Coffin Exhibit 7

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Date and Place of Birth: 19 November 1957; Machias, Maine

Formal Education: 1979: B.S. in Biology; University of Maine at Machias
1983: M.S. in Marine Sciences; University of North Carolina, Chapel Hill
1994: Ph.D. in Marine Bio-Resources; University of Maine, Orono

Pertinent Experience:

1984-1985: Marine Project Assistant; Univ. Maine Cooperative Extension Service, Machias, Maine

1985-1986: Environmental Education Coordinator; University of Maine at Machias

1986-1994: Environmental Resources Coordinator; University of Maine at Machias

1989-1997: Assistant Professor of Marine Ecology; University of Maine at Machias

1998-2002: Associate Professor of Marine Ecology; University of Maine at Machias

1990-present: Graduate Faculty Member, University of Maine (School of Marine Science)

1996-present: Cooperating Faculty member for the School for Marine Science at the Univ. of Maine

2002-present: Professor of Marine Ecology; University of Maine at Machias

2011-present: Director, Marine Science Field Station, University of Maine at Machias

Fellowships/Scholarships/Other Awards:

Switzer Foundation Environmental Fellow (1992-1993)
Teacher of the Year, University of Maine at Machias (2000)
Fulbright Scholarship (2000-2001), National University of Ireland, Galway (lecture/research)
Distinguished Alumnus, University of Maine at Machias (2001)
Trustee Professor, University of Maine at Machias (AY 2004-2005)
Bourne-Chew Award, National Shellfisheries Association (2015)
Maine Magazine's "50 Mainers to Admire and Inspire" (2019)

Courses taught: Introduction to Environmental Studies; Marine Biology; Marine Ecology; Population and Community Ecology; Algebra I; Algebra II; Pre-Calculus; Applied Statistics; Biostatistics; Introduction to the Marine Environment; Oceanography; Introduction to Mariculture; Introduction to the Local Marine Fauna and Flora of Downeast Maine

Research Interests: Shellfish ecology; population biology; resource management; mariculture

Professional Organizations: National Shellfisheries Association

Local Organizations: Maine Aquaculture Innovation Center (Chairman of Board of Directors);

Downeast Institute for Applied Marine Research & Education (Dir. of Research)
Cobscook Bay Resource Center (Member, Board of Directors)

Member: Maine Department of Environmental Protection, Clean-up and Response Review Board; Scientific Advisory Committee, Maine Climate Council.

Thesis/Dissertation:

Beal, B.F. 1983. Effects of environment, intraspecific density, predation by snapping shrimp and other consumers on the population biology of *Mercenaria mercenaria* L. near Beaufort, North Carolina. M.S. thesis, University of North Carolina, Chapel Hill. 180 p.

Beal, B.F. 1994. Biotic and abiotic factors influencing growth and survival of wild and cultured individuals of the soft-shell clam, *Mya arenaria* L., in eastern Maine. Ph.D. dissertation. Univ. Maine Orono, Maine 499 p.

Publications:

Beal, B.F. 1983. Predation on juvenile hard clams (*Mercenaria mercenaria*) by snapping shrimp (*Alpheus heterochaelis* and *A. normanni*). J. Shellfish Res. 3:1-9.

Beal, B.F. 2002. Adding value to live, commercial size soft-shell clams (*Mya arenaria* L.) in Maine, USA: Results from repeated, small-scale, field impoundment trials. Aquaculture 210:119-135.

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Beal, B.F. 2006. Biotic and abiotic factors influencing growth and survival of wild and cultured individuals of the soft-shell clam (*Mya arenaria* L.) in eastern Maine. J. Shellfish Res. 25:461-474.

Beal, B.F. 2012. Ocean-based nurseries for cultured lobster (*Homarus americanus* Milne Edwards) postlarvae: Initial field experiments off the coast of eastern Maine to examine effects of habitat and container type on growth and survival. J. Shellfish Res. 31:167-176.

Beal, B.F., Bayer, R.C., Kraus, M.G., Chapman, S.R. 1999. A unique shell marker of juvenile, hatchery-reared individuals of the soft-shell clam, *Mya arenaria* L. Fish. Bull. 97:380-386.

Beal, B.F., Cartwright, M., Bethune, D., Chaves, S.A. 1993. A Critique for Ecology (Book Review). Limnol. Oceanogr. 38:1344-1346.

Beal, B.F., Chapman, S.R. 2001. Methods for mass rearing stages I-IV larvae of the American lobster, *Homarus americanus* H. Milne Edwards, 1837, in static systems. J. Shellfish Res. 20:337-346.

Beal, B.F., Chapman, S.R, Irvine, C., Bayer, R.C. 1998. Lobster (*Homarus americanus*) culture in Maine: a community-based, fishermen-sponsored, public stock enhancement program. In: L. Gendron, editor. Proceedings of a workshop on lobster stock enhancement held in the Magdalen Islands (Quebec) from October 29 to 31, 1997. Canadian Industry Report of Fisheries and Aquatic Sciences. Ottawa: Fisheries and Oceans Canada. pp. 47-54.

Beal, B.F., Coffin, C.R., Randall, S.F., Goodenow, C.A., Jr., Pepperman, K.E., Ellis B.W. 2020. Interactive effects of shell hash and predator exclusion of 0-year class recruits of two infaunal intertidal bivalve species in Maine, USA. J. Exp. Mar. Biol. Ecol. 530-53. https://doi.org/10.1016/j.jembe.2020.151441.

