

John H. Annala

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Education:

1974, Ph.D., Zoology, University of New Hampshire

1968, B.Sc., Biology, University of Maine

Summary of Work Experience:

I have over 30 years experience working on marine fisheries research, stock assessment and management issues in the USA, New Zealand, Australia, Argentina, Africa, and for international organizations and agencies. I have been involved in fisheries research and stock assessment projects on various shellfish, inshore and deepwater groundfish, and pelagic species. During the mid-1980s I was involved in the research, stock assessment and management aspects of the introduction of Individual Transferable Quotas into New Zealand's fisheries. From 1995 to 2004 I was Chief Scientist for the New Zealand Ministry of Fisheries, with responsibility for the management of the marine fisheries, marine biodiversity, and marine bio-security science and research portfolios for the Ministry. In September 2004 I assumed the role of Chief Scientific Officer for the Gulf of Maine Research Institute.

Professional History:

Sep 2004 – present - Chief Scientific Officer, Gulf of Maine Research Institute, Portland, ME

Dec 2000 – Sep 2004 – Chief Scientist, New Zealand Ministry of Fisheries, Wellington, NZ

Apr – Dec 2000 – Acting Manager Fisheries Management, New Zealand Ministry of Fisheries, Wellington, NZ

Jul 1995 – Apr 2000 – Chief Scientist, New Zealand Ministry of Fisheries, Wellington, NZ

Dec 1992 – Jun 1995 – Research Planning Coordinator, New Zealand Ministry of Fisheries, Wellington, NZ

Dec 1988 – Jun 1995 – Fishery Assessment Coordinator, New Zealand Ministry of Fisheries, Wellington, NZ

Jul 1988 – Dec 1992 – Leader, Deepwater Research Group, New Zealand Ministry of Fisheries, Wellington, NZ

Nov 1987 – Jul 1988 – Scientist, Deepwater Research Group, New Zealand Ministry of Fisheries, Wellington, NZ

May 1985 – Nov 1987 – Leader, Coastal Fisheries Research Group, New Zealand Ministry of Fisheries, Wellington, NZ

Nov 1981 – May 1985 – Scientist, Coastal Fisheries Research Group, New Zealand Ministry of Fisheries, Wellington, NZ

Nov 1980 – Nov 1981 – Post-doctoral Fellow, Marine Policy and Ocean Management Program, Woods Hole Oceanographic Institution, Woods Hole, MA

Oct 1977 – Nov 1980 – Scientist, Coastal Fisheries Research Group, New Zealand Ministry of Fisheries, Wellington, NZ

Oct 1974 – Oct 1977 – National Research Advisory Council Post-doctoral Fellow, Coastal Fisheries Research Group, New Zealand Ministry of Fisheries, Wellington, NZ

Professional Activities:

Participation in international organizations:

Oct 1995 – present – Member of advisory committee for International Fund for Science

Jul 1997 – present – Chair of the Stock Assessment Group of the Commission for the Conservation of Southern Bluefin Tuna

Mar 2003 – present – Member of the United Nations FAO Technical Advisory Committee on the Management of Tuna Fishing Capacity

Jan 2001 – Sep 2004 – Member of the United Nations FAO Technical Working Group on the Management of Deepwater Fisheries Resources of the Southern Indian Ocean

Oct 2003 – Sep 2004 – New Zealand representative to the APEC Fisheries Working Group

Oct 2001 – Co-leader of the New Zealand delegation to the United Nations FAO Conference on Responsible Fisheries in the Marine Ecosystem, Reykjavik, Iceland

Jan – May 1999 – Chair of the Experimental Fishing Programme Working Group of the Commission for the Conservation of Southern Bluefin Tuna

Jan 1999 – Participant in the United Nations FAO Technical Consultation on Fisheries Sustainability Indicators, Sydney, Australia

Membership in bilateral Canada – US organizations

Sep 2005 – present – Member of the Regional Association for Research in the Gulf of Maine

Dec 2005 – present – Member of the Gulf of Maine Ocean Data Partnership

Sep 2006 – present – Member of the Gulf of Maine Regional Ocean Science Council

Membership on national committees:

Jun/Jul 1999 – Member of the Great Barrier Marine Park Authority panel to review the impacts of fishing on the Great Barrier Reef, Townsville, Australia

Sep 1997 – May 1998 – Member of the US National Research Council Study Committee to review the application of Individual Transferable Quotas in US fishery management systems

Conference convenorship:

Oct 2006 – Host of the ICES Symposium on Fishing Technology in the 21st Century

Dec 2003 – Convenor of Deep Sea 2003, an international conference on governance and management of deep-sea fisheries, Queenstown, New Zealand

Major international consultancies:

Dec 1997 – Consultant to the Government of Argentina in a review of the Argentinean fisheries research, stock assessment, and fishery management processes and systems

Jun – Dec 1995 – Consultant to the International Center for Marine Living Aquatic Resources Management (now the World Fish Center) in the development of their new regional research center in Abassa, Egypt

Peer reviewed publications:

Annala, J., M. Clark, G. Clement, and J. Cornelius. 2006. Management of New Zealand orange roughy fisheries – a deep learning curve. In Shotton, R. (Ed.) Deep Sea 2003: Conference on the Governance and Management of Deep-sea Fisheries. Part 1. Conference reports. Queenstown, New Zealand, 1 – 5 December 2003. *FAO Fisheries Proceedings. No. 3/1*. Rome, FAO. 2005. 718p.

