

**CURRICULUM VITAE
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PROFESSIONAL POSITIONS:

- 2003-** **Professor.** School of Marine Sciences, University of Maine, Orono, Maine.
2008-2012 **Associate Director,** School of Marine Sciences, University of Maine, Orono, ME
1999-2003 **Associate Professor.** School of Marine Sciences, University of Maine, Orono, ME
1996-1998 **Research Associate Professor.** School of Marine Sciences, University of Maine
1990-1995 **Executive Director.** Atlantic Centre for Remote Sensing of the Oceans, Bedford, Nova Scotia, Canada.
1989-1990 **Assistant Professor, Senior Research.** College of Oceanography, Oregon State University, Corvallis, Oregon.
1988-1989 **Post-Doctoral Fellow.** College of Oceanography, Oregon State University, Corvallis, Oregon.

EDUCATION:

- 1988** **Ph.D.,** Oceanography, University of British Columbia, Vancouver, B.C., Canada.
1982 **M.Sc.,** Oceanography, University of British Columbia, Vancouver, B.C., Canada.
1979 **B.Sc.,** Biology, McGill University, Montreal, Quebec, Canada.

PUBLICATIONS in Journals (since 2001):

- Pershing, A.J., M.A. Alexander, C.M. Hernandez, L.A. Kerr, A. LeBris, K.E. Mills, J.A. Nye, N.R. Record, H.A. Scannell, G.D. Sherwood, A.C. Thomas. **2015.** Rapid warming leads to the collapse of Gulf of Maine cod through complex socio-ecological dynamics. *Science*. Submitted.
- Scannell, H.A., A.J. Pershing, M.A. Alexander, **A.C. Thomas**, and K.E. Mills. **2015.** Frequency of marine heat waves in the north Atlantic and North Pacific since 1950. *Geophys. Res. Lett.* Submitted.
- Foukal, N.P., and **A.C. Thomas**. **2014.** Biogeography and phenology of satellite-measured phytoplankton seasonality in the California Current. *Deep-Sea Res. 1*, 92: 11-25.
- Xiu, P., **A.C. Thomas**, F. Chai, **2014.** Remote sensing of phytoplankton blooms induced by natural and artificial iron addition in the Gulf of Alaska. *Rem. Sens. Env.*, 145: 38-46.
- Di Lorenzo, E., V. Combes, J.E. Keister, T.P. Strub, **A.C. Thomas**, P.J. S. Franks, M.D. Ohman, J. Furtado, A. Bracco, S.J. Bograd, W.T. Peterson, F.B. Schwing, S. Chiba, B. Taguchi, S. Hormazabal and C. Parada, **2013.** Synthesis of Pacific Ocean Climate & Ecosystems Dynamics. *Oceanography*. 26(4):68–81, <http://dx.doi.org/10.5670/oceanog.2013.76>.
- Thomas, A.C.**, R. Mendelssohn and R. Weatherbee. **2013.** Background trends in California Current surface chlorophyll concentrations: a state-space view. *J. Geophys. Res.*, 118, 1-16, doi:10.1002/jgrc.20365.
- Mills, K.E., A.J. Pershing, C.J. Brown, Y. Chen, F.-S. Chiang, D.S. Holland, S. Lehuta, J.A. Nye, J.C. Sun, **A.C. Thomas**, and R.A. Wahle. **2013.** Fisheries Management in a

