Murray John Littlejohn and Patricia Gordon (Patsy) Littlejohn

Brian K. Sullivan1, Angus A. Martin2, Margaret M. Stewart3,4, and Martin J. Fouquetter, Jr.1,4

A USTRALIAN herpetologist Murray Littlejohn (Fig. 1) was a pioneer in the application of audio recording to the study of sound communication in anurans. Early in his research career he was instrumental in the development of an experimental program to investigate female phonotaxis and call discrimination in response to playback of recorded male advertisement calls. By integrating his knowledge of electronics with the biological research program of A. R. (Bert) Main at the University of Western Australia (UWA), Murray was at the cutting edge of bioacoustics, a field critically dependent on electronic technology. Murray's thesis research under Main at UWA led to a post-doctoral position in W. Frank Blair's lab at the University of Texas at Austin (UT). He was then appointed to a lectureship in Zoology at the University of Melbourne, Australia, which became his permanent academic home. Throughout his career he was enthusiastically and ably supported and assisted, particularly in his extensive field studies, by his wife, Patsy.

Murray was initially interested in the nature of species boundaries. During the 1960s to the 1990s he worked through a period of intense debate and controversy over such issues as the biological species concept, reproductive isolating mechanisms, and character displacement. Once established in Melbourne he initiated and maintained an extensive program of field research throughout temperate southeastern Australia. His tireless explorations of a little-studied frog fauna gave him scope not only to continue his bioacoustic research but to range more widely into a number of other aspects of anuran biology. Stemming in part from his long-lasting and fruitful interaction with evolutionary biologist Richard D. Alexander at the University of Michigan, he was at the forefront of the transition from a focus on calls as indicators of species status to calls as indicators of male quality. During an early interview with some of the authors, Murray indicated that in the field of bioacoustics he still considers the relationship between sexual selection and speciation an exciting area of research activity. Many herpetologists would no doubt agree.

Murray was born on 26 March 1932 in Cottesloe, a suburb of Perth, Western Australia. His father, William Littlejohn, worked as a maintenance supervisor in the state department of housing and his mother, Christina Littlejohn, was an occasional dressmaker. Murray was the second of three children and the only boy. He spent his first 23 years living in Cottesloe, always within a kilometer of the sandy and rocky shores of the Indian Ocean. Although his parents were not really aware of the significance of Murray’s work over the years, they were supportive of his early interests in natural history. His mother encouraged Murray to break out of the working-class environment because she recognized something “different” in him. He recalls an occasion during World War II when his mother, who was working at UWA on the tropic-proofing of binoculars, was able to bring him into the Physics Department, hence introducing him to the research environment of a university.

Murray does not remember strong influences toward science early in his life, although he does recall beachcombing after storms, collecting washed-up specimens and sending some of them to the Western Australian Museum for identification. The director of the Museum was the herpetologist Ludwig Glauert, who had published on the taxonomy of reptiles and who had a frog (Crinia glauerti) named for him. Glauert’s comments on the marine specimens may have encouraged Murray’s interest in biology.

During his high-school days, Murray developed interests in chemistry and electronics, carrying out experiments and constructing radio receivers, both crystal and vacuum tube sets. He recalls needing to scrounge for parts because of the shortages due to World War II. He has clear memories of his high-school teacher of chemistry and biology (a failed medical student), who must have been an enthusiastic and effective mentor. Murray suffered from poor teaching in mathematics, however, and this deficiency doubtless influenced his move toward biology.

In 1950, after he finished high school, Murray worked for a year as a laboratory assistant in the Botany Department at UWA where his major task was setting up undergraduate practical classes. He also helped with some research projects and their associated technologies. This experience led him to explore the possibility of studying science and in 1951 he enrolled for the Bachelor of Science (B.Sc.) course at UWA. He remembers preparing a frog skeleton in the introductory zoology course, but recalls no particular interest in amphibians at that stage.

Murray’s development as a biologist was profoundly influenced by the zoologist Bert Main, who in 1952 had just returned from three semesters at the University of Chicago and a shorter period in the United Kingdom. Murray found his energetic teaching style inspirational: Main had a critical mind overflowing with enthusiasm, ideas, and questions, and conveyed a strong sense of the exciting world of ecology and evolutionary biology, gleaned from his recent overseas experiences. He emphasized the importance of fieldwork in research and included it in his courses with undergraduates. In 1953, Main afforded Murray (now in the final year of his B.Sc. studies) an opportunity for two weeks of fieldwork in the Stirling Ranges in southern Western Australia (Fig. 2). He also accompanied Main on field-trips investigating the anuran fauna of the Perth area.

---

1 Arizona State University, P.O. Box 37100, Phoenix, Arizona 85069; E-mail: bsullivan@asu.edu.
2 Honorary Principal Fellow in Zoology, University of Melbourne, Parkville 3010, Victoria, Australia.
3 Department of Biological Sciences, State University of New York at Albany, Albany, New York 12222.
4 Deceased.

© 2015 by the American Society of Ichthyologists and Herpetologists DOI: 10.1643/OT-15-274 Published online: June 10, 2015