

Literature Cited

- ADNR (Alaska Department of Natural Resources). 2005. Division of Oil and Gas, Final Best Interest Finding of the Director. Chapter 7. Retrieved January 2011 from: http://www.dog.dnr.state.ak.us/oil/products/publications/akpeninsula/akpenff_toc.htm
- Alaska Regional Response Team. 2002. Alaska federal/state preparedness plan for response to oil and hazardous substance discharges/releases. Unified Plan, Volume 1. Alaska Department of Conservation, Anchorage, AK, 176 pp.
- AMAP (Arctic Monitoring and Assessment Programme). 2009. Arctic Pollution 2009. Arctic Monitoring and Assessment Programme, Oslo, Norway, 83 pp.
- Andersen L.W., E.W. Born, I. Gjertz, O. Wiig, LE. Holm and C. Bendixen. (1998) Population structure and gene flow of the Atlantic walrus (*Odobenus rosmarus rosmarus*) in the eastern Atlantic Arctic based on mitochondrial DNA and microsatellite variation. *Molecular Ecology* 7:1323-1336.
- Anderson, K. and A. Bows. 2011. Beyond ‘dangerous’ climate change: emission scenarios for a new world. *Philosophical Transactions of the Royal Society A* 369:20-44.
- Arctic Council 2009. Arctic Marine Shipping Assessment 2009 Report. Arctic Council, Norwegian Chairmanship, Oslo, Norway, 190 pp.
- Arctic Marine Transport Workshop. 2004. Edited by L. Brigham and B. Ellis. A summary of a workshop held September 28-30 at the Scott Polar Research Institute, United Kingdom. 56 pp.
- Arrigo, K. R and D. N. Thomas. 2004. Large scale importance of sea ice biology in the Southern Ocean. *Antarctic Science* 16: 471-486.
- Auffhammer, M. and R.T. Carson. 2008. Forecasting the path of China’s CO₂ emissions using province-level information. *Journal of Environmental Economics and Management* 55:229-247.
- Aydin, K and F. Mueter 2007. The Bering Sea—A dynamic food web perspective. *Deep Sea Research Part II: Topical Studies in Oceanography* 54: 2501-2525.
- Barlough, J.E., E.S. Berry, D.E. Skilling, A.W. Smith, and F.H. Fay. 1986. Antibodies to marine caliciviruses in the Pacific walrus (*Odobenus rosmarus divergens* Illiger). *Journal of Wildlife Diseases* 22:165-168.

- Bates, N.R., and J.T. Mathis. 2009. The Arctic ocean marine carbon cycle: evaluation of air-sea CO₂ exchanges, ocean acidification impacts, and potential feedbacks. *Biogeosciences* 6:2433-2459.
- Belikov, S., A. N. Boltunov, and Y. Gorbunov. 1996. Distribution and migration of polar bears, Pacific walruses and Gray whales depending on ice conditions in the Russian arctic. *Polar Biology* 9: 263-274.
- Berge, J.A., B. Bjerkeng, O. Pettersen, M.T. Schaanning, and S. Øxnevad. 2006. Effects of increased sea water concentrations of CO₂ on growth of the bivalve *Mytilus edulis* L. *Chemosphere* 62:681-687.
- Bergman, M. J. N and J. W. van Santbrink. 2000. Mortality in megafaunal benthic populations caused by trawl fisheries on the Dutch continental shelf in the North Sea in 1994. *ICES Journal of Marine Science* 57:1321-1331.
- Bluhm, B. A and R. Gradinger. 2008. Regional variability in food availability for Arctic marine mammals. *Ecological Applications* 18: S77-S96.
- Bockstoce, J. R., and D. B. Botkin. 1982. The harvest of Pacific walruses by the pelagic whaling industry, 1848 to 1914. *Arctic and Alpine Research* 14: 183-188.
- Born, E. W., I. Kraul and T. Kristensen. 1981. Mercury, DDT and PCB in the Atlantic Walrus (*Odobenus rosmarus rosmarus*) from the Thule District, North Greenland. *Arctic* 34: 255-260.
- Born, E. W., M. Acquarone, L. Ø. Knutsen, and L. Toudal. 2005. Homing behaviour in an Atlantic walrus (*Odobenus rosmarus rosmarus*). *Aquatic Mammals* 31:23-33.
- Born, E. W., S. Rysgaard, G. Ehlme, M. Sejr, M. Acquarone, and N. Levermann. 2003. Underwater observations of foraging free-living Atlantic walruses (*Odobenus rosmarus rosmarus*) and estimates of their food consumption. *Polar Biology* 26:348-357.
- Boveng, P.L., J.L. Bengtson, T.W. Buckley, M.F. Cameron, S.P. Dahle, B.P. Kelly, B.A. Megrey, J.E. Overland, and N.J. Williamson. 2009. Status review of the spotted seal (*Phoca largha*). U. S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Alaska Fisheries Science Center. Seattle, WA, 169 pp.
- Boveng, P.L., J.L. Bengtson, T.W. Buckley, M.F. Cameron, S.P. Dahle, B.A. Megrey, J.E. Overland, and N.J. Williamson. 2008. Status review of the ribbon seal (*Histiophoca fasciata*). Nation. Oceanic Atmospheric Administration, Technical Memorandum, NMFS-AFSC-191.

- Bowen, D and D. B. Siniff. 1999. Distribution, population biology, and feeding ecology of marine mammals. Pages 423-484. In: J.E. Reynolds, III and S.A. Rommel, eds. *Biology of Marine Mammals*. Smithsonian Press, Washington, D.C., 579 pp.
- Brigham, L. and B. Ellis, eds. 2004. Arctic marine transport workshop. Scott Polar Research Institute, Cambridge University, UK, 56 pp.
- Brown, M. 2010. Fishery Program Specialist, National Marine Fisheries Service Alaska Region , Sustainable Fisheries Division, Juneau, AK. Interviewed on 10 March 2010.
- Brueggeman, J.J., D.P. Volsen, R.A. Grotefendt, G.A. Green, J.J. Burns, and D.K. Ljungblad. 1991. Final report. Shell western E&P Inc. 1990 walrus monitoring program. Ebasco Environmental, Bellevue, WA, 68 pp.
- Brylinsky, M., J. Gibson, and D.C. Gordon Jr. 1994. Impacts of flounder trawls on the intertidal habitat and community of the Minas Basin, Bay of Fundy. *Canadian Journal of Fisheries and Aquatic Sciences* 51:650-661.
- Bukina, L.A., and A.I. Kolevatova. 2007. The role of walrus (*Odobenus rosmarus divergens*) in transmission of human trichinellosis in the indigenous people of the Chukchi Peninsula. North Pacific Research Board, Kirov, Russia, 32 pp.
- Burek, K.A., F.M.D. Gulland, and T.M. O'Hara. 2008. Effects of climate change on marine mammal health. *Ecological Applications* 18:S126-S134.
- Burns, J. J., L. H. Shapiro, and F. H. Fay. 1980. The relationships of marine mammal distributions, densities, and activities to sea ice conditions. U. S. Bureau of Land Management and National Oceanic and Atmospheric Administration, Anchorage, AK., 172 pp.
- Burns, J. J., L. H. Shapiro, and F. H. Fay. 1981. Ice as marine mammal habitat in the Bering Sea. Pages 781-797. In: D. W. Hood and J. A. Calder, eds. *The eastern Bering Sea shelf: oceanography and resources, Vol 2*. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of Marine Pollution Assessment. Juneau, AK.
- Caldeira, K. and M.E. Wickett. 2003. Anthropogenic carbon and ocean pH. *Nature* 425:365.
- Calle, P., D. Seagars, C. McClave, D. Senne, C. House, and J. House. 2002. Viral and bacterial serology of free-ranging Pacific walrus. *Journal of Wildlife Diseases* 38:93-100.

