

DENNIS H. CHITTY LECTURE

The University of British Columbia, 12 Noon Beaty Auditorium and
Zoom <https://ubc.zoom.us/j/63152067404>

Wednesday, 16 February 2022

Biodiversity science for the Anthropocene

Andy Gonzales McGill University



This lecture series honours Professor Dennis H. Chitty for his outstanding contributions to Population Biology and to the Department of Zoology at the University of British Columbia.

Dennis Chitty came to Canada from the United Kingdom in 1930 and obtained a B.A. from the University of Toronto in 1935. He returned to the United Kingdom and received an M.A. (1947) and D. Phil. (1949) from Oxford University, where he began studies with Charles Elton in the Bureau of Animal Population. He remained at Oxford until 1961, at which time he was appointed to the University of British Columbia. He formally retired from teaching in 1978

and became Professor Emeritus in the Department of Zoology.

Professor Chitty's research focussed on understanding population cycles in small mammals. He quickly found that the conventional explanations of these fluctuations could not fit with the growing body of data on British voles. He proposed a novel explanation (now known as the Chitty Hypothesis of Population Regulation) that the cycles are self-generated by the interactions between individuals. He also proposed that the changes in behaviour and physiology that prevent population growth and lead to decline might have a genetic basis. His idea was the first to link evolutionary change to population phenomena and it generated decades of research into the roles of individual quality, genetics, and behaviour in population dynamics of animals.

Professor Chitty was made the recipient of the Master Teacher Award from the University of British Columbia in recognition of his excellence in teaching and Fellow of the Royal Society of Canada in recognition of his contribution to science in Canada. In 1988 he was awarded the Fry Medal of the Canadian Society of Zoology which honoured both him and the memory of Dr. Fred Fry with whom Professor Chitty had worked in the Ontario Fisheries Research Laboratory, 1932-1935. In 1997 Dr. Chitty was awarded a D.Sc. from Oxford University.

Dennis died on 3 February 2010 at the age of 98, still interested in population ecology and enthusiastic about students.

Previous Dennis H. Chitty Lectures

- 1993 Dr. Nick Davies "Chick Feeding Rules & Their Exploitation by Cuckoos"
- 1994 Dr. Robert Ricklefs "Development of Senescence in Birds"
- 1995 Dr. Michael Rosenzweig "Elementary my Dear Watson! How species accumulate in space and time"
- 1996 Dr. Werner Baltensweiler "Genetic differentiation and population dynamics in the Larch Budmoth, *Zeiraphera diniana* Gn."
- 1997 Dr. Gail Michener "Sex and the single squirrel: sexual differences in behavioural and physiological ecology of Richardson's ground squirrels"
- 1998 Dr. Sharon Kingsland "Theory versus history: learning from past debates in population biology"
- 1999 Dr. Rudi Drent "Cyclic Grazing in Vertebrates: the feeding ecology of migratory geese"
- 2000 Dr. James Brown "The scale of life: Body size, organism function, and biodiversity."
- 2001 Dr. Joe Travis "Untangling the Ecological and Genetical Influences on Population Dynamics."
- 2002 **90th Birthday Seminar** Dr. Rudy Boonstra "Life in the Fast Lane: Environment-dependent Senescence in Voles"
- 2002 Dr. William Sutherland "Linking behaviour ecology and conservation"
- 2003 Dr. Kay Hollekamp "Unusual reproductive strategies in the spotted hyena"
- 2005 Dr. David Schindler "Climate Change, Human Use, and Freshwaters of the Western Prairies in the 21st Century"
- 2006 Dr. Anthony Ives "Phylogenetic signal in host-parasitoid associations and diversity and biological control of aphids"
- 2007 Dr. Bob Holt "Niche conservatism, Evolution, and applied ecology: challenges and opportunities"
- 2008 Dr. Marlene Zuk "Rapid evolution in silence: the causes and consequences of signal variation"
- 2009 Dr. Anurag Agrawal "Comparative tests of plant defense theory"
- 2010 Dr. Kate Smith "Global environmental change, disease emergence, and the timely birth of conservation medicine"
- 2011 Dr. Steve Palumbi "Hot and sour soup: adaptation of marine life in the face of climate change"
- 2012 Dr. Andy Derocher "Polar Bears in a changing Environment"
- 2013 Dr. Nelson Hairston "Hutchinson's "Ecological Theater" as Improv: Eco-Evolutionary Responses to Environmental Change"
- 2014 Dr. Tom Schoener "Evolution + Ecology = EvoEco: The Interplay of Evolutionary and Ecological Dynamics"
- 2015 [Dr. Heike Lotze](#) "Ecosystem consequences of past and present changes in marine biodiversity"
- 2016 Dr. Rosmay Gillespie "Island Time and the Interplay between Ecology and Evolution in Species Diversification"
- 2016 Dr. Valerie McKenzie "Emerging disease affecting wildlife: from the global scale to the microbial scale"
- 2017 Dr. Ben Gilbert "Species diversity: Reconciling the effects of ecological drift and species differences"
- 2018-19 Dr. Jean Polfus & Frederick Andrew "ʔelexé Eghálets'eda (Learning Together): Advancing sustainable conservation strategies through cross-cultural collaboration"
- 2019 Simon Hart "How diversity within species affects the maintenance of species diversity"
- 2021 Tadashi Fukami, "Making sense of messy communities"
- 2022 Andy Gonzales "Biodiversity science for the Anthropocene"