

CURRICULUM VITAE

Valerie Jean Loeb

Moss Landing Marine Laboratories
8272 Moss Landing Road
Moss Landing, CA
95039
(831)771-4476

E-mail: valerie.loeb@sjsu.edu

EDUCATION:

B.A. Biology, San Jose State University, 1969.

M.A. Biology, San Jose State University (Moss Landing Marine Laboratories), 1972.

Ph.D. Biological Oceanography, University of California San Diego (Scripps Institution of Oceanography), 1979.

POSITIONS HELD:

2017- Present Adjunct Professor Emeritus, Moss Landing Marine Laboratories. Manuscript production focused on Eastern Tropical Pacific ichthyoplankton assemblages and California Current zooplankton population dynamics in relation to decadal-scale atmospheric-oceanographic processes.

2014-2017 Adjunct Professor, Moss Landing Marine Laboratories. Drake Antarctic Peninsula Ecosystem Research (DAPPER) Program. NSF funded research "Addition of Biological Sampling to Drake Passage Transits of the 'L.M. Gould'". NSF funded "Collaborative Research: A metabolic index to predict the consequences of climate change for midwater ecosystems".

2011-2014 Adjunct Professor Emeritus, Moss Landing Marine Laboratories. Manuscript production utilizing the long term AMLR data sets.

1992-2011 Adjunct Professor, Moss Landing Marine Laboratories. Contract scientist for the Antarctic Marine Living Resources (AMLR) Program (NOAA/NMFS), krill and zooplankton component.

1982-1992 Research Associate, Moss Landing Marine Laboratories. Participant in the AMLR Program, ichthyoplankton and krill components; participant in the Research in Antarctic Coastal Ecosystem Rates (RACER) Project (NSF/OPP), ichthyoplankton component. Project leader in California Sea Grant funded larval rockfish (*Sebastes*) research projects.

1986, 1991 Temporary Faculty, Moss Landing Marine Laboratories
Graduate level ichthyoplankton course on the biology, ecology and identification of early life history stages of marine fishes.

1988 Contract Researcher, Sea Fisheries Research Institute, Cape Town, RSA.
Cooperative work with fisheries scientists to produce a Benguela Current ichthyoplankton data base for use in comparisons of eastern boundary current system ichthyoplankton abundance fluctuations.

- 1985, 1987 Contract Researcher, NOAA/NMFS. Cooperative work with scientists in Santiago, Chile, to develop a Humboldt Current ichthyoplankton data base for use in comparisons of eastern boundary current system ichthyoplankton abundance fluctuations.
- 1984 Contract Researcher, NOAA/NMFS. Cooperative work with fisheries scientists in Cape Town, RSA. to initiate development of a Benguela Current ichthyoplankton data base.
- 1980-1981 Consultant, Ocean Minerals Co., Mountain View, CA. Eastern tropical Pacific ichthyoplankton identification and data analysis.
- 1979-1985 Research Associate, Natural History Museum of San Diego. NSF/DPP funded work on Antarctic krill and fishes. NMFS/NOAA contract work to analyze the 1975 CalCOFI survey ichthyoplankton data base.
- 1972-1978 Research Assistant, Scripps Institution of Oceanography. Zooplankton, larval fish and neuston studies.
- 1974 Teaching Assistant, University of California San Diego. Undergraduate oceanography course.
- 1971-1972 Research Assistant, Moss Landing Marine Laboratories. Nutrient analyses and fish otolith identification work.

FIELD EXPERIENCE:

Over 50 months at sea: North Pacific central gyre 1974 (R.V. Washington), 1976 (R.V. Agassiz); California Current 1977 (R.V. Agassiz), 1978 (R.V. E.B. Scripps), 1983 (R.V. Acania), 1992, 1993 (F.V. Good News); Antarctic Peninsula 1984 (R.V. Melville), 1987, 1988 (R.V. Professor Siedlecki), 1989, 1990, 1991, 1992, 1993, 1994, 1995 (R.V. Surveyor), 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005; 2006; 2007, 2008, 2009 (R.V. Yuzhmorgeologiya), 2014, 2015 (S.V. L.M. Gould).

