

PUBLICATIONS

- ¹¹⁷Andersson, A.J., **Bates, N.R.**, Jeffries, M., and Mackenzie, F.T., in review. *Clues from current high CO₂ environments on the effects of ocean acidification on CaCO₃ preservation*. Aquatic Geochemistry.
- ¹¹⁶Smith, S.R., Sarkis, S., Murdoch, T.J.T., Weil, E.A. Croquer, A., **Bates, N.R.**, Johnson, R.J., de Putron, S.J., and Andersson, A.J., in press. *Threats to Coral Reefs in Bermuda*. Environmental Threats to Coral Reefs (editor, C. Shepard), Springer-Verlag.
- ¹¹⁵Cross, J.N., Mathis, J.T., **Bates, N.R.**, and Byrne, R.H., in press. *Conservative and non-conservative variations of total alkalinity on the southeastern Bering Sea*. Marine Chemistry, MARCHE-D-12-00149R1.
- ¹¹⁴**Bates, N.R.**, Garley, R., Frey, K., and Mathis, J.T., in review. *Seawater carbonate chemistry of sea-ice and melt ponds in the Arctic Ocean*. Geophysical Research Letters.
- ¹¹³Arrigo, K.R., Perovich, D.K., Pickart, R.S., Brown, Z.W., van Dijken, G.L., Lowry, K.E., Mills, M.M., Palmer, M.A., Balch, W.M., **Bates, N.R.**, Benitez-Nelson, C., Frey, K.E., Laney, S.R., Mathis, J., Matsuoka, A., Mitchell, B.G., Moore, G.W.K., Reynolds, R.A., Sosik, H.M., and Swift, J.H. in review. *Under-ice phytoplankton blooms in the Chukchi Sea*. Global Change Biology.
- ¹¹²**Bates, N.R.**, Mintrop, L., and Garley, R., in review. *Small volume, high precision measurements of dissolved inorganic carbon for natural water analyses and ocean acidification studies*. Limnology and Oceanography-Methods.
- ¹¹¹**Bates, N.R.**, and Jeffries, M.A., in review. *Synthesis of the global ocean carbon cycle I: Empirically based model assessments of global climatological seawater carbonate chemistry variability and air-sea CO₂ gas exchange rates*. Global Biogeochemical Cycles.
- ¹¹⁰**Bates, N.R.**, and Jeffries, M.A., in review. *Synthesis of the global ocean carbon cycle II: Global estimates of net community production*. Global Biogeochemical Cycles.
- ¹⁰⁹**Bates, N.R.**, Orchowska, M.I., Garley, R., and Mathis, J.T., in review. *Present day vulnerability of the western Arctic seafloor to seasonal ocean acidification*. Biogeosciences, manuscript bg-2012-402.
- ¹⁰⁸Andersson, A.J., **Bates, N.R.**, and de Putron, S., in review. *Future changes in reef metabolism oppose anthropogenic ocean acidification on coral reefs*. Nature Geoscience.
- ¹⁰⁷Lomas, M.W., **Bates, N.R.**, Johnson, R.J., Knap, A.H., Steinberg, D.K., Carlson, C.A., in press. *Two decades and counting: 23-years of sustained open ocean biogeochemical measurements in the Sargasso Sea*. Deep-Sea Research II.
- ¹⁰⁶Singh, A., Lomas, M.W., and **Bates, N.R.**, in press. *Revisiting N₂ fixation in the North Atlantic Ocean: Significance of Redfield ratio and climate variability*. Deep-Sea Research II.
- ¹⁰⁵Cai, W.-J., Chen, B., Chen, L., Gao, L., Gao, Z., Sun, H., Zhang, Y., **Bates, N.R.**, Anderson, L.G., Kirchman, D.L., Lee, S., Jin, M., Wang, Y., Hu, X., Huang, W.J., Chen, J., Gao, S., Xu, S., Kang, J., Sun, X., Ji, W., and Yu, X., in review. *Increased biological CO₂ uptake following sea-ice retreat in the northern Arctic Ocean*. Nature Geosciences.
- ¹⁰⁴Bell, T., Garçon, V., Shital, R., Wallace, D.W.R., Bakker, D.C.E., **Bates, N.R.**, Baker, A., Bange, H., Boyd, P., Carpenter, L., Lana, A., Le Traon, P., Olsen, A., Pfeil, B., Quack, B., Wittke, F., in press. *In situ observations and synthesis*. COST chapter. COST/SOLAS book.
- ¹⁰³Cai, W.J., **Bates, N.R.**, Guo, L., Anderson, L.G., Mathis, J., Wanninkhof, R., Hansell, D.A., Chen, L., and Semiletov, I., in press. *Carbon Fluxes across Boundaries in the Pacific Sector of the Arctic Ocean in a Changing Environment*. In: *The Pacific Arctic Sector: Status and Trends* (J.M. Grebmeier, W. Maslowski and J. Zhao, Editors), Springer.
- ¹⁰²Andersson, A.J., Krug, L.A., **Bates, N.R.**, and Doney, S., 2013. *Air-sea CO₂ flux in the North Atlantic subtropical gyre: role and influence of STMW formation*. Deep-Sea Research II.
- ¹⁰¹Mathis, J.T., Grebmeier, J.M., Hansell, D.A., Hopcroft, R.R., Kirchman, D.L., Lee, S.H., Moran, S.B. and **Bates, N.R.**, in press. *Carbon Biogeochemistry of the Western Arctic: Production, Export, and Ocean Acidification*. In: *The Pacific Arctic Sector: Status and Trends* (J.M. Grebmeier, W. Maslowski and J. Zhao, Editors), Springer.
- ¹⁰⁰Schuster, U., McKinley, G., **Bates, N.R.**, Chevallier, F., Doney, S., Fay, A., González-Dávila, M., Gruber, N., Jones, S., Landscützer, P., Lefévre, N., Manizza, M., Mathis, J., Metzl, M., Olsen, A., Rios, A., and Santana-Casiano, J.M., 2013. *Atlantic and Arctic Air-Sea CO₂ Fluxes, 1990-2009*. Biogeosciences, 10, 1, 607-627; doi: 10.5194/bg-10-607-2013.

- ⁹⁹Letscher, R.T., Hansell, D.A., Kadko, D., and **Bates, N.R.**, 2013. *Dissolved organic nitrogen dynamics in the Arctic Ocean*. Marine Chemistry, 148, 1-8, <http://dx.doi.org/10.1016/j.marchem.2012.10.002>.
- ⁹⁸Venti, A., Kadko, D., Andersson, A., Langdon, C., and **Bates, N.R.**, 2012. *A multi tracer approach to estimate reef residence times*. Limnology and Oceanography, 10, 1078-1098; doi: 10.4319/lom.2012.10.1078.
- ⁹⁷**Bates, N.R.**, 2012. *Multi-decadal uptake of carbon dioxide into subtropical mode waters of the North Atlantic Ocean*. Biogeosciences, 9, 2649-2659, doi: 10.105194/bg-9-2649-2012.
- ⁹⁶**Bates, N.R.**, Best, M.H., Neely, K., Garley, R., Dickson, A.G., and Johnson, R.J., 2012. *Indicators of anthropogenic carbon dioxide uptake and ocean acidification in the North Atlantic Ocean*. Biogeosciences, 9, 2509-2522, doi: 10.105194/bg-9-2509-2012.
- ⁹⁵Cross, J., Mathis, J.T., and **Bates, N.R.**, 2012. *Net community production and TOC dynamics on the Bering Sea shelf in 2009*. Deep-Sea Research II, 65-70, 98-109, doi: 10.01016/j.dsr2.2012.02.003.
- ⁹⁴Arrigo, K.J., Perovich, D.K., Pickart, R.S., Brown, Z.W., van Dijken, G.L., Lowry, K.E., Mills, M.M., Palmer, M.A., Balch, W.M., **Bates, N.R.**, Benitez-Nelson, C., Brownlee, E., Ehn, J.K., Frey, K.E., Garley, R., Laney, S.R. Mathis, J.T., Matsuoko, A., Mitchell, B.G., Moore, G.W.K., Ortega-Retuerta, E., Plasshenski, C.M., Reynolds, R.A., and Swift, J.H., 2012. *Massive phytoplankton blooms under Arctic sea-ice*. Science, 336(6087), 1408-1409, doi: 10.1126/science.1215065.
- ⁹³Davies, N., Field, D., and GO Network, 2012. *A genomic network to measure Earth*. Nature.
- ⁹²Friedrich, T., Timmermann, A., Jungclaus, J.H., Heinemann, M., Chikamoto, M., Abe-Ouchi, A., Gonzalez-Davila, M., Santana-Casiano, J.M., Church, M.J., **Bates, N.R.**, Gledhill, D.K., McLead, E., and Mouchet, A., 2012. *Detecting regional trends in ocean acidification against the background of natural variability*. Nature Climate Change 2(3), 167-171, doi: 10.1038/NCLIMATE1372.
- ⁹¹Poulton, A.J., Young, J.R., **Bates, N.R.**, and Balch, W.M., 2011. *Biometry of Emiliania huxleyi coccoliths along the Patagonia shelf*. Marine Ecology Progress Series, 443, 1-17, doi: 10.3354/meps09445.
- ⁹⁰Mathis, J.T., Cross, J., and **Bates, N.R.**, 2011. *The role of ocean acidification in systemic carbonate mineral suppression in the Bering Sea*. Geophysical Research Letters, L19602, doi: 10.1029/2011GL048884.
- ⁸⁹Zablocki, J., Andersson, A.J., and **Bates, N.R.**, 2011. *Diurnal aquatic CO₂ dynamics in a Bermudian mangrove system*. Aquatic Geochemistry, 17(6), 841-859, doi: 10.1007/s10498-011-9142-3.
- ⁸⁸**Bates, N.R.**, Cai, W.-J., and Mathis, J.T., 2011. *The ocean carbon cycle in the western Arctic Ocean: Distributions and air-sea fluxes of carbon dioxide (CO₂)*. Oceanography. 24(3), 186-201, doi: 10.5670/oceanog.2011.71; <http://dx.doi.org/10.5670/oceanog.2011.71>.
- ⁸⁷Levine, N.M., Doney S.C., Lima I., Wanninkhof, R., Sabine C.L., Feely, R.A., and **Bates, N.R.**, 2011. *The impact of interannual variability on the uptake and accumulation of anthropogenic CO₂ in the North Atlantic*. Global Biogeochemical Cycles, 25, GB3022, doi:10.1029/2010GB003892
- ⁸⁶Sparks, T.H., Butchart, S.H.M., Balmford, A., Bennun, L., Stanwell-Smith, D., Walpole, M., **Bates, N.R.**, Bombard, B., Bruno, J., Buchanan, G., Chenery, A.M., Collen, B., Csirke, J., Diaz, R.J., Dulvey, N.K., Fitzgerald, C., Kapos, V., Mayaux, P., Selig, E., Tierney, M., Waycott, M., Wood, L., and Green, R.E., 2011. *Linked indicator sets for addressing biodiversity loss*. Oryx-The International Journal of Conservation, 45 (3), 411-419, doi:10.1017/S003060531100024X, 21 June 2011.
- ⁸⁵**Bates, N.R.**, Jeffries, M.A., and Mathis, J.T., 2011. *Air-sea CO₂ fluxes in the Bering Sea*. Biogeosciences, 8(5), 1237-1253, doi: 10.5194/bg-8-1237-2011.
- ⁸⁴Mathis, J.T., Cross, J., and **Bates, N.R.**, 2011. Coupling primary production and terrestrial runoff to ocean acidification and carbonate mineral suppression in the eastern Bering Sea. Global Biogeochemical Cycles, 116, C02030, doi: 10.1029/2010JC006453, Feb. 19, 2011.
- ⁸³Beman, J.M., Chow, C.-E., King, A.L., Feng, Y., Fuhrman, J.A., Andersson, A., **Bates, N.R.**, Popp, B.N., and Hutchins, D.A., 2011. *Global oceanic nitrification rates as a consequence of ocean acidification*. Proceedings of the National Academy of Sciences. 108(1), 208-213, doi: 10.1073/pnas.1011053108, Jan. 4, 2011.
- ⁸²Saba, V.S., Friedrichs, M.A.M., Carr, M.-E., Antoine, D., Armstrong, R.A., Asanuma, I., Aumont, O., **Bates, N.R.**, Behrenfeld, M.J., Bennington, V., Bopp, L., Bruggeman, J., Buitenhuis, E.T., Church, M.J., Ciotti, A.M., Doney, S.C., Dowell, M., Dunne, J., Dutkiewicz, S., Gregg, W., Hoepffner, N., Hyde, K.J.W., Ishizaka, J., Kameda, T., Karl, D.M., Lima, I., Lomas, M.W., Marra, J., McKinley, G.A., Mélin, F., Moore, J.K., Morel, A., O'Reilly, J., Salihoglu, B., Scardi, M., J. Smyth, T.J., Tang, S., Tjiputra, J., Uitz,

