

IVAN VALIELA

The Ecosystems Center
Marine Biological Laboratory
Woods Hole, Massachusetts 02543
(508) 2897515
ivaliel@mbl.edu

Education:

Ph.D., Cornell University (1968), Ecology; B.S., Rutgers University (1964), Agricultural Research Member

American Soc. of Limnology and Oceanography, Coastal and Estuarine Research Federation, North Eastern Estuarine Research Soc.

Academic activities:

Distinguished Scientist (2011 present), Senior Res. Scientist, The Ecosystems Center, Marine Biological Laboratory (2008-2014).

Emeritus Professor, 2008 present; Professor, 1982-2007, Assoc. Professor (1979-1980), Assis. Professor (1969-1975), Boston University Marine Program.

Co-Director, Marine Ecology Course, Marine Biological Laboratory (1998-2003).

Act. Director, Boston Univ. Marine Progr. (1986-1987),

Coord., Woods Hole Mar. Sci. Consortium (1985-2001), and Director, REU site Coastal Bays of New England (1995-2007).

Taught courses at Fac. de Biología, Univ. de Barcelona (1985), Inst. de Biología Marina y Pesquera "Alte. Storni", San Antonio Oeste, Argentina (1986); Facultad de Ciencias del Mar, Univ. de Las Palmas, Gran Canaria, Spain (1989-1991); Inst. de Ciencias del Mar y Limnología, Univ. Nac. Autónoma de México (1998), Inst. Oceanográfico Univ. de São Paulo, Brazil (1998); Facultad de Biología, Universidad de Oviedo, 2006, Università Ca' Foscari, Venice (2007), Marine Affairs Institute, Trinidad (2009).

Visiting Scholar, Dept. of Oceanography, Univ. of Washington (1981), Univ. of Barcelona (1982).

Postdoctoral NIH Trainee, Department of Zoology, Michigan State University (1969).

Institutional and editorial activity:

Member, Consiglio Cientifico, Stazione Zoologica "Anton Dohrn", Naples (1995-2005); Board Member, Fundación Antorchas, Argentina; Jury for Fundacion Bunge y Born National Prize, Argentina; Bd. of Dir., Assoc. for Preservation of Cape Cod (1989-1991); Bd of Adv., Amer. Littoral Soc. (1981-1996), Ext. Rev. Board, University of Groningen, the Netherlands; Member, Executive Board of Governing Board of CERF (2007-2010); Jury for BBVA Prize for Biodiversity and Conservation (2008), Member, NOAA Science Advisory Board Ecosystem Sciences and Management Working Group (2009-2010)-President, Comité Ejecutivo del Laboratorio Internacional de Cambio Global (2009-2011). Member, Research Advisory Committee, Waquoit Bay National Research Reserve, NOAA (2015 present). Member, Cape Cod Commission Tech. Review Committee (2016 present).

Editorial Board, Rev. Hist. Nat. Litoránea (Argentina) (1982-2000), Limnética (1987-2000), Board of Editors, Limnology and Oceanography (1989-1992), Scientia Marina (1989-2006). Editor, Estuarine, Coastal and Shelf Science (2006-2016).

Other Activities:

Consultant, advisor, and lecturer in coastal ecology to educational institutions, government agencies, towns,

William A. Niering Outstanding Educator Award, Estuarine Research Federation, for excellence in coastal and estuarine education, 2005.

Wiese Distinguished Lecturer, Dauphin Island Sea Laboratory, 2007.

Howard, Eugene, and William Odum Award, Coastal and Estuarine Research Federation, for lifetime achievement, 2013.