- Canadell, J.G., C. Le Que, M.R. Raupacha, C.B. Fielde, E.T. Buitenhuis, P. Ciais, T.J. Conway, N.P. Gillett, R.A. Houghton, and G. Marland. 2007. Contributions to accelerating atmospheric CO₂ growth from economic activity, carbon intensity, and efficiency of natural sinks. *Proceedings of the National Academy of Sciences* 104:18866-18870.
- Carey, A. G. 1991. Ecology of North American Arctic continental shelf benthos: a review. *Continental Shelf Research* 11:865-883.
- Carmack, E., D. Barber, J. Christensen, R. Macdonald, B. Rudels, and E. Sakshaug. 2006. Climate variability and physical forcing of the food webs and the carbon budget on panarctic shelves. *Progress In Oceanography* 71:145-181.
- Carmack, E and P. Wassmann. 2006. Food webs and physical-biological coupling on pan-Arctic shelves: unifying concepts and comprehensive perspectives. *Progress In Oceanography* 71:446-477.
- Carter, T.R., R.N. Jones, X. Lu, S. Bhadwal, C. Conde, L.O. Mearns, B.C. O'Neill, M.D.A. Rounsevell and M.B. Zurek, 2007: New Assessment Methods and the Characterization of Future Conditions. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 133-171.
- Chierici, M. and A. Fransson. 2009. Calcium carbonate saturation in the surface water of the Arctic Ocean: undersaturation in freshwater influenced shelves. *Biogeosciences* 6:4963-4991.
- Chivers, S. J. 1999. Biological indices for monitoring population status of walrus evaluated with an individual-based model. Pages 239-247. In: J.L. Laake, D. G. Robertson, and S. C. Amstrup eds. *Marine Mammal Survey and Assessment Methods*. Taylor and Francis, London, UK, 286 pp.
- Christensen, J.H., B. Hewitson, A. Busuioc, A. Chen, X. Gao, I. Held, R. Jones, R.K. Kolli, W.-T. Kwon, R. Laprise, V. Magaña Rueda, L.Mearns, C.G. Menéndez, J. Räisänen, A. Rinke, A. Sarr and P. Whetton, 2007: Regional Climate Projections. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Chythlook M.B. and J.A. Fall. 1998. The Round Island walrus hunt: reviving a cultural tradition. *Cultural Survival Quarterly* 22:1-6

- Comeau, S., G. Gorsky, R. Jeffree, J.L. Teyssié, and J.P. Gattuso. 2009. Impact of ocean acidification on a key Arctic pelagic mollusc (*Limacina helicina*). *Biogeosciences* 6:1877-1882.
- Comiso, J. C. 2002. A rapidly declining perennial sea ice cover in the Arctic. *Geophysical Research Letters*. 29:1-4.
- Comiso, J. C. 2006. Abrupt decline in the Arctic winter sea ice cover. *Geophysical Research Letters* 33(L18504):1-5.
- Comiso, J. C and C. L. Parkinson. 2004. Satellite-observed changes in the Arctic. *Physics Today* 57: 38-44.
- Comiso, J. C., C. L. Parkinson, R. Gersten, and L. Stock. 2008. Accelerated decline in the Arctic sea ice cover. *Geophysical Research Letters* 35(L01703):1-6.
- Cooper, L. W., C. J. Ashjian, S. L. Smith, L. A. Codispoti, J. M. Grebmeier, R. G. Campbell, and E. B. Sherr. 2006. Rapid seasonal sea-ice retreat in the Arctic could be affecting Pacific walrus (*Odobenus rosmarus divergens*) recruitment. *Aquatic Mammals* 32:98-102.
- COSEWIC 2006. COSEWIC assessment and update status report on the Atlantic walrus *Odobenus rosmarus rosmarus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 65 pp.
- Cota, G. F and E. P. Horne. 1989. Physical control of Arctic ice algal production. *Marine Ecology Progress Series* 52:111-121.
- Coyle, K. O and R. T. Cooney. 1988. Estimating carbon flux to pelagic grazers in the ice-edge zone of the eastern Bering Sea. *Marine Biology* 98:299-306.
- Coyle, K. O., B. Konar, A. Blanchard, R. C. Highsmith, J. Carroll, M. Carroll, S. G. Denisenko, and B. I. Sirenko. 2007. Potential effects of temperature on the benthic infaunal community on the southeastern Bering Sea shelf: possible impacts of climate change. *Deep Sea Research Part II: Topical Studies in Oceanography* 54:2885-2905.
- Coyle, K. O and A. I. Pinchuk. 2002. Climate-related differences in zooplankton density and growth on the inner shelf of the southeeastern Bering Sea. *Progress In Oceanography* 55:177-194.
- Cronin, M. A., S. Hills, E. W. Born, and J. C. Patton. 1994. Mitochondrial DNA variation in Atlantic and Pacific walruses. *Canadian Journal of Zoology* 72:1035-1043.

- Dehn, L. A., G. G. Sheffield, E. H. Follmann, L. K. Duffy, D. L. Thomas, and T. M. O'Hara. 2007. Feeding ecology of phocid seals and some walrus in the Alaskan and Canadian Arctic as determined by stomach contents and stable isotope analysis. *Polar Biology* 30:167-181.
- DeMaster, D. P. 1984. An analysis of a hypothetical population of walruses. Pages 77-80. In: F.H. Fay and G.A. Fedoseev, eds. *Soviet-American cooperative research on marine mammals. Volume 1- pinnipeds.*, U.S Department of Commerce, NOAA Technical Report NMFS 12, Washington D.C., 110 pp.
- den Elzen, M. and N. Höhne. 2008. Reductions of greenhouse gas emissions in Annex I and non-Annex I countries for meeting concentration stabilization targets. *Climatic Change* 91:249-274.
- den Elzen, M.G.J., D.P. van Vuuren, and J. van Vilet. 2010. Postponing emission reductions from 2020 to 2030 increases climate risks and long-term costs. *Climatic Change* 99:313-320.
- Denman, K.L., G. Brasseur, A. Chidthaisong, P. Ciais, P.M. Cox, R.E. Dickinson, D. Hauglustaine, C. Heinze, E. Holland, D. Jacob, U. Lohmann, S Ramachandran, P.L. da Silva Dias, S.C. Wofsy and X. Zhang, 2007: Couplings Between Changes in the Climate System and Biogeochemistry. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Dietz, R., F. Riget, M. Cleemann, A. Aarkrog, P. Johansen, and J. C. Hansen. 2000. Comparison of contaminants from different trophic levels and ecosystems. *The Science of The Total Environment* 245:221-231.
- Dobson, A., and R. Carper. 1993. Biodiversity. *The Lancet* 342:1096-1099.
- Doney, S.C., V.J. Fabry, R.A. Feely, and J.A. Kleypas. 2008. Ocean acidification: the other CO₂ problem. *Annual review of Marine Science* 1:169-192.
- Douglas, D.C. 2010. Arctic sea ice decline: projected changes in timing and extent of sea ice in the Bering and Chukchi Seas. U.S. Department of the Interior, U.S. Geological Survey, Open-File Report 2010-1176, Reston, VA, 32 pp.
- Drinkwater, K. F., F. Mueter, K. D. Friedland, M. Taylor, G. L. Hunt Jr, J. Hare, and W. Melle. 2009. Recent climate forcing and physical oceanographic changes in Northern Hemisphere regions: a review and comparison of four marine ecosystems. *Progress In Oceanography* 81:10-28.

- Dubey, J., R. Zarnke, N. Thomas, S. Wong, W. Van Bonnd, M. Briggs, J. Davis, R. Ewingg, M. Menseh, O. Kwok, S. Romandi, and P. Thulliez. 2003. *Toxoplasma gondii*, *Neospora caninum*, *Sarcocystis neurona*, and *Sarcocystis canis*-like infections in marine mammals. *Veterinary Parasitology* 116:275-296.
- Duignan, P.J., J.T. Saliki, D. J. St. Aubin, J.A. House, and J.R. Geraci. 1994. Neutralizing antibodies to phocine distemper virus in Atlantic walruses (*Odobenus rosmarus rosmarus*) from arctic Canada. *Journal of Wildlife Diseases* 30:90-94.
- Dunton, K. H., J. L. Goodall, S. V. Schonberg, J. M. Grebmeier, and D. R. Maidment. 2005. Multi-decadal synthesis of benthic-pelagic coupling in the western Arctic: role of cross-shelf advective processes. *Deep Sea Research II* 52:3462-3477.
- Dunton, K. H., T. Weingartner, and E. C. Carmack. 2006. The nearshore western Beaufort Sea ecosystem: circulation and importance of terrestrial carbon in arctic coastal food webs. *Progress In Oceanography* 71:362-378.
- Dyke, A. S., J. Hooper, C. R. Harington, and J. M. Savelle. 1999. The late wisconsinan and holocene record of walrus (*Odobenus rosmarus*) from North America: a review with new data from arctic and atlantic Canada. *Arctic* 52:160-181.
- Elliott, H. W. 1882. A monograph of the seal-islands of Alaska. Government Printing Office, Washington, D.C., pp. 176.
- Ellis, R.P., J. Bersey, S.D. Rundle, J.M. Hall-Spencer, and J.I. Spicer. 2009. Subtle but significant effects of CO₂ acidified seawater on embryos of the intertidal snail, *Littorina obtusata*. *Aquatic Biology* 5:41-48.
- EPA (Environmental Protection Agency) 2009. Mandatory reporting of greenhouse gases. *Federal Register* 74:56260-65619.
- Fabry, V. J., B. A. Seibel, R. A. Feely, and J. C. Orr. 2008. Impacts of ocean acidification on marine fauna and ecosystem processes. *ICES Journal of Marine Science* 65:414-432.
- Fabry, V.J., J.B. McClintock, J.T. Mathis, and J.M. Grebmeier. 2009. Ocean acidification at high latitudes: The bellwether. *Oceanography* 22:160–171.
- Fay, F. H. 1957. History and the present status of the Pacific walrus population. *Transactions of the North American Wildlife Conference* 22:431-445.
- Fay, F. H. 1982. Ecology and biology of the Pacific walrus, *Odobenus rosmarus divergens* Illiger. *North American Fauna* 72, U.S. Fish and Wildlife Service, Washington, D. C. 279 pp.