- J., Vichi, M., Waters, K., Westberry, T.K., and Yool, A., 2010. *The challenges of modeling depth-integrated marine primary productivity over multiple decades: A case study at BATS and HOT*. Global Biogeochemical Cycles, 24, GB3020, doi: 10.1029/2009GB003655, Sep 15, 2010.
- ⁸¹**Bates, N.R.**, Amat, A., and Andersson, A.J., 2010. *The interaction of carbonate chemistry and coral reef calcification: the carbonate chemistry coral reef ecosystem feedback (CREF) hypothesis*. Biogeosciences, 7 (5), 2509-2530, doi:10.5194/bg-7-2509-2010. Corrigendum: Biogeosciences, 7 (10), 3005-3006, doi: 10.5194/bg-7-3005-2010.
- ⁸⁰Mathis, J.T., Cross, J., **Bates, N.R.**, Moran, S.B., Lomas, M.W., and Stabeno, P.J., 2010. *Seasonal distribution of dissolved inorganic carbon and net community production on the Bering Sea shelf*. Biogeosciences, 7(5), 1769-1787, doi: 10.5194/bg-7-1769-2010.
- ⁷⁹Jutterström, S., Anderson, L.G., **Bates, N.R.**, Bellerby, R., Johannessen, T., Jones, E.P., Key, R.M., Lin, X., Olsen, A., and Omar, A.M., 2010. *Arctic Ocean data in CARINA*. Earth System Science Data, 2, 71-78, Feb. 10, 2010.
- ⁷⁸Lomas, M.W., Steinberg, D.K., Dickey, T.D., Carlson, C.A., Nelson, N.B., Condon, R.H., and **Bates, N.R.**, 2010. *Increased ocean carbon export in the Sargasso Sea is countered by its enhanced mesopelagic attenuation*. Biogeosciences, 7 (1), 57-70.
- ⁷⁷Watson, A.J., Schuster, U., Bakker, D.C.E., **Bates, N.R.**, Corbiere, A., Gonzalez-Davila, M., Friedrich, T., Hauck, J., Heinze, C., Johannessen, T., Körtzinger, A., Metzl, N., Olafsson, J., Olsen, A., Oschlies, A., Padin, X.A., Pfleil, B., Santana-Casiano, M., Steinhoff, T., Telszewski, M., Rios, A.F., Wallace, D.W.R., and Wanninkhof, R., 2009. *Accurately tracking the variation in the North Atlantic sink for atmospheric CO₂*. Science, 326, 1391-1393, doi: 10.1126/science.1177394, Dec. 9, 2009.
- ⁷⁶Reid, P.C., Fischer, A., Lewis-Brown, E., Meredith, M., Sparrow, M., Andersson, A.J., Antia, A., **Bates, N.R.**, Bathmann, U., Beaugrand, G., Brix, H., Dye, S., Edwards, M., Furevik, T., Gangstø, R., Hátún, H., Hopcroft, R.R., Kendall, M., Kasten, S., Keeling, R., Corinne Le Quéré, C., Mackenzie, F.T., Malin, G., Mauritzen, C., Ólafsson, J., Paull, C., Rignot, E., Shimada, K., Vogt, M., Wallace, C., Wang, Z., and Washington R., 2009. *Impacts of the oceans on climate change*. Advances In Marine Biology, 56, 1-150, doi: 10.1016/S0065-2881(09)56001-4.
- ⁷⁵**Bates, N.R.**, and Mathis, J.T., 2009. *The Arctic Ocean marine carbon cycle: Evaluation of air-sea CO₂ exchanges, ocean acidification impacts and potential feedbacks*. Biogeosciences, 6 (11), 2433- 2459.
- ⁷⁴Birdsey, R., **Bates, N.R.**, Behrenfeld, M., Davis, K., Doney, S.C., Feely, R.A., Hansell, D.A., Heath, L.S., Kasischke, E., Law, B.E., Lee, C., McGuire, D., Raymond, P., and Tucker, C.J., 2009. *Carbon cycle observations: Gaps threaten climate mitigation policies*. EOS, Transactions, American Geophysical Union, 90 (34), 292-293, 25 August 2009, Paper 2009ES002647.
- ⁷³Marshall, J., Andersson, A., **Bates, N.**, Dewar, W., Doney, S., Edson, J., Ferrari, R., Fratantoni, D., Gregg, M., Joyce, T., Kelly, K., Lozier, S., Lumpkin, R., Samuelson, R., Skyllingstad, E., Straneo, F., Talley, L., Toole, J., and Weller, R., 2009. *Observing the cycle of convection and restratification over the Gulf Stream system and the subtropical gyre of the North Atlantic Ocean: preliminary results from the CLIMODE field campaign*. Bulletin of the American Meteorological Society, 90, 1337-1350, doi:10.1175/2009BAMS2706.1, Sep. 2009.
- ⁷²**Bates, N.R.**, Mathis, J.T., and Cooper, L., 2009. *The effect of ocean acidification on biologically induced seasonality of carbonate mineral saturation states in the Western Arctic Ocean*. Journal of Geophysical Research-Oceans, 114, C11007, doi:10.1029/2008JC004862.
- ⁷¹Lomas, M.W., Roberts, N., Lipschultz, F., Krause, J.W., Nelson, D.M., and **Bates, N.R.**, 2009. *Biogeochemical responses to late-winter storms in the Sargasso Sea. IV. Rapid succession of major phytoplankton groups*. Deep-Sea Research I, 56(6), 892-908, doi:10.1016/j.dsr.2009.03.004.
- ⁷⁰Dickey, T.D., **Bates, N.**, Byrne, R.H., Chang, G., Chavez, F.P., Feely, R.H., Hansen, A., Karl, D., Moore, C., Wanninkhof, R., and Sabine C.L., 2009. *The NOPP O-SCOPE and MOSEAN Projects: Advanced sensing for ocean observing systems*. Oceanography, 22 (2), 168-181, June 2009.
- ⁶⁹Takahashi, T., Sutherland, S.C., Wanninkhof, R., Sweeney, C., Feely, R.A., Chipman, D.W., Hales, B., Friederich, G., Chavez, F., Watson, A., Bakker, D.C.E., Schuster, U., Metzl, N., Yoshikawa-Inoue, H., Ishii, M., Midorikawa, Nojiri, Y., Kortzinger, A., Steinhoff, T., Hoppema, M., Olafsson, J., Arnarson, T.S., Tilbrook, B., Johannessen, T., Olsen, A., Bellerby, R., Wong, C.S., Delille, B., **Bates, N.R.**, and de Baar, H.J.W., 2009. *Climatological mean and decadal change in surface ocean pCO₂, and net sea-air*

- CO_2 flux over the global oceans. Deep-Sea Research II, 56 (8-10), 554-577, doi:10.1016/j.dsr2.2008.12.009.
- ⁶⁸Schuster, U., Watson, A.J., **Bates, N.R.**, Corbiere, A., Gonzalez-Davila, M., Metzl, N., Pierrot, D., and Santana-Casiano, M., 2009. Trends in North Atlantic sea-surface fCO_2 from 1990 to 2006. Deep-Sea Research II, 56, 620-629, doi:10.1016/j.dsr2.2008.12.011.
- ⁶⁷Mathis, J.T., **Bates, N.R.**, Hansell, D.A., and Babilo, T., 2009. Net community production in the northeastern Chukchi Sea. Deep-Sea Research II, 56(17), 1213-1222, doi:10.1016/j.dsr2.2008.10.017.
- ⁶⁶Lomas, M.W., Lipschultz, F., Nelson, D.M. Krause, J.W., and **Bates, N.R.**, 2009. Biogeochemical responses to late-winter storms in the Sargasso Sea. I. Pulses of primary and new production. Deep-Sea Research I, 56(6), 843-860, doi: 10.1016/j.dsr.2008.09.002.
- ⁶⁵Hood, R.R., Naqvi, W., Wiggert, J., Goes, J., Coles, V., McCreary, J., **Bates, N.R.**, Karuppasamy, P.K., Mahowald, N., Seitzinger, S., and Meyers, G., 2008. Research opportunities and challenges in the Indian Ocean. EOS, Transactions, American Geophysical Union, 89(13), 125-126, doi:10.1029/2008EO130001.
- ⁶⁴Grebmeier, J.M., **Bates, N.R.**, and Devol, A. 2008. Continental Margins of the Arctic Ocean and Bering Sea. In North American Continental Margins: A Synthesis and Planning Workshop. U.S. Carbon Cycle Science Program, Washington D.C., (Editors, B. Hales, W.-J. Cai., B.G. Mitchell, C.L. Sabine and O. Schofield, 120 pp), p. 61-72.
- ⁶³Andersson, A.J., Mackenzie, F.T., and **Bates, N.R.**, 2008. Life on the margin: implications of ocean acidification on Mg-calcite, high latitude and cold-water marine calcifiers. Marine Ecology Progress Series, 373, 265-273, doi:10.3354/meps07639.
- ⁶²Li, Q.P., Hansell, D.A., McGillicuddy, D.J., **Bates, N.R.**, and Johnson, R.J., 2008. Tracer-based assessment of the origin and biogeochemical transformation of a cyclonic eddy in the Sargasso Sea. Journal of Geophysical Research, 113, C10006, doi:10.1029/2008JC004840.
- ⁶¹Lepore, K., Moran, S.B., Grebmeier, J.M., Cooper, L.W., Lalande, C., Maslowski, W., Hill, V., **Bates, N.R.**, Hansell, D.A., Mathis, J.T., and Kelly, R.P., 2007. Seasonal and interannual changes in particulate organic carbon export and deposition in the Chukchi Sea. Journal of Geophysical Research, 112, C10024, doi:10.1029/2006JC003555.
- ⁶⁰Mathis, J.T., Hansell, D.A., Kadko, D., **Bates, N.R.**, and Cooper, L.W., 2007. Determining net dissolved organic carbon production in the hydrographically complex western Arctic Ocean. Limnology and Oceanography, 52 (5), 1789-1799, doi: 10.4319/lo.2007.52.5.1789, Sep. 2007.
- ⁵⁹Andersson, A.J., **Bates, N.R.**, and Mackenzie, F.T., 2007. Dissolution of carbonate sediments under rising pCO_2 and ocean acidification: Observations from Devil's Hole, Bermuda. Aquatic Geochemistry, 13 (3), 237-264, doi 10.1007/s10498-007-9018-8.
- ⁵⁸**Bates, N.R.**, 2007. Interannual variability of the oceanic CO_2 sink in the subtropical gyre of the North Atlantic Ocean over the last two decades. Journal of Geophysical Research (Oceans), 112 (C9), C09013, doi: 10.1029/2006JC003759, May 4, 2007.
- ⁵⁷**Bates, N.R.**, and Peters, A.J., 2007. The contribution of atmospheric acid deposition to ocean acidification in the subtropical North Atlantic Ocean. Marine Chemistry, 107 (4), 547-558, doi:10.1016/j.marchem.2007.08.002.
- ⁵⁶McGillicuddy, D.J., Anderson, L.A., **Bates, N.R.**, Bibby, T., Buesseler, K.O., Carlson, C.A., Davis, C.S., Ewart, C., Falkowski, P.G., Goldthwait, S.A., Hansell, D.A., Jenkins, W.J., Johnson, R., Kosnyrev, V.K., Ledwell, J.R., Li, Q.P., Siegel, D.A., and Steinberg, D.K., 2007. Eddy/wind interactions stimulate extraordinary mid-ocean plankton blooms. Science, 316 (5827), 1016-1021, doi:10.1126/science.1136256.
- ⁵⁵Mathis, J.T., Pickart, R.S., Hansell, D.A., Kadko, D., and **Bates, N.R.**, 2007. Eddy transport of organic carbon and nutrients from the Chukchi Shelf: Impact on the upper halocline of the western Arctic Ocean. Journal of Geophysical Research (Oceans), 112, C05011, doi: 10.1029/2006JC003899.
- ⁵⁴**Bates, N.R.**, Moran, S.B., Hansell, D.A., and Mathis, J.T., 2006. An increasing CO_2 sink in the Arctic Ocean due to sea-ice loss? Geophysical Research Letters, 33, L23609, doi:10.1029/2006GL027028.
- ⁵³**Bates, N.R.**, 2006. Air-sea CO_2 fluxes and the continental shelf pump of carbon in the Chukchi Sea adjacent to the Arctic Ocean. Journal of Geophysical Research (Oceans), 111, C10013, doi:10.1029/2005JC003083.

