



Invertebrate Indicators of Marine Coastal Habitats

with Tom Trott and Robert E. Knowlton

June 21 - 27, 2009

This seminar explores the idea that some invertebrates have environmental adaptations so specific that they can be used as indicator species for the particular habitats they are found in. Lectures will review intertidal habitat classification, invertebrates living in major habitat types, and the indicator species concept. Simple quadrat sampling methods will be taught in the field for revealing differences in the communities of species residing in various intertidal habitats. Laboratory exercises will focus on identification and quantifying species collected during quadrat sampling. Methods for determining habitat biodiversity will be presented to compare species richness and diversity of different habitats. Indicator species will be identified through statistical analysis that will also show that habitats can be distinguished by their species assemblages. Subject material will be taught at an advanced student level and be of interest to teachers and researchers of marine ecology and conservation biology. Once mastered, the knowledge and techniques learned can be used in the classroom and/or applied to problems in coastal ecology needing biomonitoring.

Tom Trott (codfish2@earthlink.net) is Associate Professor of Biology at Suffolk University where he teaches ecology, animal behavior, invertebrate zoology, and scientific writing. He researches marine community ecology focusing on near shore habitats and is involved in regional and global initiatives. For the last 6 years, he has been a primary investigator and on scientific advisory committees for the Census of Marine Life Gulf of Maine Area, Natural Geography in Shore Areas, History of Marine Animal Populations, and History of the Near Shore Programs.

Robert E. Knowlton (knowlton@gwu.edu) is Professor Emeritus of Biology at George Washington University where for 35 years he taught basic and graduate-level courses in invertebrate zoology and marine biology emphasizing field work along the Maine and mid-Atlantic coasts and in the Bahamas. His research has been focused on describing morphological, developmental, and physiological features of various decapod crustaceans (shrimps) in relation to environmental effects.



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