A’mar, T., and W. Pallson. 2015. Assessment of the Pacific cod stock in the Gulf of Alaska. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska, p. 173-296. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501

Anderson, P. J., and J. F. Piatt. 1999. Community reorganization in the Gulf of Alaska following ocean climate regime shift. Marine Ecology Progress Series 189: 117-123

Bakkala, R. G., and V. G. Wespestad. 1985. Pacific cod. In R. G. Bakkala and L. L. Low (editors), Condition of groundfish resources of the eastern Bering Sea and Aleutian Islands region in 1984, p. 37-49. U.S. Dep. Commer., NOAA Tech. Memo. NMFS F/NWC-83.

Barbeaux. S. J., T. A’mar, and W. Palsson. 2016. Assessment of the Pacific cod stock in the Gulf of Alaska. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska, P. 175-324. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501.

Barbeaux. S. J., K. Aydin, B. Fissel, K. Holsman, W. Palsson, K. Shotwell, Q. Yang, and S. Zador. 2017. Assessment of the Pacific cod stock in the Gulf of Alaska. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501

Barbeaux. S. J., K. Aydin, B. Fissel, K. Holsman, W. Palsson, K. Shotwell, Q. Yang, and S. Zador. 2018. Assessment of the Pacific cod stock in the Gulf of Alaska. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501.

Barbeaux. S. J., K. Aydin, B. Fissel, K. Holsman, W. Palsson, K. Shotwell, and S. Zador. 2019. Assessment of the Pacific cod stock in the Gulf of Alaska. *In* Plan Team for Groundfish Fisheries of the Gulf of Alaska (compiler), Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501

Barbeaux. S. J., B. Ferris, B. W. Palsson, K. Shotwell, I. Spies, M. Wang, and S. Zador. 2020. Assessment of the Pacific cod stock in the Gulf of Alaska. *In* Plan Team for Groundfish Fisheries of the Gulf of Alaska (compiler), Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501

Barbeaux. S. J., B. Ferriss, B. Laurel, M. Litzow, S. McDermott, J. Nielsen, W. Palsson, I. Spies, and M. Wang. 2021. Assessment of the Pacific cod stock in the Gulf of Alaska. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501.

Baty, F., C. Ritz, S. Charles, M. Brutsche, J. Flandrois, and M. Delignette-Muller. 2015. A Toolbox for Nonlinear Regression in R: The Package nlstools. Journal of Statistical Software, 66(5), 1-21. URL <http://www.jstatsoft.org/v66/i05/>

Betts, M., H. D. G. Maschner, and D. S. Clark. 2011. Zooarchaeology of the ‘Fish That Stops’, in Madonna L. Moss and Aubrey Cannon, eds., *The Archaeology of North Pacific Fisheries*, University of Alaska Press, Fairbanks, Alaska, 188.

Bürkner, P.-C.. 2017. Advanced Bayesian Multilevel Modeling with the R Package brms. arXiv:1705.11123

Cahalan, J., J. Gasper, and J. Mondragon. 2014. Catch sampling and estimation in the federal groundfish fisheries off Alaska, 2015 edition. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-286, 46 p.

Carpenter, B., A. Gelman, M. D. Hoffman, D. Lee, B. Goodrich, M. Betancourt, M. Brubaker, J. Guo, P. Li, and A. Riddell. 2017. Stan: A Probabilistic Programming Language. Journal of Statistical Software, 76(1), 1–32.

Cunningham, K.M., M. F. Canino, I. B. Spies, and L. Hauser. 2009. Genetic isolation by distance and localized fjord population structure in Pacific cod (*Gadus macrocephalus*): limited effective dispersal in the northeastern Pacific Ocean. Canadian Journal of Fisheries and Aquatic Sciences, 66(1), pp.153-166.

Danielson, S., and R. Hopcroft. 2022. Ocean temperature synthesis: Seward line May survey. In Ferriss, B., and Zador, S., 2022. Ecosystem Status Report 2022: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Drinan, D. P., K. M. Gruenthal, M. F. Canino, D. Lowry, M. C. Fisher, and L. Hauser. 2018. Population assignment and local adaptation along an isolation‐by‐distance gradient in Pacific cod (*Gadus macrocephalus*). Evolutionary applications, 11(8), pp.1448-1464.

Drummond, B., and H. Renner. 2022. Seabird synthesis: Alaska Maritime National Wildlife Refuge data. In Ferriss, B., and Zador, S., 2022. Ecosystem Status Report 2022: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Echave, K. B., D. H. Hanselman, M. D. Adkison, and M. F. Sigler. 2012. Inter-decadal changes in sablefish, *Anoplopoma fimbria*, growth in the northeast Pacific Ocean. Fish. Bull. 210: 361-374

Faunce, C., J. Sullivan, S. Barbeaux, J. Cahalan, J. Gasper, S. Lowe, and R. Webster. 2017. Deployment performance review of the 2016 North Pacific Groundfish and Halibut Observer Program. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-358, 75 p.