- ⁵²**Bates, N.R.**, Pequignet, A.C., and Sabine, C.L. 2006. *Ocean carbon cycling in the Indian Ocean: II. Estimates of net community production*. Global Biogeochemical Cycles, 20 (3), GB3021, doi:10.1029/2005GB002492.
- ⁵¹**Bates, N.R.**, Pequignet, A.C., and Sabine, C.L. 2006. *Ocean carbon cycling in the Indian Ocean: I. Spatiotemporal variability of inorganic carbon and air-sea CO₂ gas exchange*. Global Biogeochemical Cycles, 20 (3), GB3020, doi:10.1029/2005GB002491.
- ⁵⁰Brix, H., Gruber, N., Karl, D.M., and **Bates, N.R.**, 2006. *On the relationships between primary, net community, and export production in subtropical gyres*. Deep-Sea Research II, 53 (5-7), 698-717, doi:10.1016/j.dsr2.2006.01.024.
- ⁴⁹Hood, R.R., Laws, E.A., Armstrong, R.A., **Bates, N.R.**, Brown, C.W., Carlson, C.A., Chai, F., Doney, S.C., Falkowski, P.G., Feely, R.A., Friedrichs, M.A.M., Landry, M.R., Moore, J.K., Nelson, D.M., Richardson, T.L., Salihoglu, B., Schartau, M., Toole, D.A., and Wiggert, J.D., 2006. *Pelagic functional group modeling: Progress, challenges and prospects*. Deep-Sea Research I, 53 (5-7), 459-512, doi:10.1016/j.dsr2.2006.01.025.
- ⁴⁸Walsh, J.J., Dieterle, D.A., Maslowski, W., Grebmeier, J.M., Whittlestone, T.E., Flint, M., Sukhanova, I.N., **Bates, N.**, Cota, G.F., Stockwell, D., Moran, S.B., Hansell, D.A., and McRoy, C.P., 2005. *A numerical model of neglected spring primary production within the Chukchi/Beaufort Seas*. Deep-Sea Research II, 52, 3541-3568, doi: 1016/j.dsr2.2005.09.009.
- ⁴⁷**Bates, N.R.**, Best, M.H.P., and Hansell, D.A., 2005. *Spatio-temporal distribution of dissolved inorganic carbon and net community production in the Chukchi and Beaufort Seas*. Deep-Sea Research II, 52 (22-24), 3303-3323, doi:10.1016/j.dsr2.2005.10.005.
- ⁴⁶Mathis, J.T., Hansell, D.A., and **Bates, N.R.**, 2005. *Strong hydrographic controls on spatial and seasonal variability of dissolved organic carbon in the Chukchi Sea*. Deep-Sea Research, 52 (22-24), 3245-3258, doi:10.1016/j.dsr2.2005.10.002.
- ⁴⁵Moran, S.B., Kelly, R.P., Hagstrom, K., Smith, J.N., Grebmeier, J.M., Cooper, L.W., Cota, G.F., Walsh, J.J., **Bates, N.R.**, Hansell, D.A., Maslowski, W., Nelson, R.P., and Mulsow, S., 2005. *Seasonal changes in POC export flux in the Chukchi Sea and implications for water column-benthic coupling in Arctic shelves*. Deep-Sea Research, 52 (22-24), 3427-3451, doi:10.1016/j.dsr2.2005.09.011.
- ⁴⁴**Bates, N.R.**, Hansell, D.A., Moran, S.B., and Codispoti, L.A., 2005. *Seasonal and spatial distributions of particulate organic matter (POM) in the Chukchi and Beaufort Seas*. Deep-Sea Research II, 52 (22-24), 3324-3343, doi:10.1016/j.dsr2.2005.10.003.
- ⁴³Hansell, D.A., Kadko, D., and **Bates, N.R.**, 2004. *Degradation of terrigenous dissolved organic carbon in the western Arctic Ocean*. Science, 304 (5672), 858-861, doi: 10.1126/science.1096175.
- ⁴²Lomas, M., and **Bates, N.R.**, 2004. *Potential controls on interannual partitioning of organic carbon during the winter/spring phytoplankton bloom at the Bermuda Atlantic Time-series Study (BATS) site*. Deep-Sea Research II, 51 (11), 1619-1636, doi:10.1016/j.dsr.2004.06.007.
- ⁴¹**Bates, N.R.**, and Hansell, D.A., 2004. *Temporal variability of excess nitrate in the subtropical mode water of the North Atlantic Ocean*. Marine Chemistry, 84 (3-4), 225-241, doi:10.1016/j.marchem.2003.08.003, Jan. 2004.
- ⁴⁰Hansell, D.A., **Bates, N.R.**, and Olson, D.B., 2004. *Excess nitrate and nitrogen fixation in the North Atlantic Ocean*. Marine Chemistry, 84 (3-4), 243-265, doi:10.1016/j.marchem.2003.08.004, Jan. 2004.
- ³⁹Karl, D.M., **Bates, N.R.**, Emerson, S., Harrison, P.J., Jeandal, C., Liu, K.K., Marty J.-C., Michaels A.F., Miquel, J.C., Neuer, S., Nojiri, Y., and Wong, C.S., 2003. *Temporal studies of biogeochemical processes in the world's oceans during the JGOFS era*. In *Ocean Biogeochemistry: The Role of the Ocean Carbon Cycle in Global Climate Change*. (M.R. Fasham, ed.), Springer, pp. 239-265.
- ³⁸Gruber, N., **Bates, N.R.**, and Keeling, C.D., 2002. *Interannual variability in the North Atlantic Ocean carbon sink*. Science, 298 (5602), 2374-2378, doi: 10.1126/science.1077077, Dec. 20, 2002.
- ³⁷**Bates, N.R.**, Pequignet, A.C., Johnson, R.J., and Gruber, N. 2002. *A short-term sink for atmospheric CO₂ in subtropical mode water of the North Atlantic Ocean*. Nature, 420 (6915), 489-493, doi:10.1038/nature01253, Dec. 5, 2002.
- ³⁶Lomas, M., **Bates, N.R.**, Knap, A.H., Karl, D.A., Lukas, R., Landry, M.R., Bidigare, R.R., Steinberg, D.A., and Carlson, C.A., 2002. *Refining our understanding of ocean biogeochemistry and ecosystem functioning*. EOS, November 2002.

- ³⁵Takahashi, T., Sutherland, S.C., Sweeney, C., Poisson, A., Metzl, N., Tilbrook, B., **Bates, N.**, Wanninkhof, R., Feely, R.A., Sabine, C., Olafsson, J., and Nojiri, Y., 2002. *Global sea-air CO₂ flux based on climatological surface ocean pCO₂, and seasonal biological and temperature effects*. Deep-Sea Research II, 49 (9-10), 1601-1622, doi:10.1016/S0967-0645(02)00003-6.
- ³⁴**Bates, N.R.**, 2002. *Interannual variability in the global ocean uptake of CO₂*. Geophysical Research Letters, 29 (5), 1059-1064, doi:10.1029/2001GL013571, Mar. 1, 2002.
- ³³Lipschultz, F.J., **Bates, N.R.**, Carlson, C.A., and Hansell, D.A., 2002. *New production in the Sargasso Sea: History and current status*. Global Biogeochemical Cycles, 16 (1), 1001, doi:10.1029/2000GB001319, Mar. 2002.
- ³²**Bates, N.R.**, 2002. *Seasonal variability of the effect of coral reefs on seawater CO₂ and air-sea CO₂ exchange*. Limnology and Oceanography, 47 (1), 43-52, Jan. 2002.
- ³¹Karl, D.M., Dore, J.E., Michaels, A.F., and **Bates, N.R.**, 2001. *The U.S. JGOFS Time-series Observation Programs*. Oceanography, 14(4), 6-17, November 2001.
- ³⁰**Bates, N.R.**, and Merlivat, L., 2001. *The influence of short-term wind variability on air-sea CO₂ exchange*. Geophysical Research Letters, 28 (17), 3281-3284, doi: 10.1029/2001GL012897, Sep. 1, 2001.
- ²⁹**Bates, N.R.**, Samuels, L., and Merlivat, L., 2001. *Biogeochemical and physical factors influencing seawater fCO₂ and air-sea CO₂ exchange on the Bermuda coral reef*. Limnology and Oceanography, 46 (4), 833-846, Jun. 2001.
- ²⁸Nelson, N.B., **Bates, N.R.**, Siegel, D.A., and Michaels, A.F., 2001. *Spatial variability of the CO₂ sink in the Sargasso Sea*. Deep-Sea Research II, 48 (8-9), 1801-1821, doi:10.1016/S0967-0645(00)00162-4.
- ²⁷Hood, R.R., **Bates, N.R.**, Capone, D.G., and Olson, D.B., 2001. *Modeling the effect of nitrogen fixation on carbon and nitrogen fluxes at BATS*. Deep-Sea Research II, 48 (8-9), 1609-1648, doi:10.1016/S0967-0645(00)00160-0.
- ²⁶Ono, S., Ennyu, A., Najjar, R.G., and **Bates, N.R.**, 2001. *Shallow remineralization in the Sargasso Sea estimated from seasonal variations in oxygen, dissolved inorganic carbon and nitrate*. Deep-Sea Research II, 48 (8-9), 1567-1582, doi:10.1016/S0967-0645(00)00154-5.
- ²⁵**Bates, N.R.**, 2001. *Interannual variability of oceanic CO₂ and biogeochemical properties in the Western North Atlantic subtropical gyre*. Deep-Sea Research II, 48 (8-9), 1507-1528, doi:10.1016/S0967-0645(00)00151-X.
- ²⁴Steinberg, D.K., Carlson, C.A., **Bates, N.R.**, Johnson, R.J., Michaels, A.F., and Knap, A.H., 2001. *Overview of the US JGOFS Bermuda Atlantic Time-series Study (BATS): a decade-scale look at ocean biology and biogeochemistry*. Deep-Sea Research II, 48 (8-9), 1405-1447, doi:10.1016/S0967-0645(00)00148-X.
- ²³**Bates, N.R.**, Merlivat, L., Beaumont, L., and Pequignet, A.C., 2000. *Intercomparison of shipboard and moored CARIOCA buoy seawater fCO₂ measurements in the Sargasso Sea*. Marine Chemistry, 72 (2-4), 239-255, doi:10.1016/S0304-4203(00)00084-0, Dec. 2000.
- ²²Steinberg, D.K., Carlson, C.A., **Bates, N.R.**, Goldthwait, S.A., Madin, L.P., and Michaels, A.F., 2000. *Zooplankton vertical migration and the active transport of dissolved organic and inorganic carbon in the Sargasso Sea*. Deep-Sea Research I, 47, 137-158, doi:10.1016/S0967-0637(99)00052-7, Jan. 2000.
- ²¹Takahashi, T., Wanninkhof, R.H., Feely, R.A., Weiss, R.F., Chipman, D.W., **Bates, N.R.**, Olafsson, J., Sabine, C.L., and Sutherland, S.G., 1999. *Net sea-air CO₂ flux over the global oceans: An improved estimate based on the sea-air pCO₂ difference*. Proceedings of the Second International CO₂ in the Oceans Meeting, Tsukuba, Japan, January 1999, CGER-I037-99, 9-15.
- ²⁰Carlson, C.A., **Bates, N.R.**, Hansell, D.A., and Ducklow, H.W., 1999. *Estimation of bacterial respiration and growth efficiency in the Ross Sea, Antarctica*. Aquatic Microbial Ecology, 19 (3), 229-244, doi:10.3354/ame019229, Oct. 27, 1999.
- ¹⁹**Bates, N.R.**, and Hansell, D.A., 1999. *A high resolution study of surface layer hydrographic and biogeochemical properties between Chesapeake Bay and Bermuda*. Marine Chemistry, 67, 1-16, doi:10.1016/S0304-4203(99)00045-6, Oct. 1999.
- ¹⁸McGillicuddy, D.J., Johnson, R., Siegel, D.A., Michaels, A.F., **Bates, N.R.**, Knap, A.H., and Michaels, A.F., 1999. *Mesoscale variations of biogeochemical properties in the Sargasso Sea*. Journal of Geophysical Research, 104 (C6), 13,381-13,394, doi: 10.1029/1999JC900021, Jun. 15, 1999.

- ¹⁷**Bates, N.R.**, Takahashi, T., Chipman, D.W., and Knap, A.H., 1998. *Variability of pCO₂ on diel to seasonal timescales in the Sargasso Sea near Bermuda*. Journal of Geophysical Research, 103 (C8), 15,567-15,585, doi: 10.1029/98JC00247, Jul. 15, 1997.
- ¹⁶**Bates, N.R.**, Knap, A.H., and Michaels, A.F., 1998. *Contribution of hurricanes to local and global estimates of air-sea exchange of CO₂*. Nature, 395, 58-61, doi: 10.1038/25703, Sep. 3, 1998.
- ¹⁵**Bates, N.R.**, Hansell, D.A., Carlson, C.A., and Gordon, L.I., 1998. *Distribution of CO₂ species, estimates of net community production, and air-sea CO₂ exchange in the Ross Sea polynya*. Journal of Geophysical Research (Oceans), 103 (C2), 2883-2896, doi: 10.1029/97JC02473, Feb. 15, 1997.
- ¹⁴Hansell, D.A., **Bates, N.R.**, and Carlson, C.A., 1997. *Predominance of vertical loss of carbon from surface waters of the equatorial Pacific Ocean*. Nature, 386 (6620), 59-61, doi: 10.1038/386059a0, Mar. 6, 1997.
- ¹³Hansell, D.A., Carlson, C.A., **Bates, N.R.**, Poisson, A.P., 1997. *Horizontal and vertical removal of organic carbon in the equatorial Pacific Ocean: a mass balance assessment*. Deep-Sea Research II, 45 (9-10), 2115-2130, doi: 10.1016/S0967-0645(97)00021-0.
- ¹²**Bates, N.R.**, Michaels, A.F., and Knap, A.H., 1996. *Seasonal and interannual variability of oceanic carbon dioxide species at the US JGOFS Bermuda Atlantic Time-series Study (BATS) site*. Deep-Sea Research II, 43 (2-3), 347-383, doi: 10.1016/0967-0645(95)00093-3. Corrigendum: 43 (4-6), 1435-1435.
- ¹¹**Bates, N.R.**, Michaels, A.F., and Knap, A.H., 1996. *Alkalinity changes in the Sargasso Sea: Geochemical evidence of calcification?* Marine Chemistry, 51 (4), 347-358, doi: 10.1016/0304-4203(95)00068-2, Jan. 1996.
- ¹⁰Marchal, O., Monfray, P., and **Bates, N.R.**, 1996. *Spring summer imbalance of dissolved inorganic carbon in the mixed layer of the northwestern Sargasso Sea*. Tellus, 48 (1), 115-134, doi: 10.1034/j.1600-0889.1996.00011.x, Feb. 1996.
- ⁹**Bates, N.R.**, 1995. *Investigation of the Physical and Biological Controls of the Oceanic CO₂ System in the Sargasso Sea*. Ph.D. Dissertation, University of Southampton, U.K., 276pp.
- ⁸Hansell, D.A., **Bates, N.R.**, and Gundersen, K., 1995. *Mineralization of dissolved organic carbon in the Sargasso Sea*. Marine Chemistry, 51 (3), 201-212, doi: 10.1016/0304-4203(95)00063-1, Dec. 1995.
- ⁷Ducklow, H.W., Carlson, C.A., **Bates, N.R.**, Knap, A.H., Michaels, A.F., Jickells, T., Williams, P.J.LeB., and McCave, I.N., 1995. *Dissolved organic carbon as a component of the biological pump in the North Atlantic Ocean*. Philosophical Transactions of the Royal Society, series B, 348, 161-167, May 30, 1995.
- ⁶Marchal, O., Monfray, P., and **Bates, N.R.**, 1995. *Seasonal cycle of CO₂ and O₂ in the euphotic zone at the U.S. JGOFS station in the Sargasso Sea*. in Modelling of Marine Biogeochemical Cycles. JGOFS-France Workshop, Gif-Sur-Yvette, Nov. 23-25, 1994, 27-35.
- ⁵Michaels, A.F., **Bates, N.R.**, Buesseler, K.O., Carlson, C.A., and Knap, A., 1994. *Carbon system imbalances in the Sargasso Sea*. Nature, 372, 537-540, doi: 10.1038/372537a0, Dec. 8, 1994.
- ⁴**Bates, N.R.**, 1994. *Discussion: Early Devonian marine isotopic signatures: brachiopods from the Upper Gaspé limestones, Gaspé Peninsula, Québec, Canada*. Journal of Sedimentary Petrology, A64(2), 405-407, April 1, 1994.
- ³**Bates, N.R.**, and Brand, U., 1991. *Environmental and physiological influences on isotopic and elemental composition of brachiopod shell calcite: Implications for the isotopic evolution of Paleozoic oceans*. Chemical Geology (Isotope Geoscience Section), 94 (1), 67-78, doi: 10.1016/0168-9622(91)90041-T, Nov. 1, 1991.
- ²**Bates, N.R.**, 1990. *The Biogeochemistry of Paleozoic Brachiopods from New York State and Southern Ontario*. M.Sc. Thesis, Brock University, Canada, 254pp.
- ¹**Bates, N.R.**, and Brand, U., 1990. *Secular variation of calcite mineralogy: an evaluation of ooid and micrite chemistries*. Geologische Rundschau, 79 (1), 27-46, doi: 10.1007/BF01830446.

