

**References Cited in November 24, 2000 NMFS  
Final Listing Determination for Three Species of Marine Fish  
in Puget Sound (65 FR 70514)**

**Federal Register Notices Cited**

56 FR 58612 (November 20, 1991)

51 FR 4722 (Typographic error - see 61 FR 4722 below)

61 FR 4722 (February 7, 1996)

64 FR 33037 (June 21, 1999)

**Published Reports and Memoranda**

Alados, C.L., J. Escos, and J.M. Emlen. 1993. Developmental instability as an indicator of environmental stress in the Pacific hake (*Merluccius productus*). Fish. Bull., U.S. 91:587-593.

Alderdice, D.F. and C.R. Forrester. 1971. Effects of salinity, temperature, and dissolved oxygen on the early development of Pacific cod (*Gadus macrocephalus*). J. Fish. Res. Bd. Canada 28: 883-902.

Allen, M.J., and G.B. Smith. 1988. Atlas and zoogeography of common fishes in the Bering Sea and Northeastern Pacific. NOAA Tech. Rep. 66, 151 p.

Alverson, D.L., and H.A. Larkins. 1969. Status of knowledge of the Pacific hake resource. Calif. Coop. Oceanic Fish. Invest. Rep. 13:24-31.

Anonymous. 1968. Genetic variants point to isolated populations of Pacific hake. Comm. Fish. Rev. 30:25-26.

Bailey, K.M. 1981. An analysis of the spawning, early life history and recruitment of the Pacific hake, *Merluccius productus*. Ph. D. Thesis, Univ. Washington, 156 p.

Bailey, K.M., and J. Yen. 1983. Predation by a carnivorous marine copepod, *Euchaeta elongata* Esterly, on eggs and larvae of the Pacific hake, *Merluccius productus*. J. Plankt. Res. 5:71-82.

Bailey, K.M. 1989. Interaction between the vertical distribution of juvenile walleye pollock *Theragra chalcogramma* in the eastern Bering Sea, and cannibalism. Mar. Ecol. Prog. Ser. 53:205-213.

Bailey, K.M., R.C. Francis, and P.R. Stevens. 1982. The life history and fishery of Pacific whiting, *Merluccius productus*. Calif. Coop. Oceanic Fish. Invest. Rep. 23:81-98.

- Bailey, K.M., T.J. Quinn II, P. Bentzen, and W.S. Grant. 1999. Population structure and dynamics of walleye pollock, *Theragra chalcogramma*. *Adv. Mar. Biol.* 37:179-255.
- Baird, T.A., and B.L. Olla. 1991. Social and reproductive behaviour of captive group of walleye pollock *Theragra chalcogramma*. *Env. Biol. Fish.* 30:295-301.
- Bakkala, R.G. 1984. Pacific cod of the eastern Bering Sea. *Int. North Pac. Fish. Comm. Bull.* 42:157-179.
- Bakkala, R.G., S. Westrheim, S. Mishima, C. Zhang, and E. Brown. 1984. Distribution of Pacific cod (*Gadus macrocephalus*) in the North Pacific Ocean. *Int. North Pac. Fish. Comm. Bull.* 42:111-115.
- Beamish, R.J. 1979. Differences in the age of Pacific hake (*Merluccius productus*) using whole otoliths and sections of otoliths. *J. Fish. Res. Board Can.* 36:141-151.
- Beamish, R.J., and G.A. McFarlane. 1985. Pacific whiting, *Merluccius productus*, stocks off the west coast of Vancouver Island, Canada. *Mar. Fish. Rev.* 47:75-81.
- Bollens, S.M., B.W. Frost, H.R. Schwaninger, C.S. Davis, K.J. Way, and M.C. Landsteiner. 1992. Seasonal plankton cycles in a temperate fjord and comments on the match-mismatch hypothesis. *J. Plankt. Res.* 14:1279-1305.
- Briggs, J.C. 1974. *Marine zoogeography*. McGraw-Hill Book Co., N.Y. 475 p.
- Brodeur, R.D., M.T. Wilson, J.M. Napp, P.J. Stabeno, and S. Salo. 1997. Distribution of juvenile pollock relative to frontal structure near the Pribilof Islands, Bering Sea. *In* R.D. Brodeur, P.A. Livingston, T.R. Loughlin, and A.B. Hollowed, (eds.), *Ecology of Juvenile Walleye Pollock, Theragra chalcogramma*, p. 573-588. NOAA Tech. Rep. NMFS 126.
- Bulatov, O.A. 1989. Reproduction and abundance of spawning pollock in the Bering Sea. *In* Proceedings of the International Symposium on the Biology and Management of Walleye Pollock, Anchorage, Alaska, USA, November 14-16, 1988, p. 199-206. Lowell Wakefield Fisheries Symposium, Alaska Sea Grant Rep. No. 89-1.
- Bulatov, O.A., and E.I. Sobolevskii. 1991. Distribution, stocks, and fishery prospects of walleye pollock in the open waters of the Bering Sea. *Sov. J. Mar. Biol.* 16:297-304.
- Dark, T.A. 1975. Age and growth of Pacific hake, *Merluccius productus*. *Fish. Bull., U.S.* 73: 336-355.

