



CEES

Centre for Ecological and Evolutionary Synthesis

CENTRE FOR ECOLOGICAL AND EVOLUTIONARY SYNTHESIS (CEES)

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An interdisciplinary approach to research with a dispersion of effort across several academic fields may be considered irrational in the current structure of science. Yet this is precisely how researchers at the Centre for Ecological and Evolutionary Synthesis (CEES) in Oslo decipher some of the hitherto unresolved mysteries of biology.

CEES was awarded status as a national Centre of Excellence by the Research Council of Norway in 2007. The Centre is based at the Department of Biology, University of Oslo and consists of more than 135 members representing 25 nationalities. CEES annually publishes around 120 articles in peer reviewed journals, including distinguished international publications such as *Nature*, *Science* and *Proceedings of the National Academy of Science*. Its researchers have received prizes both for their research and for popularizing science.

Synthesis

Through a unique international integration of population ecologists and evolutionary biologists, the Centre is engaged in the challenging quest to bring more ecological thinking into evolutionary biology, and more evolutionary thinking into ecology. To meet this challenge CEES also embraces a variety of disciplines outside of biology, such as statistics and economics.

Research

The research at CEES encompasses birds, fish, mammals, plants and micro-organisms. One of the Centre's most celebrated achievements is the sequencing of the cod genome. Obtaining the full sequence of the genome is of course only the beginning, a move towards using modern technologies as a basis for solving population biological and evolutionary puzzles, such as what makes some individuals mature at a given size and age. These are issues of key interest in both aquaculture and the harvesting of natural populations such as in fisheries.

Other focal points of research at CEES include the reproductive behaviour and migratory habits of the pied flycatcher. Model systems of passerine birds employ accumulated data from the Centre's long-term study of this species, providing the opportunity to examine the processes leading to the formation of species, as well as the extent that climate change has led to evolutionary changes in migration timing.

Training

The Centre has established a supportive international environment for young researchers with journal clubs, frequent student presentations, mini-symposiums

involving eminent international scientists, and an annual student conference. Distinguished scientists from around the world give regular guest lectures and interact productively with colleagues at CEES.



Challenge

The influence of human activity on earth has accelerated since the industrial revolution, and today anthropogenic impacts on the biota are of great concern to politicians, academics, and the general public alike. In order to discern how such distortion of the environment may affect future flora and fauna, we need greater awareness of how ecology determines the course of evolution which, in turn, determines future ecological dynamics.