PROFESSIONAL ORGANIZATIONS:

American Geophysical Union.

HONORS:

Invited speaker, International Conference on Pelagic Biogeography, Amsterdam, 29 May - 5 June, 1985.

Workshop participant and rapporteur, GLOBEC Southern Ocean Zooplankton and Climate Change, La Jolla, 9-11 May, 1991.

Invited speaker, American Fisheries Society Larval Fish Conference, Los Angeles, 23-27 June, 1991.

Participant, Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) International Coordination Workshop, Hamburg, Germany, 17-21 July, 1995.

U.S. Delegate, CCAMLR Working Group on Ecosystem Monitoring and Management, Siena, Italy, 24 July-3 August, 1995.

Invited speaker, San Diego State University Biology Department Seminar, 23 October 1995.

Member U.S. GLOBEC Scientific Steering Committee, January 1995-December 1998.

Participant, IAI/GLOBEC/AMIGO Workshop, Comparative Studies of Oceanic and Coastal Processes in Temperate Zones of the Eastern Pacific Ocean, Vina del Mar, Chile, 11-16 November, 1996.

Participant, Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) International Coordination Workshop, La Jolla, California, 14-18 July, 1997.
U.S. Delegate, CCAMLR Working Group on Ecosystem Monitoring and Management, San Diego, California, 21 July-1 August, 1997.

Recipient of a Tribute published in the September 5, 1997, Congressional Record by the Honorable Sam Farr in recognition of oceanographic research work.

Participant, U.S. Southern Ocean GLOBEC implementation plan workshop, Washington DC, October 1998.

Participant, British Antarctic Survey Workshop, Large-Scale Variability in the Southern Ocean - Patterns, Mechanisms and Impacts, Cambridge, England, 2-6 August, 1999.

Contributor, The Peter Yodzis Colloquia in Fundamental Ecology, The Impact of Environmental Variability on Ecological Systems. University of Guelph. 2007.

Student Thesis Advisor:

Farron Wallace. 1988. Inshore-offshore and Seasonal Patterns: Larval Fishes in Monterey Bay, 1983-1985.

Skyli (Bridget) McAfee. 1994. Resource Use by Five Sympatric Parrotfishes in the San Blas Archipelago, Panama.

Mary Nishimoto. 1996. Ichthyoneuston Distribution off Central California During the 1991-1993 El Niño.

Brendan Daly. 1997. Between-Year Differences in Abundance and Distribution of Larval Fishes and Associated Environmental Conditions off Davenport, California, 1991-1993.

Ned Laman. 1998. Environmental Influences on Larval Fish Condition in Antarctic Coastal Waters.

Dawn Outram. 2000. Spatial and Temporal Variability in Early Growth Rates of the Antarctic Silverfish, *Pleuragramma antarcticum*, Around the Antarctic Continent.

Eddie Grannis. 2006. Long Term Variability in the Distribution, Abundance, and Taxonomic Composition of Larval Fishes in Elkhorn Slough.

MLML Graduate Students Participating In AMLR Field Season Activities:

Over the years a number of MLML graduate students have been actively involved in AMLR field season activities. Through these efforts they are engaged in multidisciplinary oceanographic research efforts that provide an unparalleled learning experience. Most participants have been involved with the net sampling operations where they stand 12 hour watches collecting and processing zooplankton samples and digitizing data. During these activities they learn how to identify more than 100 taxonomic categories including copepod species and larval stages of euphausiids and fish. The zooplankton collections are made within the context of concurrent studies of hydrography and primary productivity and vertebrate predator aggregations thereby

providing real time appreciation of marine ecosystem structure, function and dynamics. Some students also have been included in fish stock assessment surveys and/or associated benthic bycatch studies conducted every ca. two years. These activities have been directly supported and/or facilitated by Dr. Loeb's long-term association with the AMLR Program.