Beal, B.F., Coffin, C.R., Randall, S.F., Goodenow, C.A., Jr., Pepperman, K.E., Ellis, B.W., Jourdet, C.B., Protopopescu, G.C. 2018. Spatial variability in recruitment of an infaunal bivalve: experimental effects of predator exclusion on the softshell clam (*Mya arenaria* L.) along three tidal estuaries in southern Maine, USA. J. Shellfish Res. 37:1-27.

Beal, B.F., Kraus, M.G. 2002. Interactive effects of initial size, stocking density, and type of predator deterrent netting on survival and growth of cultured juveniles of the soft-shell clam, *Mya arenaria* L. in eastern Maine. Aquaculture 208:81-111.

Beal, B.F., Randall, S.F., Pepperman, K.E. 2020. Comparative field trials to examine the efficacy of a traditional management tool – brushing – to enhance local densities of 0-y class recruits in the soft-shell clam *Mya arenaria* L. fishery in Maine, USA. J. Shellfish Res. 39(3):1-15.

Beal, B.F. 2023. Soft-shell clam mariculture: history and culture techniques. Pages xx-xx in V. S. Kennedy and B. F. Beal, editors. The soft-shell clam *Mya arenaria*: biology, fisheries, and mariculture. American Fisheries Society, Bethesda, Maryland.

Beal, B.F. 2023. Predators and competitors of soft-shell clams Mya arenaria. Pages xx-xx in V. S. Kennedy and B. F. Beal, editors. The soft-shell clam *Mya arenaria*: biology, fisheries, and mariculture. American Fisheries Society, Bethesda, Maryland.

Beal, B.F., Lithgow, C., Shaw, D., Renshaw, S., Ouellette, D. 1995. Overwintering hatchery-reared individuals of the soft-shell clam, *Mya arenaria* L.: a field test of site, clam size, and intraspecific density. Aquaculture 130:145-158.

Beal, B.F., Mercer, J.P., O'Conghaile, A. 2002. Field-based nurseries for hatchery-reared postlarvae of the European lobster, *Homarus gammarus* (L.): results of a 10-month, manipulative field experiment on the Irish west coast and implications for stock enhancement efforts. Aquaculture 210:137-157.

Beal, B.F., Meredith, S.D., Jourdet, C.B., Pepperman, K.E. 2016. Diet of an underappreciated benthic intertidal fish, *Cryptacanthodes maculatus* (Cryptacanthodidae), in eastern Maine, USA. AIMS Environ. Sci. 3:488-508. doi: 10.3934/environsci.2016.3.488.

Beal, B.F., Nault, D-M, Annis, H., Thayer, P., Leighton, H., Ellis, B. 2016. Comparative, large-scale field trials along the Maine coast to assess management options to enhance populations of the commercially-important soft-shell clam, *Mya arenaria* L. J. Shellfish Res. 35(4):1-17.

Beal, B.F., Parker, M.R., Vencile, K.W. 2001. Seasonal effects of intraspecific density and predator exclusion along a shore-level gradient on survival and growth of juveniles of the soft-shell clam, *Mya arenaria* L., in Maine, USA. J. Exp. Mar. Biol. Ecol. 264:133-169.

Beal, B.F., Protopopescu, G., Yeatts, K., Porada, J. 2009. Experimental trials on the nursery culture, overwintering, and field grow-out of hatchery-reared northern quahogs (hard clams), *Mercenaria mercenaria* (L.) in eastern Maine. J. Shellfish Res. 28:763-776.

Beal, B.F., Protopopescu, F. 2012. Ocean-based nurseries for cultured lobster (*Homarus americanus* Milne Edwards) postlarvae: Field experiments off the coast of eastern Maine to examine effects of flow and container size on growth and survival. J. Shellfish. Res. 31:177-193.

Beal, B.F., Vadas, Sr., R.L., Wright, W.A., Nickl, S. 2005. Annual aboveground biomass and productivity estimates for intertidal eelgrass (*Zostera marina* L.) in Cobscook Bay, Maine. Northeast Naturalist (Special Issue 2):197-224.

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Snelgrove, P.V.R., Beal, B.F., Kennedy, V.S. 2023. Reproduction and larval biology of the soft-shell clam *Mya arenaria*. Pages xx-xx in V. S. Kennedy and B. F. Beal, editors. The soft-shell clam *Mya arenaria*: biology, fisheries, and mariculture. American Fisheries Society, Bethesda, Maryland.

Tan, E.B.P., Beal, B.F. 2015. Interactions between invasive European green crab, *Carcinus maenas* (L.), and juveniles of the soft-shell clam, *Mya arenaria* L., in eastern Maine, USA. J. Exp. Mar. Biol. Ecol. 462:62-73.

Vadas, R.L., Beal, B.F. 1987. Green algal ropes: a novel estuarine phenomenon in the Gulf of Maine. Estuaries 10:171-176.

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Vadas, R.L., Beal, B.F., Dudgeon, S.R., Wright, W.A. 2015. Spatial and temporal variability of spawning in the green sea urchin *Strongylocentrotus droebachiensis* along the coast of Maine. J. Shellfish Res. 34:1097-1128.

Vadas, R.L., Beal, B., Wright, W., Emerson, S. & Nickl, S. 2004. Biomass and productivity of red and green algae in Cobscook Bay. Northeast Naturalist 11 (Special Issue 2):163-196.

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Zarnoch, C.B., Kraeuter, J.N., Beal, B.F., Bricelj, V.M., Flimlin, G., Bushek, D. 2015. Geographic origin and culture method influence overwinter mortality of juvenile hard clams, *Mercenaria mercenaria* (L.). Aquaculture 440:48-59.