Curriculum Vitae

David A. Somerton

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Education:

B.S. Oceanography - Humboldt State University, Arcata, California, 1969
M.S. Oceanography - University of Washington, Seattle, Washington, 1972
Ph.D. Fisheries - University of Washington, Seattle, Washington, 1981

Experience:

1991-Present Supervisory Research Fishery Biologist
Alaska Fisheries Science Center
National Marine Fisheries Service
Seattle, WA

I am the Leader of the Groundfish Assessment Program, consisting of 29 people with the primary mission of conducting bottom trawl surveys throughout Alaska. The survey program is large, annually with over 350 days of charter time on commercial fishing vessels and an operating budget of over $4M. I directly supervise 10 of the GAP staff, 2 of which are supervisors of the remaining staff. Approximately 2/3 of the GAP staff members are regularly publishing fishery scientists, most of which have Ph.D. degrees. My administrative duties include developing performance plans, conducting performance reviews, providing mentorship to junior scientists, overseeing the development of GAP proposals for research funds, reviewing GAP scientific publications and providing expert advice on bottom trawl surveys for the North Pacific Fishery Management Council and other fishery management agencies. My primary non-administrative duty is to personally conduct scientific research which in recent years has focused on factors influencing and methods for estimating the catchability of bottom trawl surveys. Most of my publications involve the application of statistical modeling to data collected from designed field experiments conducted either on NOAA research vessels or chartered commercial vessels. I have been the chairman of the ICES Working Group on Fishing Technology and Fish Behavior as well as the U.S. Delegate on the ICES Fisheries Technology Committee. I have completed two NOAA rotational assignments at NMFS Headquarters, one in the Office of Science and Technology where I worked on issues related to the use of NOAA research vessels and one in the Office of International Affairs where I worked on a framework plan for developing a NMFS sponsored fishery management capacity building program for developing countries. I have been

involved in a variety of international research projects, one of which included six months tenure at the Institute of Marine Research in Bergen, Norway. In addition, for the last five years, I have been the US partner in joint research projects with government scientists from the Republic of Korea which considered issues such as bottom trawl survey standardization, trawl catchability estimation, and archival tagging techniques. I enjoy participating on research cruises, especially those conducted on chartered commercial vessels where I can directly interact with active fishers. Much of my research has been in partnership with various fisher organizations, recently with the Bering Sea Fisheries Research Foundation sponsored by several crab fisher organizations. This cooperative work has included studies in the catchability of bottom trawl surveys for various crab species, archival tagging of crabs to estimate migration trajectories and field studies to estimate the growth of snow crabs.

Supervisor: Russ Nelson, Director
Resource Assessment and Conservation Division
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1985 - 1991 Research Fishery Biologist
Southwest Fisheries Science Center
Honolulu, Hawaii, USA

In this position, I was Leader of the Habitat, Bottomfish and Seamount Tasks, supervising up to 5 people. I was responsible for the stock assessments, and all associated field work, for tuna baitfish, bottomfish (snappers and groupers) and seamount fishes (pelagic armorhead). I was the chairman of the Bottomfish Management Plan Team for the Western Pacific Management Council. While in this capacity, I developed a new approach to stock assessment based on the time-to-capture individual fish on longlines. To do this I helped design the first hook timer, which is a small clock attached to a fish hook so that it will be activated when a fish strikes. For this work I was awarded the Department of Commerce Bronze Medal. I developed a program at the Kewalo Laboratory where a spawning population of Hawaiian anchovy was maintained in captivity to provide eggs and larvae needed for experiments on development time, growth and mortality.

1983 - 1985 Research Associate
University of Washington
School of Fisheries
Seattle, Washington

In this position, I was on loan from the University of Washington to the Resource Ecology and Fisheries Management Division of the Northwest and Alaska Fisheries Science Center, National Marine Fisheries Service. I was responsible for research on problems associated with fish age determination. During my tenure, I developed simulation models to investigate the influence on ageing errors on the predictions of management models and I developed a procedure for

estimating age from the weight and dimensions of a fish otolith.

1983 Assistant Professor, Department of Fisheries and Wildlife, Oregon State University, Corvallis, Oregon.

In this position, I taught Commercial Fisheries 401, a 5 unit required senior level class which considered various aspects of commercial fisheries for marine fish and invertebrates from primarily US waters.

1978-1982 Fishery Biologist / Research Associate
College of Fisheries
University of Washington
Seattle, Washington

In this position, I conducted research on the biology and population dynamics of king and tanner crabs in Alaska. I was a member of both the King Crab and Tanner Crab Fishery Management Plan Teams for the Alaska Fisheries Management Council and I was a co-author of the first king crab management plan.