OTHER PUBLICATIONS

- ⁹Feely, R.A (lead author), Aoyama, M., **Bates, N.R.**, Byrne, R.H., González-Dávila, M., Dore, J., Gruber, N., Hydes, D., Karl, D.M., Khatiwala, S., Kleypas, J., Lee, K., Mordy, C., Olafsson, J., Orr, J., Stramma, L., Takahashi, T., Tanhua, T., and Wanninkhof, R., (contributing authors), in review. *IPCC AR5 Chapter 3 Ocean Observations Subsection 3.7*. (submitted for inclusion to the forthcoming IPCC 5th Assessment), (*peer reviewed).

- ⁶Laffoley, D.d'A., Roe, H.S.J., Angel, M.V., Ardon, J., **Bates, N.R.**, Boyd, I.L., Brooke, S., Buck, K.N., Carlson, C.A., Causey, B., Conte, M.H., Christiansen, S., Cleary, J., Donnelly, J., Earle, S.A., Edwards, R., Gjerde, K.M., Giovannoni, S.J., Gulick, S., Gollock, M., Hallet, J., Halpin, P., Hanel, R., Hemphill, A., Johnson, R.J., Knap, A.H., Lomas, M.W., McKenna, S.A., Miller, M.J., Miller, P., Ming, F.W., Moffitt, R., Nelson, N.B., Parson, L., Peters, A.J., Pitt, J., Rouja, P., Roberts, J., Roberts, J., Seigel, D.A., Siuda, A., Steinberg, D.K., Stevenson, A., Sumaila, V.R., Swartz, W., Trott, T.M., and Vats. V., 2011. *The protection and management of the Sargasso Sea: The golden floating rainforest of the Atlantic Ocean: Summary Science and Supporting Evidence Case*. Sargasso Sea Alliance, 44 pp (\$not peer reviewed).
- ⁵Feely, R.A., Fabry, V., Dickson, A., Gattuso, J.-P., Bijma, J., Riebesell, U., Doney, S., Turley, C., Saino, T., Lee, K., Anthony, K., Kleypas, J. (lead authors), Johannessen, T., Bellerby, R., Luchetta, A., Trull, T., Tilbrook, B., Olafsson, J., Watanabe, S., O'Dowd, C., Ward, B., Bakker, D., Hall-Spencer, J., Hardman-Mountford, N., Blackford, J., Send, U., Langdon, C., Hönnisch, B., Hernandez-Ayon, J.-M., Ianson, D., Kozyr, A., **Bates, N.R.**, Wanninkhof, R., Robbins, L., Hydes, D., Gledhill, D., Iglesias-Rodriguez, M.D., Lebrato, M., Balch, W.M., Newton, J., Hofmann, G., Brainard, R., Eakin, M., Salm, R., Hill, T., Sabine, C., Alin, S., Hales, B., Juranek, L., Hendee, J., Manzello, D., Musielewicz, S., Mathis, J., Sigler, M., Turk, D., Vandemark, D., Salisbury, J., Coble, P., Azetsu-Scott, K., Miller, L., Lohrenz, S., Thomas, H., and Cai, W.-J., (contributing authors), 2010. *An international observational network for ocean acidification*. Community White Paper, OceanObs09, <http://www.oceanobs09.net/> (*peer reviewed).
- ⁴Borges, A.V., Alin, S.R., Chavez, F.P., Vlahos, P., Johnson, K.S., Holt, J.T. (lead authors), Balch, W.M., **Bates, N.R.**, Brainard, R., Cai, W.-J., Chen, C.T.A., Currie, K., Dai, M., Degrandpre, M., Delille, B., Dickson, A., Feely R.A., Friederich, G.E., Hales, B., Hardman-Mountford, N., Hendee, J., Hernandez-Ayon, J.M., Hood, M., Huertas, E., Hydes, D., Ianson, D., Krasakopoulou, E., Litt, E., Luchetta, A., Mathis, J., McGillis, W.R., Murata A., Newton, J., Ólafsson, J., Omar A., Perez, F.F., Sabine, C., Salisbury, J.E., Salm, R., Sarma, V.V.S.S., Schneider, B., Sigler, M., Thomas, H., Turk, D., Vandemark, D., Wanninkhof, R., Ward, B., (contributing authors), 2010. *A global sea surface carbon observing system: inorganic and organic carbon dynamics in coastal oceans*. Community White Paper, OceanObs09, <http://www.oceanobs09.net/> (*peer reviewed).
- ³**Bates, N.R.**, 2009. Sensitive to climate change. The Circle. 3, 2009, p17-18, WWF publications (\$not peer reviewed).
- ²**Bates, N.R.**, 2009. *Marine carbon cycle feedbacks*. In *Arctic Climate Feedbacks: Global Implications*. World Wildlife Fund Report (Editors, M. Sommerkorn and S. Hassol), World Wildlife Fund Report, 100 pp, p. 54-68. (*note: peer-reviewed); http://wwf.panda.org/what_we_do/where_we_work/arctic/publications/?177361/Warming-Arctics-global-impacts-outstrip-predictions.
- ¹Bindoff, N.L., Willebrand, J., Artale, V., Cazenave, A., Gregory, J., Gulev, S., Hanawa, K., Le Quéré, C., Levitus, S., Nojiri, Y., Shum, C.K., Talley, L.D., and Unnikrishnan, A., 2007. *Observations: Oceanic Climate Change and Sea Level*. 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. **Bates** was one of 53 contributing authors to this chapter (*peer reviewed).

SELECTED TECHNICAL REPORTS and DATA REPORTS

- ⁴⁹Lomas, M.W., **Bates, N.R.**, Buck, K.N. and Knap, A.H., 2011. *Microbial productivity of the Sargasso Sea and how it compares to elsewhere, and the role of the Sargasso Sea in carbon sequestration – better than carbon neutral?* In *Oceanography of the Sargasso Sea: Overview of Scientific Studies* (Lomas, M.W., Bates, N.R., Buck, K.N., and Knap, A.H., editors), BIOS report for the Sargasso Sea Alliance, 6 pp.

- ⁴⁸Lomas, M.W., **Bates, N.R.**, Buck, K.N., and Knap, A.H., 2011. *Oceanography of the Sargasso Sea: Overview of Scientific Studies*. BIOS report for the Sargasso Sea Alliance, 94 pp.

- ⁴⁷Lomas, M.W., and **Bates, N.R.**, 2011. *Food web overview*. In Oceanography of the Sargasso Sea: Overview of Scientific Studies (Lomas, M.W., Bates, N.R., Buck, K.N., and Knap, A.H., editors), BIOS report for the Sargasso Sea Alliance, 28, 37-42.
- ⁴⁶Lomas, M.W., and **Bates, N.R.**, 2011. *Phytoplankton research*. In Oceanography of the Sargasso Sea: Overview of Scientific Studies (Lomas, M.W., Bates, N.R., Buck, K.N., and Knap, A.H., editors), BIOS report for the Sargasso Sea Alliance, 28-31, 37-42.
- ⁴⁵**Bates, N.R.**, and Lomas, M.W., N.R., 2011. Marine biogeochemical cycles in the Sargasso Sea. In Oceanography of the Sargasso Sea: Overview of Scientific Studies (Lomas, M.W., Bates, N.R., Buck, K.N., and Knap, A.H., editors), BIOS report for the Sargasso Sea Alliance, 43-45, 48-52.
- ⁴⁴**Bates, N.R.**, 2011. *The global carbon cycle and observations in the Sargasso Sea*. In Oceanography of the Sargasso Sea: Overview of Scientific Studies (Lomas, M.W., Bates, N.R., Buck, K.N., and Knap, A.H., editors), BIOS report for the Sargasso Sea Alliance, 45-47, 48-52.
- ⁴³**Bates, N.R.**, 2011. *Calcium carbonate production*. In Oceanography of the Sargasso Sea: Overview of Scientific Studies (Lomas, M.W., Bates, N.R., Buck, K.N., and Knap, A.H., editors), BIOS report for the Sargasso Sea Alliance, 47, 48-52.
- ⁴²**Bates, N.R.**, 2011. *Climate variability, NAO/ENSO influences on the subtropical gyre*. In Oceanography of the Sargasso Sea: Overview of Scientific Studies (Lomas, M.W., Bates, N.R., Buck, K.N., and Knap, A.H., editors), BIOS report for the Sargasso Sea Alliance, 53, 56-60.
- ⁴¹**Bates, N.R.**, and Peters, A.J., 2011. *Atmospheric deposition and acid precipitation, NAO/ENSO influences on the subtropical gyre*. In Oceanography of the Sargasso Sea: Overview of Scientific Studies (Lomas, M.W., Bates, N.R., Buck, K.N., and Knap, A.H., editors), BIOS report for the Sargasso Sea Alliance, 53-55, 56-60.
- ⁴⁰**Bates, N.R.**, 2011. *Air-sea gas exchange, CO₂ and DMS*. In Oceanography of the Sargasso Sea: Overview of Scientific Studies (Lomas, M.W., Bates, N.R., Buck, K.N., and Knap, A.H., editors), BIOS report for the Sargasso Sea Alliance, 55, 56-60.
- ³⁹**Bates, N.R.**, 2011. *Climate change and ocean acidification*. In Oceanography of the Sargasso Sea: Overview of Scientific Studies (Lomas, M.W., Bates, N.R., Buck, K.N., and Knap, A.H., editors), BIOS report for the Sargasso Sea Alliance, 61-67.
- ³⁸EPA, 2010. *Climate Change Indicators in the United States* [Data provider and indicator reviewer], 74 pp, EPA 430-R-10-027.
- ³⁷Tanhua, T., A. Olsen, M. Hoppe, S. Jutterström, C. Schirnck, S. van Heuven, A. Velo, X. Lin, A. Kozyr, M. Alvarez, D.C.E. Bakker, P. Brown, E. Falck, E. Jeansson, C. Lo Monaco, J. Olafsson, F.F. Perez, D. Pierrot, A.F. Rios, C.L. Sabine, U. Schuster, R. Steinfeldt, I. Stendardo, L.G. Anderson, **Bates, N.R.**, R.G.J. Bellerby, J. Blindheim, J.L. Bullister, N. Gruber, M. Ishii, T. Johannessen, E.P. Jones, J. Köhler, A. Körtzinger, N. Metzl, A. Murata, S. Musielewicz, A.M. Omar, K.A. Olsson, M. de la Paz, B. Pfeil, F. Rey, M. Rhein, I. Skjelvan, B. Tilbrook, R. Wanninkhof, L. Mintrop, D.W.R. Wallace, R.M. Key 2009. CARINA data Synthesis Project, CDIAC, NDP-091.
- ³⁶Wanninkhof, R., Feely, R.A., **Bates, N.R.**, Millero, F.J., Takahashi, T., and Cook, S., 2006. Documenting ocean carbon sources and sinks—surface water pCO₂ measurements from ships. In Annual Report on The State of the Ocean and the Ocean Observing System for Climate, Annual Report, Fiscal Year 2005, J.M. Levy (ed.), NOAA/Climate Program Office/Office of Climate Observation, 207–216.
- ³⁵Johannessen, T., Hansell, D.A., and others (including Bates, N.R., 2006. *SOLAS-IMBER joint carbon implementation plan* (draft document; release 2006).
- ³⁴**Bates, N.R.**, 2005. *Ocean time-series inventory*. IOC-SCOR International Ocean Carbon Coordination Project (IOCCP) document.
- ³³**Bates, N.R.**, 2001. *Regional testbeds: Interannual variability of the oceanic carbon cycle at the U.S. JGOFS Bermuda Atlantic Time-series Study (BATS) site*. In WOCE International Project Office, Report of the WOCE/JGOFS Ocean Transport Workshop, WOCE Report No. 174/2001, pp. 43-46.
- ³²Carlson, C.A., **Bates, N.R.**, and Hansell, D.A., 2001. *Ocean Carbon Cycling*. In Encyclopedia of Marine Science (2001 edition).
- ³¹Gruber, N., **Bates, N.R.**, Keeling, C.D., and Le Quéré, C., 2001. *Interannual variability in the extra-tropical ocean carbon cycle: The role of the North Atlantic*. 6th International CO₂ meeting, Sendai, Japan.
- ³⁰Erickson, D., and **Bates, N.R.**, 2001. Working Group Report. Short-lived CRC's. US. SOLAS Planning Workshop, Washington DC, May 2001.