Annala, J. and M. Clark. 2006. Issues in the management of high seas orange roughy fisheries in the New Zealand region. In Shotton, R. (Ed.) Deep Sea 2003: Conference on the Governance and Management of Deep-sea Fisheries. Part 2. Conference poster papers and workshop papers. Queenstown, New Zealand, 1 – 5 December 2003 and Dunedin, New Zealand, 27 – 29 November 2003. *FAO Fisheries Proceedings. No. 3/2*. Rome, FAO. 2005. 487p.

Annala, J. and R. Shotton. 2004. Deep Sea 2003, an international conference on governance and management of deep-sea fisheries. *FAO Fisheries Report No. 772*.

Annala, J.H. 1996: New Zealand's ITQ system: Have the first eight years been a success or failure? *Reviews in Fish Biology and Fisheries*. 6:43-62.

Annala, J.H. 1993: Fishery assessment approaches in New Zealand's ITQ system, pp. 791 – 805 In Kruse, G., Eggers, D.M., Marasco, R.J., Pautzke, C., and Quinn II, T.J. (Eds.) "Proceedings of the International Symposium on Management Strategies for Exploited Fish Populations", Alaska Sea Grant College Program Report No. 93-02, University of Alaska Fairbanks.

Annala, J.H. and Bycroft, B.L. 1993: Movements of rock lobsters (*Jasus edwardsii*) tagged in Fiordland, New Zealand. *N.Z. Journal of Marine and Freshwater Research*. 27: 183-190.

Annala, J.H. 1991: Multispecies fisheries in New Zealand and associated by-catch problems, pp. 69–74 In Abel, K., Williams, M., and Smith, P. (Eds.). *Australian & New Zealand Southern Trawl Fisheries Conference: Issues and Opportunities*. Bureau of Rural Resources Proceedings No. 10. (Bureau of Rural Resources and Australian Bureau of Agricultural and Resource Economics: Canberra).

Annala, J.H. 1991: Factors influencing fecundity and population egg production of *Jasus* species, pp. 301–315 In Wenner, A. and Kuris, A. (Eds.), "*Crustacean Issues 7, Crustacean Egg Production*", A.A. Balkema, Rotterdam.

Annala, J.H., Sullivan, K.J., Hore, A.J. 1991: Management of multispecies fisheries in New Zealand by individual transferable quotas. *ICES Marine Science Symposium*. 193: 321–329.

Annala, J.H. and Breen, P.A. 1989: Yield– and egg–per–recruit analyses for the New Zealand rock lobster, *Jasus edwardsii*. *N.Z. Journal of Marine and Freshwater Research*. 23: 93–105.

Annala, J.H. and Bycroft, B.L. 1988: Growth of rock lobsters (*Jasus edwardsii*) in Fiordland, New Zealand. *N.Z. Journal of Marine and Freshwater Research*. 22: 29–41.

Annala, J.H. 1987: The biology and fishery of tarakihi, *Nemadactylus macropterus*, in New Zealand waters. *N.Z. Ministry of Agriculture and Fisheries, Fisheries Research Division Occasional Publication 51*.

Annala, J.H. and Bycroft, B.L. 1987: Fecundity of the New Zealand red rock lobster, *Jasus edwardsii*. *N.Z. Journal of Marine and Freshwater Research*. 21: 591–597.

Annala, J.H. and Esterman, D.B. 1986: Yield estimates for the New Zealand rock lobster fishery, pp. 347–358. In G. Jamieson and N. Bourne (Eds.) North Pacific workshop on stock assessment and management of invertebrates. *Canadian Special Publication of Fisheries and Aquatic Sciences 92*.

Annala, J.H. and Bycroft, B.L. 1985: Growth rate of juvenile rock lobsters (*Jasus edwardsii*) at Stewart Island, New Zealand. *N.Z. Journal of Marine and Freshwater Research*. 19: 445 – 454.

Annala, J.H. 1983: The introduction of limited entry into the New Zealand rock lobster fishery. *Marine Policy*. 7: 101-108.

Annala, J.H. 1983: New Zealand rock lobsters - Biology and fishery. *N.Z. Ministry of Agriculture and Fisheries, Fisheries Research Division Occasional Publication 42*.