- Dark, T.A., and M.E. Wilkins. 1994. Distribution, abundance, and biological characteristics of groundfish off the coast of Washington, Oregon, and California, 1977-1986. NOAA Tech. Rep. 117, 73 p.
- Department of Fisheries and Oceans (DFO). 1999. Pacific cod in Hecate Strait. DFO Science Stock Status Report A6-01 (1999), 3 p.
- Dorn, M.W. 1975. (Typographic error - see Dorn 1995 below)
- Dorn, M.W. 1993. Pacific Cod. *In* Status of living marine resources off the Pacific coast of the United States for 1993. pp. 17-18. NOAA Tech. Memo. NMFS F/NWC, Seattle, Alaska Fish. Sci. Cent. 26.
- Dorn, M.W. 1995. Effects of age composition and oceanographic conditions on the annual migration of Pacific whiting, *Merluccius productus*. Calif. Coop. Oceanic Fish. Invest. Rep. 36: 97-105.
- Dorn, M.W., M.W. Saunders, C.D. Wilson, M.A. Guttormsen, K. Cooke, R. Kieser, and M.E. Wilkins. 1999a. Status of the coastal Pacific hake/whiting stock in U.S. and Canada in 1998. *In* Pacific Fishery Management Council, Appendix: Status of the Pacific Coast groundfish fishery through 1999 and recommended acceptable biological catches in 2000: Stock assessment and fishery evaluation. Pacific Fishery Management Council, 2130 SW Fifth Avenue, Suite 224, Portland, OR 97201.
- Dorn, M.W., A.B. Hollowed, E. Brown, B. Megrey, C. Wilson, and J. Blackburn. 1999b. Walleye Pollock. *In* Pacific Fishery Management Council, Appendix: Status of the Pacific Coast groundfish fishery through 1999 and recommended acceptable biological catches in 2000: Stock assessment and fishery evaluation. North Pacific Fishery Management Council. 605 W. 4<sup>th</sup> Ave., Suite 306, Anchorage, AK 99501.
- Dunn, J.R., and A.C. Matarese. 1987. A review of the early life history of Northeast Pacific gadoid fishes. Fish. Res. (Amst.). 5:163-184.
- Ermakov, Y. 1982. Population of Pacific hake, *Merluccius productus* (Merluccidae), and the boundaries of distribution. J. Ichthyol. 22:153-156.
- Eschmeyer, W.N., E.S. Herald, H. Hammann. 1983. A Field Guide to Pacific Coast Fishes of North America. Houghton Mifflin Company, Boston, Massachuset. 336 p.
- Forrester, C.R. 1969. Life history information on some groundfish species. Fish. Res. Bd. Canada Tech. Rep. 105, 17p.