Karen Davis	1992 (Krill)
Frank Roddy	1992 (Krill)
Ned Laman	1993 (Zooplankton)
Alan Young	1994 (Zooplankton)
Debbie Nebenzahl	1995 (Zooplankton)
Dawn Outram	1995, 1996, 1997 (Zooplankton)
Kimberly Puglise	1997 (Zooplankton)
Andrew Thurber	2003 (Benthic Bycatch with Stacy Kim)
Cassandra Brooks	2006, 2008, 2011 (Zooplankton, Fish Stock Assessment)
Kristen Green	2007 (Zooplankton)
Joelle Sweeney	2009 (Zooplankton)
Jasmine Fry	2009, 2010 (Zooplankton)

PUBLICATIONS:

- Loeb, V.J. 1972. A study of the distribution and feeding habits of the Dall's porpoise (*Phocoenoides dalli*) in Monterey Bay, California. Masters thesis, San Jose State University.
- Loeb, V.J. 1979. The ichthyoplankton assemblage of the North Pacific central gyre: spatial and temporal patterns. Ph.D. dissertation, University of California San Diego.
- Loeb, V.J. 1979. Larval fishes in the zooplankton community of the North Pacific central gyre. *Mar. Biol.* 53: 173-191
- Loeb, V.J. 1980. Vertical distribution and development of larval fishes in the North Pacific central gyre during summer. *Fish. Bull. (U.S.)* 77: 777-793.
- Loeb, V.J. 1980. Patterns of spatial and species abundance within the larval fish assemblage of the North Pacific central gyre during late summer. *Mar. Biol.* 60: 189-200.
- Loeb, V.J., P.E. Smith and H.G. Moser. 1983. Ichthyoplankton and zooplankton abundance patterns in the California Current area, 1975. *Calif. Coop. Oceanic Fish. Invest. Rept.* 24: 109-131.
- Loeb, V.J., P.E. Smith and H.G. Moser. 1983. Geographical and seasonal patterns of larval fish species structure in the California Current area, 1975. *Calif. Coop. Oceanic Fish. Invest. Rept.* 24: 132-151.
- Loeb, V.J., P.E. Smith and H.G. Moser. 1983. Recurrent groups of larval fish species in the California Current area. *Calif. Coop. Oceanic Fish. Invest. Rept.* 24: 152-164.
- Shulenberger, E., J.H. Wormuth and V.J. Loeb. 1984. A large swarm of *Euphausia superba*, I: Overview of patch structure and composition. *Jour. Crust. Biol.* 4: 73-93.
- Loeb, V.J. and J. A. Nichols. 1984. Vertical distribution and composition of ichthyoplankton and invertebrate zooplankton assemblages in the eastern tropical Pacific. *Biologia Pesquera* 13: 39-66.
- Loeb, V.J. 1986. Importance of vertical distribution studies in biogeographic understanding: eastern tropical Pacific vs. North Pacific central gyre ichthyoplankton assemblages as an example. *UNESCO Tech. Pap. Mar. Sci.* 49: 177-181.
- Brinton, E., V.J. Loeb, M.C. Macaulay and E. Shulenberger. 1987. Variability of *Euphausia superba* populations near Elephant Island and the South Shetlands: 1981 vs. 1984. *Polar Biol.* 7: 345-362.
- Loeb, V.J. and E. Shulenberger. 1987. Vertical distributions and relations of euphausiid populations off Elephant Island, March 1984. *Polar Biol.* 7: 363-373.
- Loeb, V.J. and O. Rojas. 1988. Interannual variation of ichthyoplankton composition and abundance relations off northern Chile, 1964-83. *Fish. Bull. (U.S.)* 86: 1-24.
- Loeb, V.J. 1991. Distribution and abundance of larval fishes in the western Bransfield Strait region, December 1986-March 1987. *Deep-Sea Res.* 38 (8/9): 1251-1260.

