

Curriculum vitae

Gordon A. McFarlane
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Current Position:

Scientist emeritus,
Fisheries and Oceans, Canada,
Marine Ecosystems and Aquaculture Division
Pacific Biological Station,
Fisheries and Oceans Canada, Nanaimo, British Columbia

Contribution:

Recognized authority on the biology and dynamics of marine fish and on the influences of climate and oceanographic processes on fish distribution, recruitment and abundance. Breadth of expertise and accomplishments involving international and multi-disciplinary studies of climate-ocean-fish interactions, and the development of ecosystem based approaches to management. In particular, extensive knowledge of marine life in the Strait of Georgia, the west coast of Vancouver Island, and the biology and distribution of sharks and skates off Canada's west coast. Significant contributions to international climate change research programs through role as: PI for Globec Canada; co-chair of PICES Basin Studies Task Team (BASS); member on the international Fisheries and Ecosystem Responses to Recent Regime Shifts working group (FERRRS) to determine the validity of regimes; and chair of Tri-National (Canada/US/Mexico) Sardine Forum working group on abundance and distribution changes in Pacific sardines. Member of international projects, transboundary stock working groups, and regional advisory committees, in which I apply and promote Departmental research. Published over 200 papers of which 105 are primary, that have contributed to determining and refining biological parameters used in stock assessment; examining the climatic and oceanographic processes influencing the dynamics of marine fish; and the physical, biological and fisheries oceanography of large marine systems. These studies have been incorporated into assessments which resulted in management actions regionally and internationally. Climate-ocean studies have contributed to the development of ecosystem approaches to fisheries assessment and management.

Professional Service:

July 1971 – May 1980: Toxicology Section – Freshwater Institute, Winnipeg.

June 1980 – April 1986: Program Head, Groundfish Section – Pacific Biological Station, Nanaimo.

April 1986 – December 1991: Section Head, Groundfish Section – Pacific Biological Station, Nanaimo.

January 1992 – February 2002: Section Head, Marine Fish Population Dynamics – Pacific Biological Station, Nanaimo.

February 2002- Present : Program Head , Ocean Productivity , Groundfish Section; Manager, Science Program Planning (November,2005 - July,2008).

Recognition:

- Member of Steering Committee of 10 international symposia;
- Invited session chair/ panel member at 26 international symposia;
- Keynote speaker at 5 international symposia;
- Invited speaker at 14 international symposia;
- Invited reviewer of numerous research grant proposals (2-3 annually);
- Canadian member and/or chair of numerous international committees, task team, etc.
- Co-PI of 6 international research programs;
- Chair of 3 PSARC (Pacific Scientific Advice Review Committee) review committees (Groundfish 1986-88; Shellfish 1992-94; Fisheries Oceanography Working Group 2000-2003);
- Invited reviewer for major scientific journals (~ 6-10 reviews annually);
- Guest lecturer at several universities(including US, Japan,Russia);
- Co-editor of 4 Symposia volumes;
- External member of 3 student advisory committees;
- Given numerous radio, magazine and newspaper interviews;

Publications:

-see attached

Recent committee work and assignments:

- 1998-04 Co-chair and principle investigator in PICES BASS (Basin Studies) Task Team project that developed ECOPATH models for the subarctic Pacific gyre systems.
- 2000-present Member, Tri-national (Canada ,US, Mexico) Sardine Forum. Meets annually to present research and develop joint research plans.
- 2000-02 Chair, PSARC Fisheries Oceanography Working Group
- 2000-05 Canadian participant in PICES FIS Committee's Working Group 16: Climate Impacts on Pacific Fisheries.
- 2000-03 Principal investigator in Canada-Russia joint scientific programs examining the relationships between atmospheric winds, ocean physics and trends in marine fish stocks.
- 2003-present Principle investigator in Canada-Korea joint scientific program "Marine Ecosystem Comparison between Korea and Canada: Mechanisms that link the Impacts of Regime Shifts to Large-Scale changes in Fish Populations".
- 2004-05 Canadian member of PICES Study Group on Fisheries and Ecosystem Responses to Recent Regime Shifts. Study Group comprised of 21 delegates from the six member countries.
- 2004-present Canadian participant in PICES CFAME (Climate Forcing and Marine Ecosystems) Task Team.
- 2005-08 Member, Pacific Region Science Executive (as manager, Science Program Planning). Projects included:
- a) Integrated HR Planning Process.
 - b) 05/06 budget reconciliation- after division reorganization.
 - c) National Science Partnership Strategy working group report- Pacific Rep.
 - d) Annual Science Report (national)- Pacific Rep.
 - e) PSES- Science Rep.
 - f) NPOA- Sharks,- Pacific Rep.
 - g) Coordinated Canada/ Korea collaborative agreement:- science projects and student exchange.

