



ON-SITE BIOLOGY COLLOQUIUM

Friday, 15 Nov 2024 | 4 pm | DBS Conference Room 1, Blk S3 Level 5

Hosted by Assoc Prof John Ascher

Map to Block S3



Are tropical parasitoid food webs tractable? Results of Dan Janzen's and Winnie Hallwach's half a million plus caterpillar rearings in Costa Rica

By Donald L.J. Quicke

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About the Speaker

Donald Quicke read zoology at Oxford University a long while ago. He then went on to do a PhD at the University of Nottingham (on snail neurobiology), followed by postdocs there, firstly on the ecological genetics of sea anemones, and then on the chemistry and properties of neurotoxic spider venoms. However, all along he continued pursuing his early interest in parasitoid wasps, especially the Ichneumonoidea. After a series of fellowships at Sheffield University, he was awarded an advanced research fellowship on the NERC Initiative in Taxonomy at Imperial College London, where he was eventually appointed Chair in Systematics. He retired to live in Thailand in 2013 but is still very research active.

Donald has published more than 300 papers. His interests are diverse and in addition to parasitoid wasps, his academic books cover systematics, mimicry, the computer language R, and human female arousal and orgasms.

Understanding community ecology is a complex business. The often tight association between insect parasitoids and their hosts has often been used to extrapolate patterns of diversity and has been extensively analysed and modelled in terms of community stability. There is also much interest in what governs whether parasitoids are extreme specialists or broad generalists. Likewise, why parasitoid assemblage size differs widely between hosts and might reflect rarity, geographic range, food plant breadth and protective traits.

This talk will be based on analysis of the unprecedented dataset on parasitoid wasps, caterpillars and their foodplants built by Dan Janzen and Winnie Hallwachs over the past 40+ years in the Area de Conservación Guanacaste (ACG) in northwestern Costa Rica. Over half a million caterpillars have been collected and reared by a team of parataxonomists and in addition to butterflies and moths, 8225 species of parasitoid wasps and DNA barcoded.

Analyses of this data set have revealed many interesting relationships which will be discussed, especially in terms of host specificity and differences in host utilisation by different parasitoid taxa. Finally, I will consider whether tropical parasitoid food webs are tractable and comparable with temperate ones.