IVAN VALIELA

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Birth date: 11 November 1941
Birthplace: Buenos Aires, Argentina
Citizenship: USA

Education:

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

***Memberships*:**

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

Academic activities:

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

Emeritus Professor, 2008-present; Professor, 1980-2007, Assoc. Professor (1975-1980), Assist. Professor (1969-1975), Boston University Marine Program, MBL.

Co-Director, Marine Ecology Course, Marine Biological Laboratory (1975-1983).

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

Coord., Woods Hole Mar. Sci. Consortium (1985-2011), and Director, REU site Coastal Bays of New England (1995-2007).

Taught courses at Fac. de Biologia, Univ. de Barcelona (1985), Inst de Biologia 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 Limnologia, Univ. Nac. Autonoma de Mexico (1998), Inst. Oceanografia, Univ. de Sao Paulo, Brazil (1998); Facultad de Biologia, 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).

Post-doctoral NIH Trainee, Department of Zoology, Michigan State University (1969).

Institutional and editorial activity:

Member, Consiglio Cientifico, Stazione Zoologica "Anton Dohrn", Naples (1995-2000); Board Member, Fundacion Antorcha, 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. (1982-1996), Ext. Rev. Board, University of Groningen, the Netherlands; Member-at-large 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 (2009-2013), President, Comité Ejecutivo del Laboratorio Internacional de Cambio Global (2009-2011). Member, Research Advisory Committee, Waquoit Bay National Research Reserve, NOAA (2017-present), Advisory Committee, Association for the Preservation of Cape Cod (2019-present). Member, Cape Cod Commission Tech. Review Committee (2016-present). Member of Steering Committee, Integrated Marine Biosphere Research (IMBeR)(2024-present).

Editorial Board, *Rev. Hist. Nat. Litoral* (Argentina) (1982-2000), *Limnetica* (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, and government agencies in Massachusetts, Virginia, New Jersey, New York, Alaska, Argentina, Italy, Spain, Portugal, Mexico, Brazil, Holland, Trinidad and Tobago, and Saudi Arabia.

Manuscript, book, and proposal reviewer for many journals, government agencies, private foundations, and panel member in various sections of NSF, NASA, EPA, NOAA Sea Grant and Harmful Algae Programs.

Author of widely used texts: *"Marine Ecological Processes"*, Springer-Verlag, New York, 1984, and 3rd Ed. 2016; *"Doing Science: Design, Analysis, and Communication of Scientific Research"* Oxford University Press, New York, 2001, and 2nd Ed., 2009; "*Global Coastal Change*", Blackwell Publ. London, 2006.

Awards

Achievement Award, New England Estuarine Research Society, for very significant contributions to estuarine science, education, conservation, and management, 2005.

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. 60:20-28.

1969 Valiela, I. An experimental study of the mortality factors of larval *Musca autumnalis* de 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 16:77-84.

1973 Valiela, I., J.M. Teal, and W. Sass. Nutrient retention in salt marsh plots experimentally fertilized with sewage sludge. Estuar. Coast. Mar. Sci. 1:261-269.

Vince, S., and I. Valiela. 1973. The effects of ammonium and phosphate enrichments on chlorophyll a, pigment ratio and species composition of phytoplankton of Vineyard Sound. Mar. Biol. 19:69-73.

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. 14:47-56.

Banus, M., I. Valiela, and J.M. Teal. Exports of lead from salt marshes. Mar. Pollut. Bull. 5:6-9.

Teal, J.M., and I. Valiela. 1974. The Living Filter. Oceanus 17:7-10. 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. 5:140-142.

Prinslow, T., I. Valiela, and J.M. Teal. The effect of detritus and ration size on the growth of *Fundulus heteroclitus* L. , 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. 2:301-305.

Van Raalte, C., W.D. Stewart, I. Valiela, and E.J. Carpenter. A ^{14}C technique for measuring algal productivity in salt marsh muds. Botanica Marina 17:186-188.

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. 547-563 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. 7:144-157.

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. 12:973-982.

Banus, M., I. Valiela, and J.M. Teal. Lead, zinc and cadmium budgets in experimentally enriched ecosystems. Estuar. Coast. Mar. Sci. 3:421-430.

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. 13:323-332.

Valiela, I., S. Vince, and J.M. Teal. Assimilation of sewage by wetlands. Pp. 234-253. Estuarine Processes, Vol. 1. Uses, stresses and adaptation to the estuary. Academic Press.

Van Raalte, C.D., I. Valiela, and J.M. Teal. The effect of fertilization on the species composition of salt marsh diatoms. Water Res. 10:1-4.

Van Raalte, C.D., I. Valiela, and J.M. Teal. Productivity of benthic algae in experimentally fertilized salt marsh plots. Limnol. Oceanogr. 21:862-872.

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1977 Kaplan, W.A., J.M. Teal, and I. Valiela. Denitrification in salt marsh sediments: evidence for seasonal temperature selection among populations of denitrifiers. Microb. Ecol. 3:193-204.

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1978 Valiela, I., J.M. Teal, and W.G. Deuser. The nature of growth forms in the salt marsh grass *Spartina alterniflora.* Amer. Nat. 112:461-470.

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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 23:798-812.

Teal, J.M., I. Valiela, and D. Berlo. Nitrogen fixation by rhizosphere and free-living bacteria and salt marsh sediments. Limnol. Oceanogr. 24:126-132.

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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. 67:1059-1068.

1981 Breteler, R.J., I. Valiela, and J.M. Teal. Bioavailability of mercury in several North-eastern U.S. *Spartina* ecosystems. Estuar. Coast. Shelf Sci. 12:155-166.

