

David Tilman

The William S. Cooper Award is presented annually by the Society in recognition of an outstanding recent contribution in geobotany or physiographic ecology. These were the areas of greatest research interest to Professor Cooper during his long and very productive career. The award was established both to honor the authors of outstanding contributions in these areas and to encourage others to pursue work in them.

Dr. David Tilman of the University of Minnesota is the recipient of the William S. Cooper Award for 1989. The award recognizes Dr. Tilman's 1988 book, "Plant strategies and the dynamics and structure of plant communities" published by Princeton University Press.

In his previous book published in 1982, Tilman formalized a model of resource competition for plants that almost immediately generated both enthusiasm and controversy. That work focused the attention of plant ecologists on the mechanisms of plant competition. The 1988 book, for which Dr. Tilman is being honored, presents a more complex but still general model that is an important advance over earlier models, incorporating size structure and competition for light, and emphasizing dynamic as well as equilibrium behavior. It is perhaps the most comprehensive formal model we have in plant community ecology, making predictions about plant growth form and life history variation across gradients of resource availability (to which he argues many complex gradients of physiography, soil type, and succession can be reduced) and gradients of herbivory and disturbance. Because the predictions are based on explicit mechanisms, the model has the potential to spawn an enormous variety of empirical studies testing both its resultant simple predictions and its underlying mechanisms. That it has already begun to do so is evidenced by the impressive body of empirical research conducted by Tilman and colleagues to test his many theories, and which is summarized in this book.



The bylaws of the Society state that the Cooper Award is given "for a recent contribution in ecology with special emphasis on geobotany, physiographic ecology, plant succession, or the distribution of plants along environmental gradients." Tilman's book almost uniquely makes substantive, original contributions in all these areas and attempts to unify aspects of all of them in one body of theory.

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