Fergusson, E.. 2022. Long-term trends in zooplankton densities in Icy Strait, Southeast Alaska. In Ferriss, B., and Zador, S., 2022. Ecosystem Status Report 2022: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Ferriss, B., and S. Zador. 2022. Ecosystem Status Report 2022: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Fournier, D. 1983. An analysis of the Hecate Strait Pacific cod fishery using an age-structured model incorporating density-dependent effects. Can. J. Fish. Aquat. Sci. 40:1233-1243.

Geweke, J.. 1992. Evaluating the accuracy of sampling-based approaches to calculating posterior moments. In Bayesian Statistics 4 (ed JM Bernado, JO Berger, AP Dawid and AFM Smith). Clarendon Press, Oxford, UK.

Hanselman, D. H., C. R. Lunsford, C. J. Rodgveller, and M. J. Peterson. 2016. Assessment of the sablefish stock in Alaska. In Stock assessment and fishery evaluation report for the groundfish resources of the GOA and BS/AI. North Pacific Fishery Management Council, 605 W 4th Ave, Suite 306 Anchorage, AK 99501. pp. 325-488.

Hatch, S.A., M. Arimitsu, and J. F. Piatt. 2022. Seabird breeding performance on Middleton Island. In Ferriss, B., and Zador, S., 2022. Ecosystem Status Report 2022: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Hebert, K., and S. Dressel. 2022. Southeastern Alaska Herring. In Ferriss, B., and Zador, S., 2022. Ecosystem Status Report 2022: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Heidelberger, P., and P. D. Welch. 1983. Simulation run length control in the presence of an initial transient. Opns Res., 31, 1109-44 (1983)

Hobday, A.J., L. V. Alexander, S. E. Perkins, D. A. Smale, S. C. Straub, E. C. Oliver, J. A. Benthuysen, M. T. Burrows, M. G. Donat, M. Feng, and N. J. Holbrook. 2016. A hierarchical approach to defining marine heatwaves. Progress in Oceanography, 141, pp.227-238.

Hobday, A. J., E. C. Oliver, A. S. Gupta, J. A. Benthuysen, M. T. Burrows, M. G. Donat, N. J. Holbrook, P. J. Moore, M. S. Thomsen, T. Wernberg, and D. A. Smale. 2018. Categorizing and naming marine heatwaves. Oceanography, 31(2), pp.162-173.

Jensen, A.L.. 1996. Beverton and Holt life history invariants result from optimal trade-off of reproduction and survival. Canadian Journal of Fisheries and Aquatic Sciences 53, 820– 822.

Kastelle, C. R., T. E. Helser, J. L. McKay, C. G. Johnston, D. M. Anderl, M. E. Matta, and D. G. Nichol. 2017. Age validation of Pacific cod (*Gadus macrocephalus*) using high-resolution stable oxygen isotope (δ 18O) chronologies in otoliths. Fisheries research, 185, pp.43-53.

Ketchen, K. S.. 1964. Preliminary results of studies on a growth and mortality of Pacific cod (*Gadus macrocephalus*) in Hecate Strait, British Columbia. J. Fish. Res. Bd. Canada 21:1051-1067.

Kimura, D. K., J. W. Balsiger, and D. H. Ito. 1984. Generalized stock reduction analysis. Canadian Journal of Fisheries and Aquatic Sciences, 41(9), pp.1325-1333.

Lemagie, E., and M.W. Callahan. 2022. Ocean temperature synthesis: Satellite Data and Marine Heat Waves. In Ferriss, B. and Zador, S., 2022. Ecosystem Status Report 2022: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Low, L. L.. 1974. A study of four major groundfish fisheries of the Bering Sea. Ph.D. Thesis, Univ. Washington, Seattle, WA. 240 p.

Methot, R. D.. 1986. Synthetic estimates of historical abundance and mortality for northern anchovy, *Engraulis mordax*. NMFS, Southwest Fish. Cent., Admin. Rep. LJ 86-29, La Jolla, CA.

Methot, R. D.. 1990. Synthesis model: An adaptable framework for analysis of diverse stock assessment data. Int. N. Pac. Fish. Comm. Bull. 50:259-277.

Methot, R. D.. 2005. User manual for the assessment program Stock Synthesis 2 (SS2), Model Version 1.19. National Marine Fisheries Service, Northwest Fisheries Science Center, 2725 Montlake Blvd. East, Seattle, WA 98112-2097. 47 p.

Methot, R. D. and I. G. Taylor. 2011. Adjusting for bias due to variability of estimated recruitments in fishery assessment models. Canadian Journal of Fisheries and Aquatic Sciences, 68(10), pp.1744-1760.