- Changing Climate: Lessons From the 2012 Ocean Heat Wave in the Northwest Atlantic *Oceanography* 26(2). <http://dx.doi.org/10.5670/oceanog.2013.27>.
- Horecka, H.H., **A.C. Thomas** and R.A. Weatherbee, **2013**. Environmental links to interannual variability in shellfish toxicity in Cobscook Bay and eastern Maine, a strongly tidally mixed coastal region. *Deep-Sea Res. II*, <http://dx.doi.org/10.1016/j.dsr2.2013.01.013>.
- Nair, A., **A.C. Thomas** and M.A. Borsuk, M. A. **2013**. Interannual variability in the timing of New England shellfish toxicity and relationships to environmental forcing. *Science of the Total Environment*. 447, 255-266.
- Thomas, A.C.**, P.T. Strub, R. Weatherbee and C. James. **2012**, Satellite views of Pacific chlorophyll variability: comparisons to physical variability, local versus nonlocal influences and links to climate indices. *Deep-Sea Res. 2*. 77-80, 99-116.
- Ruzicka, J.J., R.D. Brodeur, R.L. Emmett, J.H. Steele, J.E. Zamon, C.A. Morgan, **A.C. Thomas**, T.W. Wainwright. **2012**, Interannual variability in the Northern California Current food web structure: Changes in energy flow pathways and the role of forage fish, euphausiids, and jellyfish. *Prog. in Oceanography*, 102, 19-41.
- Runge, J.A., A. Kovach, J. Churchill, L. Kerr, J.R. Morrison, R. Beardsley, D. Berlinsky, C. Chen, S. Cadrin, C. Davis, K. Ford, J.H. Grabowski, W. H. Howell, R.Ji, R. Jones, A. Pershing, N. Record, **A. Thomas**, G. Sherwood, S. Tallack, D. Townsend. **2010**, Understanding Climate Impacts on Recruitment and Spatial Dynamics of Atlantic Cod in the Gulf of Maine: Integration of Observations and Modeling. *Prog. in Oceanography*. 87, 251-263.
- Ji R., M. Edwards, D.L. Mackas, J.A. Runge, **A.C. Thomas**, **2010**, Marine plankton phenology and life history in a changing climate: Current research and future directions, *J. Plankton Res.* 32, 10, 1355-1368.
- Thomas, A.C.**, R. Weatherbee, H. Xue, G. Lui, **2010**, Interannual variability of shellfish toxicity in the Gulf of Maine: time and space patterns and links to environmental variability. *Harmful Algae*. 9, 458-480.
- Di Lorenzo E., J. Fiechter, N. Schneider, A.J. Miller, P.J.S. Franks, S.J. Bograd, A.M. Moore, **A.C. Thomas**, W. Crawford, A. Pena and A. Hermann, **2009**: Nutrient and salinity decadal variations in the central and eastern North Pacific. *Geophys. Res. Lett.* 36, L14601, doi:10.1029/2009GL038261.
- Thomas, A.C.**, P. Brickley and R. Weatherbee. **2009**. Interannual variability in chlorophyll concentrations in the Humboldt and California Current Systems. *Prog. in Oceanogr.* 83, 386-392.
- Henson S.A. and **A.C. Thomas**. **2008**. A census of oceanic anticyclonic eddies in the Gulf of Alaska. *Deep Sea Res.*, 55, 163-176.
- Venegas, R., P.T. Strub, E. Beier, R. Letelier, **A.C. Thomas**, T. Cowles, C. James, L. Soto-Mardones, C. Cabrera. **2008**. Satellite-derived variability in chlorophyll, wind stress, sea surface height, and temperature in the northern California Current System. *J. Geophys. Res.* 113, C03015, doi:10.1029/2007JC004481.
- Henson, S.A. and **A.C. Thomas**. **2007**. Interannual variability in timing of seasonal chlorophyll increases in the California Current. *J. Geophys. Res.*, 112, doi:10.1029/2006JC003960.
- Legard, K. and **A.C. Thomas**. **2007**. Spatial patterns of intraseasonal variability of chlorophyll and sea surface temperature in the California Current. *J. Geophys. Res.*, 112, doi:10.1029/2007JC004097.
- Crawford, W.R., P.J. Brickley, and **A.C. Thomas**, **2007**. Eddy Transport into a Cyclonic Gyre:

- An Example in the Gulf of Alaska, *Prog. in Oceanogr.*, 75, 287-303.
- Henson, S.A. and **A.C. Thomas**. 2007. Phytoplankton scales of variability in the California Current system: Interannual and cross-shelf variability. *J. Geophys. Res.*, 112, C07017, doi:10.1029/2006JC004039
- Henson, S.A. and **A.C. Thomas**. 2007. Phytoplankton scales of variability in the California Current system: Latitudinal variability *J. Geophys. Res.*, 112, C07018, doi:10.1029/2006JC004040.
- Theil, M. et al. 2007. The Humboldt Current system of northern-central Chile: Oceanographic processes, ecological interactions and socioeconomic feedback. *Oceanogr. Mar. Biol. Ann Rev.* 45: 195-345.
- Thomas, A.C.** and P. Brickley. 2006. Satellite measurements of chlorophyll distribution during spring 2005 in the California Current. *Geophys. Res. Lett.* 33, doi:10.1029/2006GL026588.
- Legaard, K. and **A.C. Thomas**. 2006. Spatial patterns of seasonal and interannual variability in chlorophyll and surface temperature in the California Current. *J. Geophys. Res.* 111, C06032, doi:10.1029/2005JC003282.
- Whitehouse, B.G., P.W. Vachon, **A.C. Thomas**, R.J. Quinn and W.M. Renaud, 2006, Rapid environmental assessment (REA) of the maritime battlespace, *Canadian Military J.*, 7(1): 66-69.
- Thomas, A.C.** and R. Weatherbee. 2006. Satellite-measured temporal variability of the Columbia River plume. *Rem. Sensing. Env.* 100: 167-178.
- Dagg, M.J., H. Liu and **A.C. Thomas**. 2006. Effects of mesoscale phytoplankton variability on the copepods *Neocalanus flemingeri* and *N. plumchrus* in the coastal Gulf of Alaska. *Deep-Sea Res.* 53: 321-332.
- Pettigrew, N.R., J.H. Churchill, C.D. Janzen, L.J. Mangum, R.P. Signell, **A.C. Thomas**, D.W. Townsend, J.P. Wallinga, and H. Xue, 2005, The kinematic and hydrographic structure of the Gulf of Maine Coastal Current. *Deep Sea Res. Part2*, 52: 2369-2391.
- Townsend, D.W., N.R. Pettigrew and **A.C. Thomas**, 2005. On the nature of offshore *Alexandrium fundyense* blooms in the Gulf of Maine. *Deep-Sea Res. Part 2*. 52: 2603-2630.
- Luerssen R.M., **A.C. Thomas** and J. Hurst, 2005. Relationships between satellite-measured thermal features and *Alexandrium*-imposed toxicity in the Gulf of Maine, *Deep Sea Res. Part 2*. 52: 2656-2673.
- Crawford, W.R., P.J. Brickley, T.D. Peterson, and **A.C. Thomas**, 2005. Impact of Haida Eddies on chlorophyll-a distribution in the eastern Gulf of Alaska, *Deep-Sea Res.* 52: 975-989.
- Brickley P., and **A.C. Thomas**, 2004, Satellite-measured seasonal and interannual chlorophyll variability in the Northeast Pacific and coastal Gulf of Alaska. *Deep-Sea Res.* 51: 229-245.
- Thomas A.C.**, P. T. Strub, M.E. Carr and R. Weatherbee, 2004. Comparisons of chlorophyll variability between the four major global eastern boundary currents. *Int. J. Rem. Sens.* 25:1443-1447.
- Strub, P.T. and **A.C. Thomas**, 2004, Anticyclonic eddies in the Alaska gyre (and Cape Horn Current?). *Gayana* 68(2): 552-555.
- Thomas A.C.**, P. T. Strub and P. Brickley, 2003, Anomalous chlorophyll concentrations in the California Current in 2001-2002. *Geophys. Res. Lett.* 30(15): 8022, doi:10.1029/2003GL017409 .