Publications

- 1967 Hansens, E.J., and I. Valiela. Activity of the face fly in New Jersey. *J. Econ. Ent.* 50:20-23.
- 1969 Valiela, I. An experimental study of the mortality factors of larval *Musca autumnalis* Geer. *Ecol. Monogr.* 39:199-225.
- Valiela, I. The arthropod fauna of bovine dung in Central New York and sources on its natural history. *J. New York Entom. Soc.* 77:210-220.
- 1971 Valiela, I. Food specificity and community maturity: Preliminary ornithological evidence for a general framework. *General Systems* 16:47.
- 1973 Valiela, I., J.M. Teal, and W. Sass. Nutrient retention in salt marsh plots experimentally fertilized with sewage sludge. *Estuar. Coast. Mar. Sci.* 12:691-701.
- Vince, S., and I. Valiela. The effects of ammonium and phosphate enrichments on chlorophyll a, pigment ratio and species composition of phytoplankton in Niantic Bay Sound. *Mar. Biol.* 19:693.
- 1974 Estrada, M., I. Valiela, and J.M. Teal. Concentration and distribution of chlorophyll in fertilized plots in a Massachusetts salt marsh. *J. Exp. Mar. Biol. Ecol.* 15:47-53.
- Banus, M., I. Valiela, and J.M. Teal. Exports of lead from salt marshes. *Mar. Pollut. Bull.* 5:6-11.
- Teal, J.M., and I. Valiela. The Living Filter. *Oceanus* 1107-Reprinted in *Marine Technol. Soc. J.* 7:19-21.
- Krebs, C.T., I. Valiela, G. Harvey, and J.M. Teal. Reduction of field populations of fiddler crabs by uptake of chlorinated hydrocarbons. *Mar. Pollut. Bull.* 5:140-144.
- Prinslow, T., I. Valiela, and J.M. Teal. The effect of detritus and ration size on the growth of *Fundulus heteroclitus*, a salt marsh killifish. *J. Exper. Mar. Biol. Ecol.* 16:1-10.
- Van Raalte, C., I. Valiela, E.J. Carpenter, and J.M. Teal. Nitrogen fixation: presence in salt marshes and inhibition by additions of combined nitrogen. *Estuar. Coast. Mar. Sci.* 20:501-511.
- Van Raalte, C., W.D. Stewart, I. Valiela, and E.J. Carpenter. ¹⁴C technique for measuring algal productivity in salt marsh muds. *Botanica Marina* 17:188-194.
- Valiela, I., D. Babiec, W. Atherton, S. Seitzinger, and C. Krebs. Some consequences of sexual dimorphism: feeding in male and female fiddler crabs, *Uca pugnax* (Smith). *Biol. Bull.* 147:652-660.
- Valiela, I., and J.M. Teal. Nutrient limitation in salt marsh vegetation. Pp 56-71 in R.J. Reimold and W.H. Queen (Eds.), *Ecology of Halophytes*, Academic Press.
- 1975 Valiela, I., M. Banus, and J.M. Teal. Metal retention by salt marsh sediments and the response of marsh bivalves to enrichment with metal-containing fertilizers. *Environ. Pollut.* 7:1445-1457.
- Valiela, I., J.M. Teal, and W.J. Sass. Production and dynamics of salt marsh vegetation and effect of sewage contamination. Biomass, production and species composition. *J. Appl. Ecol.* 98:973-982.

- Banus, M., I. Valiela, and J.M. Teal. Lead, zinc and cadmium budgets in experimentally enriched ecosystems. *Estuar. Coast. Mar.* 50:121-130.
- MacLeod, P., and I. Valiela. The effect of density and mutual interference by a predator: a laboratory study of predation by the nudibranch *Coryphella rufibranchialis* on the hydroid *Tubularia larynx*. *Hydrobiologia* 47:339-346.
- 1976 Meany, R., I. Valiela, and J.M. Teal. Growth, abundance and distribution of larval tabanids in experimentally fertilized plots on a Massachusetts salt marsh. *J. Appl. Ecol.* 13:223-234.
- Valiela, I., S. Vince, and J.M. Teal. Assimilation of sewage by wetlands. *Pp 25-34 Estuarine*