- Loeb, V.J., A.F. Amos, M.C. Macaulay and J.H. Wormuth. 1993. Antarctic krill stock distribution and composition in the Elephant and King George Island areas, January-February, 1988. *Polar Biol.* 13: 171-181.
- Loeb, V.J., A.K. Kellermann, P. Koubbi, A.W. North and M.G. White. 1993. Antarctic larval fish assemblages: a review. *Bull. Mar. Sci.* 53: 416-449.
- Siegel, V. and V. Loeb. 1994. Length and age at maturity of Antarctic krill. *Antarctic Science* 6: 479-482.
- Siegel, V. and V. Loeb. 1995. Recruitment of Antarctic krill (*Euphausia superba*) and possible causes for its variability. *Mar. Ecol. Progr. Ser.* 123: 45-56.
- Yoklavich, M.M., V.J. Loeb, M. Nishimoto and B. Daly. 1996. Nearshore assemblages of larval rockfishes and their physical environment off central California during an extended el Niño event, 1991-1993. *Fishery Bull.* 94: 766-782.
- Loeb, V., V. Siegel, O. Holm-Hansen, R. Hewitt, W. Fraser, W. Trivelpiece and S. Trivelpiece. 1997. Effects of sea-ice extent and krill or salp dominance on the Antarctic food web. *Nature* 387: 897-900.
- Siegel, V., W.K. de la Mare and V. Loeb. 1997. Long-term monitoring of krill recruitment and abundance indices in the Elephant Island area (Antarctic Peninsula). *CCAMLR Science*, 4: 19-35.
- Kim, S., V. Siegel, R. Hewitt, M. Nagonobu, D. Demer, T. Ichii, S. Kang, S. Kawaguchi, V. Loeb, A. Amos, K. Chung, O. Holm-Hansen, W. Lee, N. Silva, and M. Stein. 1998. Temporal changes in marine environments in the Antarctic Peninsula area during the 1994/95 austral summer. *Memoirs of National Institute of Polar Research, Special Issue* 52:186-208.
- Siegel, V., V. Loeb and J. Gröger. 1998. Krill (*Euphausia superba*) density, proportional and absolute recruitment and biomass in the Elephant Island region (Antarctic Peninsula) during the period 1977 to 1997. *Polar Biol.* 19: 393-398.
- Reid, K., E.J. Murphy, V. Loeb and R.P. Hewitt. 2002. Krill population dynamics in the Scotia Sea: variability in growth and mortality within a single population. *Journal of Marine Systems* 36: 1-10.
- Hewitt, R. P., S. Kim, M. Naganobu, M. Gutierrez, D. Kang, Y. Takao, J. Quinones, Y.-H. Lee, H.-C. Shin, S. Kawaguchi, J. H. Emery, D. A. Demer, and V. J. Loeb. 2004. Variation in the biomass density and demography of Antarctic krill in the vicinity of the South Shetland Islands during the 1999/2000 austral summer. *Deep-Sea Research II* 51:1411-1419.
- Kawaguchi, S., V. Siegel, F. Litvinov, V. Loeb and J. Watkins. 2004. Salp distribution and size composition in the Atlantic sector of the Southern Ocean. *Deep-Sea Research Part II* 51: 1369-1381.