- Foucher, R.P., and A.V. Tyler. 1990. Estimation of the fecundity of Pacific cod (*Gadus macrocephalus*). Can. Manuscr. Rep. Fish. Aquat. Sci. 2088, 49 p.
- Fox, D.A. 1997. Otolith increment analysis and the application toward understanding recruitment variation in Pacific hake (*Merluccius productus*) within Dabob Bay, WA. M.S. Thesis, Univ. Washington, 73 p.
- Fredin, R.A. 1985. Pacific cod in the eastern Bering Sea: a synopsis. Northwest and Alaska Fisheries Center NAFC Proc. Rep. 85-05, 58 p.
- Garrison, K.J., and B.S. Miller. 1982. Review of the early life history of Puget Sound fishes. Seattle, WA, Fish. Res. Inst., Univ. Washington, 729 p.
- Grant, W.S., I.Z. Chang, T. Kobayashi, and G. Stahl. 1987a. Lack of genetic stock discretion in Pacific cod (*Gadus macrocephalus*). Can. J. Fish. Aquat. Sci. 44:490-498.
- Grover, J.J. 1990. Feeding ecology of late-larval and early juvenile walleye pollock *Theragra chalcogramma* from the Gulf of Alaska in 1987. Fish. Bull., U.S. 88:463-470.
- Haist, V., and D. Fournier. 1998. Hecate Strait Pacific cod stock assessments for 1997 and recommended yield options for 1998. Department of Fisheries and Oceans, Pacific Biological Station, Stock Assessment Secretariat Research Document 97/145.
- Hart, J.L. 1973. Pacific Fishes of Canada. Bull. Fish. Res. Bd. Canada 180, 730 p.
- Hinckley, S. 1987. The reproductive biology of walleye pollock, *Theragra chalcogramma*, in the Bering Sea, with reference to spawning stock structure. Fish. Bull., U.S. 85:481-498.
- Hollowed, A.B. 1992. Spatial and temporal distributions of Pacific hake, *Merluccius productus*, larvae and estimates of survival during early life stages. Calif. Coop. Oceanic Fish. Invest. Rep. 33:100-123.
- Kabata, Z., and D.J. Whitaker. 1981. Two species of *Kudoa* (Myxosporea: Multivalvulida) parasitic in the flesh of *Merluccius productus* (Ayres 1855) (Pisces: Teleostei) in the Canadian Pacific. Can. J. Zool. 59:2085-2091.
- Kabata, Z., and D.J. Whitaker. 1985. Parasites as a limiting factor in exploitation of Pacific whiting, *Merluccius productus*. Mar. Fish. Rev. 47:55-59.
- Kendall, A.W., L.S. Incze, P.B. Ortner, S. Cummings, and P.I.K. Brown. 1994. Vertical distribution of eggs and larvae of walleye pollock, *Theragra chalcogramma*, in Shelikof Strait, Gulf of Alaska. Fish. Bull., U.S. 92:540-554.