- Fay, F. H and B. P. Kelly. 1980. Mass natural mortality of walrus (*Odobenus rosmarus*) at St. Lawrence Island, Bering Sea, autumn 1978. *Arctic* 33:226-245.
- Fay, F. H and B. P. Kelly. 1989. Development of a method for monitoring the productivity, survivorship, and recruitment of the Pacific walrus population. OCSEAP Study MMS 89-0012, Minerals Management Service. Anchorage, AK. 51 pp.
- Fay, F. H., B. P. Kelly, P. H. Gehrlich, J. L. Sease, and A. A. Hoover. 1984. Modern populations, migrations, demography, trophics, and historical status of the Pacific Walrus. Final Report, Outer Continental Shelf Environmental Assessment Program, Institute of Marine Science, University of Alaska, Fairbanks, 376 pp.
- Fay, F. H., B. P. Kelly, and J. L. Sease. 1989. Managing the exploitation of Pacific walrus: a tragedy of delayed response and poor communication. *Marine Mammal Science* 5:1-16.
- Fay, F. H., H. Feder, and S. W. Stoker. 1977. An estimation of the impact of the Pacific walrus population on its food resources in the Bering Sea. U.S. Marine Mammal Commission, Washington, D.C., 38 pp.
- Fay, F. H., G. C. Ray, and A. Kibal'chich. 1984. Time and location of mating and associated behavior of the Pacific walrus, *Odobenus rosmarus divergens* Illiger. Pages 89-99. In: F.H. Fay and G.A. Fedoseev, eds. Soviet-American cooperative research on marine mammals. U.S Department of Commerce, NOAA Technical Report NMFS 12, Washington, D.C., 110 pp.
- Fay, F. H and J. J. Burns. 1988. Maximal feeding depth of walrus. *Arctic* 41:239-240.
- Fay, F. H., J. J. Burns, S. W. Stoker, and J. S. Grundy. 1994. The struck-and-lost factor in Alaskan walrus harvests, 1952-1972. *Arctic* 47:368-373.
- Fay, F. H., L. L. Eberhardt, B. P. Kelly, J. J. Burns, and L. T. Quakenbush. 1997. Status of the Pacific walrus population, 1950-1989. *Marine Mammal Science* 13:537-565.
- Fay, F. H and S. W. Stoker. 1982. Analysis of reproductive organs and stomach contents from walrus taken in the Alaskan native harvest, spring 1980: final report. University of Alaska, Institute of Marine Science, Fairbanks, AK, 86 pp.
- Federal Agency for Fishery of the Russian Federation. 2009. Decree of the general permissible catch for marine resources. Retrieved July 2010 from: <http://www.mnogozakonov.ru/catalog/date/2009/09/30/57489/textpage/2/>

- Federal Aviation Administration. 2008. Wildlife flight advisories – Alaska. Retrieved March 2010 from:
http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systems/fs/alaskan/advisories/walrus/
- Feder, H. M., A. S. Naidu, S. C. Jewett, J. M. Hameedi, W. R. Johnson and T. E. Whitledge. 1994. The northeastern Chukchi Sea: benthos-environmental interactions. *Marine Ecology Progress Series* 111:171-190.
- Fedoseev, G. A. 1984. Present status of the population of walruses *Odobenus rosmarus* in the eastern Arctic and Bering Sea. *Marine mammals of the far east*. Moscow, Russia 10 pp.
- Feely, R. A., C. L. Sabine, K. Lee, W. Berelson, J. Kleypas, V. J. Fabry, and F. J. Millero. 2004. Impact of anthropogenic CO₂ on the CaCO₃ system in the oceans. *Science* 305:362-366.
- Findlay, H.S., M.A. Kendall, J.I. Spicer, and S. Widdicombe. 2010. Relative influences of ocean acidification and temperature on intertidal barnacle post-larvae at the northern edge of their geographic distribution. *Estuarine Coastal and Shelf Science* 86:675-682.
- Fischbach, A.S., C.V. Jay, A.A. Kochnev, J.L. Garlich-Miller, and D.H. Monson. 2010. Altered movement and foraging patterns of Pacific walrus in the Chukchi Sea from changing summertime ice conditions. Poster presentation Society for Marine Mammalogy annual meeting 10-14 February, Anchorage, AK.
- Fisher, K. I. and R. E. A. Stewart. 1997. Summer foods of Atlantic walrus, *Odobenus rosmarus rosmarus*, in northern Foxe basin, Northwest Territories. *Canadian Journal of Zoology* 75:1166-1175.
- Food and Agriculture Organization of the United Nations. 2007. National fishery sector overview The Russian Federation. Retrieved July 2010 from:
ftp://ftp.fao.org/fi/DOCUMENT/fcp/en/FI_CP_RU.pdf
- Frantzen, E. 2007. From Russia with Love. Retrieved January 2011 from:
<http://www.epmag.com/archives/features/405.htm>
- Freitas, C., K. M. Kovacs, R. A. Ims, M. A. Fedak, and C. Lydersen. 2009. Deep into the ice: over-wintering and habitat selection in male Atlantic walruses. *Marine Ecology Progress Series* 375:247-261.
- Fritz, L.W. 2001. Biology of the hard clam. Pages 53-76. In: J.N. Kraeuter and M. Castagna, eds. *Developments in aquaculture and fisheries science*. Elsevier, New York, NY, 722 pp.

- Frölicher, T.L. and F. Joos. 2009. Reversible and irreversible impacts of greenhouse gas emissions in multi-century projections with the NCAR global coupled carbon cycle-climate model. Climatic Dynamics DOI 10.1007/s00382-009-0727-0. 21 pp.
- Frost, K. J., L. F. Lowry, and J. J. Burns. 1983. Distribution of marine mammals in the coastal zone of the Bering Sea during summer and autumn. Pages 365-561. In: Outer Continental Shelf Environmental Assessment Program. Final Reports of Principle Investigators. Volume 37. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Alaska Office, Anchorage, 708 pp.
- Garlich-Miller, J. L. and C. Pungowiyi. 1999. Proceedings of a workshop concerning walrus harvest monitoring in Alaska and Chukotka. U.S. Fish and Wildlife Service, Marine Mammals Management, Anchorage, AK, 59 pp.
- Garlich-Miller, J.L., and C.V. Jay. 2000. Proceedings of a workshop concerning walrus survey methods. U.S. Department of the Interior, U.S. Fish and Wildlife Service, Marine Mammals Management, Technical Report MMM 00-2, Anchorage, AK., 97pp.
- Garlich-Miller, J. L., L. T. Quakenbush, and J. F. Bromaghin. 2006. Trends in age structure and productivity of Pacific walrus harvested in the Bering Strait region of Alaska, 1952-2002. Marine Mammal Science 22:880-896.
- Garlich-Miller, J. L and R. E. A. Stewart. 1999. Female reproductive patterns and fetal growth of Atlantic walrus (*Odobenus rosmarus rosmarus*) in Foxe Basin, Northwest Territories, Canada. Marine Mammal Science 15:179-191.
- Garlich-Miller, J.L., J.G. MacCracken, J. Snyder, R. Meehan, M. J. Myers, J.M. Wilder, E. Lance, and A. Matz. 2011. Status review of the Pacific walrus (*Odobenus rosmarus divergens*). U.S. Fish and Wildlife Service, Marine Mammals Management, January 2011, Anchorage, AK, 155 pp.
- Garnaut, R. S. Howes, F. Jotzo, and P. Sheehan. 2008. Emissions in the Platinum Age: the implications of rapid development for climate-change mitigation. Oxford Review of Economic Policy 24:377-401.
- Gazeau, F., C. Quiblier, J.M. Jansen, J. Gattuso, J.J. Middelburg, and C.H.R. Heip. 2007. Impact of elevated CO₂ on shellfish calcification. Geophysical Research Letters 34(L07603):1-5.
- Gilbert, J., G. Fedoseev, D. Seagars, E. Razlivalov, and A. Lachugin. 1992. Aerial census of Pacific walrus, 1990. U.S. Fish and Wildlife Service, Marine Mammals Management, Anchorage, AK, 33 pp.