- Siegel, V., S. Kawaguchi, P. Ward, V. Litvinov, V. Sushin, V. Loeb and J. Watkins. 2004. Krill demography and large-scale distribution in the southwest Atlantic during January/February 2000. *Deep-Sea Research Part II* 51: 1253-1273.
- Ward, P., S. Grant, M.A. Brandon, V. Siegel, V.A. Sushin, V.J. Loeb and H. Griffiths. 2004. Mesozooplankton community structure in the Scotia Sea during the CCAMLR 2000 Survey: January-February 2000. *Deep-Sea Research II* 51: 1351-1367.
- Goebel, M.E., J.D. Lipsky, C.S. Reiss and V.J. Loeb. 2007. Using carapace measurements to determine the sex of Antarctic krill, *Euphausia superba*. *Polar Biology* 30: 307-315.
- Loeb, V.J., 2007. Environmental Variability and the Antarctic Marine Ecosystem. IN: Vasseur, D.A., McCann, K.S., (Eds.), *The Impact of Environmental Variability on Ecological Systems. The Peter Yodzis Fundamental Ecology Series, Volume 2*, pp. 197-225. Springer, Dordrecht, The Netherlands
- Atkinson, A., V. Siegel, E. Pakhomov, P. Rothery, V. Loeb, R. Ross, L. Quetin, G. Tarling, E. Murphy, P. Fretwell, and A. Fleming. 2008. Oceanic circumpolar habitat of Antarctic krill. *Marine Ecology Progress Series* 362: 1-23.
- Reiss, C.S., A.M. Cossio, V. Loeb, and D.A. Demer. 2008. Variations in the biomass of Antarctic krill, (*Euphausia superba*), around the South Shetland Islands from 1996 to 2006. *ICES Journal of Marine Science, Jour du Conseil*, 65(4): 497-508.
- Atkinson, A., V. Siegel, E. Pakhomov, M.J. Jessop and V. Loeb. 2009. A re-appraisal of the total biomass and annual production of Antarctic krill. *Deep-Sea Research I*, 56: 727-740.
- Loeb, V.J., E.E. Hofmann, J.M. Klinck, O. Holm-Hansen, and W.B. White. 2009. ENSO and variability of the Antarctic Peninsula pelagic marine ecosystem. *Antarctic Science*. 21: 135-148.
- Loeb, V.J., E.E. Hofmann, J.M. Klinck and O. Holm-Hansen. 2010. Hydrographic control of the marine ecosystem in the South Shetland-Elephant Island and Bransfield Strait region. *Deep-Sea Research II* 57: 519-542. DOI:10.1016/j.dsr2.2009.10.004.
- Santora, J.A., C.S. Reiss, V.J. Loeb and R.R. Veit. 2010. Krill demographic patterns explain the spatial segregation of baleen whale species near the South Shetland Islands, Antarctica. *Marine Ecology Progress Series*, 405: 255-269. DOI:10.3354/meps08513.
- Loeb, V.J., J.A. Santora. 2012. Population dynamics of *Salpa thompsoni* near the Antarctic Peninsula: growth rates and interannual variations in reproductive activity (1993-2009). *Progress in Oceanography*, 96: 93-107. DOI: 10.1016/j.pocean.2011.11.001.
- Santora, J.A., W.J. Sydeman, I.D. Schroeder, C.S. Reiss, B.K. Wells, J.C. Field, A.M. Cossio and V.J. Loeb. 2012. Krill Space: A Comparative Assessment of Mesoscale Structuring in Polar and Temperate Marine Ecosystems. *ICES Journal of Marine Science* doi:10.1093/icesjms/fss048.