PUBLICATION LIST – PRIMARY- G.A. MCFARLANE

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Franzin, W. G. and **G.A.McFarlane**. 1980. An analysis of the aquatic macrophyte, *Myriophyllum exasbescens*, as an indicator of metal contamination of aquatic ecosystems near a base metal smelter. Bull. Environ. Contam. Toxicol. 24: 597-605.

Franzin, W. G. and **G. A. McFarlane**. 1980. Fallout, distribution and some effects of Zn, Cd, Pb, Cu and As in aquatic ecosystems near a base metal smelter on Canada's Precambrian Shield, P. 302-303. In D. Drablos and E. Tollan [ed.]. Ecological impact of acid precipitation. SNSF, Oslo. [644a].

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McFarlane, G. A. and W. G. Franzin. 1981. An examination of Cd, Cu, and Hg concentrations in livers of white suckers, *Catostomus commersoni*, and northern pike, *Esox lucius*, from five lakes near a base metal smelter at Flin Flon, Manitoba. Can. J. Fish. Aquat. Sci. 37: 1573-1578.

Beamish, R. J. and **G. A. McFarlane**. 1983. Summary of results of the Canadian sablefish tagging program. Proceedings of the Second Lowell Wakefield Fisheries Symposium, Anchorage, AK Alaska Sea Grant Report 83-3. p. 147-183.

Beamish, R. J., and **G. A. McFarlane**. 1983. The forgotten requirement for age validation in fisheries biology. Trans. Am. Fish. Soc. 112: 735-743.

Beamish, R. J., and **G. A. McFarlane**. 1983. Validation of age determination estimates: The forgotten requirement. In Prince, E., and L. Pulos [eds.]. Proc. International Workshop of Age Determination of Oceanic Pelagic Fishes: Tunas, Billfishes, Sharks. Spec. Sci. Rep. NOAA. Tech. Rep. 8 NMFS.

Beamish, R. J., **G. A. McFarlane**, and D. E. Chilton. 1983. Use of oxytetracycline and other methods to validate a method of age determination for sablefish. Proceedings of the Second Lowell Wakefield Fisheries Symposium, Anchorage, AK. Alaska Sea Grant Report 83-3. p. 95-116.

McFarlane, G. A., and R. J. Beamish. 1983. Biology of adult sablefish, *Anoplopoma fimbria*, in waters off western Canada. Proceedings of the Second Lowell Wakefield Fisheries Symposium, Anchorage, AK. Alaska Sea Grant Report 83-3. p. 59-80.

McFarlane, G. A., and R. J. Beamish. 1983. Overview of the fishery and management strategy for sablefish, *Anoplopoma fimbria*, off the west coast of Canada. Proceedings of the Second Lowell Wakefield Fisheries Symposium, Anchorage, AK. Alaska Sea Grant Report 83-3. p. 13-36.

McFarlane, G. A., and R. J. Beamish. 1983. Preliminary observations on the juvenile biology of sablefish, *Anoplopoma fimbria*, in waters off the west coast of Canada. Proceedings of the Second Lowell Wakefield Fisheries Symposium, Anchorage, AK. Alaska Sea Grant Report 83-3. p. 119-136.

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McFarlane, G. A., and R. J. Beamish. 1985. Biology and fishery of Pacific hake, *Merluccius productus*, in the Strait of Georgia. Marine Fish. Rev. 47(2): 23-34.

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Hargreaves, N. B., D. M. Ware, and **G. A. McFarlane**. 1994. Return of the Pacific sardine (*Sardinops sagax*) to the British Columbia coast in 1992. Can. J. Fish. Aquat. Sci. 51: 460-463.

Beamish, R. J., and **G. A. McFarlane**. 1995. A discussion of the importance of ageing errors, and an application to walleye pollock: the world's largest fishery, p. 545-565. In D. H. Sector, S. E. Campana, and J. M. Dean [eds.]. Recent developments in fish otolith research. University of South Carolina Press, Columbia, South Carolina.

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