- Gilbert, J. R. 1999. Review of previous Pacific walrus surveys to develop improved survey designs. Pages 75-84. In: J. L. Laake, D. G. Robertson, and S. C. Amstrup, eds. *Marine mammal survey and assessment methods*. Taylor and Francis, London, UK, 287 pp.
- Goldstein T.J., A.K. Mazet, V.A. Gill, A.M. Doroff, K. A. Burek, and J.A. Hammond. 2009. Phocine distemper virus in northern sea otters in the Pacific Ocean, Alaska, USA. *Emerging Infectious Diseases* 15: 925-927.
- Gradinger, R. 2009. Sea-ice algae: major contributors to primary production and algal biomass in the Chukchi and Beaufort Seas during May/June 2002. *Deep Sea Research Part II: Topical Studies in Oceanography* 56:1201-1212.
- Gradinger, R., K. Meiners, G. Plumley, Q. Zhang, and B. Bluhm. 2005. Abundance and composition of the sea-ice meiofauna in off-shore pack ice of the Beaufort Gyre in summer 2002 and 2003. *Polar Biology* 28:171-181.
- Grainger, E. H., A. A. Mohammed and J. E. Lovrity. 1985. The sea-ice fauna of Frobisher Bay, arctic Canada. *Arctic* 38:23-30.
- Grebmeier, J. M., H. M. Feder, and C. P. McRoy. 1989. Pelagic-benthic coupling on the shelf of the northern Bering and Chukchi Seas, II. Benthic community structure. *Marine Ecology Progress Series* 51:253-268.
- Grebmeier, J. M., and C. P. McRoy. 1989. Pelagic-benthic coupling on the shelf of the northern Bering and Chukchi Seas, III. Benthic food supply and carbon cycling. *Marine Ecology Progress Series* 53:79-91.
- Grebmeier, J. M and L. W. Cooper. 1995. Influence of the St. Lawrence Island polynya upon the Bering Sea benthos. *Journal of Geophysical Research* 100:4439-4460.
- Grebmeier, J. M and K. H. Dunton. 2000. Benthic processes in the Northern Bering/Chukchi seas: status and global change. Pages 61-71. In: H. P. Huntington, ed. *Impacts of changes in sea ice and other environmental parameters in the Arctic..* Marine Mammal Commission, Bethesda, MD, 136 pp.
- Grebmeier, J. M., J. E. Overland, S. E. Moore, E. V. Farley, E. C. Carmack, L. W. Cooper, K. Frey, J. Helle, F. McLaughlin, and L. McNutt. 2006a. A major ecosystem shift in the northern Bering Sea. *Science* 311:1461-1464.
- Grebmeier, J. M., L. W. Cooper, H. M. Feder, and B. I. Sirenko. 2006b. Ecosystem dynamics of the Pacific-influenced Northern Bering and Chukchi Seas in the amerasian arctic. *Progress in Oceanography* 71:331-361.

- Green, M.A., R.C. Aller, and J. Y. Aller. 1998. Influence of carbonate dissolution on survival of shell-bearing meiobenthos in nearshore sediments. *Limnology and Oceanography* 43:18-28.
- Green, M.A., M.E. Jones, C.L. Boudreau, R.L. Moore, and B.A. Westman. 2004. Dissolution mortality of juvenile bivalves in coastal marine deposits. *Limnology and Oceanography* 49:727-734.
- Ham-Lamme, K.D., D.P. King, B.C. Taylor, C. House, D.A. Jessup, S. Jeffries, P.K. Yochem, F.M.D. Gulland, D.A. Ferrick, and J.L. Stott. 1999. The application of immuno-assays for seriological detection of morbillivirus exposure in free ranging harbor seals (*Phoca vitulina*) and sea otters (*Enhydra lutris*) for the western coast on the United States. *Marine Mammal Science* 15:601-608.
- Hamilton, T., D. Seagars, T. Jokela, and D. Layton. 2008. ^{137}Cs and ^{210}Po in Pacific walrus and bearded seal from St. Lawrence Island, Alaska. *Marine Pollution Bulletin* 56:1158-1167.
- Harington, C. R and G. Beard. 1992. The qualicum walrus - a late pleistocene walrus (*Odobenus rosmarus*) skeleton from Vancouver Island, British-Columbia, Canada. *Annales Zoologici Fennici* 28:311-319.
- Harington, C. R. 2008. The evolution of arctic marine mammals. *Ecological Applications* 18:23-40.
- Hawkins, E. and R. Sutton. 2009. The potential to narrow uncertainty in regional climate predictions. *Bulletin of the American Meteorological Society*. August 2009:1095-1107.
- Heptner, V. G., K. K. Chapskii, V. A. Arsen'ev, and V. E. Sokolov. 1976. Pinnipeds and toothed whales: pinnipedia and odontoceti. *Mammals of the Soviet Union II*, Vysshaya Shkola Publishers, Moscow, 59 pp.
- Hills, S. and J. R. Gilbert. 1994. Detecting Pacific walrus population trends with aerial surveys: a review. *Transactions of the North American Wildlife and Natural Resources Conference* 59:201-210.
- Holland, M.M., M.C. Serreze, and J. Stroeve. The sea ice mass budget of the Arctic and its future change as simulated by coupled climate models. *Climate Dynamics*: DOI 10.1007/s00382-008-0493-4. 16 pp.
- Horner, R. A. 1976. Sea ice organisms. *Marine Biology Annual Review* 14:167-182.
- Hunt, G. L and P. J. Stabeno. 2002. Climate change and the control of energy flow in the southeastern Bering Sea. *Progress In Oceanography* 55:5-22.

- Hunt, H.L., and R.E. Scheibling. 1997. The role of post-settlement mortality in recruitment of benthos marine invertebrates. *Marine Ecology Progress Series* 155:269-301.
- Huntington, H. P. 2009. A preliminary assessment of threats to arctic marine mammals and their conservation in the coming decades. *Marine Policy* 33:77-82.
- IPCC (Intergovernmental Panel on Climate Change). 2007: Summary for Policymakers. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 7-22.
- Ireland, D.S., D.W. Funk, R. Rodrigues, and W.R. Koski (eds.). 2009. Joint Monitoring Program in the Chukchi and Beaufort seas, open water seasons, 2006–2007. LGL Alaska Report P971–2, Report from LGL Alaska Research Associates, Inc., Anchorage, AK, LGL Ltd., environmental research associates, King City, Ont., JASCO Research, Ltd., Victoria, BC, and Greeneridge Sciences, Inc., Santa Barbara, CA, for Shell Offshore, Inc., Anchorage, AK, ConocoPhillips Alaska, Inc., Anchorage, AK, and the National Marine Fisheries Service, Silver Springs, MD, and the U.S. Fish and Wildlife Service, Anchorage, AK. 485 p. plus Appendices.
- Jay, C.V., and A. S. Fischbach. 2008. Pacific Walrus response to Arctic Sea ice losses. U.S. Department of Interior, U.S. Geological Survey, Fact Sheet 2008-3041. Retrieved March 2010 from: <http://pubs.usgs.gov/fs/2008/3041>
- Jay, C.V., and S. Hills. 2005. Movements of walrus radio-tagged in Bristol Bay, Alaska. *Arctic* 58:192-202.
- Jay, C.V., G.B. Marcott, and D.C. Douglas. 2010. Projected status of the Pacific walrus (*Odobenus rosmarus divergens*) in the 21st century. Department of the Interior, U.S. Geological Survey, Administrative Report, Anchorage, AK, 90 pp.
- Jay, C.V., M. S. Udevitz, R. Kwok, A. S. Fischbach and, D. C. Douglas. 2010. Divergent movements of walrus and sea ice in northern Bering Sea. *Marine Ecology Progress Series* 407:293-302.
- Jay, C.V., P. M. Outridge, and J. L. Garlich-Miller. 2008. Indication of two Pacific walrus stocks from whole tooth elemental analysis. *Polar Biology* 31:933-943.
- Jay, C.V., S. D. Farley, and G. W. Garner. 2001. Summer diving behavior of male walrus in Bristol Bay, Alaska. *Marine Mammal Science* 17:617-631.

- Jefferson, T. A., M. A. Webber and R. L. Pitman. 2008. Walrus *Odobenus rosmarus*. Pages 376-379. In: Marine Mammals of the World., Academic Press, San Diego, CA, 573 pp.
- Jensen, S., J. Aars, C. Lydersen, K. Kovacs, and K. Åsbakk. 2009. The prevalence of *Toxoplasma gondii* in polar bears and their marine mammal prey: evidence for a marine transmission pathway? *Polar Biology*:1-8.
- Johnson, A., J. Burns, W. Dusenberry and R. Jones. 1982. Aerial survey of Pacific walrus, 1980. U.S. Fish and Wildlife Service, Marine Mammals Management. Anchorage, AK, 44 pp.
- Kastelein, R. A. 2002. Walrus (*Odobenus rosmarus*). Pages 1294-1300. In: W. F. Perrin, B. Wursig and J.G.M. Thewissen, eds. *Encyclopedia of Marine Mammals*. Academic Press, San Diego CA., 1414 pp.
- Kavry, S. 2010. Umky Patrol Member. Vankrem, Chukotka, R.F. Interviewed on 2 March 2010.
- Kavry, V. I., A. N. Boltunov, and V. V. Nikiforov. 2008. New coastal haulouts of walrus (*Odobenus rosmarus*) – response to the climate changes. Pages 248-251. In: *Proceedings Marine Mammals of the Holarctic V*, 14-18 October 2008, Odessa, Ukraine.
- Kelly, B. P. 2001. Climate change and ice breeding pinnipeds. Pages 43-55. In: G. Walther, C. A. Burga, and P.J. Edwards, eds. *Fingerprints of Climate Change*. Kluwer Academic/Plenum Publishers, New York, NY, 338 pp.
- Kenchington, E. L. R., J. Prena, K. D. Gilkinson, Gordon D.C, Jr., K. MacIsaac, C. Bourbonnais, P. J. Schwinghamer, T. W. Rowell, D. L. McKeown, and W. P. Vass. 2001. Effects of experimental otter trawling on the macrofauna of a sandy bottom ecosystem on the Grand Banks of Newfoundland. *Canadian Journal of Fisheries and Aquatic Sciences* 58:1043-1057.
- Kern, J. C and A. G. Carey Jr. 1983. The faunal assemblage inhabiting seasonal sea ice in the nearshore Arctic Ocean with emphasis on copepods. *Marine Ecology Progress Series* 10:159-167.
- Klaus, A. D., J. S. Oliver, and R. G. Kvitek. 1990. The effects of gray whale, walrus, and ice gouging disturbance on benthic communities in the Bering Sea and Chukchi Sea, Alaska. *National Geographic Research* 6:470-484.
- Klein Breteler, W. C., N. Schogt, and S. Rampen. 2005. Effect of diatom nutrient limitation on copepod development: role of essential lipids. *Marine Ecology Progress Series* 291:125-133.

