Conferencia

Dijous 19 de maig de 2016,

12.30 hores

Sala Charles Darwin

Campus de Burjassot-Paterna

Universitat de València

HOW DO NEW SPECIES EVOLVE?

Roger K. Butlin

Dep. of Animal & Plant Sciences, Univ. of Sheffield

VII

Memorial Peregrí Casanova de Biodiversitat i Biologia Evolutiva

Organitza

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VII **Memorial Peregrí Casanova de Biodiversitat i Biologia Evolutiva**

HOW DO NEW SPECIES EVOLVE?

Evolutionary biology seeks to explain two key features of the living world: adaptation and diversity. Diversity is discontinuous, with organisms falling into more or less distinct clusters in either phenotypic or genotypic space. These clusters are known as species. Their number increases through the splitting of lineages (speciation) and decreases due to extinction: the enormous diversity of life on earth results from a general excess of speciation over extinction.

In sexually reproducing organisms, the distinctness of species arises primarily because successful reproduction occurs only among members of the same species and not between individuals of different species. Therefore, the key to understanding speciation is to explain how this restriction, known as 'reproductive isolation' evolves.

Although reproductive isolation can take many forms, there are only three categories of process involved. Reproductive isolation may be a side-effect of independent evolution or a by-product of divergent selection, or it may be directly favoured by 'reinforcement'. I will illustrate these three alternatives with examples from grasshoppers, aphids and snails.

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