- Valiela, I., and J.M. Teal. Inputs, outputs and interconversions of nitrogen in a salt marsh ecosystem Pp. 399-414. In R.K. Jefferies and A.J. Davy (eds.), Ecological Processes in Coastal Environments. Brit. Ecol. Soc. Symp. Blackwell.
- Valiela, I., J.M. Teal, S. Volkmann, D. Shafer, and E.J. Carpenter. Nutrient and particulate fluxes in a salt marsh ecosystem: Tidal exchanges and inputs by precipitation and groundwater. Limnol. Oceanogr. 23:79-812.
- Teal, J.M., I. Valiela, and D. Berlo. Nitrogen fixation by rhizosphere ~~and~~^{fixing} bacteria and salt marsh sediments. Limnol. Oceanogr. 24:120-
- Valiela, I., and J.M. Teal. Nutrient dynamics: summary and recommendations. Pp. 26-250. R.E. Good, D.F. Whigham and R.K. Simpson (eds.), Freshwater Wetlands. Acad. Press.
- Kaplan, W., I. Valiela, and J.M. Teal. Denitrification in a salt marsh ecosystem. Limnol. Oceanogr. 24:726-734.
- 1979 Valiela, I., L. Koumjian, T. Swain, J.M. Teal, and J. Hobbie. Cinnamic acid inhibition of detritus feeding. Nature 280:557.
- Valiela, I., and J.M. Teal. The nitrogen budget of a salt marsh ecosystem. Nature 280:652-
- 1980 Giblin, A.E., A. Bourg, I. Valiela and J.M. Teal. Uptake and cycling of heavy metals in sewage sludge in a New England salt marsh. Amer. J. Bot. 67:1058-
- 1981 Breteler, R.J., I. Valiela, and J.M. Teal. Bioavailability of mercury in several ~~Northern~~ U.S. Spartina ecosystems. Estuar. Coast. Shelf Sci. 12:665-
- Breteler, R.J., J.M. Teal, and I. Valiela. Retention and fate of experimentally added mercury in a Massachusetts salt marsh treated with sewage sludge. Mar. Environm. Res. 25:211-
- Breteler, R.J., A.E. Giblin, J.M. Teal, and I. Valiela. Trace enrichments in decomposing litter of Spartina alterniflora. Aquat. Bot. 11:111-120.
- Buchsbaum, R., I. Valiela, and J.M. Teal. Grazing by Canada geese and related aspects of the chemistry of salt marsh grass. Colonial Waterbirds 4:132-136-
- Howes, B.L., R.W. Idwarth, J.M. Teal, and I. Valiela. Oxidation reduction potentials in a salt marsh: Spatial patterns and interactions with primary production. Limnol. Oceanogr. 26:830-850-
- Vince, S.W., I. Valiela, and J.M. Teal. An experimental study of the structure and herbivorous insect communities in a salt marsh. Ecology 62:1667-1678.
- 1982 Jordan, T.E., and I. Valiela. A nitrogen budget of the ribbed mussel *Geukensia demissa*