- Kochnev, A. A. 2002. Autumn aggregations of polar bears on the Wrangel Island and their importance for the population. Pages 137-138. In: V.M. Belkovich, ed. Marine Mammals of the Holarctic, 2002. Abstracts and presentations. The second International conference. Moscow, R.F., 294 pp.
- Kochnev, A. A. 2004. Warming of eastern arctic and present status of the Pacific walrus (*Odobenus rosmarus divergens*) population. Pages 284-288. In: V.M. Belkovich, ed. Marine Mammals of the Holarctic. Marine Mammal Council, Moscow. R.F., 609 pp.
- Kochnev, A. A. 2005. Development of the Pacific Walrus Aerial Survey Methodology. Agency Report: Ministry of Agriculture of the Russian Federation - Federal Fisheries Agency, Anadyr, R.F., 30 pp.
- Kochnev, A. A. 2008. 2007 activity report. Pages 17-20. In: Marine Mammals Council Newsletter, Pacific Research Fisheries Center, Chukotka Branch, Anadyr, R.F, 35 pp.
- Kochnev, A. A. 2010. Leader, Marine Mammals Laboratory, Pacific Research Fisheries Center. Anadyr, R.F. Interviewed on 10 March 2010.
- Kohno, N. 2006. A new miocene odobenid (Mammalia:Carnivora) from Hokkaido, Japan, and its implications for odobenid phylogeny. Journal of Vertebrate Paleontology 26:411–421.
- Kovacs, K. M and C. Lydersen. 2008. Climate change impacts on seals and whales in the North Atlantic Arctic and adjacent shelf seas. Science Progress 91:117-150.
- Kozo, T. L., W. J. Stringer, and L. J. Torgerson. 1987. Mesoscale nowcasting of sea ice movement through the Bering Strait with a description of major driving forces. Monthly Weather Review 115:193-207.
- Kroeker, K.J., R.L. Kordas, R.N. Crim, and G.G. Singh. 2010. Meta-analysis reveals negative yet variable effects of ocean acidification on marine organisms. Ecology Letters, pre-release, DOI: 10.1111/j.1461-0248.2010.01518.x
- Kurihara, H. 2008. Effects of CO₂ driven ocean acidification on the early development stages of invertebrates. Marine Ecology Progress Series 373:275-284.
- Kurihara, H. and Y. Shirayama. 2004. Effects of increased atmospheric CO₂ on sea urchin early development. Marine Ecology Progress Series 274:161-169.
- Kwok, R., G.F. Cunningham, W. Wensnahan, H.J. Zwally, and D. Yi. 2009. Thinning and volume loss of the Arctic ocean sea ice cover: 2003-2008. Journal of Geophysical Research 114(C07005):1-16.

- Laidre, K. L., I. Stirling, L. F. Lowry, O. Wiig, M. P. Heide-Jørgensen, and S. H. Ferguson. 2008. Quantifying the sensitivity of arctic marine mammals to climate-induced habitat change. *Ecological Applications* 18: S97-S125.
- Lawrence, D.M., A.G. Slater, R.A. Tomas, M.M. Holland, and C. Deser. 2008. Accelerated Arctic land warming and permafrost degradation during rapid sea ice loss. *Geophysical Research Letters* 35 (L11506) 6 pp.
- Letcher, R. J., J. O. Bustnes, R. Dietz, B. M. Jenssen, E. H. Jørgensen, C. Sonne, J. Verreault, M. M. Vijayan and G. W. Gabrielsen. 2010. Exposure and effects assessment of persistent organohalogen contaminants in arctic wildlife and fish. *Science of the Total Environment* 408:2995-3043.
- Levermann, N., A. Galatius, G. Ehlme, S. Rysgaard, and E. W. Born. 2003. Feeding behaviour of free-ranging walrus with notes on apparent dextrality of flipper use. *BMC Ecology* 3(9):1-13.
- Lindqvist, C., L. Bachmann, L. W. Andersen, E. W. Born, U. Arnason, K. M. Kovacs, C. Lydersen, A. V. Abramov, and Ø. Wiig. 2009. The Laptev Sea walrus *Odobenus rosmarus laptevi*: an enigma revisited. *Zoologica Scripta* 38:113-127.
- Lindsay, D., M. Collins, S. Mitchell, C. Wetch, A. Rosypal, G. Flick, A. Zajac, A. Lindquist, and J. Dubey. 2004. Survival of *Toxoplasma gondii* oocysts in eastern oysters (*Crassostrea virginica*). *Journal of Parasitology* 90:1054-1057.
- Lipscomb, T.P. 1995. Histopathological study of walrus liver and kidney; Correlation with metal levels. On file at U.S. Fish and Wildlife Service, Marine Mammals Management, Anchorage, AK, 41 pp.
- Lovvorn, J. R., L. W. Cooper, M. L. Brooks, C. C. De Ruyck, J. K. Bump and, J. M. Grebmeier. 2005. Organic matter pathways to zooplankton and benthos under pack ice in late winter and open water in late summer in the north-central Bering Sea. *Marine Ecology Progress Series* 291: 135-150.
- Lowry, L. F and K. J. Frost. 1981. Feeding and trophic relationships of phocid seals and walrus in the eastern Bering Sea. Pages 813-823. In: D. W. Hood and J. A. Calder, eds. *The eastern Bering Sea shelf: oceanography and resources*, Vol 2. NOAA, Office of Marine Pollution Assessment, University of Washington Press, Seattle.
- Lüthi, D., M. Le Floch, B. Bereiter, T. Blunier, J-M. Marnola, U. Siegenthaler, D. Raynaud, J. Jouzel, H. Fischer, K. Kawamura, T.F. Stocker. 2008. High-resolution carbon dioxide concentration record 650,000-800,000 years before present. *Nature* 453:379-382.

- Macintosh, A. and L. Wallace. 2009. International aviation emissions to 2025: Can emissions be stabilized without restricting demand? Australian National University Centre for Climate Law and Policy. CCLP Working Paper Series 2008/1. 23 pp.
- Mackenzie, B. R and D. Schiedek. 2007. Daily ocean monitoring since the 1860s shows record warming of northern European seas. *Global Change Biology* 13:1335-1347.
- Manning, M.R. J. Edmonds, S. Emori, A. Grubler, K. Hibbard, F. Joos, M. Kainuma, R. F. Keeling, T. Kram, A. C. Manning, M. Meinshausen, R. Moss, N. Nakicenovic, K. Riahi, S. K. Rose, S. Smith, R. Swart, and D. P. van Vuuren. 2010. Misrepresentation of the IPCC CO₂ emission scenarios. *Nature Geoscience* 3:376-377.
- Marcot, B.G., J.D. Steventon, G.D. Sutherland, and R.K. McCann. 2006. Guidelines for developing and updating Bayesian belief networks applied to ecological modeling and conservation. *Canadian Journal of Forest Research* 36:3063-3074.
- Markus, T., J. C. Stroeve, and J. Miller. 2009. Recent changes in Arctic sea ice melt onset, freezeup, and melt length season. *Journal of Geophysical Research* 114(C12024):1-14.
- McConnaughey, R. A., K. L. Mier, and C. B. Dew. 2000. An examination of chronic trawling effects on soft-bottom benthos of the eastern Bering Sea. *ICES Journal of Marine Science* 57:1377-1388.
- McConnaughey, R.A., S.E. Syrjala, and B. Dew. 2005. Effects of chronic bottom trawling on the size structure of soft-bottom benthic invertebrates. *American Fisheries Society Symposium* 41:425-437.
- McKay, J. L., A. d. Vernal, C. Hillaire-Marcel, C. Not, L. Polyak, and D. Darby. 2008. Holocene fluctuations in Arctic sea-ice cover: dinocyst-based reconstructions for the eastern Chukchi Sea. *Canadian Journal of Earth Sciences*. 45:1377-1397.
- McMahon, K. W., W. G. A. Jr., B. J. Johnson, M.-Y. Sun, G. R. Lopez, L. M. Clough, and M. L. Carroll. 2006. Benthic community response to ice algae and phytoplankton in Ny Ålesund, Svalbard. *Marine Ecology Progress Series* 310:1-14.
- Mecum, R. D. 2009. Proposed amendment 94 to the fishery management plan for groundfish of the Bering Sea and Aleutian Islands management area to require trawl sweep modification in the Bering Sea flatfish fishery. National Marine Fisheries Service, National Oceanic and Atmospheric Administration. Juneau, AK, 176 pp.