Annala, J.H. 1981: Movements of rock lobsters (*Jasus edwardsii*) tagged near Gisborne, New Zealand. *N.Z. Journal of Marine and Freshwater Research*. 15: 437-433.

Annala, J.H., McKoy, J.L., Booth, J.D. and Pike, R.B. 1980: Size at the onset of sexual maturity in female rock lobsters *Jasus edwardsii* (Decapoda: Palinuridae) in New Zealand. *N.Z. Journal of Marine & Freshwater Research*. 14: 217-227.

Annala, J.H. 1980: Mortality estimates for the rock lobster *Jasus edwardsii*, near Gisborne, New Zealand. *N.Z. Journal of Marine and Freshwater Research*. 14: 357-371.

Annala, J.H. 1979: Mortality estimates for the New Zealand rock lobster, *Jasus edwardsii*. *Fishery Bulletin*. 77:471-480.

Annala, J.H. 1977: Effects of increases in the minimum legal size on the Otago rock lobster fishery. *N.Z. Ministry of Agriculture and Fisheries, Fisheries Research Division Occasional Publication 13*.

Gilbert, D.J., J.H. Annala, and K. Johnston. 2000: Technical background to fish stock indicators for state-of-environment reporting in New Zealand. *Marine and Freshwater Research*. 51:451-464.

Hilborn, R., J. Annala, and D.S. Holland. 2006. The cost of overfishing and management strategies for new fisheries on slow-growing fish: orange roughy (*Hoplostethus atlanticus*) in New Zealand. *Canadian Journal of Fisheries and Aquatic Sciences*. 63:2149 – 2153.

Starr, P.J., Annala, J.H. and Hilborn, R.H. 1998: Contested stock assessment: two case studies. *Canadian Journal of Fisheries and Aquatic Sciences*. 55:529-537.

Saila, S.B., Annala, J.H., McKoy, J.L. and Booth, J.D. 1979: Application of yield models to the New Zealand rock lobster fishery. *N.Z. Journal of Marine and Freshwater Research*. 13: 1-11.

Unpublished stock assessment documents:

I am the author or co-author of numerous New Zealand Fishery Assessment Reports and Fishery Assessment Working Group Reports for a variety of species.

From 1988 to 2004 I compiled and edited the annual Fishery Assessment Plenary Report that contained the stock assessments for all New Zealand's fish and shellfish species (62 species and 690 pages in 2004).

Recent Selected Invited Lectures/Seminars:

Dec 2006 – “You need both rights and responsibilities in good fisheries management”, University of Washington School of Fisheries, Seattle, Washington

Apr 2006 – “Southern Bluefin Tuna Management Procedure”, Zoology Department, University of New Hampshire, Durham, New Hampshire

Oct 2005 – “Seven Principles of Good Fisheries Management”, School of Marine Sciences, University of Maine

May 2005 – “The Gulf of Maine Research Institute and fishery ecosystem research in the Gulf of Maine”, COMES, Oregon State University, Newport, Oregon

Apr 2005 – “The guiding principles of good fisheries management”, Bowdoin College, Brunswick, Maine

Oct 2004 – “Fisheries management – the New Zealand experience with rights based management”, Zoology Department, University of New Hampshire, Durham, New Hampshire

Mar 2003 - "Fisheries management – the New Zealand experience with rights based management", United Nations Food and Agriculture Organization, Rome, Italy

Jan 2002 - "Fisheries management – the New Zealand experience with rights based management", Bevan Lecture, University of Washington School of Fisheries, Seattle, Washington

Recent Selected Conference Papers:

Sep 2005 – Annala, J.H., L.T. singer, and J. Williamson. Comparison of collaborative research in New England and New Zealand. International Council for the Exploration of the Sea Annual Science Conference, Aberdeen, Scotland.

Dec 2003 – Annala, J., M. Clark, G. Clement, and J. Cornelius. Management of New Zealand orange roughy fisheries – a deep learning curve. Deep Sea 2003, an international conference on the governance and management of deep-sea fisheries, Queenstown, New Zealand.

Nov 2003 - Annala, J. and M. Clark. Issues in the management of high seas orange roughy fisheries in the New Zealand region. FAO Workshop on the Assessment and Management of Deepwater Fisheries, Dunedin, New Zealand.

Sep 2001 - Peacey, J.P., J.H. Annala, and K. Stokes. Evaluation of the Adaptive Management Programme for orange roughy in northern New Zealand. International Council for the Exploration of the Sea Annual Science Conference, Oslo, Norway.

Recent peer review of publications for the following organizations/journals:

- US National Research Council
- Blackwell Publishing
- Canadian Journal of Fisheries and Aquatic Sciences
- ICES Journal of Marine Sciences