- Buchsbaum, R., J.O. Wilson, and I. Valiela. Digestibility of plant constituents by Canada Geese and Atlantic Brant. *Ecology* 67:38693.
- White, D. S., C. D'Avanzo, I. Valiela, C. Lasta, and M. Pascual. The relationship of diet to growth and ammonia excretion in salt marsh fish. *Environm. Biol. Fish.* 16:105-
- Giblin, A.E., G.W. Luther III, and I. Valiela. Trace metal solubility in salt marsh sediments contaminated with sewage sludge. *Estuar. Coast. Shelf Sci.* 23:4037-
- Valiela, I. Review of "An Introduction to Coastal Ecology" by P. J. S. Boaden and R. Seed. *Quart. Rev. Biol.* 61:424425.
- 1987 Caraco, N., A. Tamse, O. Boutros, and I. Valiela. Nutrient limitation of phytoplankton growth in brackish coastal ponds. *Canad. J. Fish. Aquat. Sci.* 44:763-
- Buchsbaum, R., and I. Valiela. Variability in the chemistry of estuarine plants and its effect on feeding by Canada geese. *Oecologia* 73:156-
- Wilson, JO., I. Valiela, and T. Swain. Decomposition processes in a salt marsh ecosystem: Carbohydrate dynamics during decay of litter of *Spartina alterniflora*. *Mar. Biol.* 92:247-
- 1988 Rietsma, C., I. Valiela and R. Buchsbaum. Effects of detrital chrysotile growth and food choice in the salt marsh snail, *Melampus bidentatus*. *Ecology* 69:261266.
- Valiela, I., and J. Costa. Eutrophication of Buttermilk Bay, a Cape Cod coastal embayment: Concentrations of nutrients and watershed nutrient budgets. *Envir. Manag.* 12:53953.
- Valiela, I. Conditions and motivations for long-term ecological research: Some notions from studies on salt marshes and elsewhere. Pp. 158- In G.E. Likens (ed.), *Long Term Ecological Research*. SpringerVerlag.
- 1989 Valiela, I. Review of "Ecology Potentials and Limitations", by T. Fenchel. *Estuaries* 11:11410-
- Valiela, I. Review of "The Ecology and Management of Wetlands", Vols. I, II, by D. Hook and others (eds.). *Marine Technol. Soc. J.* 23:62-
- 1990 Valiela, I. Suitably large scales for study of marine ecosystems. Review of "Biomass Yields and Geography of Large Marine Ecosystems", by K. Sherman and L. M. Alexander (eds.). *Ecology* 71:2031.
- D'Avanzo, C., and I. Valiela. Use of detrital foods and assimilation of nitrogen by coastal detritivores. *Estuaries* 13:204.
- Valiela, I., J. Costa, K. Foreman, J.M. Teal, B. Howes, and D. Aubrey. Transport of groundwater borne nutrients from water. *AubreAer. Are Td [(V)-20opxdtGh (oundwpxdtG)-O4 >>BDC (I)-2 (s)-1 (D'Ae,-2 (a)4 (n a)4 (nd Lb1)-1 (a)42 (va)4 (nz)-6 (o, C)-3 (., a)4 (nd l)23 (. V)2 (a)4 (I)-2 N and*

- 1995 Lajtha, K., B. Seely, and I. Valiela. Retention and leaching losses of atmospheric ~~chloride~~^{nitrogen} in the aggrading coastal watershed of Waquoit Bay, MA. *Biogeochemistry* 28:233-243.
- Sardá, R., K. Foreman, and I. Valiela. Macroinfauna of a southern New England salt marsh: Seasonal dynamics and production. *Mar. Biol.* 121:445-455.
- Valiela, I., and C.S. Rietsma. Disturbance of salt marsh vegetation by wrack mats in Great Sippewissett Marsh. *Oecologia* 102:1062.
- Alber, M. and I. Valiela. Organic aggregates in detrital food webs: Incorporation by bay scallops, *Argopecten irradians*. *Mar. Ecol. Prog. Ser.* 121:1124.
- LaMontagne, M.G., and I. Valiela. Denitrification measured by a direct ¹⁵N method in sediments of Waquoit Bay, MA. *Biogeochemistry* 31:63-68.
- Bohrer, T., A. Wright, J. Hauxwell, and I. Valiela. Effect of epiphyte biomass on growth rate of *Zosteramarina* in estuaries subject to different nutrient loading. *Biol. Bull.* 189:260.
- Callaway, D., I. Valiela, K. Foreman, and L.A. Soucy. Effects of ¹⁵N loading and salt marsh habitat on gross primary production and chlorophyll a levels in the estuarine Waquoit Bay. *Biol. Bull.* 189:254-255.
- Chaplin, S.A., C.H. MacGregor, I. Valiela, K. Foreman, and L. Soucy. The effect of residential and forested watershed land cover on nutrient loading to Hamblin and Jehu Ponds, Waquoit Bay, Massachusetts. *Biol. Bull.* 189:247-248.
- Drake, C., P.J. Behr, and I. Valiela. Effect of algal cover on size selective predation of *Gammarus mucronatus* by the striped killifish, *Fundulus majalis*. *Biol. Bull.* 189: 243-244.
- Lyons, J., J. Ahern, J. McClelland, and I. Valiela. Macrophyte abundances in Waquoit Bay estuaries subject to different nutrient loads and the potential role of fringing salt marsh in groundwater nitrogen interception. *Biol. Bull.* 189:252-256.
- MacGregor, C.H., S.A. Chaplin, and I. Valiela. Land ~~cover~~ effects on inorganic nutrients in groundwater and the role of salt marshes in interception of ~~derived~~ nutrients entering estuaries of Waquoit Bay, Massachusetts. *Biol. Bull.* 189:249-259.
- Martinez, N., J. Hauxwell, and I. Valiela. Effect of macroalgal species and nitrogen loading rates on colonization of macroalgae by herbivorous amphipods. *Biol. Bull.* 189:2254-2255.
- Sardá, R., I. Valiela, and K. Foreman. Life cycle, demography, and production of *Marenzelleria viridis* (Verrill, 1873) in a salt marsh of southern New England. *J. Mar. Biol. Assoc. U. K.* 75:725-738.
- Sheridan, C. I. Valiela, K. Foreman, and L.A. Soucy. Effect of nutrient enrichment on phytoplankton growth in Waquoit Bay, Massachusetts. *Biol. Bull.* 189:258-259.
- Tomasky, G., and Valiela. Nutrient limitation of phytoplankton growth in Waquoit Bay, Massachusetts. *Biol. Bull.* 189:257-258.
- Valiela, I. *Marine Ecological Processes*. 2nd Ed. Springer Verlag. 686 pp.
- Wolfe, C.A., C. Rietsma, and I. Valiela. Foliar release of ammonium and dissolved organic nitrogen by *Spartina alterniflora*. *Biol. Bull.* 189:262.

