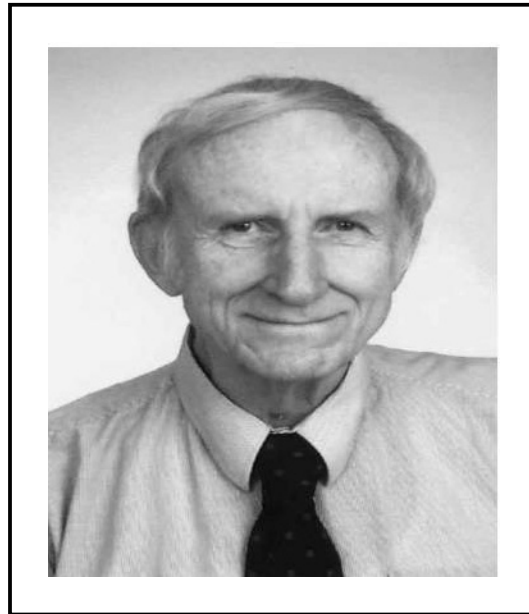


Obituary

Professor H.T. Odum (1924-2002)



“The rain forest achieves complexity, high metabolism, and stability over geological time periods without surges and waste. Can we find in this example the clues for designing our own equally effective systems of man and nature?”

H. T. Odum 1970a, p A5

Howard Thomas Odum passed away on September 11, 2002 at the age of 78 in Gainesville, Florida. He contributed to many ecological fields including tropical ecology, where he conducted classic studies in coral reefs (Odum and Odum 1955), mangrove forests (Golley et al. 1962), and rain forests. Because much of his tropical research was in Puerto Rico, I take this opportunity to celebrate the many tropical accomplishments of this eminent American ecologist.

H.T. Odum visited the Luquillo Experimental Forest (LEF) for the first time in 1944 when he was serving in the U.S. Army (Lugo 1995a). He began his tropical ecology career as a meteorologist with the U.S. Army stationed in Puerto Rico. Thereafter followed a long career at various universities including Duke, University of Texas, University of North Carolina, and University of Florida at Gainesville. Until his death he actively

studied the tropical rain forest. The centerpiece of this intellectual activity is a classic in tropical literature, *A Tropical Rain Forest* (Odum and Pigeon 1970). “The aim of the project was to learn how a rain forest works as a system and under stress, including populations, mineral cycles, metabolism, and operations of the complex living structure, by concentrating new and old techniques and many investigators on one small area” (Odum 1970b, p. ix).

Another classic of the tropical literature is a paper presented at the Lockwood Conference on the suburban forest and ecology (Odum 1962) because of the scope of the paper and the new ideas that it contained about rain forest structure, function, and management. In 1962, there was no precedent in tropical ecology for the scope of analysis of a tropical forest that H. T. Odum presented. Moreover, as was characteristic of much of his

work, he used fundamental ecosystem analysis in the paper to develop new ideas about the relation between humans and the biosphere. The field of Ecological Engineering originated with this paper (and followed through in Odum 1970c), as did his energy diagram symbols (Lugo 1995b).

During his work in Puerto Rico, H. T. Odum was responsible for:

- First quantitative prism of a tabonuco rain forest.
- First quantitative study of a mangrove forest.
- First ecosystem-level quantitative study of a tropical forest.
- First ecosystem-level model simulations of tropical forests.
- Establishing the foundation for the current Long-Term Ecological Research program in Puerto Rico.
- Attracting a lot of talent to Puerto Rico and fomenting an incredible diversity of studies at El Verde.

To graduate students of my generation who were working in Puerto Rico at the time, including Peter Murphy, Jack Ewel, Phil Sollins, Barbara Banister, Gilberto Cintrón, and others, H. T. Odum was mostly a mentor and a teacher. In my case, he was responsible for teaching me to:

- drive,
- understand the principles on which scientific equipment functions,
- order ten times what I thought I needed to do a job,
- always do 10 replicates when doing field sampling,
- know what questions to ask nature,
- trust nature's resilience and self-design,
- be positive about humans and nature,
- think at three levels of biotic organization,
- be quantitative,
- read as much literature as I could, but to do it critically and not to let the literature bias my thinking, and
- write manuscripts.

H. T. Odum was a genius. He knew about everything and stimulated you to learn about everything. He loved nature and taught you to love it as well. He was a man of great integrity and very patriotic. He was the epitome of a scientist and a teacher.

We all have been lucky to have had H. T. Odum in our midst and benefited from his work.

He gave us a view of what a real scientist is, the vision, passion, integrity, and enormous energy that is required to excel in the field of systems ecology.

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