- Thomas A.C.**, D.W. Townsend and R. Weatherbee, **2003**, Satellite-measured phytoplankton variability in the Gulf of Maine. *Cont. Shelf Res.* 23: 971-989.
- Carr M-E., P.T. Strub, **A.C. Thomas** and J.L. Blanco, **2002**, Evolution of 1996-1999 La Nina and El Nino conditions off the western coast of South America: a remote sensing perspective, *J. Geophys. Res.* 107: 3236, doi:10.1029/2001JC001183
- Blanco J.L., M-E. Carr, **A.C. Thomas** and P.T. Strub, **2002**, Hydrographic conditions off northern Chile during the 1996-1998 La Nina and El Nino, *J. Geophys. Res.* 107, doi:10.1029/2001JC001002
- Thomas A.C.**, D. Byrne and R. Weatherbee, **2002**, Coastal sea surface temperature variability from LANDSAT infrared data. *Rem. Sens. Env.* 81:262-272.
- Thomas A.C.**, M.E. Carr and P. T. Strub, **2001**, Chlorophyll variability in eastern boundary currents, *Geophys. Res. Lett.* 28: 3421-3424. **Chosen as featured cover article.**
- Nixon, S.W. and **A.C. Thomas**, **2001**, On the size of the Peru upwelling ecosystem. *Deep Sea Res. I*, 48:2521-2528.
- Blanco J.L., **A.C. Thomas**, M-E. Carr and P.T. Strub, **2001**, Seasonal climatology of hydrographic conditions in the upwelling region off northern Chile, *J. Geophys. Res.* 106:11,451-11,467.
- Thomas A.C.** and P.T. Strub, **2001**, Cross-shelf phytoplankton pigment variability in the California Current. *Cont. Shelf Res.* 21: 1157-1190
- Thomas A.C.**, J.L. Blanco, M.E. Carr, P.T. Strub and J. Ossus, **2001**, Satellite-measured chlorophyll and temperature variability off northern Chile during the 1996-1998 La Nina and El Nino, *J. Geophys. Res.* 106:899-915.
- Townsend D.W. and **A.C. Thomas**, **2001**, Winter-spring transition of phytoplankton chlorophyll and inorganic nutrients on Georges Bank, *Deep Sea Res. II*, 48:199-214.
- Townsend D.W., N.R. Pettigrew and **A.C. Thomas**, **2001**, Offshore blooms of the red tide dinoflagellate, *Alexandrium* sp., in the Gulf of Maine. *Cont. Shelf Res.* 21:347-369.

Publications in Books:

- Mackas, D., P.T. Strub, **A.C. Thomas**, V. Montecino, **2006**, Eastern Ocean Boundaries Pan-Regional View, In: *The Sea*. A.R. Robinson and K.H. Brink, Editors. Harvard Press Ltd..
- Townsend, D.W., **A.C. Thomas**, L.M. Mayer, M.A. Thomas and J.A. Quinlan, **2006**, Interdisciplinary oceanography of the northwest Atlantic continental shelf waters. In: *The Sea*. A.R. Robinson and K.H. Brink, Editors. Harvard Press Ltd..
- Montecino, V., P.T. Strub, J. Tarazona, F. Chavez, **A.C. Thomas** and T. Baumgartner. **2006**, Bio-physical interactions off western South America, In: *The Sea*. A.R. Robinson and K.H. Brink, Editors. Harvard Press Ltd..
- Reddin D.G., J. Helbig, **A. Thomas**, B.G. Whitehouse and K.D. Friedland, **2000**, Survival of Atlantic Salmon (*Salmo salar* L.) Related to Marine Climate. in *The Ocean Life of Atlantic Salmon - Environmental and Biological Factors Influencing Survival*, Derek Mills ED, Blackwell Science Ltd., UK.
- Hill, A.E., B.M. Hickey, F.A. Shillington, P.T. Strub, K.H. Brink, E.D. Barton, **A.C. Thomas**, **1998**. Eastern Boundary Currents: A Pan-Regional Review. In: *The Sea*. A.R. Robinson and K.H. Brink, Editors. J. Wiley and Sons Inc.
- Thomas, A.C.** and P.T. Strub. **1998**. Large-scale temporal and spatial variability of phytoplankton pigment concentrations in the California Current. Pg 255-266 In: *Remote*

Sensing of the Pacific Ocean by Satellites. R.A. Brown, Ed., Earth Ocean and Space Pty. Ltd.