- ²⁹Mintrop, L., and **Bates, N.R.**, 2001. *Carbon in the North Atlantic (CARINA) Meeting Report*, Vigo, Spain, April 2001.
- ²⁸Doney, S.C., Hood, M., Alexiou, A., **Bates, N.R.**, Bishop, J., Ducklow, H.W., Fine, R., Gruber, N., Jahnke, R., Johnson, K., Lindstrom, E., K.-K. Liu, Mackenzie, F.T., McClain, C., Murphy, P.P., Platt, T., Smith, S.V., Stuart, V., Summerhayes, C., Wallace, D.W.R., and Wanninkhof, R., 2001. *A Global Ocean Carbon Observation System- A Background Report. A Contribution to the Integrated Global Observing System (IGOS)*, UNESCO report.
- ²⁷Dickey, T.D., **Bates, N.R.**, Byrne, R.H., Chavez, F., Feely, R.A., Moore, C., Wanninkhof, R., 2001. *A review of the NOPP Ocean-Systems for Chemical, Optical and Physical Experiments (OSCOPE) Project*. American Meteorological Society, Fifth Symposium on Integrated Observing Systems, 4 pp.
- ²⁶Dickey, T.D., **Bates, N.R.**, Byrne, R.H., Chavez, F., Feely, R.A., Moore, C., Wanninkhof, R., 2000. *Ocean-Systems for Chemical, Optical and Physical Experiments (OSCOPE) Project*. Final Workshop Report, 3 pp.
- ²⁵**Bates, N.R.**, 2000. *Linkages between ocean biogeochemistry and climate variability*. Ocean Carbon Transport, Exchanges and Transformations (OCTET) Meeting Report.
- ²⁴Dickey, T.D., **Bates, N.R.**, Byrne, R.H., Chavez, F., Feely, R.A., Moore, C., Wanninkhof, R., 2000. Third Oceanographic-Systems for Chemical, Optical, and Physical Experiments (O-SCOPE) Monterey Bay Aquarium Research Institute (MBARI), Dec. 1999.
- ²³Dickey, T.D., **Bates, N.R.**, Byrne, R.H., Chavez, F., Feely, R.A., Moore, C., Wanninkhof, R., 1999. *First Oceanographic-Systems for Chemical, Optical, and Physical Experiments (O-SCOPE), Workshop Report*, PMEL, Seattle, Sept. 1998.
- ²²Dickey, T.D., **Bates, N.R.**, Byrne, R.H., Chavez, F., Feely, R.A., Moore, C., Wanninkhof, R., 1999. *Second Oceanographic-Systems for Chemical, Optical, and Physical Experiments (O-SCOPE), Workshop Report*, Univ. South Florida, Feb. 1999.
- ²¹Najjar, R., Feely, R., Takahashi, T., Tortell, P., Sabine, C.L., Langdon, C., DeConto, R., **Bates, N.R.**, Berelson, W., Peng, T.-H., Rubin, S., Sweeney, C., Hales, B., and Bishop, J., 1999. *Working Group Report: Chemistry. Synthesis and Modelling Project, Ocean Biogeochemical Response to Climate Change*, Durham, NH, 13-17 July 1998, U.S. JGOFS Planning Report Number 22, 15-21.
- ²⁰**Bates, N.R.**, Knap, A.H., and Michaels, A.F., 1998. *Carbon dioxide, climate change and hurricanes*. The Journal of the Forum for Environmental Law, Science, Engineering and Finance. December Issue, publisher. M.A. Frodl, Washington D.C., U.S.A.
- ¹⁹**Bates, N.R.**, Knap, A.H., Bahr, F., Benson, J., Chipman, D.W., Howse, F., Johnson, R.J., and Takahashi, T., 1998. *Carbon dioxide measurements obtained aboard the R/V Weatherbird II in the Sargasso Sea, June-December 1994*. Bermuda Biological Station For Research Data Report, BBSR CO₂ Data Report 98-1, Ferry Reach, Bermuda.
- ¹⁸**Bates, N.R.**, Knap, A.H., Bahr, F., Benson, J., Chipman, D.W., Howse, F., Johnson, R.J., and Takahashi, T., 1998. *Carbon dioxide measurements obtained from the R/V Weatherbird II in the Sargasso Sea, January-December 1995*. Bermuda Biological Station For Research Data Report, BBSR CO₂ Data Report 98-2, Ferry Reach, Bermuda.
- ¹⁷**Bates, N.R.**, Knap, A.H., Bahr, F., Benson, J., Chipman, D.W., Howse, F., Johnson, R.J., and Takahashi, T., 1998. *Carbon dioxide measurements obtained from the R/V Weatherbird II in the Sargasso Sea, January-December 1996*. Bermuda Biological Station For Research Data Report, BBSR CO₂ Data Report 98-3, Ferry Reach, Bermuda.
- ¹⁶Carlson, C.A., **Bates, N.R.**, and Steinberg, D.K., 1998. BATS time-series celebrates a decade of ocean research. U.S. JGOFS Newsletter, November 1998.
- ¹⁵**Bates, N.R.**, 1997. Determination of total inorganic carbon (C_T) by the coulometric procedure. in BATS Methods Manual, Version 4, March 1997 (Knap, A.H., et al.), U.S. JGOFS Planning Office, Woods Hole, MA, pp 39-47.
- ¹⁴**Bates, N.R.**, 1997. Seasonal variability of the oceanic CO₂ system and the air-sea flux of CO₂ at the BATS site in the Sargasso Sea. in Second JGOFS North Atlantic Planning Report (Ducklow, H., Marra, J., and Goyet, C. eds.), JGOFS Report Number 20, JGOFS Planning Office, Woods Hole, MA, pp. 7-10.
- ¹³Knap, A.H., Michaels, A.F., Steinberg, D.K., Bahr, F., **Bates, N.R.**, Bell, S., Countway, P., Close, A.R., Doyle, A.P., Dow, R.L., Howse, F.A., Gundersen, K., Johnson, R.J., Kelly, R., Little, R., Orcutt, K.,

- Parsons, R., Rathburn, C., Sanderson, M., and Stone, S., 1997. *BATS Methods Manual, Version 4, April 1997*, U.S. JGOFS Planning Office, Woods Hole, 136pp.
- ¹²Knap, A.H., Michaels, A.F., Hansell, D.A., Bahr, F., **Bates, N.R.**, Becker, S., Caporelli, E., Close, A.R., Doyle, A.P., Dow, R.L., Johnson, R.J., Kelly, R., Little, R., Gundersen, K., Howse, F.A., and Waterhouse, T., 1997. *U.S. JGOFS Bermuda Atlantic Time-series Study. Data Report for BATS 61-BATS 72, Oct. 1993-Sept. 1994*. U.S. JGOFS Planning and Coordination Office, Woods Hole.
- ¹¹Doney, S., Wallace, D.W.R., Ducklow, H.W., and **Bates, N.R.**, 1996. *The North Atlantic Carbon Cycle: New perspectives from JGOFS and WOCE*. ICES Annual Science Conference, Rekjavik, Iceland, Sept. 27-Oct. 4, 1996.
- ¹⁰Knap, A.H., Michaels, A.F., Dow, R.L., Johnson, R.J., Gundersen, K., Close, A., Howse, F., **Bates, N.R.**, Hammer, M., Doyle, A., Waterhouse, T., Kelly, R., Becker, S., and Little, B., 1995. *U.S. JGOFS Bermuda Atlantic Time-series Study. Data Report for BATS 49-BATS 60, Oct. 1992-Sept. 1993*. U.S. JGOFS Planning and Coordination Office, Woods Hole.
- ⁹Knap, A.H., Michaels, A.F., Dow, R.L., Johnson, R.J., Gundersen, K., Sorensen, J.C., Close, A., Howse, F., Hammer, M., **Bates, N.R.**, Best, M., Doyle, A., and Waterhouse, T., 1994. *U.S. JGOFS Bermuda Atlantic Time-series Study. Data Report for BATS 37-BATS 48, Oct. 1991-Sept. 1992*. U.S. JGOFS Planning and Coordination Office, Woods Hole.
- ⁸**Bates, N.R.**, and Knap, A.H., 1993. *Total CO₂ measurements in the Sargasso Sea at the Bermuda Atlantic Time-Series (BATS) Station, May 1991 To May 1993*. Final Technical Report to NOAA, 21pp.
- ⁷**Bates, N.R.**, 1993. *Determination of Total Inorganic Carbon (C_T) by the Coulometric Procedure. in BATS Methods Manual, Version 3, March 1993* (Knap, A.H., et al.), U.S. JGOFS Planning Office, Woods Hole, MA, pp 31-37.
- ⁶Galloway, J.N., Michaels, A.F., Prospero, J., Anderson, J., Arimoto, R., **Bates, N.R.**, Church, T., Cutter, G., Dacey, J., Hansell, D., Knap, A.H., Lipschultz, F., and Sholkovitz, E. 1993. *Chemical Exchanges and Feedbacks Across the Sea Surface (CEFSS)*. Report from the AEROCE-BATS Workshop, January 1993, Bermuda, 25pp.
- ⁵Knap, A.H., Michaels, A.F., Dow, R.L., Johnson, R.J., Gundersen, K., Sorensen, J.C., Close, A., Howse, F., Hammer, M., **Bates, N.R.**, Doyle, A., and Waterhouse, T., 1993. *BATS Methods Manual*. U.S. JGOFS Planning and Coordination Office, Woods Hole.
- ⁴Knap, A.H., Michaels, A.F., Dow, R.L., Johnson, R.J., Gundersen, K., Sorensen, J.C., Close, A., Howse, F., Hammer, M., **Bates, N.R.**, Knauer, G.A., Lohrenz, S.E., Asper, V.A., Tuel, M., Ducklow, H., and Quinby, H., 1993. *U.S. JGOFS Bermuda Atlantic Time-series Study. BATS 25-BATS 36, Oct. 1990-Sep. 1991*. U.S. JGOFS Planning Office, Woods Hole.
- ³**Bates, N.R.**, 1992. *Earth Materials and Processes at the Earth's Surface*. School of Earth and Ocean Sciences, University of Victoria, Canada, 110 pp.
- ²**Bates, N.R.**, 1991. *The Earth's Internal Processes and Historical Geology*. University of Victoria Press, University of Victoria, Canada, 85 pp.
- ¹**Bates, N.R.**, 1990. *Earth Materials and Processes at the Earth's Surface*. University of Victoria Press, University of Victoria, Canada, 101 pp.

SELECTED POPULAR PRESS and NEWSLETTER ARTICLES

- ¹⁶Lomas, M.W., and **Bates, N.R.**, 2011. *20-years of accomplishments at the Bermuda Atlantic Time-series Station (BATS)*. Meridian, Spring 2011, BIOS Publication, http://www.bios.edu/media_publications/meridian.html.
- ¹⁵Mathis, J.T., and **Bates, N.R.**, 2010. *The marine carbon cycle of the Arctic Ocean: Some thoughts about the controls on air-sea CO₂ exchanges and responses to ocean acidification*. Ocean Carbon and Biogeochemistry (OCB) News, 3(2), Spring/summer 2010.
- ¹⁴**Bates, N.R.**, 2007. *An introduction to ocean acidification*. Meridian, Fall 2007, BIOS Publication, http://www.bios.edu/media_publications/meridian.html.
- ¹³**Bates, N.R.**, and Peters, A.J., 2007. *What about acid rain?* Meridian, Fall 2007, BIOS Publication, http://www.bios.edu/media_publications/meridian.html.

- ¹²Andersson, A.J., **Bates, N.R.**, and Mackenzie, F.T., 2007. *Devil's Hole as a natural laboratory*. Meridian, Fall 2007, BIOS Publication, http://www.bios.edu/media_publications/meridian.html.
- ¹¹Hood, R.R., Wiggert, J.D., **Bates, N.R.**, and Seitzinger, S., 2006. Carbon cycling and biogeochemical variability in the Indian Ocean. CLIVAR Exchanges, 39, 11, (4), Newsletter of the Climate Variability and Predictability Programme, pp 24-28.
- ¹⁰**Bates, N.R.**, 2006. Arctic Ocean research. Meridian, Summer 2006, BIOS Publication, not available at the BIOS website.
- ⁹**Bates, N.R.**, 2005. *Arctic Scientific Research at BBSR*, BBSR Annual Report 2005, October 2005.
- ⁸**Bates, N.R.**, 2003. *The History of Global Geosciences Research at BBSR*, BBSR Annual Report, October 2003.
- ⁷**Bates, N.R.**, 2002. *Monitoring BBSR Climate and Weather Station*. BBSR Annual Report 2, October 2002.
- ⁶**Bates, N.R.**, 2001. *Coral and Climate Change. Understanding the Link*. Currents, BBSR publication, Fall 2001.
- ⁵**Bates, N.R.**, and Carlson, C.A., 2000. *Linkages between ocean biogeochemistry at BATS and modes of climate variability (i.e., NAO, ENSO)*. U.S. JGOFS Newsletter, 10 (3), 5-6.
- ⁴Carlson, C.A., **Bates, N.R.**, and Steinberg, D.K., 1999. *Ten years of BATS data*. Earth System Monitor, June 1999, p. 9-10.
- ³Carlson, C.A., **Bates, N.R.**, and Steinberg, D.K., 1998. *BATS time-series celebrates a decade of ocean research*. U.S. JGOFS Newsletter, November 1998.
- ²McGillicuddy, D., Johnson, R.J., Siegel, D.A., and **Bates, N.R.**, 1998. *BATS validation activities document mesoscale biogeochemical variations in the vicinity of the time series*. U.S. JGOFS Newsletter, April 1998.
- ¹Carlson, C.A., **Bates, N.R.**, and Steinberg, D.K., 1997. *Time-series data sets: a valuable resource for synthesis and modeling phase of U.S. JGOFS*. U.S. JGOFS Newsletter, July 1997.

