

BIO

JAMES C. WOODEY

Dr. Woodey joined the staff of the U.S./Canada International Pacific Salmon Fisheries Commission (IPSFC) in 1971 after completion of his Ph.D. research on Lake Washington sockeye salmon. At the IPSFC, he was tasked with fisheries management duties, including sockeye salmon stock identification programs, population dynamics and in-season management. In 1972, he proposed and implemented a successful hydroacoustic monitoring program designed to provide estimates of sockeye salmon abundance in the Fraser River that became the cornerstone of fisheries management – the estimation of daily sockeye escapement by stock. His stock-recruitment studies led to significant changes to individual stock and watershed-wide sockeye escapement goals in the late 1970s and 1980s. When the countries terminated the IPSFC at the end of 1985, Dr. Woodey was transferred to the new Pacific Salmon Commission (PSC) charged with working with the Fraser River Panel in the management of Fraser River sockeye and pink salmon. As Chief Biologist and Head, Fisheries Management Division for the PSC, he and the Fisheries Management team members improved the intensive pre-season and in-season monitoring programs for management of the Fraser River sockeye and pink salmon using test fishing, racial stock composition estimation, hydroacoustic estimation of daily escapements and objective statistical models for analysis of run size. Data obtained from these studies were used to design fishery management strategies for achievement of Treaty objectives. Management of Fraser River sockeye salmon by the IPSFC and PSC has been internationally recognized for its successful rebuilding of depleted stocks and the achievement of Treaty goals.

After taking early retirement in 2002, Dr. Woodey returned to his passion of understanding the population dynamics of cyclical Fraser River sockeye salmon stocks. In a study funded by the PSC's Southern Boundary Restoration and Enhancement Fund (Southern Fund), his work led to a jointly authored report showing significant recruitment differences between cycle lines that strongly suggest that cycle-line interaction is responsible for differential juvenile growth and productivity within stocks. A new S-R model utilizing these analyses produces much more realistic simulation results compared to traditional S-R models. He has also participated as Senior Scientific Advisor on studies to ascertain the causes and consequences of abnormal early river entry of Late-run Fraser River sockeye salmon, a phenomenon that has led to mortality of up to 94% of maturing Late-run sockeye prior to spawning in some years. Understanding this problem has stymied scientists and led to a severe constriction of the productivity and yields from these and other Fraser River sockeye stocks in recent years.

Dr. Woodey was awarded the 2004 Murray A. Newman Award for Significant Achievement in Aquatic Conservation and for his leadership in the management and conservation of Fraser River salmon by the Vancouver Aquarium and Marine Science Centre.

RESUME

JAMES C. WOODEY

Education:

High School: Franklin H.S., Seattle, WA. (graduated in 1960)
University: Washington State University (1960-1962)
University of Washington

- B.Sc. in Fisheries (1964)
- M.Sc. in Fisheries (1966)
- Ph.D. in Fisheries (1972)

Employment history (after university):

International Pacific Salmon Fisheries Commission
(a U.S./Canada Treaty Organization)
1971-1981 Management Biologist
1982-1985 Chief, Fisheries Management Division

Pacific Salmon Commission
(a U.S./Canada Treaty organization; successor organization to the IPSFC)
1986-2002 Chief Biologist; Chief, Fisheries Management Division

Fisheries Consultant (part-time)
2002-Present

Hobbies/activities:

Gardening, fly fishing, cooking, church volunteer work

Publications:

Banneheka, S.G., R.D. Routledge, J.C. Guthrie and J.C. Woodey. 1995. *Estimation of in-river fish passage using a combination of transect and stationary hydroacoustic sampling*. Can. J. Fish. Aquat. Sci. 52(2): 335-343.

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McKinnell, S.M., C.C. Wood, M.F. Lapointe, J.C. Woodey, K.E. Kostow, J. Nelson, and K.D. Hyatt. 1999. *Reviewing the evidence that adult sockeye salmon strayed from the Fraser River and spawned in other rivers in 1997*. PICES Scient. Rep. 10, pp. 73-75.

Woodey, J.C. 1989. *Use of GSI Data in Management of Fraser River Pink Salmon*. In P.A. Knudsen (ed.) Proceedings of the 14th Northeast Pacific Pink and Chum Salmon Workshop. Washington State Department of Fisheries, pp. 42-44.

Woodey, J.C. 1987. *In-season management of Fraser River sockeye salmon (Oncorhynchus nerka): meeting multiple objectives*. In: H.D. Smith, L. Margolis, and C.C. Wood (eds). Sockeye salmon (Oncorhynchus nerka) population biology and future management. Can. Spec. Publ. Fish. Aquat. Sci. 96, pp. 367-374.

Walters, C. and J.C. Woodey. 1992. *Genetic models for cyclic dominance in sockeye salmon (O. nerka)*. Can. J. Fish. Aquat. Sci. 49(2): 281-292.

Woodey, J.C. 1972. *Distribution, feeding and growth of juvenile sockeye salmon in Lake Washington*. Doctoral Dissertation, Univ. Washington, Seattle, WA. 207 p.

Woodey, J.C. 2000. *International management of Fraser River sockeye salmon*. In E.E. Knudsen et al. (eds.) Sustainable fisheries management: Pacific salmon. CRC Press. pp. 207-218.

Woodey, J.C., Lapointe, M.F. and Hume, J.M.B. 2005. *Evidence for cycle-line interaction as a mechanism for cyclic dominance in Fraser River sockeye salmon (Oncorhynchus nerka)*. Pacific Sal. Comm. SBR&EF Rpt. 66 p.