Eminent Ecologist Award
Sam McNaughton, Ph.D.
Syracuse University

Sam McNaughton

The **Eminent Ecologist Award** is given to a senior ecologist in recognition of an outstanding body of ecological work or of sustained ecological contributions of extraordinary merit.

The 2004 Eminent Ecologist is Dr. Sam McNaughton. Over his 40 year career, Sam's research output has been prodigious; he has authored/co-authored over 100 papers in peer-reviewed journals (more if you include book chapters and books!) and in 2003 was recognized as an "ISI highly cited researcher". His work has ranged from theoretical to modeling to observational and empirical studies. Few ecologists have so effectively spanned population- community – ecosystem- landscape ecology in their research and also managed to blend research in fundamental areas of ecology and evolutionary biology to their application in managed systems.

Sam began his career by publishing an influential series of papers on ecotypes and geographical distributions of in *Typha* that demonstrating population differentiation at the biochemical level. In the late 1970's he switched his attention to plant–herbivore interactions and the ecosystem-level consequences of herbivory and began what this year marks a 30 year 'adventure' in exploring interactions between plant and grazing communities in the grasslands of the Serengeti. Many of his ideas were controversial (e.g., grazing facilitation), but his findings and hypotheses spurred further research and interest in the complexity of interactions and feedbacks between organisms and their resources and greater understanding of the roles of herbivores in the world's ecosystems. His field observations and experiments in the Serengeti, led to a comprehensive understanding of the effects of grazers on nutrient cycling and plant competition, which he pursued by studying the physiological mechanisms by which grazing-induced changes in plant morphology, leaf- and plant-level photosynthesis, and the capacity to acquire nutrients. In this way he was able to make convincing links between evolutionary mechanisms at the population level to community dynamics to system-level properties. Similarly his work on diversity and stability took this debate from the level of correlation to the level of mechanism, beginning with his 1977 paper in *American Naturalist*. This work has been one of the most important spring-boards for the recent flood of interest in studies of the mechanistic basis by which biodiversity influences ecosystem function.

To many, Sam's career is the model of what ecologists should aspire to if they want to make a difference to ecology in terms of innovative research, development of theory, and the transfer of these concepts to younger generations of ecologists and managers. Sam has influenced the field of ecology through his own research and his mentorship of numerous graduate students and post-doctoral associates, many of whom were introduced to his wit, charm, drive and dedication to science while working with him on plant–herbivore interactions in the Serengeti. Importantly, Sam is seen as a thoroughly nice person by his colleagues, former and current students and postdocs. To many he is the kind of professional that they seek to emulate – his willingness to recognize and celebrate creativity has inspired generations of young scientists who have worked with him to continue to explore novel ideas and activities.

Sam is clearly a "true scholar" with a gift for blending his love for natural history patterns to current and emerging issues in both theoretical and applied ecology and we are pleased to recognize his accomplishments by awarding him as the 2004 Eminent Ecologist Award.

Eminent Ecologist Award Subcommittee: Kay Gross (Chair), Nelson Hairston, Jr., Bob Holt, Bea Van Horne, Paul Dayton, and Peter Groffman