- Loeb, V.J., J.A. Santora. 2013. Pteropods and climate off the Antarctic Peninsula, 1994-2009. *Progress in Oceanography*, 116, 31-48.
- Wells, B.K., Schroeder, I.D., Santora, J.A., Hazen, E.L., Bograd, S.J., Bjorksted, E.P., Loeb, V.J., *et al.*, 2013. State of the California Current 2012-13: No such thing as an "average" year. *CalCOFI Report* 54, 37-71.
- Santora, J.A., Schroeder, I.D., Loeb, V.J. 2014. Spatial assessment of fin whale hotspots and their association with krill within an important Antarctic feeding and fishing ground. *Marine Biology* 161: 2293-2305.
- Force, M.P., Santora, J.A., Reiss, C.S., Loeb, V.J. 2015. Seabird species assemblages reflect hydrographic and biogeographic zones within Drake Passage. *Polar Biology* 38: 381-392.
- Loeb, V.J., Santora, J.A. 2015. Climate variability and spatiotemporal dynamics of five Southern Ocean krill species. *Progress in Oceanography*.
<http://dx.doi.org/10.1016/j.pocean.2015.01.002>.
- Atkinson, A., Hill, S.L., Pakhomov, E.A., Siegel, V., Anadon, R., Chiba, S., Daly, K.L., Downie, R., Fielding, S., Fretwell, P., Gerrish, L., Hosie, G.W., Jessopp, M.J., Kawaguchi, S., Krafft, B.A., Loeb, V., Nishikawa, J., Peat, H.J., Reiss, C.S., Ross, R.M., Quetin, L.B., Schmidt, K., Steinberg, D.K., Subramaniam, R.C., Tarling, G.A., Ward.. P. 2017. KRILLBASE: a circumpolar database of Antarctic krill and salp numerical densities, 1926-2016. *Earth System Science Data* 9(1):193-210.
- Brault, E.K., Koch, P.L., McMahon, K.W., Broach, K.H., Rosenfield, A.P., Sauthoff, W., Loeb, V.J., Arrigo, K.R., Smith Jr. W.O. 2018. Carbon and Nitrogen Isoscapes in West Antarctica Reflect Oceanographic Transitions. *Marine Ecology Progress Series* 593: 29-45. <https://doi.org/10.3354/meps12524>
- Atkinson, A., Hill, S.L., Pakhomov, E.A., Siegel, V., Reiss, C.S., Loeb, V.J., Steinberg, D.K., Schmidt, K., Tarling G.A., Gerrish, L., Salliey, S.F. 2019. Krill (*Euphausia superba*) distribution contracts towards the Antarctic continental shelf during rapid regional warming. *Nature Climate Change* 9(2). [https://doi.org/ 10.1038/s41558-018-0370-z](https://doi.org/10.1038/s41558-018-0370-z).
- Johnston, N.M., Murphy, E.J., Atkinson, A.A., Constable, A.J., Cotte, C.S., Cox, M., Daly, K., Driscoll, R., Flores, H., Halfter, S., Henschke, N., Hill, S.L., Hofer, J., Hunt, B.P.V., Kawaguchi, S., Lindsay, D.J., Loeb, V., Manno, C., Meyer, B., Pakhomov, E., Pinkerton, M.H., Reiss, C., Richardson, K., Smith, W., Steinberg, D.K., Swadling, K.M., Tarling, G.A., Thrope, S.E., Veytia, D., Ward, P., Weldrick, C.K., Yang, G., 2022. Status, change and futures of zooplankton in the Southern Ocean. *Frontiers in Ecology and Evolution, Conservation and Restoration Ecology*. doi: 10.3389/fevo.2021.624692

- Loeb, V.J., Wishner, K.F., Outram, D.M. In prep. Midwater fishes and Oxygen minimum conditions in the Eastern Tropical Pacific.
- Loeb, V.J., Santora, J.A., Schroeder, I.D. In prep. : The heteropod *Carinaria japonica* provides insight on North Pacific Ocean Circulation

SHORT COMMUNICATIONS:

