

# When Animals Cooperate



Gerald Wilkinson  
Professor, Biology

## CURRENT RESEARCH

### From flies to humans, unexpected cooperation shifts evolutionary biology

Thirty-five years ago, Dr. Wilkinson found himself lying in the base of a hollowed tree observing vampire bats and their social behaviors. What he noticed would disrupt scientists' fundamental understanding of cooperation among animals. When specific bats were unable to obtain a blood meal, other bats were happy to share what they had stored. This however was even more shocking when Dr. Wilkinson found that unlike most cases of apparent altruism in animals, often the bats that gave had no familial relationship to the bat that needed food; it looked as if sharing was based upon an expectation of future assistance. Now, as a Professor of Biology at the University of Maryland, College Park, Dr. Gerald Wilkinson continues to study bats and other species through the lens of evolutionary biology. It is his hope that through the study of mechanisms underlying cooperation, he and his team may provide novel insight into the factors favoring or maintaining cooperation in other species, including humans. Such findings could also be relevant for understanding cooperation at other levels of biological organization, including genes and cells. Imperfect cooperation within a body typically can result in a serious disorder or disease, such as cancer.

Dr. Wilkinson's unique attempt to study the behavior of animals in the wild in order to determine genetic causes in incredibly diverse organisms, like bats and flies, has set him apart from other researchers within his field. His study of both cooperation and sexual selection both support ways in which organism's molecular mechanisms challenge Mendelian predictions. Thus, his work offers a perspective that challenges our textbook understandings of genetics and behavior and has...

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## AFFILIATION



University of Maryland College Park Campus

## EDUCATION

- Ph.D., in Biology, 1984 . University of California, San Diego
- B.S., in Zoology, 1977 . University of California, Davis

## AWARDS

- Quest Award, Animal Behaviour Society, 2003
- Fellow, Animal Behaviour Society, 2003
- President, Animal Behaviour Society, 2007
- Fellow, American Association for the Advancement of Science, 2011
- Fellow, Institute of Advance Studies, Berlin, 2013

## RESEARCH AREAS

Environment, Ecology

## FUNDING REQUEST

Your contributions will support the research of Dr. Gerald Wilkinson, of the University of Maryland, College Park, as he continues to make advances in evolutionary biology. Donations will fund projects currently limited by lack of funding and will include supporting personnel in the lab, maintenance of captive animals, and new research directions. Additionally, it would help cover field work, which has recently been done in Trinidad, Baja California, Sri Lanka, and Malaysia. Finally, it would permit additional genomic sequencing, which he and his team are using in multiple projects. Join in understanding basic science that underlies cooperation, and human disorders associated with non-Mendelian transmission.