- Kessler, D.W. 1985. Alaska's Saltwater Fishes and Other Sea Life. Alaska Northwest Publishing Company, Anchorage, Alaska. 358 p.
- Ketchen, K.S. 1961. Observations on the ecology of the Pacific cod (*Gadus macrocephalus*) in Canadian waters. J. Fish. Res. Board Can. 18:513-558.
- Love, M.S. 1991. Probably more than you want to know about the fishes of the Pacific coast. Really Big Press, Santa Barbara, California. 215 p.
- McFarlane, G.A., and R.J. Beamish. 1985. Biology and fishery of Pacific whiting, *Merluccius productus*, in the Strait of Georgia. Mar. Fish. Rev. 47:23-34.
- McFarlane, G.A. and R.J. Beamish. 1986. Biology and fishery of Pacific hake *Merluccius productus* in the Strait of Georgia. Int. N. Pac. Fish. Comm. Bull. 50: 365-392.
- Mason, J.C. 1986. Fecundity of the Pacific hake, *Merluccius productus*, spawning in Canadian waters. Fish. Bull., U.S. 84:209-217.
- Matthews, K. 1987. Habitat utilization by recreationally-important bottomfish in Puget Sound: An assessment of current knowledge and future needs. Wash. Dep. Fish. Progr. Rep. 264, 57 p.
- Merati, N., and R.D. Brodeur. 1996. Feeding habits and daily ration of juvenile walleye pollock, *Theragra chalcogramma*, in the western Gulf of Alaska. In R.D. Brodeur, P.A. Livingston, T.R. Loughlin, and A.B. Hollowed (eds.), Ecology of juvenile walleye pollock, *Theragra chalcogramma*, p. 65-80. NOAA Tech. Rep. NMFS 126.
- Methot, R.D., and M.W. Dorn. 1995. Biology and fisheries of North Pacific hake (*Merluccius productus*). In J. Alheit and T. J. Pitcher (eds.), Hake: Biology, fisheries and markets, p. 389-414. Chapman & Hall, London.
- Miller, B.S., C.A. Simenstad, and L.L. Moulton. 1976. Puget Sound baseline: nearshore fish survey. Fish. Res. Inst, Univ. Washington, Seattle, 196 p.
- Miller, J.M., and R.N. Lea. 1972. Guide to the Coastal Marine Fishes of California. Fish Bulletin 157. Division of Agricultural Sciences, University of California, Berkeley, CA. 249 p.
- Muigwa, N.M. 1989. Vertical distributions patterns of prespawning and spawning pollock (*Theragra chalcogramma*) in Shelikof Strait. In Proceedings of the International Symposium on the Biology and Management of Walleye Pollock, Anchorage, Alaska, USA, November 14-16, 1988, p. 403-432. Lowell Wakefield Fisheries Symposium, Alaska Sea Grant Rep. No. 89-1.

- Mulligan, T.J., K. Bailey, and S. Hinckley. 1989. The occurrence of larval and juvenile walleye pollock, *Theragra chalcogramma*, in the Eastern Bering Sea with implications for stock structure. In Proceedings of the International Symposium on the Biology and Management of Walleye Pollock, Anchorage, Alaska, USA, November 14-16, 1988, p. 471-489. Lowell Wakefield Fisheries Symposium, Alaska Sea Grant Rep. No. 89-1.
- National Marine Fisheries Service (NMFS). 1997. Investigation of scientific information on the impacts of California sea lions and Pacific harbor seals on salmonids and on the coastal ecosystems of Washington, Oregon, and California. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-NWFSC-28, 172 p.
- NMFS. 2000. Status review of Pacific hake, Pacific cod, and walleye pollock from Puget Sound, Washington. U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-44, 275 p.
- National Oceanic and Atmospheric Administration (NOAA). 1990. West coast of North America coastal and ocean zones strategic assessment: Data atlas. U.S. Dep. Commer. NOAA. OMA/NOS, Ocean Assessments Division, Strategic Assessment Branch. Invertebrate and Fish Volume.
- Nelson, M.O. 1969. Availability of Pacific hake (*Merluccius productus*) related to the harvesting process. FAO Fisheries Reports 62, Volume 3:619-644.
- Nelson, M.O., and H.A. Larkins. 1970. Distribution and biology of Pacific hake: a synopsis. U.S. Fish Wildl. Serv. Circ. 332:23-33.
- Olla, B.L., M.W. Davis, C.H. Ryer, and S.M. Sogard. 1996. Behavioral determinants of distribution and survival in early stages of walleye pollock, *Theragra chalcogramma*: a synthesis of experimental studies. Fish. Oceanogr. 5(Suppl. 1):167-178.
- Palsson, W.A. 1990. Pacific cod (*Gadus macrocephalus*) in Puget Sound and adjacent water : biology and stock assessment. Wash. Dep. Fish. Tech. Rep. 112, 137 p.
- Palsson, W.A., J.C. Hoeman, G.G. Bargmann, and D.E. Day. 1997. 1995 status of Puget Sound bottomfish stocks (revised). Report No. MRD97-03, Wash. Dep. Fish Wildl., Olympia, WA, 98 p.
- Pedersen, M. 1985. Puget Sound Pacific whiting, *Merluccius productus*, resource and industry: an overview. Mar. Fish. Rev. 47:35-38.
- Phillips, J.B. 1942. Wall-eyed pollack caught in Monterey Bay. Calif. Fish Game 28(3):155-156.
- Phillips, J.B. 1943. Another wall-eyed pollack at Monterey. Calif. Fish Game 29(2):83.