- Loeb, V.J. 1991. AMLR Program: Krill population structure in the Elephant Island area, January-March 1991. *Antarctic Journal of the U.S.* 26(5): 206-207.
- Loeb, V.J. 1992. RACER: Composition and vertical distribution of larval fishes at a time-series station in Gerlache Strait, November 1989. *Antarctic Journal of the U.S.* 27(5): 173-175.
- Loeb, V. and V. Siegel. 1992. Krill stock structure in the Elephant Island Area, January to March 1992. *Antarctic Journal of the U.S.* 27(5): 214-216.
- Loeb, V. and V. Siegel. 1992. Variability of krill stock composition and distribution in the vicinity of Elephant Island during AMLR investigations 1988-92. CCAMLR Scientific Abstracts WG-Krill-92/12.
- Loeb, V.J. 1993. RACER: Ichthyoplankton abundance, species composition and distribution in Gerlache Strait, October-November 1989. *Antarctic Journal of the U.S.* 28: 177-179.
- Laman, E.A. and V.J. Loeb. 1993. RACER: Larval feeding ecology of three species of Antarctic fishes (*Lepidonotothen larseni*, *Trematomus newnesi*, *T. lepidorhinus*) from Gerlache Strait, November 1989. *Antarctic Journal of the U.S.* 28: 179-180.
- Loeb, V. and V. Siegel. 1993. AMLR Program: Krill and macrozooplankton in the Elephant Island area, January-March 1993. *Antarctic Journal of the U.S.* 28: 185-188.
- Loeb, V. and V. Siegel. 1993. Status of the krill stock around Elephant Island in 1991/92 and 1992/93. *CCAMLR Science* 1: 7-33.
- Loeb, V. and V. Siegel. 1994. Krill stock structure and macrozooplankton abundance near Elephant Island, January-March 1994. *Antarctic Journal of the U.S.* 29(5): 185-188.
- Laman, E.A. and V.J. Loeb. 1994. RACER: Feeding incidence and yolk resorption in three species of Antarctic larval fish. *Antarctic Journal of the U.S.* 29(5): 162-164.
- Loeb, V.J. 1995. RACER: Ichthyoplankton assemblages in Gerlache Strait and Marguerite Bay during December 1991-January 1992. *Antarctic Journal of the U.S.* 30(5): 167-169.
- Loeb, V.J., D. Outram, and D. Nebenzahl. 1995. Salps and other macrozooplankton in the vicinity of Elephant and King George Islands during January-February 1995. *Antarctic Journal of the U.S.* 30(5): 221-224.
- Loeb, V.J. 1995. Krill demography in the vicinity of Elephant and King George Islands during January-February 1995. *Antarctic Journal of the U.S.* 30(5): 224-227.

- Outram, D.M. and V.J. Loeb. 1995. RACER: Spatial and temporal variability in the early growth rate of the Antarctic silverfish (*Pleuragramma antarcticum*) around the Antarctic continent. *Antarctic Journal of the U.S.* 30(5): 172-174.
- Laman, E.A. and V.J. Loeb. 1995. RACER: Larval fish condition factor relative to their distribution patterns within Gerlache Strait, Antarctica. *Antarctic Journal of the U.S.* 30(5): 170-171.
- Loeb, V. and V. Siegel. 1996. AMLR Program: Krill demography in the Elephant Island area during the 1995/1996 austral summer. *Antarctic Journal of the U.S.* 31(2): 145-148.
- Loeb, V. and D. Outram. 1996. AMLR Program: Salps and other macrozooplankton sampled during the 1995/1996 austral summer. *Antarctic Journal of the U.S.* 31(2): 149-152.
- Loeb, V. 1997. AMLR Program: Krill demography in the Elephant Island area January to March 1997. *Antarctic Journal of the U.S.* 32(5): 128-131.
- Loeb, V. K. Puglise and D. Outram. 1997. AMLR Program: Salps and other macrozooplankton during January-March 1997. *Antarctic Journal of the U.S.* 32(5): 131-134.
- Loeb, V. 1998. AMLR Program: Krill populations in the Elephant Island area January and February, 1998. *Antarctic Journal of the U.S.*
- Loeb, V. and W. Armstrong. 1998. AMLR: The zooplankton assemblage sampled during austral summer 1998 compared to those sampled in 1993 to 1997. *Antarctic Journal of the U.S.*
- Loeb, V. 1999. AMLR Program: Krill Abundance and Population Structure in the Elephant Island Area, January and February, 1999. *Antarctic Journal of the U.S.*
- Loeb, V. and W. Armstrong. 1999. AMLR Program: Salps and Other Zooplankton in the Elephant Island Area During Austral Summer 1999. *Antarctic Journal of the U.S.*