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1982 Jordan, T.E., and I. Valiela. A nitrogen budget of the ribbed mussel *Geukensia demissa* and its significance in nitrogen flow in a New England salt marsh. Limnol. Oceanogr. 27:75-90.

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1983 Giblin, A.E., I. Valiela, and J.M. Teal. The fate of metals introduced into a New England salt marsh. Water Air Soil Pollut. 20:81-98.

Jordan, T.E., and I. Valiela. Sedimentation and resuspension in a New England salt marsh. Hydrobiologia 98:179-184.

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1984 Valiela, I., J. Wilson, R. Buchsbaum, C. Rietsma, D. Bryant, K. Foreman, and J. Teal. The importance of chemical composition of salt marsh litter on decay rates and feeding by detritivores. Bull. Mar. Sci. 35:261-269.

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Buchsbaum, R., I. Valiela, and T. Swain. The role of phenolic compounds and other plant constituents in feeding by Canada geese in a coastal marsh. Oecologia 63:343-349.

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Wiltse, W.I., K.H. Foreman, J.M. Teal, and I. Valiela. Effects of predators and food resources on the macrobenthos of salt marsh creeks. J. Mar. Res. 42:923-942.

1985 Valiela, I., J.M. Teal, S. Volkmann, R. Van Etten, and S. Allen. Decomposition in salt marsh ecosystems: The phases and major factors affecting disappearance of above-ground organic matter. J. Exp. Mar. Biol. Ecol. 89:1-26.

Wilson, J.O., I. Valiela, and T. Swain. Sources and concentrations of vascular plant material in sediments of Buzzards Bay. Mar. Biol. 90:129-137.

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1986 Wilson, J. O., R. Buchsbaum, I. Valiela, and T. Swain. Decomposition in salt marsh ecosystems: phenolic dynamics during decay of litter of *Spartina alterniflora*. Mar. Ecol. Progr. Ser. 29:177-187.

Buchsbaum, R., J.O. Wilson, and I. Valiela. 1986. Digestibility of plant constituents by Canada Geese and Atlantic Brant. Ecology 67:386-393.

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. 16:105-111.

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. 23:477-498.

Valiela, I. Review of "An Introduction to Coastal Ecology" by P. J. S. Boaden and R. Seed. Quart. Rev. Biol. 61:424-425.

1987 Caraco, N., A. Tamse, O. Boutros, and I. Valiela. Nutrient limitation of phytoplankton growth in brackish coastal ponds. Canad. J. Fish. Aquat. Sci. 44:473-476.

Buchsbaum, R., and I. Valiela. Variability in the chemistry of estuarine plants and its effect on feeding by Canada geese. Oecologia 73:146-153.

Wilson, J.O., I. Valiela, and T. Swain. Decomposition processes in a salt marsh ecosystem: Carbohydrate dynamics during decay of litter of *Spartina alterniflora*. Mar. Biol. 92:277-284.

1988 Rietsma, C., I. Valiela and R. Buchsbaum. Effects of detrital chemistry on growth and food choice in the salt marsh snail, *Melampus bidentatus*. Ecology 69:261-266.

Valiela, I., and J. Costa. Eutrophication of Buttermilk Bay, a Cape Cod coastal embayment: Concentrations of nutrients and watershed nutrient budgets. Environm. Manag. 12:539-553.

Valiela, I. Conditions and motivations for long-term ecological research: Some notions from studies on salt marshes and elsewhere. Pp. 158-169. In G.E. Likens (ed.), Long Term Ecological Research. Springer-Verlag.

1989 Valiela, I. Review of "Ecology - Potentials and Limitations", by T. Fenchel. Estuaries 11:140-141.

Valiela, I. Review of "The Ecology and Management of Wetlands", Vols. I, II, by D. Hook and others (eds.). Marine Technol. Soc. J. 23:62-63.

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 13:20-24.

Valiela, I., J. Costa, K. Foreman, J.M. Teal, B. Howes, and D. Aubrey. Transport of groundwater-borne nutrients from watersheds and their effects on coastal waters. Biogeochemistry 10:177-197.

1991 D'Avanzo, C.D., M. Alber, and I. Valiela. Nitrogen assimilation from amorphous detritus by two coastal consumers. Estuar. Coast. Shelf Sci. 33:203-209.

Buchsbaum, R., I. Valiela, T. Swain, M. Dzierzeski, and S. Allen. Available and refractory nitrogen in detritus of coastal vascular plants and macroalgae. Mar. Ecol. Progr. Ser. 72:131-143.

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1992 Valiela, I. Review of "Estuaries and Coasts: Spatial and Temporal Intercomparisons", by M. Elliot and J.-P. Ducrotoy (eds.). Quart. Rev. Biol. 67:224.

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1993 Comin, F., and I. Valiela. On the control of phytoplankton abundance and production in coastal lagoons. J. Coast. Res. 9:895-906.

Bierzechudek, A., C. D'Avanzo, and I. Valiela. Effects of macroalgae, night and day, on ammonium profiles in Waquoit Bay. Biol. Bull. 185:330-331.

1994 Johnson, R., M. LaMontagne, and I. Valiela. Rate of denitrification in submerged salt marsh sediments. Biol. Bull. 187:289-290.

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1995 Lajtha, K., B. Seely, and I. Valiela. Retention and leaching losses of atmospherically-derived nitrogen in the aggrading coastal watershed of Waquoit Bay, MA. Biogeochemistry 28:33-54.

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