- Pinkas, L. 1967. First record of Pacific cod in southern California waters. *Calif. Fish Game*. 53:127-128.
- Quirolo, L.F. 1992. Pacific hake. *In* W.S. Leet, C.M. Dewees, and C.W. Haugen, (eds.), *California's Living Marine Resources and Their Utilization*, p. 109-112. California Sea Grant College Pgm., Davis, California. UCSGEP-92-12.
- Sakuma, K.M. and S. Ralston. 1995. Distribution patterns of late larval groundfish off central California in relation to hydrographic features during 1992 and 1993. *Calif. Coop. Oceanic Fish. Invest. Rep.* 36: 179-192.
- Sakurai, Y. 1982. Reproductive ecology of walleye pollock *Theragra chalcogramma* (Pallas). Ph.D. Thesis, Hokkaido Univ. (English transl. avail.: Alaska Fisheries Science Center).
- Sakurai, Y. 1989. Reproductive characteristics of walleye pollock with special reference to ovarian development, fecundity and spawning behavior. *In* Proceedings of the International Symposium on the Biology and Management of Walleye Pollock, Anchorage, Alaska, USA, November 14-16, 1988, p. 97-115. Lowell Wakefield Fisheries Symposium, Alaska Sea Grant Rep. No. 89-1.
- Sakurai, Y., and T. Hattori. 1996. Reproductive behavior of Pacific cod in captivity. *Fish. Sci.* 62:222-228.
- Saunders, M.W., and W. Andrews. 1998. Walleye pollock stock assessment for 1997 and recommended yield options for 1998. Department of Fisheries and Oceans, Pacific Biological Station, PSARC Working Paper G97-7, 18 p.
- Saunders, M.W., and G.A. McFarlane. 1997. Observations on the spawning distribution and biology of offshore Pacific hake (*Merluccius productus*). *Calif. Coop. Oceanic Fish. Invest. Rep.* 38:147-157.
- Saunders, M.W., and G.A. McFarlane. 1999. Pacific hake - Strait of Georgia stock assessment for 1999 and recommended yield options for 2000. PSARC Working Paper G99-8, 10 p.
- Saunders, M.W., G.A. McFarlane, and W. Shaw. 1989. Delineation of walleye pollock (*Theragra chalcogramma*) stocks off the Pacific Coast of Canada. *In* Proceedings of the International Symposium on the Biology and Management of Walleye Pollock, Anchorage, Alaska, USA, November 14-16, 1988, p. 379-401. Lowell Wakefield Fisheries Symposium, Alaska Sea Grant Rep. No. 89-1.
- Schmitt, C.C., S.J. Jeffries, and P.J. Gearin. 1995. Pinniped predation on marine fish in Puget Sound. *In* E. Robichaud (ed.), *Puget Sound research '95 proceedings*, p. 630-637. Puget Sound Water Quality Authority, Bellevue, WA.