1976 - 1977 Fishery Consultant
Small Tribes of Western Washington
Sumner, Washington

1974 - 1976 Fishery Biologist
Northwest and Alaska Fisheries Science Center
National Marine Fisheries Service
Seattle, Washington

Professional Affiliations:

American Society of Fishery Research Biologists

Languages:

Fluent in English, some reading and speaking capability in both French and Spanish.

Recent Publications:

Somerton, D.A.
Submitted. Environmental effects of bottom trawling: a benthic overfishing model. ICES J. Mar. Res.

Somerton. D.A. and P. Munro.
In press. Bridle efficiency of a survey trawl for flatfish. Fish. Bull. 99:641-652.

Somerton, D.A., R.S. Otto and S.E. Syrjala.
In press. Can changes in tow duration on bottom trawl surveys lead to changes in CPUE

and mean size? Fish. Res.

Munro, P.T. and D.A. Somerton.
In press. Estimating net efficiency of a survey trawl for flatfishes. Fish. Res.

Weinberg, K.L., D.A. Somerton and P.T. Munro.
In press. The effect of trawl speed on the footrope capture efficiency of a survey trawl. Fish. Res.

Somerton, D.A. and K.L. Weinberg.
2001. The affect of speed through the water on footrope contact of a survey trawl. Fish. Res. 53:17-24.

Munro, P. an. D.A Somerton.
2001. Maximum likelihood and non-parametric methods for estimating trawl footrope selectivity. ICES J.Mar. Sci. 58:220-229.

Godø, O.R., D.A. Somerton and A. Totland.
1999. Fish behavior during sampling as observed from free floating buoys - application for bottom trawl survey assessment. ICES CM1999 J:10.

Somerton, D., J. Ianelli, S. Walsh, S. Smith, O.R. Godø and D. Ramm.
1999. Incorporating experimentally derived estimates of survey trawl efficiency into the stock assessment process: a discussion. ICES J. Mar.Sci. 56:299-302.

Somerton, D.A. and R.S. Otto.
1999. Net efficiency of a survey trawl for snow crab, *Chionoecetes opilio*, and Tanner crab, *C. bairdi*. Fish. Bull. 97:617-625.

Somerton, D.A. and W. Donaldson
1998. Paracitism of the golden king crab, *Lithodes aequispinus*, by two species of snailfish, genus *Careproctus*. Fish. Bull. 96:871-884.

Somerton, D.A. and W. Donaldson
1996. Contribution to the biology of the grooved and triangle Tanner crabs, *Chionoecetes tanneri* and *C. angulatus* in the eastern Bering Sea. Fish. Bull. 94:348-357.

Somerton, D.A. and B.S. Kikkawa
1994. A stock survey technique using the time to capture individual fish on longlines. Can. J. Fish. Aquat. Sci. 52:260-267.

Seki, M.P. and D.A. Somerton
1994. Feeding ecology and daily ration of the pelagic armorhead, *Pseudopentaceros wheeleri*, at Southeast Hancock Seamount. Env. Biol. Fish 39:73-84.

Somerton, D.A., D.R. Kobayashi and K.C. Landgraf

1993. Stock assessment of nehu, *Encrasicholina purpurea*, using the egg production method. Bull.Mar.Sci. 53:768-777.

Somerton, D.A. and B. S. Kikkawa
1992. Population dynamics of Pelagic Armorhead, *Pseudopentaceros wheeleri*, on Southeast Hancock seamount. Fish. Bull.90:756-769.

Somerton, D.A. and D.R. Kobayashi
1992. Inverse method for mortality and growth estimation: a new method for larval fishes. Fish. Bull., 90:368-375.

Somerton, D.A. and D.R. Kobayashi
1991. Bias in the Wetherall Estimates of Z/K and L_4 due to population disequilibria. Fishbyte 9(2):42-44.

Somerton, D.A.
1991. Detecting differences in fish diets. Fish. Bull. 89:167-169.

Somerton, D.A. and D. R. Kobayashi.
1991. Robustness of the Wetherall length-based method to population disequilibria. Fish. Bull., 89:307-314.

Somerton, D.A.
1990. Baitfish stock assessment using the egg production method: an application on the Hawaiian anchovy or nehu (*Encrasicholina purpurea*). Pages 152-158. In: S.J.M. Blaber and J.W. Copeland (ed.). Tuna baitfish in the Indo-Pacific region: proceedings of a workshop, Honiara, Solomon Islands, 11-13 December, 1989. Inkata Press, PTY LTD Publ. Victoria, Australia.

Somerton, D. A., and D. R. Kobayashi.
1989. A method for correcting catches of fish larvae for the size selection of plankton nets. Fish. Bull., U.S. 87:447-455.

Bledsoe, L. J., D.A. Somerton and C.M. Lynde.
1989. The Puget Sound runs of salmon: an examination of the changes in run size since 1896. Can. Spec. Publ. Fish. Aquat. Sci. 105:50-61.

Somerton, D. A., B. S. Kikkawa, and C. D. Wilson.
1988. Hook timers to measure the capture time of individual fish. Mar. Fish. Rev. 50(2):1-5.

