

Journal
of
Northwest Atlantic
Fishery Science



Volume 11
February 1991

Northwest Atlantic Fisheries Organization
Dartmouth, Canada

Journal of Northwest Atlantic Fishery Science



Volume 11

Printed and Distributed by:
Northwest Atlantic Fisheries Organization
P. O. Box 638, Dartmouth, Nova Scotia
Canada B2Y 3Y9

February 1991

Journal of Northwest Atlantic Fishery Science

Scientific publications by ICNAF and NAFO have been in existence since ICNAF began in 1949 with the *ICNAF Special Publication Series* dealing with Proceedings of scientific symposia. The *ICNAF Research Bulletin* was started in 1964 to provide a means of publishing results of scientific research relevant to the Commission. The *ICNAF Research Bulletin* was terminated in September 1979 after the issue of Number 14. The primary scientific publication of NAFO began with the first issue of the *Journal of Northwest Atlantic Fishery Science* in December 1980.

Editorial Policy

The Journal provides an international forum for the primary publication of original research papers on fisheries science in the Northwest Atlantic, with emphasis on environmental, biological, ecological and fishery aspects of the living marine resources and ecosystems. While the Journal is intended to be regional in scope, papers of general applicability, and methodological and review papers, irrespective of region, are considered. Space is available for notes and letters to the editor to facilitate scientific discussion of published papers. All papers are peer-reviewed to determine their suitability for primary publication. Associate Editors arrange for the peer-reviews and ensure that the papers accepted for publication meet the high standards required for the Journal. Manuscripts approved for publication are accepted with the understanding that they are not copyrighted, published or submitted elsewhere except in abstract form. There are no page charges.

Editorial Board

Associate Editors

- W. R. Bowering, Northwest Atlantic Fisheries Centre, St. John's, Newfoundland, Canada (*Vertebrate Fisheries Biology*)
- G. P. Ennis, Northwest Atlantic Fisheries Centre, St. John's, Newfoundland, Canada (*Invertebrate Fisheries Biology*)
- R. G. Halliday, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada (*Vertebrate Fisheries Biology*)
- G. Krause, Alfred Wegener Institut für Polar und Meeresforschung, Federal Republic of Germany (*Biological Oceanography*)
- R. Misra, Department of Fisheries and Oceans, Physical and Chemical Sciences Branch, 1707 Lower Water Street, Halifax, Nova Scotia, Canada (*Vertebrate Fisheries Biology*)
- R. K. Mohn, Halifax Fisheries Research Laboratory, Halifax, Nova Scotia, Canada (*Biostatistics*)

Technical Editor

- T. Amaratunga, Assistant Executive Secretary, NAFO, Dartmouth, Nova Scotia, Canada

Contents

ATKINSON, D. B. Relationships Between Pre-anal fin Length and Total Length of Roughhead Grenadier (<i>Macrourus berglax</i> Lacépède) in the Northwest Atlantic	7
NELSON, G. A., and M. R. ROSS. Biology and Population Changes of Northern Sand Lance (<i>Ammodytes dubius</i>) from the Gulf of Maine to the Middle Atlantic Bight	11
ROBICHAUD, D. A., and A. CAMPBELL. Annual and Seasonal Size-frequency Changes of Trap-caught Lobsters (<i>Homarus americanus</i>) in the Bay of Fundy	29
FOWLER, G. M., and W. T. STOBO. Comparative Recoveries of Spaghetti Tags and Petersen Disc Tags on Atlantic Cod (<i>Gadus morhua</i>) and American Plaice (<i>Hippoglossoides platessoides</i>)	39
KENCHINGTON, T. J. Vertical Distribution and Movements of Larval Redfishes (<i>Sebastes</i> spp.) in the Southern Gulf of St. Lawrence	43
KOELLER, P. A. Approaches to Improving Groundfish Survey Abundance Estimates by Controlling the Variability of Survey Gear Geometry and Performance	51
AUSTER, P. J., R. J. MALATESTA, S. C. LaROSA, R. A. COOPER, and L. L. STEWART. Microhabitat Utilization by the Megafaunal Assemblage at a Low Relief Outer Continental Shelf Site Middle Atlantic Bight, USA	59
NOTICES	71
Information for Authors	77
Scientific Publications of NAFO	79

MAP ILLUSTRATING NAFO'S CONVENTION AREA AND 200-MILE FISHING ZONE BOUNDARIES