- Schmitt, C., J. Schweigert, and T. P. Quinn. 1994. Anthropogenic influences on fish populations of the Georgia Basin. In R.C.H. Wilson, R.J. Beamish, F. Aitkens, and J. Bell, (eds.), Review of the Marine Environment and Biota of Strait of Georgia, Puget Sound, and Juan de Fuca Strait, p. 218-252. Can. Tech. Rep. Fish. Aquat. Sci. 1948, 390 p.
- Shaw, W., G.A. McFarlane, and R. Kieser. 1990. Distribution and abundance of the Pacific hake (*Merluccius productus*) spawning stocks in the Strait of Georgia, British Columbia, based on trawl and acoustic surveys in 1981 and 1988. Int. North Pac. Fish. Comm. Bull. 50:121-134.
- Shimada, A.M., and D.K. Kimura. 1994. Seasonal movements of Pacific cod, *Gadus macrocephalus*, in the eastern Bering Sea and adjacent waters based on tag-recapture data. Fish. Bull., U.S. 92:800-816.
- Smith, P.E. 1995. Development of the population biology of the Pacific hake, *Merluccius productus*. Calif. Coop. Oceanic Fish. Invest. Rep. 36:144-152.
- Sogard, S.M., and B.L. Olla. 1996a. Diel patterns of behaviour in juvenile walleye pollock, *Theragra chalcogramma*. Envir. Bio. Fishes 47:379-386.
- Sogard, S.M., and B.L. Olla. 1996b. Food deprivation affects vertical distribution and activity of a marine fish in a thermal gradient: potential energy-conserving mechanisms. Mar. Ecol. Progr. Ser. 133:43-55.
- Stauffer, G.D. 1985. Biology and life history of the coastal stock of Pacific whiting, *Merluccius productus*. Mar. Fish. Rev. 47:2-9.
- Stepanenko, M.K. 1995. Distribution, behavior and abundance of Pacific cod, *Gadus macrocephalus*, in the Bering Sea. J. Ichthyol. 35: 17-27.
- Sumida, B.Y., and H.G. Moser. 1980. Food and feeding of Pacific hake larvae, *Merluccius productus*, off southern California and northern Baja California. Calif. Coop. Oceanic Fish. Invest. Rep. 21:161-166.
- Swartzman, G., W. Stuetzle, K. Kulman, and M. Powojowski. 1994. Relating the distribution of pollock schools in the Bering Sea to environmental factors. ICES J. Mar. Sci. 51:481-492.
- Tanasich, R.W., D.M. Ware, W. Shaw, and G.A. McFarlane. 1991. Variations in diet, ration, and feeding periodicity of Pacific hake (*Merluccius productus*) and spiny dogfish (*Squalus acanthias*) off the lower west coast of Vancouver Island. Can. J. Fish. Aquat. Sci. 48: 2118-2128.



- Thomson, J. A. 1962. On the fecundity of Pacific cod (*Gadus macrocephalus* Tilesius) from Hecate Strait, British Columbia. J. Fish. Res. Board Can. 19: 497-500.
- Utter, F.M. 1969. Transferrin variants in Pacific hake (*Merluccius productus*). J. Fish. Res. Board Can. 26:3268-3271.
- Utter, F.M., and H.O. Hodgins. 1969. Lactate dehydrogenase isozymes of Pacific hake (*Merluccius productus*). J. Exp. Zool. 172:59-68.
- Utter, F.M., and H.O. Hodgins. 1971. Biochemical polymorphisms in the Pacific hake (*Merluccius productus*). Cons. Perm. Int. Explor. Mer Rapp. P.-V. Reun. 161:87-89.
- Ware, D.M., and G.A. McFarlane. 1995. Climate-induced changes in Pacific hake (*Merluccius productus*) abundance and pelagic community interactions in the Vancouver Island upwelling system. Can. Spec. Publ. Fish. Aquat. Sci. 121:509-521.
- Washington Department of Fish and Wildlife (WDFW). 1998. Management of recreational bottomfishes in Puget Sound. Federal Aid in Sport Fish Restoration Act, Annual Performance Report F-110-R, 55 p.
- West, J.E., 1997. Protection and restoration of marine life in the inland waters of Washington state. Puget Sound Water Quality Action Team, Puget Sound/Georgia Basin Environmental Report Series: No. 6, 144 p.
- Westrheim, S.J. 1996. On the Pacific cod (*Gadus macrocephalus*) in British Columbia waters, and a comparison with Pacific cod elsewhere, and Atlantic cod (*G. morhua*). Can. Tech. Rep. Fish. Aquat. Sci. 2092, 390 p.