- Meehl, G.A., T.F. Stocker, W.D. Collins, P. Friedlingstein, A.T. Gaye, J.M. Gregory, A. Kitoh, R. Knutti, J.M. Murphy, A. Noda, S.C.B. Raper, I.G. Watterson, A.J. Weaver and Z.-C. Zhao. 2007. Global Climate Projections. In: *Climate Change 2007: The Physical Science Basis. Contribution of working group I to the fourth assessment report of the Intergovernmental Panel on Climate Change*. [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Meier, W. N., J. Stroeve, and F. Fetterer. 2007. Whither Arctic sea ice? A clear signal of decline regionally, seasonally, and extending beyond the satellite record. *Annals of Glaciology* 46:428-434.
- Melnikov, I. A. 2000. The Arctic sea ice ecosystem and global warming. Pages 72-82. In: H. P. Huntington, ed. *Impacts of changes in sea ice and other environmental parameters in the Arctic*. U.S. Marine Mammal Commission, Bethesda, MD, 136 pp.
- Metcalf, V and M. Robards. 2008. Sustaining a healthy human-walrus relationship in a dynamic environment: challenges for comanagement. *Ecological Applications* 18:S148-S156.
- Miller, A. I. 2010. Visitor Services Manager, Togiak National Wildlife Refuge Dillingham, AK. Interviewed on 3 March 2010.
- MMS (Minerals Management Service). 2007. Chukchi Sea planning area: Oil and gas lease sale 193 and seismic-surveying activities in the Chukchi Sea, Final environmental impact statement. U.S. Department of the Interior, Minerals Management Service, Anchorage, AK, 631 pp.
- MMS (Minerals Management Service). 2008. February 6, 2008 news release: MMS Chukchi Sea lease sale 193 breaks energy records with \$2.6 billion in high bids. Retrieved August 2008 from: <http://www.mms.gov/ooc/press/2008/press0206.htm>
- Moline, M. A., N. J. Karnovsky, Z. Brown, G. J. Divoky, T. K. Frazer, C. A. Jacoby, J. J. Torres, and W. R. Fraser. 2008. High latitude changes in ice dynamics and their impact on polar marine ecosystems. *Annals of the New York Academy of Science* 1134: 267-319.
- Mueter, F. J., C. Broms, K. F. Drinkwater, K. D. Friedland, J. A. Hare, G. L. Hunt Jr, W. Melle, and M. Taylor. 2009. Ecosystem responses to recent oceanographic variability in high-latitude Northern Hemisphere ecosystems. *Progress In Oceanography* 81:93-110.
- Mueter, F. J and M. A. Litzow. 2008. Sea ice retreat alters the biogeography of the Bering Sea continental shelf. *Ecological Applications* 18:309-320.

- Muir, D. C. G., M. D. Segstro, K. A. Hobson, C. A. Ford, R. E. A. Stewart, and S. Olpinski. 1995. Can seal eating explain elevated levels of PCBs and organochlorine pesticides in walrus blubber from eastern Hudson Bay (Canada)? *Environmental Pollution* 90:335-348.
- Mulcahy, D., T. Fischbach, D. Monson, C. Jay, K. Oakley, J. Garlich-Miller, J. Snyder, D. Rippetto, E. Marek, C. Goertz, J. Prewitt, L. Polasek, R. Suydam, C. George, T. Sformo, B. Adams, and H. Aguvluk. 2009. Preliminary findings: Pacific walrus mortality event, Icy Cape region, Alaska, September, 2009. U.S. Fish and Wildlife Service, Marine Mammals Management, Anchorage AK, 4 pp.
- Murphy, R. 2010. Alaska Peninsula Area Management Biologist, Port Moller, Kodiak, AK. Interviewed on 3 March 2010.
- Mymrin, N. I., G. P. Smirnov, A. S. Gaevskiy, and V. E. Kovalenko. 1990. Seasonal distribution and abundance of walruses in the Gulf of Anadyr of the Bering Sea. *Zoological Journal* 3:105-113.
- NAMMCO (North Atlantic Marine Mammal Commission). 2004. Report of the NAMMCO workshop on hunting methods for seals and walrus. North Atlantic Marine Mammal Commission North Atlantic House, Copenhagen, Denmark, 60 pp.
- National Research Council (NRC). 2005. Polar icebreaker roles and future needs: a preliminary assessment. National Academies Press, Washington, D.C., 42 pp.
- National Snow and Ice Data Center. 2007. Arctic sea shatters all previous record lows. NSIDC Arctic Sea Ice News, Fall 2007. National Snow and Ice Data Center, University of Colorado, Boulder, 3 pp.
- National Snow and Ice Data Center. 2010. Updated minimum Arctic sea ice extent. Retrieved September 2010 from:
<http://nsidc.org/arcticseaicenews/2010/092710.html>
- Nielsen, O., R.E.A. Stewart, L. Measures, P. Duignan, and C. House. 2000. A morbillivirus antibody survey of Atlantic walrus, narwhal and beluga in Canada. *Journal of Wildlife Diseases* 36:508-517.
- Nikiforov, V. V., V. I. Kavry and A. N. Boltunov. 2007. What is going on with walruses in the Chukchi Sea? Retrieved January 2010 from:
<http://belyemedvedi.ru/outcomes.htm>
- NMFS (National Marine Fisheries Service). 2005. Final Environmental Impact Statement for essential fish habitat identification and conservation in Alaska. Alaska Regional Office, Juneau. Retrieved January 2011 from:
<http://www.fakr.noaa.gov/habitat/seis/efheis.htm>

- NOAA (National Oceanic and Atmospheric Administration). 2004. Report to Congress: review of commercial fisheries progress toward reducing mortality and serious injury of marine mammals incidental to commercial fishing operations. National Marine Fisheries Service, Office of Protected Resources, Silver Spring, MD, 47 pp.
- NOAA (National Oceanic and Atmospheric Administration). 2008. Fisheries of the exclusive economic zone off Alaska; groundfish fisheries of the Bering Sea and Aleutian Islands Management Area. Federal Register 44:43362-43373.
- NOAA (National Oceanic and Atmospheric Administration). 2009a. List of fisheries. Federal Register 74:58859-58901.
- NOAA (National Oceanic and Atmospheric Administration). 2009b. Outline of a research Plan for the Northern Bering Sea Research Area. A communication to the SSC on the Northern Bering Sea Research Area research plan planning process. Anchorage, AK, June 2009.
- NOAA (National Oceanic and Atmospheric Administration). 2010. Endangered and threatened species; Proposed threatened and not warranted status for subspecies and sidinct population segments of the bearded seal. Federal Register 75:77496-77515.
- NPFMC (North Pacific Fisheries Management Council). 2009. Fishery management plan for fish resources of the Arctic Management Area. North Pacific Fisheries Management Council, Anchorage, AK, 158 pp.
- NPFMC (North Pacific Fisheries Mangement Council). 2010. Northern Bering Sea research area - scientific research plan. Retrieved March 2010 from: http://www.fakr.noaa.gov/NPFMC/current_issues/ecosystem/NBSRA.htm
- Oliver, J. S., P. N. Slattery, E. F. O'Conner, and L. F. Lowery. 1983. Walrus, *Odobenus rosmarus* feeding in the Bering Sea: a benthic perspective. Fishery Bulletin 81: 501-512.
- Olsen, J. 2009. Groundfish pelagic trawl fishing effort in the Gulf of Alaska, Bering Sea and Aleutian Islands. Retrieved March 2010 from: <http://access.afsc.noaa.gov/reem/ecoweb/html/EcoContribution.cfm?ID=65>
- O'Rourke, R. (Coordinator). 2010. Changes in the Arctic: background and issues for Congress. A Congressional Research Service Report for Congress. 7-5700.www.crs.gov. R41153.