- Wright, A., T. Bohrer, J. Hauxwell, and I. Valiela. Growth of epiphytes on *Zostera marina* in estuaries subject to different nutrient loading. Biol. Bull. 189:261.
- Foreman, K., I. Valiela, and R. Sardá. Controls of benthic marine food webs. Sci. Mar. 15:281-19-
- 1996 Alber, M., and I. Valiela. Utilization of microbial organic aggregates by bay scallops, *Argopecten irradians* (Lamarck). J. Exp. Mar. Biol. Ecol. 195:89.
- Foreman, K., I. Valiela, and R. Sardá. Controls of benthic marine food webs. Sci. Mar. 15:281-19-
- Ahern, J., J. Lyons, J. McClelland, and I. Valiela. Invertebrate response to ~~nitrate~~ changes in macrophyte assemblages in Waquoit Bay. Biol. Bull. 189:241-242.
- Valiela, I., P. Peckol, C. D'Avanzo, K. Lajtha, J.N. Kremer, W.R. Geyer, K. Foreman, D. Hersh, B. Seely, T. Isaji, and R. Crawford. Hurricane Bob on Cape Cod. Amer. Scientist 84:554-
- Dickens, A., L. Soucy, and I. Valiela. Particulate and dissolved nitrogen: A study of transformations in groundwater and estuarine samples of the Waquoit Bay estuarine system. Biol. Bull. 192:331-
- Feinstein, N., S. Yelenik, J. McClelland, and I. Valiela. Growth rates of ribbed mussels in six estuaries subject to different nutrient loads. Biol. Bull. 191:327-
- Fritz, C., E. LaBrecque, J. Tober, P.J. Behr, and I. Valiela. Shrimp in Waquoit Bay: Effects of nitrogen loading on size and abundance. Biol. Bull. 191:326-
- Galán Jiménez, E., J. Hauxwell, E. Heckscher, C. Reitsma, and I. Valiela. Selection of nitrogen-enriched macroalgae *Cladophora vagabunda* and *Gracilaria tikvahiae* by the herbivorous amphipod *Microdeutopus gryllotalpa*. Biol. Bull. 191:324.
- Heckscher, E., J. Hauxwell, E. Galán Jiménez, C. Reitsma, and I. Valiela. Selectivity by the herbivorous amphipod *Microdeutopus gryllotalpa* among five species of macroalgae. Biol. Bull. 191:324-326.
- LaBrecque, E., C. Fritz, J. Tober, P.J. Behr, and I. Valiela. Abundance and growth rates in relation to population densities of *Fundulus heteroclitus* in Waquoit Bay estuaries subject to different nitrogen loads. Biol. Bull. 191:320.
- Tober, J., C. Fritz, E. LaBrecque, P.J. Behr, and I. Valiela. Abundance, biomass, and species richness of fish communities in relation to nitrogen loading rate of Waquoit Bay estuaries. Biol. Bull. 191:321-322.
- Yelenik, S., J. McClelland, N. Feinstein, and I. Valiela. Changes in N and C stable isotope signatures of particulate organic matter and ribbed mussels in estuaries subject to different nitrogen loading. Biol. Bull. 191: 329-330.
- Sardá, R., I. Valiela, and K. Foreman. Decadal shift in salt marsh macrofaunal community in response to sustained long-term experimental nutrient enrichment. J. Exp. Mar. Biol. Ecol. 205:63-81.
- 1997 Portnoy, J.W., and I. Valiela. Short-term effects of salinity reduction and drainage on salt marsh

