

Photographic Atlas of
Fish Otoliths
of the Northwest Atlantic Ocean

Canadian Special Publication of Fisheries and Aquatic Sciences 133

Steven E. Campana



Photographic Atlas of Fish Otoliths of the Northwest Atlantic Ocean

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Correct citation for this publication: Campana, S.E. 2004. *Photographic Atlas of Fish Otoliths of the Northwest Atlantic Ocean*. NRC Research Press, Ottawa, Ontario. 284 pp.

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NRC·CNRC

NRC Research Press
Ottawa 2004

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Printed in Canada on acid-free paper. 

ISBN 0-660-19108-3 Electronic ISBN 0-660-19267-5

ISSN 0706-6481

NRC No. 46328

National Library of Canada cataloguing in publication data

Campana, Steven E., 1955–

Photographic atlas of fish otoliths of the Northwest Atlantic Ocean

(Canadian Special Publication of Fisheries and Aquatic Sciences 133)

Includes an abstract in French.

Includes bibliographical references.

ISBN 0-660-19108-3

1. Fishes — North Atlantic Ocean — Identification.
 2. Fishes — North Atlantic Ocean — Age determination.
 3. Otoliths.
 4. Fishes — Morphology.
- I. National Research Council Canada.
 - II. Title.
 - III. Series.

QL621.5C26 2004 571.3'17 C2003-980310-4

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Abstract/Résumé

The shape of fish otoliths is highly species specific. Since otoliths resist degradation better than most other tissues, the shape and size of preserved or undigested otoliths recovered from fossilized sediments, native middens, and the stomachs and droppings of fish predators can be used to reconstruct the species composition of the diet or fish assemblage. This photographic atlas presents light and (or) scanning electron micrographs of 580 pairs of sagittal otoliths representing 288 species, 97 families, and 27 orders of fish from the northwest Atlantic. For most species, multiple individuals across a range of sizes are presented in order to highlight changes in otolith shape with increased size. For 72 of the families, photographs of the lapillar and asteriscal otoliths are also presented.

Chez les poissons, la forme des otolithes est très particulière à chaque espèce. Puisque les otolithes résistent mieux à la dégradation que la plupart des autres tissus, la forme et la taille des otolithes, préservés ou non digérés, prélevés des sédiments fossilisés, des dépotoirs autochtones et des estomacs ou des excréments de prédateurs peuvent être utilisés pour reconstituer la composition taxinomique du régime alimentaire d'un poisson ou de l'habitat dans lequel il vit. Cet atlas photographique propose des images, obtenues à partir de microscopie optique ou de microscopie électronique à balayage, de 580 paires d'otolithes sagittaux, représentant 288 espèces, 97 familles et 27 ordres de poissons de l'Atlantique Nord-Ouest. Pour la plupart des espèces, plusieurs spécimens d'une gamme de tailles variées sont présentés pour mettre en évidence les changements dans la forme des otolithes en fonction de la taille du poisson. Des photographies des asteriscii et des lapilli sont également offertes pour 72 familles.

Acknowledgements

I owe a great deal to the people who provided me with fish or otoliths in support of this atlas. Without them, this atlas would not have been possible. I particularly appreciate the assistance of the following people: Carlos Assis (Universidade de Lisboa, Lisbon, Portugal), Tom Azarovitz (Northeast Fisheries Science Center, Woods Hole, MA), Rod Bradford (Bedford Institute of Oceanography, Dartmouth, NS), John Caselman (Ontario Ministry of Natural Resources, Picton, ON), Edgar Dalley (Northwest Atlantic Fisheries Centre, St. John's, NF), Ken Doe (Bedford Institute of Oceanography, Dartmouth, NS), Janet Fields (Northeast Fisheries Science Center, Woods Hole, MA), Jacques Gagné (Institut Maurice-Lamontagne, Mont Joli, PQ), Andrew Hebda (Nova Scotia Museum of Natural History, Halifax, NS), Joe Hunt (St. Andrews Biological Station, St. Andrews, NB), Brian Jessop (Bedford Institute of Oceanography, Dartmouth, NS), Jonathan Joy (Eastern College of Applied Arts, Technology and Continuing Education, Bonavista, NF), Jeremy King (Massachusetts Division of Marine Fisheries, Pocasset, MA), Jason LeBlanc (Nova Scotia Dept. of Agriculture and Fisheries, Pictou, NS), Sylvie Levesque (Centre de recherche et de développement des produits marins, Shippagan, N.B.), Tomasz Linkowski (Sea Fisheries Institute, Gdynia, Poland), John Martell (St. Andrews Biological Station, St. Andrews, NB), Allan McNeil (Nova Scotia Dept. of Agriculture and Fisheries, Pictou, NS), Roberta Miller (Institut Maurice-Lamontagne, Mont Joli, PQ), Lisa Natanson (National Marine Fisheries Service, Narragansett, RI), Vic Nordahl (Northeast Fisheries Science Center, Woods Hole, MA), Gróa Pétursdóttir (Marine Research Institute, Reykjavik, Iceland), Julie Porter (St. Andrews Biological Station, St. Andrews, NB), David Secor (Chesapeake Biological Laboratory, Solomons, MD), Peter Shelton (Northwest Atlantic Fisheries Centre, St. John's, NF), Greg Skomal (Massachusetts Division of Marine Fisheries, Boston, MA), Louise Stanley (Coastal Fisheries Institute, Baton Rouge, LA), Heath Stone (St. Andrews Biological Station, St. Andrews, NB), Sarah Swan (Centre for Coastal and Marine Sciences, Dunstaffnage, Scotland), Dianne Tracey (National Institute of Water and Atmospheric Research, Wellington, New Zealand), Margaret Treble (Fisheries and Oceans Canada, Winnipeg, MB), Kim Whitman (Atlantic Veterinary College, University of Prince Edward Island, Charlottetown, PEI), Charles Wilson (Coastal Fisheries Institute, Baton Rouge, LA), Steve Wischniowski (International Pacific Halibut Commission, Seattle, WA), and David Wyanski (Marine Resources Research Institute, Charleston, SC).

I found the professionals of the Observer Program most helpful in collecting fish from commercial vessels. I thank Victor Matthews, John Robidoux, John Donahue, Bill Lloyd, Dave Spallin, and Gary Tuff for their help.

My colleagues in the Marine Fish Division at the Bedford Institute of Oceanography were kind enough to collect many fish specimens for me. In particular, I thank Peter Comeau, Paul Fanning, Jim Fennell, Bill MacEachern, Mark Showell, Jim Simon, and Scott Wilson for their assistance.

Joanne Hamel, Linda Marks, Tara Caseley, Warren Joyce, and Frances MacKinnon provided excellent technical support during this project, and I greatly appreciated their assistance. I also thank Art Cosgrove, and especially Francis Kelly, for their work in preparing and formatting the illustrations and graphics. David O'Neil (National Research Council, Halifax, NS) did an excellent job preparing the SEM photos.

Last but certainly not least, I greatly appreciate the expert species identifications provided by Daphne Themelis (Dalhousie University, Halifax, NS) and Lou Van Guelpen (Huntsman Marine Science Centre, St. Andrews, NB).