Methot, R. D., and C. R. Wetzell. 2013. Stock synthesis: A biological and statistical framework for fish stock assessment and fishery management. Fish. Rsch. 142:86-99.

Nash, R. D., A. H. Valencia, and A. J. Geffen. 2006. The origin of Fulton’s condition factor—setting the record straight. Fisheries, 31(5), pp.236-238.

National Oceanographic and Atmospheric Administration (NOAA). 2017. NOAA OI SST V2 High Resolution Dataset. Available: https://www.esrl.noaa.gov/psd/data/gridded/data.noaa.oisst.v2.highres.html

Nichols, N. W., P. Converse, and K. Phillips. 2015. Annual management report for groundfish fisheries in the Kodiak, Chignik, and South Alaska Peninsula Management Areas, 2014. Alaska Department of Fish and Game, Fishery Management Report No. 15-41, Anchorage.

Palsson, W. 2021. Miscellaneous Species in the Gulf of Alaska Bottom Trawl Survey. In Ferriss, B. and Zador, S., 2021. Ecosystem Status Report 2021: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Pegau, W.S., J. Trochta, and S. Haught. 2022. Prince William Sound Herring. In Ferriss, B. and Zador, S., 2022. Ecosystem Status Report 2022: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Plummer, M., N. Best, K. Cowles, and K. Vines. 2006. CODA: Convergence Diagnosis and Output Analysis for MCMC, R News, vol 6, 7-11.

R Core Team. 2022. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria.

Raring, N. W., E. A. Laman, P. G. von Szalay, and M. H. Martin. 2016. Data report: 2011 Gulf of Alaska bottom trawl survey. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-330, 231 p. doi:10.7289/V5/TM-AFSC-330.

Rose, G.A. and D. W. Kulka. 1999. Hyperaggregation of fish and fisheries: how catch-per-unit-effort increased as the northern cod (*Gadus morhua*) declined. Canadian Journal of Fisheries and Aquatic Sciences, 56(S1), pp.118-127.

Rutecki, T. L., and E. R. Varosi. 1997. Distribution, age, and growth of juvenile sablefish, *Anoplopoma fimbria*, in southeast Alaska. U.S. Dep. Commer., NOAA Technical Report NMFS, vol. 130, pp. 45– 54.

Saha, S., J. M. Solé, R. Arasa, M. Picanyol, [M. Á. González](https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/journal/articles.aspx?searchCode=M%c2%aa+%c3%81ngeles+Gonz%c3%a1lez&searchField=authors&page=1), [A. Domingo-Dalmau](https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/journal/articles.aspx?searchCode=Anna+Domingo-Dalmau&searchField=authors&page=1), [M. Masdeu](https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/journal/articles.aspx?searchCode=Marta+Masdeu&searchField=authors&page=1), [I. Porras](https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/journal/articles.aspx?searchCode=Ignasi+Porras&searchField=authors&page=1), and [B. Codina](https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/journal/articles.aspx?searchCode=Bernat+Codina&searchField=authors&page=1). 2010. The NCEP Climate Forecast System Reanalysis. Bulletin of American Meteorological Society, 91, 1015-1057.

Sasaki, T. 1985. Studies on the sablefish resources in the North Pacific Ocean. Bulletin 22, (1-108), Far Seas Fishery Laboratory. Shimizu, 424, Japan.

Schlegel, R.W. and A. J. Smit. 2018. heatwaveR: A central algorithm for the detection of heatwaves and cold-spells. J. Open Source Software, 3(27), p.821.

Shi, Y., D. Gunderson, P. Munro, and J. Urban. 2007. Estimating movement rates of Pacific cod (*Gadus macrocephalus*) in the Bering Sea and the Gulf of Alaska using mark-recapture methods. North Pacific Research Board Final Report, 620.

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. U.S. Natl. Mar. Fish. Serv., Fish. Bull. 92:800-816.

Sigler, M. F. and J. T. Fujioka. 1988. Evaluation of variability in sablefish, *Anoplopoma fimbria*, abundance indices in the Gulf of Alaska using the bootstrap method. Fish. Bull. 86: 445-452.

Sigler, M. F., and H. H. Zenger. 1989. Assessment of Gulf of Alaska sablefish and other groundfish based on the domestic longline survey, 1987. NOAA Tech. Memo. NMFS F/NWC-169.

Siwicke, K.. 2022. Ocean temperature synthesis: Longline survey. In Ferriss, B. and Zador, S., 2022. Ecosystem Status Report 2022: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Soderlund, E., C. Dykstra, T. Geernaert, E. Anderson-Chao, and A. Ranta. 2009. 2008 Standardized stock assessment survey. Int. Pac. Halibut Comm. Report of Assessment and Research Activities 2008: 469-496

Spalinger, K.. 2006. Bottom trawl survey of crab and groundfish: Kodiak, Chignik, South Peninsula, and eastern Aleutian management districts, 2005. Alaska Department of Fish and Game, Division of Sport Fish, Research and Technical Services.