SELECTED ABSTRACTS

- ¹⁴²Bates, N.R., Amat, A., and Andersson, A.J., 2012. The carbonate chemistry coral reef ecosystem feedback (CREF) hypothesis. ICRS, Cairns, Australia, July 2012.
- ¹⁴¹Andersson, A.J., de Putron, S., Bates, N.R., and Collins, A., 2012. Bermuda ocean acidification and coral reef investigation. ICRS, Cairns, Australia, July 2012.
- ¹⁴⁰van Meerssche, E.S., Johnson, R.J., Lomas, M.W., Bates, N.R., Knap, A.H., 2012. Qualitative variability of phytoplankton biomass and community structure of the Sargasso Sea based upon pigment analysis. ASLO Meeting, Salt Lake City, UT. USA.
- ¹³⁹Johnson, R.J., Evans, D.G., McGillicuddy, D.J. Jr., Bates, N.R., Lomas, M.W., Knap, A.H., 2012. Observations of mesoscale eddies near the Bermuda Atlantic Time-series Study site and implications for local hydrography and nutrient budgets. ASLO Meeting, Salt Lake City, UT. USA.
- ¹³⁸Andersson, A.J., de Putron, S., Bates, N.R., and Collins, A., 2011. Bermuda ocean acidification and coral reef investigation. Poster presentation OCB Ocean acidification PI meeting, March 22-24, 2011, Woods Hole, MA, USA
- ¹³⁷Venti, A., Kadko, D., Andersson, A.J., Langdon, C., and Bates, N.R., 2011. A multi-tracer model approach to estimate reef water residence times. ASLO/AGU Meeting, Puerto Rico, February 2011.
- ¹³⁶Bates, N.R., Amat, A., and Andersson, A.J., 2011. The carbonate chemistry coral reef ecosystem feedback (CREF) hypothesis. ASLO/AGU Meeting, Puerto Rico, February 2011.
- ¹³⁵Andersson, A.J., de Putron, S.J., Bates, N.R., Collins, A., Garley, R., Noyes, T., and Dexter, E., 2011. Bermuda ocean acidification and coral reef investigation: temporal and spatial changes in seawater carbonate chemistry and calcification. ASLO/AGU Meeting, Puerto Rico, February 2011.
- ¹³⁴Andersson, A.J., de Putron, S.J., Bates, N.R., Collins, A., Garley, R., Noyes, T., and Dexter, E., 2011. Bermuda ocean acidification and coral reef investigation: temporal and spatial changes in seawater carbonate chemistry and calcification. IPCC Meeting, Okinawa, February 2011.
- ¹³³Andersson, A.J., Bates, N.R., de Putron, S.J., and Collins, A., 2011. BEACON: Bermuda Ocean Acidification and Coral Reef Investigation. ISRS-2011 meeting, Holland.
- ¹³²Bates, N.R., 2010. Arctic marine carbon cycle. COCOS-RECCAP meeting, Viterbo, Italy, Oct. 2010.

- ¹³¹Mathis, J.T., Cross, J.N., and Bates, N.R., 2010. Coupling primary production and terrestrial runoff to ocean acidification and carbonate mineral suppression in the eastern Bering Sea. International Polar Year, Oslo Science Conference, 8-12 June 2010, Oslo, Norway.
- ¹³⁰Bates, N.R., and Mathis, J.T., 2010. Carbon cycle dynamics, ocean acidification impacts, and feedbacks in the Arctic Ocean. International Polar Year, Oslo Science Conference, 8-12 June 2010, Oslo, Norway.
- ¹²⁹Orr, J.C., Jutterström, S., Bopp, L., Anderson, L.G., Bates, N.R., Cadule, P., Fabry, V.J., Frölicher, T., Heinze, C., Jones, E.P., Joos, F., Key, R.M., Lenton, A., Maier-Reimer, E., Olsen, O., Segschneider, J., Skjelvan, I., Steinacher, M., Swingedouw, D., and Tjiptura, J., 2010. Winter versus summer onset of undersaturation in the Arctic Ocean. International Polar Year, Oslo Science Conference, 8-12 June 2010, Oslo, Norway.
- ¹²⁸Cai, W.J., and Bates, N.R., 2010. Western Arctic Ocean carbon cycle: fluxes across boundaries in a changing environment. International Polar Year, Oslo Science Conference, 8-12 June 2010, Oslo, Norway.
- ¹²⁷Andersson, A.J., Bates, N.R., and de Putron, S.J., 2010. BEACON: Bermuda ocean acidification and coral reef investigation - overview and early results. ASLO/AGU Meeting, Portland, February 2010.
- ¹²⁶Mathis, J.T., and Bates, N.R., 2010. Coupling primary production and terrestrial runoff to ocean acidification and carbonate mineral suppression in the Eastern Bering Sea. ASLO/AGU Meeting, Portland, February 2010.
- ¹²⁵Cross, J.N., Mathis, J.T., Bates, N.R., Moran, B., Lomas, M.W., and Stabeno, P.J., 2010. Seasonal distribution and controls on dissolved inorganic carbon and net community production on the Eastern Bering Sea shelf. ASLO/AGU Meeting, Portland, February 2010.
- ¹²⁴Bates, N.R., and Mathis, J.T., 2010. Feedbacks on the marine carbon cycle, air-sea CO₂ fluxes and ocean acidification impacts in the Arctic Ocean. ASLO/AGU Meeting, Portland, February 2010.
- ¹²³Lomas, M.W., Steinberg, D.K., Nelson, N.B., Condon, R.H., and Bates, N.R., 2009. A multi-year increase in shallow POC export is countered by enhanced mesopelagic POC attenuation in the Sargasso Sea. AGU Chapman Conference, Brockenhurst, UK.
- ¹²²Lomas, M.W., Steinberg, D.K., Nelson, N.B., Condon, R.H. and Bates, N.R., 2008. Multi-year increases in shallow biological carbon export are mitigated by enhanced mesopelagic attenuation in the Sargasso Sea. IOCCT time-series meeting, La Jolla, November 2008.
- ¹²¹Andersson, A.J., Mackenzie, F.T., Bates, N.R., Kuffner, I.B., Lerman, A.B., Jokiel, P.L., Rodgers, K.S., and Tan, A., 2008. Dissolution of CaCO₃ in shallow water carbonate environments in the high CO₂ world of the Anthropocene. Second International Symposium on The Ocean in a High-CO₂ World, Monaco. October 6-9, 2008.
- ¹²⁰McKinley, G.A., Bates, N.R., Bennington, V., Ullman, D., and Dutkiewicz, S., 2008. Carbon cycle variability at Bermuda and in the North Atlantic subtropical gyre. PICES meeting, Seattle, May 2008.
- ¹¹⁹Andersson, A.J., Bates, N.R., Jeffries, M.A., Neely, J.K., Doney, S.C., and Benoit, N., 2008. Increasing uptake and fate of CO₂ in the North Atlantic subtropical mode water (STMW). ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹¹⁸Bates, N.R., Amat, A., Andersson, A.J., Jeffries, M., Wanninkhof, R., Maenner, S., and Sabine, C.L., 2008. Seasonal relationships between coral calcification and seawater carbonate chemistry. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹¹⁷Bell, S.J., Johnson, R.J., Lomas, M.W., Bates, N.R., and Knap, A.H., 2008. Interdecadal nutrient variability throughout the water column in the western North Atlantic subtropical gyre. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹¹⁶Best, M.H., and Bates, N.R., 2008. Changes in subtropical North Atlantic air-sea carbon dioxide fluxes and carbon storage in eighteen degree mode water over the last two decades. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹¹⁵Jackman, L.M., Bates, N.R., Johnson, R.J., and Lomas, M.W., 2008. Variability of the carbon budget and consequential fluxes at the BATS site. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹¹⁴Jeffries, M A, and Bates, N.R., 2008. Global estimates of net community production (NCP) estimated from seasonal climatological maps of inorganic carbon data. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.

- ¹¹³Johnson, R.J., Bates, N.R., Knap, A.H., Whitefield, J.D., Lomas, M.W., and Kadko, D., 2008. Coordinated change in the heat, salinity and CO₂ budgets of the mesopelagic zone at the Bermuda Time-series Site. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹¹²Levine, N.M., Toole, D.A., Neeley, A.R., Dacey, J.W., Doney, S.C., Bates, N.R., and Moran, M.A., 2008. Bacterially driven diurnal changes in the upper ocean sulfur cycle. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹¹¹Lomas, M.W., Bates, N.R., Johnson, R.J., and Knap, A.H., 2008. The Bermuda Atlantic Time-series Study: A research platform to study change in the oligotrophic subtropical North Atlantic. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹¹⁰Mathis, J.T., Bates, N.R., and Hansell, D.A., 2008. Net community production and the biological pump in the western Arctic Ocean. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹⁰⁹McKinley, G.A., Bates, N.R., Bennington, V., Ullman, D., and Dutkiewicz, S., 2008. Carbon cycle variability at Bermuda and in the North Atlantic subtropical gyre. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹⁰⁸Neeley, A., Dacey, J.W., Toole, D.A., Nemcek, N., Percy, D., and Bates, N.R., 2008. Seasonal variability of oceanic organic sulfur compounds in the subtropical gyre of the North Atlantic Ocean: DMS, DMSP and DMSO. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹⁰⁷Neely, K., Bates, N.R., Johnson, R.J., and McGillicuddy, D.J., 2008. The influence of mesoscale eddies on inorganic carbon cycling and air-sea CO₂ gas exchange in the North Atlantic Ocean. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹⁰⁶Peters, A.J., and Bates, N.R., 2008. The contribution of atmospheric acid deposition to ocean acidification of the North Atlantic Ocean and coral reef dominated ecosystems. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹⁰⁵Toole, D.A., Neeley, A., Nemcek, N., Dacey, J.W., Bates, N.R., Percy, D., and Levine, N.M., 2008. Seasonal variability in DMS and DMSP biogeochemical cycling rates in the Sargasso Sea: A monthly time-series. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹⁰⁴Zablocki, J., Andersson, A., and Bates, N.R., 2008. Dynamics of carbon dioxide in a mangrove-dominated marine ecosystem. ASLO/AGU Ocean Sciences meeting, Orlando, March 2008.
- ¹⁰³Mathis, J.T., Bates, N.R., and Hansell, D.A., 2007. Carbon biogeochemistry in the Western Arctic Ocean and inferences on an ice free Arctic Ocean. AGU Meeting, San Francisco, December 2007.
- ¹⁰²Andersson, A.J., Bates, N.R., Jeffries, M., and Purinton, B., 2007. Inorganic carbon observations during Eighteen Degree Water (EDW) formation: contributions to the CLIMODE experiment. CLIMODE meeting, Woods Hole, July 2007.
- ¹⁰¹Zemmelink, H.J., Toole, D., Bates, N.R., Van Weerlee, E., Brussard, C., and de Baar, H.J.W., 2006. Gradients in alkalinity and dissolved inorganic carbon near the sea surface. CarboOCEAN meeting, Gran Canaria, December 2006.
- ¹⁰⁰Bates, N.R., Purinton, B., and Jeffries, M., 2006. Air-sea carbon dioxide exchange and fate of carbon in Eighteen Degree Water (EDW) of the North Atlantic Ocean: Initial results from the 2006 CLImate MOde water Dynamics Experiment (CLIMODE). AGU meeting, San Francisco, December 2006.
- ⁹⁹Roadman, M.J., Bates, N.R., Johnson, R.J., McGillicuddy, D.J., Andersson, A., Bell, S., Buck, N., Lethaby, P., Lochhead, V., Lomas, D., Neely, K., Pequignet, C., and Pluvine, S., 2006. Overview of EDDIES Transect Cruises in the Sargasso Sea. AGU/TOS/ASLO meeting, Hawaii, February 2006.
- ⁹⁸Hagstrom, K., Moran, S.B., Grebmeier, J.M., Cooper, L.W., Maslowski, W., Hill, V.J., Bates, N.R., and Hansell, D.A. 2006. Seasonal and interannual changes in POC export and deposition in the Chukchi Sea. AGU/TOS/ASLO meeting, Hawaii, February 2006.
- ⁹⁷Johnson, R.J., Roadman, M.J., Bates, N.R., McGillicuddy, D.J., Andersson, A., Bell, S., Buck, N., Lethaby, P., Lochhead, V., Lomas, D., Neely, K., Pequignet, C., Pluvine, S., and Roadman, M.J., 2006. Mesoscale eddy variability in the Sargasso Sea and its impact on upper ocean biogeochemistry. TOS/ASLO meeting, Hawaii, February 2006.
- ⁹⁶Lomas, M.W., Lipschultz, F.J., Nelson, D.M. and Bates, N.R., 2006. Impact of phytoplankton community structure on export production: Just who is doing "new production"? AGU/TOS/ASLO meeting, Hawaii, February 2006.
- ⁹⁵McGillicuddy, D.J., Bates, N.R., Bibby, T., Buesseler, K.O., Carlson, C.A., Davis, C.S., Falkowski, P., Goldthwaite, S., Hansell, D.A., Jenkins, W.J., Johnson, R., Ledwell, J.R., Li, Q., Siegel, D.A., and