Somerton, D. A.
1986. At-sea processing of Alaskan crabs and its effect on yield per recruit. Can. Spec. Publ. Fish. Aquat. Sci. 92:245-251.

Somerton, D. A., and M. F. Merritt.
1986. Method of adjusting crab catch per pot for differences in soak time and its

application to the Alaskan Tanner crab (*Chionoecetes bairdi*). N. Am. J. Fish. Manage. 6:586-591.

Somerton, D. A., and R. S. Otto.
1986. Distribution and reproductive biology of the golden king crab, *Lithodes aequispina* in the eastern Bering Sea. Fish. Bull., U.S. 84:571-584.

Johnson, P. T., R. A. MacIntosh, and D. A. Somerton.
1986. Rhizocephalan infection in blue king crab *Paralithodes platypus* from Olga Bay, Kodiak Island, Alaska. Fish. Bull., U.S. 84:117-184.

Somerton, D. A.
1985. The disjunct distribution of the blue king crab (*Paralithodes platypus*) in Alaska: An hypothesis. In G. Melteff (editor), Proceedings of the International Symposium on king crabs, p. 13-21. Alaska Sea Grant Rep. 8512.

Somerton, D. A., and R. A. MacIntosh.
1985. Reproductive biology of the blue king crab, *Paralithodes platypus,* in the eastern Bering Sea. J. Crustacean Biol. 5:365-376.

Jewett, S. C., N. A. Sloan, and D. A. Somerton.
1985. Size at sexual maturity and fecundity of the fjord-dwelling golden king crab *Lithoides aequispina* Benedict from northern British Columbia. J. Crustacean Biol. 5:377-385.

Somerton, D. A., and J. June.
1984. A cost-benefit method for determining optimum closed fishing areas to reduce the trawl catch of prohibited species. Can. J. Fish. Aquat. Sci. 41:93-98.

Somerton, D. A., and R. A. MacIntosh.
1983. Size at sexual maturity of the blue king crab (*Paralithodes platypus*) populations in Alaska. Crustaceana 45:169-175.

Somerton, D. A., and W. S. Meyers.
1983. Fecundity differences between primiparous and multiparous female Alaskan Tanner crab (*Chionoecetes bairdi*). J. Crustacean Biol. 3:183-186.

Somerton, D. A.
1982. Bipartite breeding: A hypothesis of the reproductive pattern in Tanner crabs. In Melteff (editor), Proceedings of the International Symposium on the genus *Chionoecetes*, p. 283-289. Alaska Sea Grant Rep. 82-10.

Somerton, D. A.
1982. Effects of sea ice on the distribution and population fluctuations of *Chionoecetes opilio* in the eastern Bering Sea. In Melteff (editor), Proceedings of the International Symposium on the genus *Chionoecetes*, p. 157-172. Alaska Sea

Grant Rep. 81-10.

Somerton, D. A.
1982. Estimating the frequency of molting in adult male *Chionoecetes bairdi* in the eastern Bering Sea. In Melteff (editor), Proceedings of the International Symposium on the genus *Chionoecetes*, p. 337-352. Alaska Sea Grant Rep. 82-10.

Somerton, D. A.
1981. Contribution to the life history of the deep-sea king crab, *Lithodes couesi*, in the Gulf of Alaska. Fish. Bull., U.S. 79:259- 270.

Somerton, D. A.
1981. *Fusitrition oregonensis* from the Patton seamount in the Gulf of Alaska. Veliger 24:185-186.

Somerton, D. A.
1981. Life history and population dynamics of two species of Tanner crabs, (*Chionoecetes bairdi* and *C. opilio*), in the eastern Bering Sea with implications for the management of the commercial harvest. Ph.D. Dissertation, University of Washington, Seattle, 220 p.

Somerton, D. A.
1981. Regional variation in the size of maturity in two species of Tanner crab (*Chionoecetes bairdi* and *C. opilio*) and its use in defining management subareas. Can. J. Fish. Aquat. Sci. 38:163-174.

MacIntosh, R. A., and D. A. Somerton.
1981. Large marine gastropods of the eastern Bering Sea. In D. W. Hood and J. A. Calder (editors), The eastern Bering Sea shelf: Oceanography and resources, Vol. II, p. 1215-1228. U.S. Dep. Commer., NOAA.

Somerton, D.
1980. A computer technique for estimating the size of sexual maturity in crabs. Can. J. Fish. Aquat. Sci. 37:1488-1494.

Somerton, D.
1980. Fitting straight lines to Hiatt growth diagrams: A re- evaluation. J. Cons. Cons. Int. Explor. Mer 39:15-19.

Somerton, D. and C. Murray.
1976. Field guide to the fishes of Puget Sound and the northwest coast. University of Washington Press, Seattle, Wash., 70 p.