Spies, I., 2012. Landscape genetics reveals population subdivision in Bering Sea and Aleutian Islands Pacific cod. Transactions of the American Fisheries Society, 141(6), pp.1557-1573.

Spies, I., K. M. Gruenthal, D. P. Drinan, A. B. Hollowed, D. E. Stevenson, C. M. Tarpey, and L. Hauser. 2019. Genetic evidence of a northward range expansion in the eastern Bering Sea stock of Pacific cod. Evolutionary applications, 13(2), pp.362-375

Spies, I., D. Drinan, E. Petrou, R. Spurr, C. Tarpey, T. Hartinger, W. Larson, and L. Hauser. 2021. Evidence for selection in spatially distinct patterns of a putative zona pellucida gene in Pacific cod, and implications for management. Ecology and Evolution, 11(23): 16661-16679.

Stark, J. W.. 2007. Geographic and seasonal variations in maturation and growth of female Pacific cod (*Gadus macrocephalus*) in the Gulf of Alaska and Bering Sea. Fish. Bull. 105:396–407.

Stauffer, G.. 2004. NOAA protocols for groundfish bottom trawl surveys of the Nation’s fishery resources. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-F/SPO-65, 205 p.

Thompson, G. G., and A. M. Shimada. 1990. Pacific cod. In L. L. Low and R. E. Narita (editors), Condition of groundfish resources of the eastern Bering Sea-Aleutian Islands region as assessed in 1988, p. 44-66. U.S. Dep. Commer., NOAA Tech. Memo. NMFS F/NWC-178.

Thompson, G. G., and R. D. Methot. 1993. Pacific cod. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Bering Sea/Aleutian Islands region as projected for 1994, chapter 2. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501.

Thompson, G. G, and H. H. Zenger. 1993. Pacific cod. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska as projected for 1994, chapter 2. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501.

Thompson, G. G, and H. H. Zenger. 1995. Pacific cod. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska as projected for 1994, chapter 2. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501.

Thompson, G. G.. 2007. Assessment of the Pacific cod stock in the Gulf of Alaska. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501.

Thompson, G. G., Z. T. A’mar, and W. A. Palsson. 2011. Assessment of the Pacific cod stock in the Gulf of Alaska. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501.

Thompson, G.G.. 2016. Assessment of the Pacific Cod Stock in the Eastern Bering Sea. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska. Compiled by The Plan Team for the Groundfish Fisheries of the Gulf of Alaska. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501.

Thompson, G.G.. 2017. Assessment of the Pacific Cod Stock in the Eastern Bering Sea. *In* Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska. North Pacific Fishery Management Council, 605 W. 4th Avenue Suite 306, Anchorage, AK 99501.

Torrejon-Magallanes, J.. 2020. sizeMat: Estimate Size at Sexual Maturity. R package version 1.1.2.

von Szalay, P. G., and N. W. Raring. 2018. Data report: 2017 Gulf of Alaska bottom trawl survey. NOAA Tech. Mem NMFS-AFSC-374. 260 p.

Walters, C.. 2003. Folly and fantasy in the analysis of spatial catch rate data. Canadian Journal of Fisheries and Aquatic Sciences, 60(12), pp.1433-1436.

West, C. F., M. A. Etnier, S. Barbeaux, M. A. Partlow, and A. M. Orlov. 2020. Size distribution of Pacific cod (*Gadus macrocephalus*) in the North Pacific Ocean over 6 millennia. Quaternary Research, pp.1-21.

Wespestad, V., R. Bakkala, and J. June. 1982. Current abundance of Pacific cod (*Gadus macrocephalus*) in the eastern Bering Sea and expected abundance in 1982-1986. NOAA Tech. Memo. NMFS F/NWC-25, 26 p.

Whitehouse, A. and K. Aydin. 2021. Foraging guild biomass-Gulf of Alaska. In Ferriss, B. and Zador, S., 2021. Ecosystem Status Report 2021: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Worton, C.. 2022. ADF&G Gulf of Alaska trawl survey. In Ferriss, B., and Zador, S., 2022. Ecosystem Status Report 2022: Gulf of Alaska, Stock Assessment and Fishery Evaluation Report, North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, Alaska 99501.

Yang, Q., E. D. Cokelet, P. J. Stabeno, L. Li, A. B. Hollowed, W. A. Palsson, N. A. Bond, and S. J. Barbeaux. 2019. How “The Blob” affected groundfish distributions in the Gulf of Alaska. Fisheries Oceanography, 28(4), pp.434-453.