- Orr, J.C., V.J. Fabry, O. Aumont, L. Bopp, S.C. Doney, R.A. Feely, A. Gnanadesikan, N. Gruber, A. Ishida, F. Joos, R.M. Key, K. Lindsay, E. Maier-Reimer, R. Matear, P. Monfray, A. Mouchet, R.G. Najjar, G. Plattner, K.B. Rogers, C.L. Sabine, J.L. Sarmiento, R. Schlitzer, R.D. Slater, I.J. Totterdell, M. Weirig, Y. Yamanaka, and A. Yool. 2005. Anthropogenic ocean acidification over the twenty-first century and its impact on calcifying organisms. *Nature* 437:681-686.
- Osterhaus, A., P. Groen, and F. Devries. 1988. Canine distemper virus in seals. *Nature* 335:403-404.
- Osterhaus, A., J. Groen, Niesters H, van de Bildt M, Martina B, Vedder L, Vos J, van Egmond H, Sidi BA, and B. MEO. 1997. Morbillivirus in monk seal mortality. *Nature* 388:838-839.
- Outridge, P. M., K. A. Hobson, R. McNeely, and A. Dyke. 2002. A comparison of modern and preindustrial levels of mercury in the teeth of beluga in the Mackenzie Delta, Northwest Territories, and walrus at Igloolik, Nunavut, Canada. *Arctic* 55:123-132.
- Overland, J. E and P. J. Stabeno. 2004. Is the climate of the Bering Sea warming and affecting the ecosystem. *EOS* 85:309-316.
- Overland, J. E and M. Y. Wang. 2007. Future regional Arctic sea ice declines. *Geophysical Research Letters* 34(L17705):1-7.
- Ovsyanikov, N. 2003. Polar bears in Chukotka. *World Wildlife Fund (WWF) Arctic Bulletin* 2:13-14.
- Ovsyanikov, N. G., Bove L.L., and A.A. Kochnev. 1994. Causes of mass mortality of walruses on coastal haulouts. *Zoological Journal* 73:80-87.
- Ovsyanikov, N. G and I. E. Menyushina. 2007. Specifics of polar bear surviving ice free season on Wrangel Island in 2007. Wrangel Island State Nature Reserve, Chukotskyi AO, Russia, 6 pp.
- Ovsyanikov, N. G., I. E. Menyushina and A. V. Bezrukov. 2007. Unusual walrus mortality at Wrangel Island in 2007. Wrangel Island State Nature Reserve, Chukotskyi AO, Russia, 4 pp.
- Parkinson, C. L., D. J. Cavalieri, P. Gloersen, H. J. Zwally, and J. C. Comiso. 1999. Arctic sea ice extents, areas, and trends, 1978-1996. *Journal of Geophysical Research* 104:20837-20856.
- Patrol News 2008. Protection of walruses on Cape Kozhevnikov. Retrieved March 2010 from: http://belyemedvedi.ru/news_arch/01102008.html

- Pielke Jr., R., T. Wigley, and C. Green. Dangerous assumptions. *Nature* 452:531-532.
- Polyak, L., R.B. Alley, J.T. Andrews, J. Brigham-Grette, T.M. Cronin, D.A. Darby, A.S. Dyke, J.J. Fitzpatrick, S. Funder, M. Holland, A.E. Jennings, G.H. Miller, M. O'Regan, J. Saville, M. Serreze, K. St. John, J.W.C. White, and E. Wolff. 2010. History of sea ice in the Arctic. *Quaternary Science Review* 29:1575-1778.
- Pörtner, H. 2008. Ecosystem effects of ocean acidification in time of ocean warming: a physiologist's view. *Marine Ecology Progress Series* 373:203-217.
- Randall, D.A., R.A. Wood, S. Bony, R. Colman, T. Fichefet, J. Fyfe, V. Kattsov, A. Pitman, J. Shukla, J. Srinivasan, R.J. Stouffer, A. Sumi and K.E. Taylor, 2007: Climate Models and Their Evaluation. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Raupach, M.R., G. Marland, P. Ciais, C. Le Quéré, J.G. Canadell, G. Klepper, and C.B. Field. 2007. Global and regional drivers of accelerating CO₂ emissions. *Proceedings of the National Academy of Sciences*.
[cgi/doi/10.1073/pnas.0700609104](https://doi.org/10.1073/pnas.0700609104)
- Rausch, R.L. 2005. *Diphyllobothrium fayi* n. sp (Cestoda : Diphyllobothriidae) from the Pacific walrus, *Odobenus rosmarus divergens*. *Comparative Parasitology* 72:129-135.
- Rausch, R.L., J.C. George, and H.K. Brower. 2007. Effect of climatic warming on the Pacific walrus, and potential modification of its helminth fauna. *Journal of Parasitology* 93:1247-1251.
- Ray, D. J. 1975. *The Eskimos of Bering Strait, 1650-1898*. University of Washington Press, Seattle, 305 pp.
- Ray, G. C., J. McCormick-Ray, P. Berg, and H. E. Epstein. 2006. Pacific walrus: benthic bioturbator of Beringia. *Journal of Experimental Marine Biology and Ecology* 330: 403-419.
- Reeves, R. R. 1978. Atlantic walrus *Odobenus rosmarus rosmarus*: a literature survey and status report. U.S. Department of the Interior, Fish and Wildlife Service, Wildlife Research Report 10, Washington D.C., 41 pp.

- Renaud, P. E., A. Riedel, C. Michel, N. Morata, M. Gosselin, T. Juul-Pedersen, and A. Chiuchiolo. 2007. Seasonal variation in benthic community oxygen demand: a response to an ice algal bloom in the Beaufort Sea, Canadian Arctic? *Journal of Marine Systems* 67:1-12.
- Richard, P. R. 1990. Habitat description and requirements. Pages 21-26. In: F. H. Fay, B. P. Kelly and B. A. Fay, eds. *The ecology and management of walrus populations - report of an international workshop*. U.S. Marine Mammal Commission, Bethesda, MD.
- Richardson, W. J., J. C.R. Greene, C. I. Malme, and D. H. Thomson. 1995. *Marine Mammals and Noise*. Academic Press, Inc., San Diego, CA, 576 pp.
- Riget, F., R. Dietz, E. W. Born, C. Sonne, and K. A. Hobson. 2007. Temporal trends of mercury in marine biota of west and northwest Greenland. *Marine Pollution Bulletin* 54:72-80.
- Robards, M. 2006. Review of contaminant studies on Pacific walrus (*Odobenus rosmarus divergens*). Eskimo Walrus Commission, Kawerak Incorporated, Nome, AK, 30 pp.
- Robards, M. D., J. J. Burns, C. L. Meek, and A. Watson. 2009. Limitations of an optimum sustainable population or potential biological removal approach for conserving marine mammals: Pacific walrus case study. *Journal of Environmental Management* 91:57-66.
- Sambrotto, R. N., J. J. Goering, and C. P. McRoy. 1984. Large yearly production of phytoplankton in the western Bering Strait. *Science* 225:1147-1150.
- Sasaki, Y. N and S. Minobe. 2005. Seasonally dependent interannual variability of sea ice in the Bering Sea and its relation to atmospheric fluctuations. *Journal of Geophysical Research* 110(C05011):1-11.
- Scribner, K. T., S. Hill, S. R. Fain, and M. A. Cronin. 1997. Population genetics studies of the polar bear (*Ursus maritimus*): a summary of available data and interpretation of results and research needs. Pages 173-184. In: A. E. Dizon, S. J. Chivers and W. F. Perrin, eds. *Molecular Genetics of Marine Mammals*. Special Publication Number 3, The Society for Marine Mammalogy, 338 pp.
- Seagars D.J., and J. Garlich-Miller. 2001. Organochlorine compounds and aliphatic hydrocarbons in Pacific walrus blubber. *Marine Pollution Bulletin* 43:122-131.
- Sell, S., and E. Weiss 2010. *Walrus Islands State Game Sanctuary*. Annual Management Report: 68 pp.

- Serreze, M.C., A.P. Barret, J.C. Stroeve, D.N. Kindig, and M.M. Holland. 2009. The emergence of surface-based Arctic amplification. *The Cryosphere* 3:11-19.
- Scripps. 2011. Scripps Institution of Oceanography. Scripps CO₂ Program. Retrieved October 2010 from: <http://scrippsco2.ucsd.edu/home/index.php>
- Sheehan, P. The new global growth path: implications for climate change analysis and policy. *Climatic Change* 91:211-231.
- Sheffield, G., F. H. Fay, H. Feder, and B. P. Kelly. 2001. Laboratory digestion of prey and interpretation of walrus stomach contents. *Marine Mammal Science* 17:310-330.
- Sheffield, G. and J. M. Grebmeier. 2009. Pacific walrus (*Odobenus rosmarus divergens*): differential prey digestion and diet. *Marine Mammal Science* 25:761-777.
- Sjare, B and I. Stirling. 1996. The breeding behavior of Atlantic walruses, *Odobenus rosmarus rosmarus*, in the Canadian High Arctic. *Canadian Journal of Zoology* 74: 897-911.
- Smith, A. W., D.G. Ritter, G.C. Ray, D.E. Skilling, and D. Wartzok. 1983. New calicivirus isolates from feces of walrus (*Obodenus rosmarus*). *Journal of Wildlife Diseases* 19:89-89.
- Smith, W. O., J. M. Grebmeier and American Geophysical Union. 1995. Arctic oceanography: marginal ice zones and continental shelves., American Geophysical Union, Washington, DC, 287 pp.
- Southall, B.L., A. E. Bowles, W. T. Ellison, J. J. Finneran, R. L. Gentry, J. C. R. Greene, D. Kastak, D. R. Ketten, J. H. Miller, P. E. Nachtigall, W. J. Richardson, J. A. Thomas, and P.L. Tyack. 2007. Marine mammal noise exposure criteria: Initial scientific recommendations. *Journal of the Acoustical Society of America* 125:2517.
- Speckman, S. G., V. Chernook, D.M. Burn, M.S. Udevitz, A.A. Kochnev, A. Vasilev, C.V. Jay, A. Lisovsky, A.S. Fischbach, and B.R. Benter. 2010. Results and evaluation of a survey to estimated Pacific walrus population size, 2006. *Marine Mammal Science*, pre-release, DOI:10.1111/j.1748-7692.2010.00419.x.
- Springer, A. M., C. P. McRoy, and M. V. Flint. 1996. The Bering Sea green belt: shelf-edge processes and ecosystem production. *Fisheries Oceanography* 5:205-223.
- Stabeno, P. J., N. A. Bond and S. A. Salo. 2007. On the recent warming of the southeastern Bering Sea shelf. *Deep Sea Research* 54:2599-2618.