- Valiela, I., and S. E. Fox. Managing coastal wetlands. *Science* 319:190-192.
- Valiela, I., and S. Fox. Mechanisms of ecological control over time: Evidence from coastal ecosystems. Alladares, F., Camacho, A., Elosegui, A., Estrada, M., Gracia, C., García, S., & Gili, J.M. (eds). *Unity in Diversity*. Ed. Rubes, Fundación BBVA, Madrid.
- Bowen, J. L., and I. Valiela. Using ^{15}N to assess coupling between watersheds and estuaries in temperate and tropical regions. *J. Coast. Res.* 24:83-94.
- Fox, S. E., E. Stieve, I. Valiela, J. Hauxwell, and J. McClelland. Macrophyte abundance in Waquoit Bay: Effects of land-derived nitrogen loads on seasonal and interannual biomass patterns. *Estuaries and Coasts* 31:532-541.
- Culbertson, J. B., I. Valiela, Y. S. Olsen, and C. M. Reddy. Effect of field exposure to residual petroleum hydrocarbons on growth, condition index, and filtration rate of the ribbed mussel, *Geukensia demissa*. *Environm. Pollut.* 154:312-319.
- Culbertson, J., I. Valiela, M. Pickart, E. Peacock, and C. Reddy. Long-term consequences of residual petroleum on salt marsh grass in Wild Harbor, MA. *J. Appl. Ecol.* 45:1282-1291.
- Teichberg, M., S. Fox, C. Aguila, Y. Olsen, and I. Valiela. Macroalgal responses to experimental nutrient enrichment in shallow coastal waters: growth, internal nutrient pools, and isotopic signatures. *Mar. Ecol. Prog. Ser.* 368:117-126.
- Carmichael, R. H., T. Hattenrath, I. Valiela, and R. H. Michener. Nitrogen stable isotopes in the shell of *Mercenaria mercenaria*: trace wastewater inputs from watersheds to estuarine ecosystems. *Aquat. Biol.* 4:99-111.
- 2009**
- Valiela, I. *Doing Science: Design, Analysis, and Communication of Scientific Research*. Second Edition. Oxford University Press. 333 pages.
- Baeta, A., R. Pinto, I. Valiela, P. Richard, N. Niquil, and J. C. Marques. ^{15}N and ^{13}C in the Mondego estuary food web: Seasonal variation in producers and consumers. *Marine Environmental Research* 67:109-116.
- Baeta, A., I. Valiela, F. Rossi, R. Pinto, P. Richard, N. Niquil, and J. C. Marques. Eutrophication and trophic structure in response to the presence of the eelgrass *Zostera marina*. *Biology* 156:2107-2120.
- Fox, S. E., M. Teichberg, Y. S. Olsen, and I. Valiela. Restructuring of benthic communities in eutrophic estuaries: lower abundance of prey leads to trophic shifts from omnivory to grazing. *Mar. Ecol. Progr. Ser.* 380:457.
- Valiela, I., E. Kinney, J. Culbertson, E. Peacock, and S. Smith. Global losses of mangroves and salt marshes: Magnitudes, causes and consequences. Pp. 380-397. Duarte, C. (ed.). *Global Loss of Coastal Habitats: Rates, Causes, and Consequences*. Fundación BBVA. Bilbao.
- Carmichael, R. H., E. Gainea, Z. Sheller, A. Tong, A. Clapp, and I. Valiela. Diet composition of juvenile horseshoe crabs: Implications for growth and survival of natural and cultured stocks. Pp. 521-534, in Tancredi, J. T., et al. (eds.). *Biology and Conservation of Horseshoe Crabs*. Springer, N.Y.
- Castro, P., I. Valiela, and H. Freitas. Sediment pool and plant content as indicators of nitrogen regimes in Portuguese estuaries. *Journal of Experimental Marine Biology and Ecology* 380:1-10.

