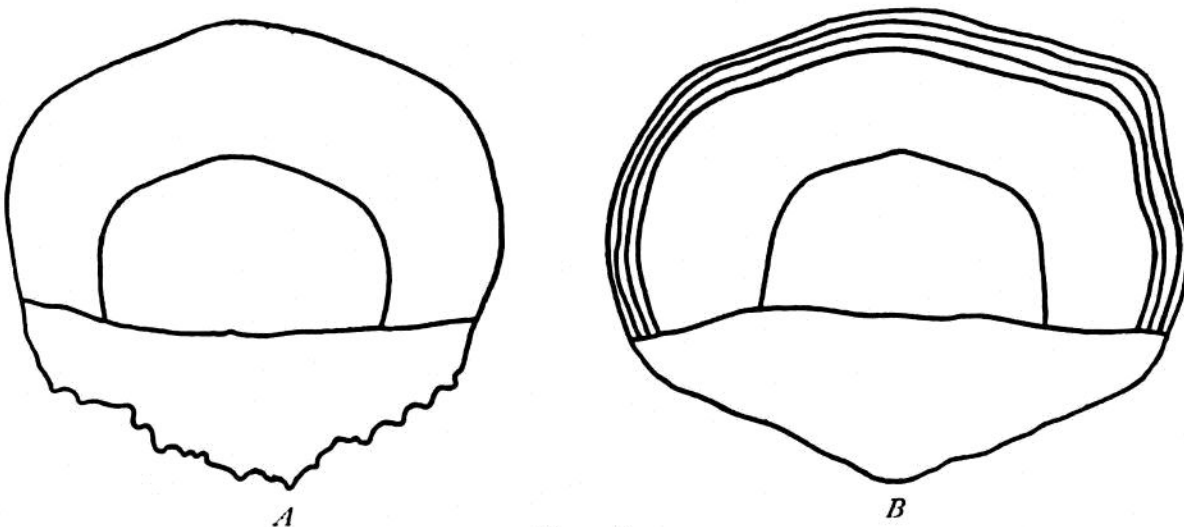


FIG. 561.

Scales of *A*, herring (*Clupea harengus*); *B*, sprat (*Clupea sprattus*). Both fishes 16 cm. long.

are distinct even in this respect. Nothing shows this more clearly than a comparison between the two closely related species: the sprat and the herring. Fig. 561 represents scales of a herring and of a sprat, both 16 cm. long, the herring being only 1½ year old and the sprat 4 years. The