

time, geographic separation, competition, and ecology. The terrestrial dimension of research activity at STRI has been primarily zoological. Emphasis has been on problems concerned with biological processes that can be studied best in the tropics, particularly the causes for high species diversity and the social behavior of certain groups of animals (notably anurans, birds, and primates) as they are related to the complexity of tropical communities.

Our Radiation Biology Laboratory conducts research on the functions of living organisms that are affected and controlled by solar radiation. The sun is the principle source of energy for life on the earth. Radiant energy from the sun is trapped by pigments and converted into potential chemical energy. The research of the RBL is directed toward understanding the cellular and subcellular mechanisms and processes by which organisms use radiant energy for their growth and development. Such studies produce information fundamental to the development of technological advances and applications, especially in food production and environmental control. The modern fields of biophysical physiology and biochemistry have a continuing requirement for a precise characterization of solar radiation in developing experiments of health-oriented importance to man. The physiological studies of the RBL provide, as in the case of the Museum of Natural History, an important foundation for ecosystem-oriented studies.

The Office of Oceanography and Limnology operates the Smithsonian Oceanographic Sorting Center which processes marine specimens from national and international expeditions for use by scientists of the world in specimen-related research. The office also facilitates the productive involvement of Smithsonian scientists in aquatic research of national and international significance, and provides outside scientists and research organizations with a focal point for their effective use of Smithsonian competence. Through its Sorting Centers in Washington, D.C., and in Tunisia (the latter principally supported by the Smithsonian Foreign Currency Program), the Office serves as a substantial producer and repository of biological and geological data for the Federal Government. These data are used in the evaluation and harvest of fisheries and mineral resources; in the resolving of naval problems of fouling, bioluminescence, and bioacoustics; and in studying the effects of pollution on the marine environment. The Office of Oceanography and Limnology is concerned with marine ecological studies as well as systematic biology, and coordinates its efforts closely with those of the Office of Ecology.

The Chesapeake Bay Center for Field Biology, which is administered by the Smithsonian Office of Ecology through a consortium arrangement with the Johns Hopkins University and the University of Maryland, provides a relatively stable baseline against which to compare other ecological systems in the rapidly changing Washington area. The Center lies about 7 miles south of Annapolis, Maryland. Its 700 acres of land include areas still in cultivation, areas abandoned from agriculture for 22 years, and areas of relatively undisturbed mature forest. Control of about 10 miles of undeveloped shoreline (the largest such expanse on the western shore of Chesapeake Bay) provides opportunities for long-term studies of salt marshes, eroding bluffs, sandy beaches, and shallow estuaries. Under Smithsonian ownership, the land and surrounding estuaries are preserved effectively