- Steele, M. and T. Boyd. 1998. Retreat of the cold halocline layer in the Arctic Ocean. *Journal of Geophysical Research* 103:10419-10435.
- Steele, M., W. Ermold, and J. Zhang. 2008. Arctic Ocean surface warming trends over the past 100 years. *Geophysical Research Letters* 35:1-6.
- Steinacher, M., J.F. Frolicher, T.L. Plattner, G. Doney, and C. Scott. 2009. Imminent ocean acidification in the Arctic projected with the NCAR global coupled carbon cycle-climate model. *Biogeosciences* 6:515-533.
- Strand, J. and G. Asmund. 2003. Tributyltin accumulation and effects in marine molluscs from West Greenland. *Environmental Pollution* 123:31-37.
- Stroeve, J. C., M. C. Serreze, F. Fetterer, T. Arbetter, W. Meier, J. Maslanik, and K. Knowles. 2005. Tracking the Arctic's shrinking ice cover: Another extreme September minimum in 2004. *Geophysical Research Letters* 32(L04501):1-4.
- Stroeve, J., M. M. Holland, W. Meier, T. Scambos, and M. Serreze. 2007. Arctic sea ice decline: Faster than forecast. *Geophysical Research Letters* 34(L09501):1-5.
- Stroeve, J., M. Serreze, S. Drobot, S. Gearheard, M. M. Holland, J. Maslanik, W. Meier, and T. Scambos. 2008. Arctic sea ice extent plummets in 2007. *EOS* 89:13-20.
- Sunderland, E. M., D. P. Krabbenhoft, J. W. Moreau, S. A. Strode, and W. M. Landing. 2009. Mercury sources, distribution, and bioavailability in the North Pacific Ocean: Insights from data and models. *Global Biogeochemical Cycles* 23(GB2010):1-14.
- Takahashi, S., S. Tanabe, I. Takeuchi, and N. Miyazaki. 1999. Distribution and Specific Bioaccumulation of Butyltin Compounds in a Marine Ecosystem. *Archives of Environmental Contamination and Toxicology* 37:50-61.
- Talmage, S.C. and C.J. Gobler. 2009. The effects of elevated carbon dioxide concentrations on the metamorphosis, size, and survival of larval hard clams (*Mercenaria mercenaria*), bay scallops (*Argopecten irradians*), and Eastern oysters (*Crassostrea virginica*). *Limnology and Oceanography* 54:2072-2080.
- Taylor D.L., S. Schliebe, and H. Metsker. 1989. Contaminants in blubber, liver and kidney tissue of Pacific walrus. *Marine Pollution Bulletin* 20:465-468.
- The Royal Society. 2005. Ocean acidification due to increasing atmospheric carbon dioxide. Policy document 12/05, June 2005. ISBN 0 85403 617 2. Retrieved January 2011 from: <http://www.royalsoc.ac.uk>

- Thomas, T. A., W. R. Koski, D. S. Ireland, D. W. Funk, M. Laurinolli, and A. M. Macrander. 2009. Pacific walrus movements and use of terrestrial haul-out sites along the Alaskan Chukchi sea Coast in 2007. Poster Presentation, Society of Marine Mammals annual meeting Quebec City, Canada.
- Tomasini, L., R. Knutti, G-K. Plattner, D.P. van Vuuren, T.F. Stocker, R.B. Howarth, and M.E. Borsuk. 2010. Uncertainty and risk in climate projections for the 21st century: comparing mitigation to non-intervention scenarios. *Climatic Change* 103:399-422.
- Tynan, C. T. and D. P. DeMaster. 1997. Observations and predictions of Arctic climatic change: potential effects on marine mammals. *Arctic* 50:308– 322.
- Udevitz, M. S., C. V. Jay, A.S. Fischbach, and J.L. Garlich-Miller. 2009. Modeling haul-out behavior of walruses in Bering Sea ice. *Canadian Journal of Zoology* 87: 1111-1128.
- Udevitz, M. S., J. R. Gilbert, and G. A. Fedoseev. 2001. Comparison of methods used to estimate numbers of walruses on sea ice. *Marine Mammal Science* 17:601–616.
- UNEP (United Nations Environmental Programme) 2005. Natural systems of Wrangel Island Reserve, Chukotka, Russian Federation. World Conservation Monitoring Centre. Retrieved January 2011 from: <http://www.unep-wcmc.org/sites/wh/pdf/WRANGEL%20I.pdf>
- United States Energy Information Administration. 2010. International Energy Outlook. Retrieved January 2011 from: <http://www.eia.gov/oiaf/ieo/index.html>
- United States House of Representatives. 1981. Report [to accompany H.R.4084] No 97-228, Washington, D.C. 7 pp.
- USDOJ (U.S. Department of the Interior). 2010. Press release. Salazar divides MMS's three conflicting missions. Retrieved September 2010 from: <http://www.doi.gov/news/pressreleases/Salazar-Divides-MMSs-Three-Conflicting-Missions.cfm>
- USFWS (U.S. Fish and Wildlife Service). 1994. Conservation plan for Pacific walrus in Alaska. Marine Mammals Management, Anchorage, AK, 79 pp.
- USFWS (U.S. Fish and Wildlife Service). 2008. Marine mammals; incidental take during specified activities. *Federal Register* 73:33212-33255.
- USFWS (U.S. Fish and Wildlife Service). 2009. Bristol Bay walrus vulnerable to disturbance. Marine Mammals Management, Anchorage, AK, 1 pp.

- USFWS (U.S. Fish and Wildlife Service). 2010. Pacific walrus (*Odobenus rosmarus divergens*): Alaska Stock. Marine Mammals Management, Anchorage, AK, 9 pp. Retrieved January 2011 from:
<http://alaska.fws.gov/fisheries/mmm/walrus/reports.htm>
- van Vuuren, D.P., J. Edmonds, S. J. Smith, K. V. Calvin, J. Karas, M. Kainuma, N. Nakicenovic, K. Riahi, B. J. van Ruijven, R. Swart, and A. Thomson. 2010. What do near-term observations tell us about long-term developments in greenhouse gas emissions? *Climatic Change* 103:635-642.
- Vishnevskaya, T. I and V. A. Bychkov. 1990. The Laptev walrus. Pages 155-176. In: F. H. Fay, B. P. Kelly and B. A. Fay, eds. The ecology and management of walrus populations - report of an international workshop. U.S. Marine Mammal Commission, Bethesda, MD.
- Wacasey, J. W. and E. G. Atkinson. 1987. Energy values of marine benthic invertebrates from the Canadian Arctic. *Marine Ecology Progress Series* 39:243-250.
- Wang, M., and J.E. Overland. 2009. A sea ice free summer Arctic within 30 years? *Geophysical Research Letters* 36(L07502):1-5.
- Wang, M., J.E. Overland, and N.A. Bond. 2010. Climate projections for selected large marine ecosystems. *Journal of Marine Systems* 79:258-266.
- Wilson, B and D. Evans. 2009a. Establishing a protection zone around a walrus haulout on Hagemester Island in Northern Bristol Bay - a discussion paper. North Pacific Fisheries Management Council, Anchorage, AK, 23 pp.
- Wilson, B and D. Evans 2009b. Groundfish trawl fishery, Pacific walrus, and local fishery interactions in Northern Bristol Bay - a discussion paper. North Pacific Fisheries Management Council, Anchorage, AK, 31 pp.
- Witbaard, R., E. Jansma, and U. Sass Klaassen. 2003. Copepods link quahog growth to climate. *Journal of Sea Research* 50:77-83.
- Woodgate, R. A., T. Weingartner and R. Lindsay. 2010. The 2007 Bering Strait oceanic heat flux and anomalous Arctic sea-ice retreat. *Geophysical Research Letters*. 37(L01602):1-10.
- Wootten, J.C., C.A. Pfister, and J.D. Forester. 2008. Dynamic patterns and ecological impacts of declining ocean pH in a high-resolution multi-year dataset. *Proceedings of the National Academy of Sciences* 105:18848-18853.
- Wozencraft, W. C. 2005. Order Carnivora. Pages 532–628. In: D. E. Wilson and R. E. A. Stewart, eds. *Mammal Species of the World*. Johns Hopkins University Press, Baltimore, MD, 142 pp.

- Yamamoto-Kawai, M., F.A. McLaughlin, E.C. Carmack, S. Nishino, and S. Koji. 2009. Aragonite undersaturation in the Arctic Ocean: effects of ocean acidification and sea ice melt. *Science* 326:1098-1100.
- Zhang, J., D. A. Rothrock, and M. Steele. 1998. Warming of the Arctic Ocean by a strengthened Atlantic inflow: model results. *Geophysical Research Letters* 25: 1745-1748.
- Zhang, J. C., R. Woodgate and R. Moritz 2010. Sea ice response to atmospheric and oceanic forcing in the Bering Sea. *Physical Oceanography* 40:1729-1747.