Annemarie Surlykke, Fellow of the Acoustical Society of America, passed away on July 28, 2015. She was a scientific leader, teacher, dear friend, loving wife, and devoted mother. A wide circle of family, friends, and colleagues are deeply mourning her.

Annemarie began her faculty career in the Department of Biology at the University of Southern Denmark in 1987 and was promoted to full professor in 2011. She was an eminent scholar in the field of animal bioacoustics, fully engaged in both teaching and research.

Annemarie was one of the rare members of the animal bioacoustics research community to study both echolocating bats and insects, not only in the laboratory but also in the field. Her work spanned research on tropical and temperate species, and she employed methods ranging from behavior to neurophysiology. Annemarie made major contributions to our understanding of hearing in animals that produce and process ultrasonic signals. She also played an active role in the Center for Sound Communication in Denmark that is dedicated to research and teaching in animal bioacoustics. She collaborated with scientists in Japan, Taiwan, Panama, Germany, Sweden, and the United States.

Annemarie's research on bats explored the limit and operation of hearing for detection, localization, and perception of echo returns of the animal's sonar signals. Her published work includes acoustic studies of sonar signals produced by bats under laboratory and field conditions and behavioral studies of adaptive sonar signal call design. She recently coedited a book on animal sonar.

Her insect studies emphasized specializations in hearing for the detection and evasion of bat predators. She conducted detailed behavioral and physiological studies of the ears and auditory neurons of many different insect species. Annemarie's publications also include theoretical work that addresses the coevolution of hearing in predators and prey.

Annemarie's scientific discovery has had a resounding impact on the field of animal bioacoustics. For example, she measured the extremely high sound levels of bat calls and demonstrated that different species of bats, irrespectively of size, have comparable emission sound volumes, i.e., acoustic "field of view," most likely reflecting common optimization processes. Investigations like these raised important questions about auditory processing and scene representation in bats.

Annemarie's research was internationally renowned and was supported by the European Union, the Human Frontiers Science Program, and the Natural Science Division of the Danish Council for Independent Research (FNU), where she served as a highly esteemed council member for six years. She was a Fellow of the Institute for Advanced Study in Berlin in 2008-2009 and received special recognition by her colleagues with a major science award from the Danish Academic Society in 2013.

Annemarie possessed a sharp, analytical mind and a great passion for her work. She was an outstanding and popular lecturer; both at the university and in public forums, she would engage her audiences through a compelling narration of scientific investigations.

The door to Annemarie's office at the university was always open; she balanced encouragement and constructive criticism, often served with humorous input, that earned her great respect and admiration from students and colleagues alike.

Her second great passion was horseback riding, and she would nourish her mind by riding in the forests near her beautiful home in Denmark, where she also found time to tend a vibrant garden.

Annemarie Surlykke's extraordinary contributions to science and her community will continue to inspire those who knew her. Our deepest condolences go out to her husband, Per Østergaard, son, Søren Surlykke, other family members, friends, and colleagues.

Articles by Annemarie Surlykke

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Written by:
Cynthia Moss, *Email:* cynthia.moss@jhu.edu
Johns Hopkins University

Jakob Christensen-Dalsgaard, *Email:* jcd@biology.sdu.dk
Signe Brinkløv, *Email:* brinklov@biology.sdu.dk
Lasse Jakobsen, *Email:* lasse@biology.sdu.dk
University of Southern Denmark