Valiela, I., L. Camilli, T. Stone, A. Giblin, J. Crusius, S. Fox, C. Bartholomew, R. Oliveira Monteiro, J. Tucker, and C. Harris. Increased rainfall drastically freshens and enriches coastal waters along the Pacific coast of Panama. *Global and Planetary Change* 9293:130-137.

2013

Peng, X., E. Yando, E. Hildebrand, C. Dwyer, A. Kearney, A. Waciega, I. Valiela, and A. E. Bernhard. Differential responses of ammonium-oxidizing archaea and bacteria to long-term fertilization in a New England salt marsh. *Frontiers in Microbiology* 3:11

TomaskyHolmes, G., I. Valiela, and M. A. Charette. Determination of water mass ages using radium isotopes as tracers: Implications for phytoplankton dynamics in estuaries. *Marine Chemistry* (2013) DOI <http://dx.doi.org/10.1016/j.marchem.2013.02.002>

Valiela, I., C. BarthJensen, T. Stone, J. Crusius, and M. Bartholomew. Deforestation of coastal watersheds of Panama: Nutrient retention and export to streams. *Biogeochemistry* (2013) DOI 10.1007/s10533-013-9836-2.

Valiela, I., C. Harris, A. Giblin, C. Bartholomew, T. Stone, S. Fox, J. Crusius, and M. Bartholomew. Nutrient gradients in Panamanian estuaries: Effects of watershed deforestation, rainfall, upwelling, and wthin-estuary transformations. *Mar. Ecol. Progr. Ser.* 482:1-

. L Q Q H \ (/ D Q G , 9 D¹⁵O In Salt Marsh Sediments Vn a Long-term fertilization study. *Mar. Ecol. Progr. Ser.* 477:52-

2014

Valiela, I., M. Bartholomew, A. Giblin, J. Tucker, C. Harris, P. Martinetto, M. Otter, L. Camilli, T. Stone Watershed deforestation and downestuary transformations alter sources, transport, and export of suspended particl

Valiela, I., C. Duarte, and R. W. Fulweiler. In memoriam, Scott Nixon (1943-2012). *Estuaries and Coasts* 38:1123-1125.

Valiela, I., and M. Bartholomew. Land-sea coupling and global-driven forcing: Following some of Scott Nixon's challenges. *Estuaries and Coasts* 38:1289.

Valiela, I. The Great Sippewissett salt marsh plot: Some history, highlights, and contrails from a long-term study. *Estuaries and Coasts* 38:10920.

Zhou, M.-Y., D.-Y. Liu, D. M. Anderson, and I. Valiela. Introduction to the Special Issue on green tides in the Yellow Sea. *Estuar. Coast. Shelf Sci.* 183:3-

2016

Lloret, J., and I. Valiela. Unprecedented decrease in deposition of nitrogen oxides over North America: The relative effects of emission controls and prevailing air trajectories. *Biogeochemistry* 129:165-180.

Valiela, I., C. Owens, J. Lloret, E. Elmstrom. Eutrophication of Cape Cod estuaries: Effect of decadal changes in global-driven atmospheric and local-scale wastewater nutrient loads. *Marine Pollution Bulletin* 110:309-315.

Submitted

Valiela, I., E. Elmstrom, T. Stone, and L. Camilli. Land-sea couplings in the tropics: ~~and~~ ^{Watershed} deforestation, ~~within-mangrove~~ estuary processes, and coastal upwelling alter nitrogen exchanges with coastal waters in Pacific Panama. *Ecosystems*.