International Commission for



the Northwest Atlantic Fisheries

Serial No. 3348 (D.c.2)

ICNAF Res.Doc. 74/110

ANNUAL MEETING - JUNE 1974

Bibliography of Age Validation Studies

F. E. Nichy National Marine Fisheries Service Northeast Fisheries Center Woods Hole, Massachusetts 02543

The following is a list of United States publications on age validations of major species in the Northwest Atlantic, with remarks on those where problems exist in aging.

FLATFISHES

American Plaice

Lux, F. E. 1970. Note on growth of American plaice, Hippoglossoides platessoides (Fabr.) in ICNAF Subarea 5. ICNAF Res. Bull. No. 7:

Winter Flounder

- Berry, R. J., S. B. Saila, and D. B. Horton. 1965. Growth studies of winter flounder, <u>Pseudopleuronectes americanus</u> (Walbaum), in Rhode Island. Trans. Amer. Fish. Soc. 94: 259-264.
- Lux, F E. 1973. Age and growth of the winter flounder, Pseudopleuronectes americanus, on Georges Bank. Fish. Bull. U.S. 71: 505-512.
- Lux, F. E. 1973. White spotting in the 1959 year-class of Georges Bank winter flounder, <u>Pseudopleuronectes</u> americanus (Walbaum). Trans Amer. Fish. Soc. 102: 83-88.

Summer Flounder

Poole, J. C. 1961. Age and growth of the Fluke in Great South Bay and their significance to the sport fishery. New York Fish and Game Jour. 8(1): 1-18.

Yellowtail Flounder

- Lux, F. E., and F. E. Nichy. 1969. Growth of Yellowtail flounder, Limanda ferruginea (Storer), on three New England fishing grounds. ICNAF Res. Bull. No. 6: 5-25.
- Royce, W. F., R. J. Buller, and E. D. Premetz. 1959. Decline of the Yellowtail flounder (Limanda ferruginea) off New England. Bull. U.S. Fish and Wildlife Service 59(146): 169-267.

PELAGIC FISHES

Mackere1

Age validation studies incomplete.

Sea Herring

- Boyar, H. C., R. R. Marak, F. E. Perkins, and R. A. Clifford. 1973.

 Seasonal distribution and growth of larval herring (Clupea harengus L.) in the Georges Bank-Gulf of Maine area from 1962 to 1970. Jour. du Conseil 35(1): 36-51.
- Watson, J. E. 1964. Determining the age of young herring from their otoliths. Trans. Amer. Fish. Soc. 93: 11-20.

GROUNDFISHES

Cod

- Jensen, A. C. 1970. Validation of ages determined from otoliths of Gulf of Maine Cod. Trans. Amer. Fish. Soc. 99: 359-362.
- Schroeder, W. C. 1930. Migrations and other phases in the life history of the cod off southern New England. Bull. U.S. Bureau of Fisheries 46: 1-136.
- (Manuscript in preparation on growth of Cod on Georges Bank. Main problem has been consistency in determining first year on otoliths. Size of first year zone varies considerably with area.)

Haddock

- Clark, J. R. 1958. Consistency of scale reading. ICNAF Special Publication No. 1: 191-192.
- Jensen, A. C., and J. R. Clark. 1958. Time of formation of scale annuli. ICNAF Special Publication No. 1: 193-197.
- Jensen, A. C., and J. P. Wise. 1958. Determining age of young haddock from their scales. Bull. U.S. Fish and Wildlife Service 61: 440-449.
- Wise, J. P. 1957. Growth rate of Browns Bank haddock. U.S. Fish and Wildlife Service, Research Rept. No. 50: 1-13.

Pollock

- Hoberman, J. M., and A. C. Jensen. 1962. The growth rate of New England Pollock. Trans. Amer. Fish. Soc. 91: 227-228.
- (Needs further study, and possibility exists that pollock scales, the basis for the above report, have limited use in aging pollock.)

Red and White Hake

Growth poorly understood. Technique of removing very thin cross-sections from otoliths recently developed at the National Marine Fisheries Service Laboratory, Woods Hole, should increase the capability of aging these species.

Redfish

- Kelly, G. F., and R. S. Wolf. 1959. Age and growth of the Redfish (Sebastes marinus) in the Gulf of Maine. Bull. U.S. Fish and Wildlife Service 60: 1-31.
- Kelly, G. F., and A. M. Barker. 1961. Observations on the behavior, growth, and migration of Redfish at Eastport, Maine. ICNAF Special Publication No. 3: 263-275.
- Perlmutter, k., and G. M. Clarke. 1949. Age and growth of immature Rosefish (Sebastes marinus) in the Gulf of Maine and off Western Nova Scotia. Bull. U.S. Fish and Wildlife Service 51: 207-228.

Scup

Finkelstein, S. L. 1969. Age and growth of Scup in the waters of Eastern Long Island. New York Fish and Game Jour. 16(1): 84-110.

Whiting

Nichy, F. E. 1969. Growth patterns on otoliths from young silver hake, Merluccius bilinearis (Mitch). ICNAF Res. Bull. No. 6: 107-117.

(Problems still exist in determining first year zone on otoliths. We are reexamining the otoliths using thin cross-sections which improves the visibility of the inner zones).

		•