- Steinberg, D.K., 2006. Impacts of Eddies and Mixing on Plankton Community Structure and Biogeochemical Cycling in the Sargasso Sea. AGU/TOS/ASLO meeting, Hawaii, February 2006.
- ⁹⁴Orr, J., Anderson, L.G., Bates, N.R., Bopp, L., Fabry, V.J., Jones, E.P., and Swingedouw, D., 2006. Arctic Ocean acidification. AGU/TOS/ASLO meeting, Hawaii, February 2006.
- ⁹³Pequignet, A.C., Bates, N.R., and Sabine, C.L. 2006. Ocean carbon cycling in the Indian Ocean: I. Spatio-temporal variability of inorganic carbon and air-sea CO₂ gas exchange. AGU/TOS/ASLO meeting, Hawaii, February 2006.
- ⁹²Bates, N.R., Pequignet, A.C., and Sabine, C.L. 2006. Ocean carbon cycling in the Indian Ocean: II. Estimates of net community production. AGU/TOS/ASLO meeting, Hawaii, February 2006.
- ⁹¹Li, Q.P., McGillicuddy, D.J., Hansell, D.A., Bates, N.R., and Jenkins, W.J., 2006. Biogeochemical impacts of a cyclonic eddy in the Sargasso Sea. AGU/TOS/ASLO meeting, Hawaii, February 2006.
- ⁹⁰Farmer, C.T., Mathis, J.T., Hansell, D.A., Bates, N.R., and Kadko, D., 2006. Eddy transport of carbon in the Western Arctic Ocean and the biogeochemical preconditioning necessary for shelf-basin exchange. AGU/TOS/ASLO meeting, Hawaii, February 2006.
- ⁸⁹Mathis, J.T., Hansell, D.A., Bates, N.R., Byrne, D.A., Beale, L.M., and Duncombe Rae, C.M., 2006. Carbon in the Agulhas Current and Rings System: Transport between major ocean basins. AGU/TOS/ASLO meeting, Hawaii, February 2006.
- ⁸⁸Andersson, A., Mackenzie, F.T., and Bates, N.R., 2005. Fast reactions of metastable carbonate minerals under rising pCO₂. GSA Fall Meeting, Salt Lake City, October 2005.
- ⁸⁷Bates, N.R., 2005. 20 years of oceanic CO₂ observations in the North Atlantic Ocean. 7th International Carbon Dioxide Conference, Boulder, September 2005.
- ⁸⁶Bates, N.R., 2005. Ocean carbon cycling in the Arctic Ocean and adjacent Chukchi Sea. Ocean Carbon Cycle and Climate (OCCC) meeting, WHOI, August 2005.
- ⁸⁵Mathis, J.T., Hansell, D.A., Bates, N.R., and Pickart, R.S., 2005. Transport of DOC, POC and DIC from shelf waters of the Chukchi Sea into the deep Arctic basin via a cold core eddy. ASLO Ocean Sciences Meeting, Santiago de Compostela, June 2005.
- ⁸⁴Lipschultz, F., Lomas, M.W., Nelson, D.M., Bates, N.R., Walker, C.F., and Krause, J., 2005. Winter mixing and the spring bloom: Revising new production in the Sargasso Sea. ASLO Aquatic Sciences Meeting, Salt Lake City, April 2005.
- ⁸³Lomas, M.W., Nelson, D.M., Lipschultz, F., Bates, N.R., Walker, C.F., Krause, J., and Knap, A.H., 2004. Storms in the Sargasso Sea: Rapid particle export and DIC drawdown. AGU meeting, December 2004.
- ⁸²Hansell, D.A., Kadko, D., and Bates, N.R., 2004. Behaviour of terrigenous dissolved organic carbon in the western Arctic Ocean. Mediterranean Conference, Reggio-Calabria, September 2004.
- ⁸¹Bates, N.R., and Hansell, D.A., 2004. Temporal variability of excess nitrate in the subtropical mode water of the North Atlantic Ocean. ALSO/TOS meeting, Hawaii, February 2004.
- ⁸⁰Bates, N.R., Hansell, D.A., Moran, S.B., Codispoti, L.A., and Swift, J., 2004. Seasonal and spatial distribution of particulate organic matter (POM) and new production in the Chukchi Sea. ALSO/TOS meeting, Hawaii, February 2004.
- ⁷⁹Hansell, D.A., Kadko, D., and Bates, N.R., 2004. Non-conservative behaviour of terrigenous dissolved organic carbon in the western Arctic Ocean. ALSO/TOS meeting, Hawaii, February 2004.
- ⁷⁸Brix, H., Gruber, N., Keeling, C.D., Bates, N.R., Le Quéré, C., and McKinley, G., 2004. Interannual variability and trends in the oceanic carbon cycle. From HOT and BATS to the subtropical ocean. AGU Meeting, Portland, February 2004.
- ⁷⁷Lomas, M.W., Knap, A.H., and Bates, N.R., 2004. Potential controls on interannual partitioning of organic carbon during the winter/spring phytoplankton bloom at the Bermuda Atlantic Time-series Study site. ALSO/TOS meeting, Hawaii, February 2004.
- ⁷⁶Bates, N.R., 2003. Temporal variability of CO₂ and excess nitrate in the subtropical mode water of the North Atlantic Ocean. U.S. JGOFS SMP (Synthesis and Modelling Project) Meeting. Woods Hole, July 2003.
- ⁷⁵Bates, N.R., Lomas, M.L., Johnson, R.J., and Knap, A.H., 2003. Biogeochemical and ecosystem responses of the North Atlantic subtropical gyre to atmospheric forcing and climate variability. North American Carbon Program (NACP) Meeting, Washington DC, May 2003.
- ⁷⁴Brix, H., Gruber, N., Keeling, C.D., and Bates, N.R., 2003. Interannual to decadal variability in the subtropical oceanic carbon cycle. JGOFS Open Science Conference, Washington DC, May 2003.

- ⁷³Bates, N.R., Lomas, M.L., Johnson, R.J., and Knap, A.H., 2003. Biogeochemical and ecosystem responses of the North Atlantic subtropical gyre to atmospheric forcing and climate variability. JGOFS Open Science Conference, Washington DC, May 2003.
- ⁷²Bates, N.R., 2003. Uptake and storage of CO₂ in Subtropical Mode Water (STMW) of the North Atlantic Ocean. JGOFS Open Science Conference, Washington DC, May 2003.
- ⁷¹Bates, N.R., 2003. The Carbon in the North Atlantic (CARINA) project. Climate variability (CLIVAR) North Atlantic Planning Meeting, Villefranche, France, April 2003.
- ⁷⁰Bates, N.R., and Hansell, D.A., 2003. Temporal variability of excess nitrate in the subtropical mode water of the North Atlantic Ocean. European Geophysical Society (EGS) Meeting, Nice, France, April 2003, EAE03-A-01387.
- ⁶⁹Amat, A., and Bates, N.R., 2003. High latitude reefs: A potential refuge for reef builders. European Geophysical Society (EGS) Meeting, Nice, France, April 2003, EAE03-A-01385.
- ⁶⁸Brix, H., Gruber, N., Keeling, C.D., and Bates, N.R., 2003. Interannual to decadal variability in the subtropical oceanic carbon cycle. European Geophysical Society (EGS) Meeting, Nice, France, April 2003, EAE03-A-07063.
- ⁶⁷Bates, N.R., Lomas, M.L., Johnson, R.J., and Knap, A.H., 2003. Biogeochemical and ecosystem responses of the North Atlantic subtropical gyre to atmospheric forcing and climate variability. European Geophysical Society (EGS) Meeting, Nice, France, April 2003, EAE03-A-14778.
- ⁶⁶Hansell, D.A., Bates, N.R., and Olson, D., 2003. Excess nitrate and nitrogen fixation in the subtropical North Atlantic. European Geophysical Society (EGS) Meeting, Nice, France, April 2003, EAE03-A-01390.
- ⁶⁵Bates, N.R., and Kleypas, J.A., 2003. Issues concerning the future viability of coral reefs and their calcification. UK Overseas Territories Conservation Forum (UKOT) Lecture. Bermuda, March 2003.
- ⁶⁴Bates, N.R., 2003. Changes in the oceanic sink of CO₂ in subtropical mode water of the North Atlantic Ocean. Carbon Dioxide in the Atlantic Ocean. Second CARINA general meeting and open science conference. Maspalomas, Gran Canaria, Spain, February 26-March 1, 2003.
- ⁶³Bates, N.R., and Hansell, D.A., 2003. POM and DIC distributions in the SBI study region of the Chukchi and Beaufort Seas. Western Arctic Shelf-Basin Interactions (SBI) Phase 2-Principal Investigators Meeting. RSMAS, Miami, 5-7 March 2003.
- ⁶²Hansell, D.A., and Bates, N.R., 2003. DOC and DON in the SBI System. Western Arctic Shelf-Basin Interactions (SBI) Phase 2-Principal Investigators Meeting. RSMAS, Miami, 5-7 March 2003.
- ⁶¹Bates, N.R., Lomas, M.L., Johnson, R.J., and Knap, A.H., 2003. Biogeochemical and ecosystem responses of the North Atlantic subtropical gyre to atmospheric forcing and climate variability. OCEANS meeting, Paris, January 2003,
- ⁶⁰Bates, N.R., Pequignet, A.C., Johnson, R.J. and Gruber, N. 2002. A variable sink for atmospheric CO₂ in Subtropical Mode Water of the North Atlantic Ocean. European Geophysical Society meeting, Nice, France, April 2002.
- ⁵⁹Bates, N.R., Pequignet, A.C., and Johnson, R.J. 2002. Changes in the oceanic sink of CO₂ in Subtropical Mode Water of the North Atlantic Ocean. BATS/HOT Meeting, Vancouver, April 2002.
- ⁵⁸Lomas, M., and Bates, N.R., 2002. Fate of Oceanic Primary Production: A Potential Change in Sargasso Sea Ecosystem Functioning? Primary Productivity Meeting and Workshop. Bangor, North Wales, March 2002.
- ⁵⁷Gruber, N., Keeling, C.D., Dickson, A.G., Guenther, P.G., Brix, H., Bates, N.R., and Dore, J., 2002. Interannual to decadal variability in the carbon cycle of the subtropical gyres: A comparative study between Station 'S'/BATS and HOT. ASLO/AGU Ocean Sciences Meeting, Hawaii, February 2002.
- ⁵⁶Bates, N.R., Pequignet, A.C., and Johnson, R.J. 2002. Changes in the oceanic sink of CO₂ in Subtropical Mode Water of the North Atlantic Ocean. ASLO/AGU Ocean Sciences Meeting, Hawaii, February 2002.
- ⁵⁵Pequignet, A.C., and Bates, N.R., 2002. Seasonal variability of inorganic carbon and estimates of new production in the Indian Ocean. ASLO/AGU Ocean Sciences Meeting, Hawaii, February 2002.
- ⁵⁴Amat, A., and Bates, N.R., 2002. Coral reefs, CO₂ dynamics and air-sea exchange of CO₂. CO₂ and Coral Reefs/coastal Systems Workshop. Tokyo, January 2002.
- ⁵³Gruber, N., Bates, N.R., Keeling, C.D., and Le Quéré, C., 2001. Interannual variability in the extra-tropical ocean carbon cycle: The role of the North Atlantic. 6th International CO₂ meeting, Sendai, Japan. October 2001