Thomas, A.C., P.T. Strub and S. Levesque. **1994**. Satellite measured ocean colour variability at large spatial and temporal scales. Pg 240-248 In: Proceedings of WMO/IOC Technical Conference on Space-based Ocean Observations, Bergen, Norway, World Meteorological Organization, UNESCO.

Other &/or Older Publications:

Mundy, P.R., Allen, D.M., Boldt, J.L., Bond, N.A., Dressel, S., Farley Jr., E.V., Hanselman, D.H., Heifetz, J., Hopcroft, R.R., Janout, M.A., Ladd, C., Lam, R.C., Livingston, P.A., Lunsford, C.R., Mathis, J.T., Mueter, F.J., Rooper, C.N., Sarkar, N., Shotwell, S.A.K., Sturdevant, M.V., **Thomas, A.C.**, Weingartner, T.J., Woodby, D. **2010**. Status and trends of the Alaska Current Region, 2003-2008, pp. 142-195 In, S.M. McKinnell and M.J. Dagg [Eds.] Marine Ecosystems of the North Pacific Ocean, 2003-2008. PICES Special Publication 4, 393 p.

Bograd, S.J., Sydeman, W.J., Barlow, J., Brodeur, R.D., Calambokidis, J., Chavez, F., Crawford, W.R., Durazo, R., Emmett, R., Field, J. Gaxiola-Castro, G., Goericke, R., Hildebrand, J., Irvine, J.E., Kahru, M., Koslow, J.A., Lavaniegos, B., Lowry, M. Mackas, D.L., Manzano-Sarabia, M. McKinnell, S.M., Mitchell, B.G., Munger, L., Perry, R.I., Peterson, W.T., Ralston, St., Schweigert, J., Suntssov, A., Tanasichuk, R., **Thomas, A.**, Whitney, F. **2010**. Status and trends of the California Current region, 2003-2008, In: S.M. McKinnell and M. Dagg. [Eds.] Marine Ecosystems of the North Pacific Ocean, 2003-2008. PICES Special Publication 4.

Siegel, D. A., **A.C. Thomas** and J. Marra, **2004**, Views of ocean processes from the Sea-viewing Wide Field of View Sensor (SeaWiFS) Mission: Introduction to the second special issue. Deep-Sea Res. 51: 911-912.

Siegel, D. A., **A.C. Thomas** and J. Marra, **2004**, Views of ocean processes from the Sea-viewing Wide Field of View Sensor Mission: Introduction to the first special issue. Deep-Sea Res. 51: 1-3.

Thomas, A.C., **2001**. Measuring the Surface Temperature of the Ocean. Pg 34-36 In: Backscatter, Spring/Summer 2001, Nova Scotia, Canada.

Thomas, A.C. **1999**, Seasonal distributions of satellite-measured phytoplankton pigment concentration along the Chilean coast. J. Geophys. Res. 104:25877-25890.

Thomas, A.C., B. Whitehouse and S. Levesque. **1996**. Spatial and Temporal Variability of North Atlantic Salmon Habitat: Estimates from Satellite Measured Sea Surface Temperature. Technical Report for the Atlantic Salmon Federation and the Atlantic Salmon Trust.

Thomas, A.C., P.T. Strub, F. Huang and C. James. **1994**. A comparison of the seasonal and interannual variability of phytoplankton pigment concentrations in the Peru and California Current System. J. Geophys. Res. 99:7355-7370.

Thomas, A.C. **1992**. Associations between zooplankton community structure and satellite measured surface thermal patterns in a continental shelf region. Cont. Shelf Res. 12:753-777.

Hobbs, R.C., L.W. Botsford and **A.C. Thomas**. **1992**. Influence of hydrographic conditions and hind forcing on the distribution and abundance of Dungeness crab, C. magister, larvae. Can. J. Fish. Aquat. Sci., 49:1379-1388.

