

ARE SPECIES A VALID CATEGORY IN EVOLUTIONARY THINKING ?

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Darwin himself, at the beginning of "The Origin ..." expressed serious doubts about the use of the term "species". Modern writers on evolution still find definition of species an awkward problem. The recent debate about the Biological Species Concept (isolation versus recognition) makes no allowance for application of the term to any depth of time. Attempts to describe evolution using rigid definitions of species, be it biological or typological, lead to concepts of punctuated equilibria and orderly cladistic branching; both of these imagine new species emerging quickly (by processes usually not detailed). Population genetics provides an explanation of population change with time (microevolution). It also produced a concept of breeding population and a species as a collection of interbreeding individuals. Unfortunately, the breeding criteria cannot be applied to fossils, or to any individuals separated by more time than the lifespan of two generations. We conclude that the notion of a species is at variance with the logic of the theory of evolution and postulate that the term "species" should be abandoned in evolutionary discussions. Individual fossils should be labelled by nicknames (or numbers) and arranged in lineages. Parts of lineages may be characterized as stages by the fossils commonly found in a corresponding time period.

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