- ⁵²Bates, N.R., Pequignet, A.C., Hansell, D.A., and Sabine, C.L., 2001. Seasonal variability of CO₂ and air-sea CO₂ gas exchange in the Indian Ocean. U.S. JGOFS SMP Workshop. Woods Hole, MA, July 2001.
- ⁵¹Gruber, N., Bates, N.R., Keeling, C.D., and Le Quéré, C., 2001. Interannual variability in the extra-tropical ocean carbon cycle: The role of the North Atlantic. U.S. JGOFS SMP Workshop. Woods Hole, MA, July 2001.
- ⁵⁰Pequignet, A.C., Bates, N.R., and Sabine, C.L., 2001. Spatial and seasonal variability of dissolved inorganic carbon in the Indian Ocean: Implications for air-sea fluxes of CO₂ and deep ocean lysocline. ASLO Meeting, Albuquerque, New Mexico, February 2001.
- ⁴⁹Bates, N.R., 2000. Linkage between ocean biogeochemistry and climate variability in the North Atlantic. North Pacific Carbon Cycling and Ecosystem Dynamics Hakodate, Japan, October 2000 (talk presented by C.L. Sabine, PMEL).
- ⁴⁸Bates, N.R., Carlson, C.A., Hansell, D.A., Johnson, R.J., Knap, A.H., and Steinberg, D.K., 2000. Physical and biogeochemical variability in the North Atlantic Ocean: The BATS program. Symposium on North Pacific CO₂ Data Synthesis, Tsukuba, Japan, October 2000. (talk presented by C.L. Sabine, PMEL).
- ⁴⁷Bates, N.R., 2000. The BATS program: Carbon flux in the Sargasso Sea. Tropical Atmosphere Science Center (TASC) Air-sea Exchange Meeting, La Parquera, Puerto Rico, July 2000.
- ⁴⁶Bates, N.R., 2000. Interannual variability at BATS: Coupling between ocean biogeochemistry and modes of climate variability. JGOFS Steering Committee Meeting, Washington D.C., June 2000.
- ⁴⁵Bates, N.R., Peguignet, A.C. and Sabine, C.L., 2000. Seasonal variability of dissolved inorganic carbon and comparative estimates of anthropogenic CO₂ in the Indian Ocean. Synthesis and Modelling Project, WHOI, Woods Hole, June 2000.
- ⁴⁴Bates, N.R., Carlson C.A., Hansell, D.A., Johnson, R.J., Knap, A.H., and Steinberg, D.K., Steinberg, D.K., 2000. A decade of ocean physical and biogeochemical observations at the U.S. JGOFS Bermuda Atlantic Time-series (BATS). Second JGOFS International Symposium, Bergen, April 2000.
- ⁴³Carlson C.A., Bates, N.R., Steinberg, D.K., Hansell, D.A., Johnson, R.J., Knap, A.H., and Michaels, A.F., 2000. An overview of biogeochemical variability at the U.S. JGOFS Bermuda Atlantic Time-series Study (BATS) and Hydrostation S Site in the Northwestern Sargasso Sea. Second JGOFS International Symposium, Bergen, April 2000.
- ⁴²Dickey, T.D., Bates, N.R., Boyle, E.A., DeGrandpre, M., Jannasch, H., Merlivat, L., Moore, C., Taylor, C., Turner, K., and Wanninkhof, R., 2000. New measurements of bio-optical and chemical properties from the Bermuda Testbed Mooring. ASLO Meeting, Copenhagen, Denmark, June 2000.
- ⁴¹Hansell, D.A., Knap, A.H., and Bates, N.R., 2000. The Sargasso Sea Ocean Observatory. Second JGOFS International Symposium, Bergen, Norway, April 2000.
- ⁴⁰Bates, N.R., 2000. Interannual variability at the BATS site. Surface Ocean-Lower Atmosphere Study (SOLAS) Meeting, Damp, Germany, February 2000.
- ³⁹Hansell, D.A., Knap, A.H., and Bates, N.R., 2000. The Sargasso Sea Ocean Observatory. Surface Ocean-Lower Atmosphere Study (SOLAS) Meeting, Damp, Germany, February 2000.
- ³⁸Lipschultz, F.J., Bates, N.R., Carlson, C.A., Hansell, D.A., Steinberg, D.K., 2000. New production in the Sargasso Sea: history and current status. ASLO-AGU Ocean Science Meeting, San Antonio, Texas, January 2000.
- ³⁷Bates, N.R., Johnson, R.J., Carlson C.A., Knap, A.H., Michaels, A.F., and Steinberg, D.K., 1999. Interannual ocean variability at the U.S. JGOFS Bermuda Atlantic Time-series Study (BATS) and Hydrostation S Site. Synthesis and Modelling Project, Ocean Biogeochemical Response to Climate Change, Durham, New Hampshire, 13-17 July 1998, U.S. JGOFS Planning Report Number 22, 38.
- ³⁶Carlson C.A., Bates, N.R., Steinberg, D.K., Hansell, D.A., Johnson, R.J., Knap, A.H., and Michaels A.F., 1999. An overview of biogeochemical variability at the U.S. JGOFS Bermuda Atlantic Time-series Study (BATS) and Hydrostation S site in the northwestern Sargasso Sea. JGOFS North Pacific Workshop and SEATS Planning Meeting, Taipei Taiwan. March 1999, 10.
- ³⁵Carlson C.A., Steinberg, D.K., Bates, N.R., Hansell, D.A., and Johnson, R.J., 1999. Using trends observed in the BATS data set to gain insight into potential effects of climate change on upper ocean biogeochemistry. Synthesis and Modelling Project, Ocean Biogeochemical Response to Climate Change, Durham, New Hampshire, 13-17 July 1998, U.S. JGOFS Planning Report No. 22, 43-44.
- ³⁴Hansell, D.A., Knap, A.H., and Bates, N.R., 1999. The Sargasso Sea Ocean Observatory. The Ocean Observing System for Climate, 18-22 October, St. Raphael, France.

- ³³Bates, N.R., Johnson, R.J., Carlson C.A., Knap, A.H., Michaels, A.F., and Steinberg, D.K., 1998. Interannual Ocean Variability at the U.S. JGOFS Bermuda Atlantic Time-series Study (BATS) and Hydrostation S site. European Geophysical Society Meeting, Nice, April 8-12, 1998. EOS Transactions, 79 (1), OS171.
- ³²Bates, N.R., and Goyet, C., 1998. Basin and global scale carbon modelling. U.S. Synthesis and Modelling Project Planning Workshop Report, Time-Series Stations and Modelling, Snowbird, Utah, 22-27 July, 1997, U.S. JGOFS Planning Report Number 21, 38.
- ³¹Bates, N.R., and Hansell, D.A., 1998. Hydrographic and biogeochemical signals in the surface ocean between the Chesapeake Bay-Cape Hatteras Shelf and Bermuda: Implications for the export of shelf/terrestrial organic carbon. ASLO-AGU meeting, San Diego, Feb. 1998. EOS Transactions, AGU, 79 (1), OS78.
- ³⁰Carlson C.A., Bates, N.R., Hansell, D.A. and Ducklow, H.W., 1998. The use of gas tight bags and biogeochemical tracers (DOC and TCO₂) to estimate the growth efficiency of bacterioplankton in the Ross Sea, Antarctica. ASLO-AGU meeting, San Diego, Feb. 1998. EOS Transactions, AGU, 79 (1), OS109.
- ²⁹Carlson C.A., Hansell, D.A., Bates, N.R., Ducklow, H.W., and Smith, W.O., 1998. Organic carbon partitioning during spring phytoplankton blooms in the Ross Sea polynyas and the Sargasso Sea. U.S. Synthesis and Modelling Project Planning Workshop Report, Time-Series Stations and Modelling, Snowbird, Utah, 22-27 July, 1997, U.S. JGOFS Planning Report Number 21, 44.
- ²⁸Michaels, A.F., Ammerman, J.W., Bates, N.R., and Knap, A.H., 1998. Nitrogen fixation, carbon cycling and the Sargasso Sea. ASLO-AGU meeting, San Diego, February 1998. EOS Transactions, AGU, 79 (1), OS43.
- ²⁷Michaels, A.F., Siegel, D.A., Johnson, R.J., Nelson, N.B., Bates, N.R., and Knap, A.H., 1998. Hydrostation S, the Bermuda Atlantic Time-series Study and decadal variability in the Sargasso Sea. ASLO-AGU meeting, San Diego, February 1998. EOS Transactions, AGU, 79 (1), OS54.
- ²⁶Ono, S., Najjar, R., Ennyu, A., and Bates, N.R., 1998. Shallow remineralization in the Sargasso Sea estimated from seasonal variations in oxygen and dissolved inorganic carbon. AGU Meeting, San Francisco), EOS Transactions, AGU.
- ²⁵Steinberg, D.K., Carlson, C.A., Bates, N.R., Goldthwait, S., Madin, L., and Michaels, A.F., 1998. Zooplankton vertical migrations and the active transport of dissolved organic and inorganic carbon in the Sargasso Sea. U.S. Synthesis and Modelling Project Planning Workshop Report, Time-Series Stations and Modelling, Snowbird, Utah, 22-27 July, 1997, U.S. JGOFS Planning Report No. 21, 81.
- ²⁴Bates, N.R., 1997. The impact of hurricanes on the local to global estimates of air-sea exchange of CO₂. AGU Spring Meeting, Baltimore, Maryland. EOS Transactions, AGU, 78 (2), S89.
- ²³Bates, N.R., Carlson, C.A., and Hansell, D.A., 1997. Comparison of inorganic and organic carbon cycling between the Sargasso Sea and Ross Sea. International JGOFS Modelling Symposium, 20-26 May 1997, p. A2.
- ²²Bates, N.R., Knap, A.H., Michaels, A.F., Steinberg, D.K., Carlson, C.A., Hansell, D.A., Johnson, R.J., and Bell, S.J., 1997. Ocean Variability at the U.S. JGOFS Bermuda Atlantic Time-series Study (BATS) site. Int. JGOFS Modelling Symposium, 20-26 May, p. 17.
- ²¹Steinberg, D.K., Carlson, C.A., Bates, N.R., and Michaels, A.F., 1997. Zooplankton vertical migrations and the active transport of dissolved organic and inorganic carbon in the Sargasso Sea. ASLO Spring Meeting, Santa Fe, New Mexico.
- ²⁰Bates, N.R., Michaels, A.F., and Knap, A.H., 1996. Spatial variability of CO₂ species in the Sargasso Sea. CO₂ in the Oceans Meeting, Puerto Rico, 22-26 January, 1996, Caribbean Journal of Science, 32(3), 262.
- ¹⁹Bates, N.R., 1996. Measurements of total carbon dioxide (TCO₂) in seawater: calibration of TCO₂ analyses from a multiyear oceanic time series in the Sargasso Sea. CO₂ in the Oceans Meeting, Puerto Rico, 22-26 January, 1996, Caribbean Journal of Science, 32(3), 303-304.
- ¹⁸Bates, N.R., Takahashi, T., Chipman, D.W., Howse, F., Goddard, J.G. and Knap, A.H., 1996. Diurnal to seasonal variability of pCO₂ in the Sargasso Sea. ASLO/AGU Meeting, La Jolla, CA, 18-22 February, 1996.

- ¹⁷Bates, N.R., Knap, A.H., and Michaels, A.F., 1995. Insights into the oceanic carbon cycle at the U.S. JGOFS time series in the Sargasso Sea. First JGOFS International Symposium, Villefranche-sur-Mer, 8-12 May, 1995.
- ¹⁶Bates, N.R., Johnson, R.J., Knap, A.H., and Michaels, A.F., 1995. Interannual changes of the oceanic inorganic carbon system in the Sargasso Sea. IAPSO Meeting, 5-14 August, Hawaii.
- ¹⁵Buesseler, K.O., Michaels, A.F., Hartman, M.C., and Bates, N.R., 1995. Upper ocean particulate fluxes at the JGOFS Bermuda Atlantic Time-series Study estimated using sediment traps, thorium-234 and biogeochemical inferences. First JGOFS International Symposium, Villefranche-sur-Mer, 8-12 May, 1995.
- ¹⁴King, L.L., Wakeham, S.G., Hayes, J.M., and Bates, N.R., 1995. Alkenone isotopes as a proxy for dissolved CO₂ at the Bermuda Atlantic Time Series Station. American Chemical Society Meeting.
- ¹³Marchal, O., Bates, N.R., and Monfray, P., 1995. A diagnostic model of the oceanic carbon cycle at the U.S. JGOFS Bermuda Atlantic Time-series Site in the Northwestern Sargasso Sea. IAPSO Meeting, 5-14 August, Hawaii.
- ¹²Michaels, A.F., Little, R., Knap, A., Johnson, R., Gundersen, K., Michaels, C., Close, A., Howse, F., Bates, N.R., Doyle, A., Bahr, F., Caporelli, E., Stone, S., Countway, P., Church, M., Sherriff-Dow, R., Sorenson, J.C., Hansell, D., Waterhouse, T., Hammer, M., and Becker, S., 1995. Interannual variability at the Bermuda Atlantic Time-series Study (BATS) site. Oceanography Society Meeting, 18-21 April, Newport, R.I., Program of abstracts, 44.
- ¹¹Nelson, N.B., Bates, N.R., Michaels, A.F., Siegel, D.A., and Knap, A.H., 1995. Impact of surface pCO₂ variability on air-sea exchange in the Sargasso Sea, summer 1994. IAPSO Meeting, 5-14 August, Hawaii.
- ¹⁰Bates, N.R., Knap, A.H., and Michaels, A.F., 1994. Temporal and spatial variability of the inorganic carbon system in the Sargasso Sea, November 1988 to January 1994. EOS Transactions, AGU, 75(3), 99.
- ⁹Hansell, D.A., Gundersen, K., and Bates, N.R., 1994. Mineralization of dissolved organic carbon in the Sargasso Sea: A progress report. EOS Trans., AGU, 75(3), 107.
- ⁸Nelson, N.B., Bates, N.R., Michaels, A.F., Siegel, D.A., and Knap, A.H., 1994. Satellite assessment of sea surface temperature and pCO₂ variability at the U.S. JGOFS Bermuda Atlantic Time-series Study (BATS) site. EOS Transactions, AGU, 75(42).
- ⁷Bates, N.R., Michaels, A.F., and Knap, A.H., 1993. Seasonal variability of the oceanic CO₂ system in the Sargasso Sea: U.S. JGOFS Bermuda Atlantic Time-series Study. The Oceanography Society, 19-24 April, 1993, Seattle, WA, Program with abstracts, 81.
- ⁶Close, A., Michaels, A.F., Knap, A.H., Hansell, D.A., Dow, R.L., Bates, N.R., Doyle, A., Gundersen, K., Hammer, M., Howse, F., Johnson, R., Sorenson, J., and Waterhouse, T., 1993. Ocean time-series near Bermuda: Hydrostation "S" and the U.S. JGOFS Bermuda Atlantic Time-series Study. The Oceanography Society, 19-24 April, 1993, Seattle, WA, Program of abstracts, 82.
- ⁵Bates, N.R., Knap, A.H., and Michaels, A.F., 1992. Seasonal variability in dissolved inorganic carbon, alkalinity and pCO₂ in the Northwestern Sargasso Sea: U.S. JGOFS Bermuda Atlantic Time-series Station. EOS Transactions, AGU, 73(43), 304.
- ⁴Bates, N.R., and Brand, U., 1990. Biogeochemistry of Lower Paleozoic brachiopods: Paleoenvironmental and secular oceanic variation. Geological Association of Canada-Mineralogical Association of Canada, Annual Meeting, April 1990, Vancouver, BC, Program with Abstracts, 15, A-8.
- ³Bates, N.R., and Brand, U., 1990. Depositional and taxonomic control of elemental and isotopic contents of Middle Devonian Hamilton Group brachiopods, New York State and Ontario. Geological Association of Canada-Mineralogical Association of Canada, Annual Meeting (April, 1990; Vancouver, Canada), Program with Abstracts, 15, A-7.
- ²Bates, N.R., and Brand, U., 1990. Isotope biogeochemistry of Paleozoic brachiopods. Canadian Sedimentology Meeting, Brock University, May 1990.
- ¹Bates, N.R., and Brand, U., 1989. Secular variations of calcite mineralogy: an evaluation of ooid and micrite chemistries. International Geological Congress Meeting, Fourth Meeting, July 1989, Washington, U.S., Program with Abstracts, 4, 99-100.