Thomas, A.C. and P.T. Strub. **1990**. Seasonal and interannual variability of pigment

- concentrations across a California Current frontal zone. *J. Geophys. Res.* 95:13023-13042.
- Strub, P.T., C. James, **A.C. Thomas**, and M.R. Abbott. **1990**. Seasonal and non-seasonal variability of satellite derived surface pigment concentration in the California Current. *J. Geophys. Res.* 95:11501-11530.
- Thomas, A.C.** and P.T. Strub. **1989**. Interannual variability in phytoplankton pigment distribution during the spring transition off western North America. *J. Geophys. Res.* 94:18095-18117.
- Thomas, A.C.** and W.J. Emery. **1988**. Relationships between near-surface plankton concentrations, hydrography and satellite measured sea surface temperature. *J. Geophys. Res.* 93:15733-15748.
- Thomas, A.C.** and W.J. Emery. **1986**. Winter hydrography and plankton distributions on the southern British Columbia continental shelf. *Can. J. Fish. Aquat. Sci.* 43:1249-1258.
- Emery, W.J., **A.C. Thomas**, M. Collins, W.J. Crawford and D.L. Mackas. **1986**. An objective method for computing advective surface velocities from sequential infrared satellite images. *J. Geophys. Res.* 91:12865-12878.
- Lewis, A.G. and **A.C. Thomas**. **1986**. Tidal transport of zooplankton across the sill of a British Columbia fjord. *J. Plankton Res.* 8:1079-1089.
- Emery, W.J., **A.C. Thomas**, M.J. Collins, W.R. Crawford, and D.L. Mackas. **1986**. Comparison between satellite image advective velocities, dynamic topography, and surface drifter trajectories. The Oceanography Report, *EOS* 67(22).

APPOINTMENTS TO NATIONAL PANELS:

- NASA SeaWiFS Science Team, 1997-2003
- NASA SeaWiFS Science Team, Executive Committee, 1997-1999
- NASA Gulf of Maine Ocean Color Working Group, 1997-1999
- Canadian National Ice Remote Sensing Working Group, 1993-95
- Canadian National Oceans Remote Sensing Working Group, 1993-95
- Canadian Space Agency, Long Term Space Plan Formulation Committee, 1993-94
- Canadian Joint Earth Observation Advisory Council, 1994-96

AWARDS HONORS:

- 2006 Geophysical Research Letters, citation for excellence in reviewing
- 1988-1989 Isaac W. Killam Postdoctoral Fellowship
- 1985-1987 British Columbia Science Council Postgraduate Scholarship
- 1983-1985 NSERC Postgraduate Scholarship
- 1982 Chevron Canada Ltd., Oceanography Scholarship

MENTORING:

- Post Docs:** Dr. Guoqi Han (with Moto Ikeda, now at Memorial University),
 Dr. Seunghyun Son (now at NOAA Silver Spring),
 Dr. Stephanie Henson (now at U. Southampton)
- Graduate Students:** Remy Luerssen, Jennifer Bosch, Kasey Legaard, Chris Proctor, Ryan Weatherbee, Mahima Jaini (with Rick Wahle), Nick Foukal, Kerstin Cullen
- Undergraduate (Honors, Capstones, Independent Studies, Research Assistants):** Elizabeth Cough, Dan Showda, Stuart Goldberg, Madeline Peak, Cameron Jenness, Hannah Horecka, Kenneth Regan, Emily Farel, Samantha Bond, Juliana Tavora, Deanna Watson, Andrew Goode

TEACHING:

SMS 302: Oceanography,
SMS 540: Satellite Oceanography
SMS 491: Intro to Computer Programming, Data Analysis and Matlab,
Plus others courses episodically.

GUEST LECTURER, INTERNATIONAL GRADUATE Programs:

Chile: Olmue 1997, IOCCG Ocean color & primary productivity from space,
USA: Darling Marine Center 2004, NSF Geostatistics & Marine Data,
China: Shanghai 2009, Summer Grad Program, Satellite Oceanography,
Chile: U. Concepcion 2014, ASI XIV Satellite Oceanography

OTHER: Senior scientist 18 oceanographic cruises, participating scientist 20 additional cruises, Guest Editor: Deep Sea Research 2

MEMBER: American Geophysical Union

INTERESTS: competitive swimming, wilderness backpacking, foreign travel, foreign people, good wine, beer & food