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Phylogeny, taxonomy and nomenclature: the problem of taxonomic categories and of nomenclatural ranks

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Abstract

The use of ranks and nominal-series in zoological nomenclature has recently been challenged by some authors who support unranked systems of nomenclature. It is here shown that this criticism is based on a double misunderstanding: (1) the confusion between nomenclatural ranks and taxonomic categories; (2) the request for a monosemic nomenclatural system, not for scientific reasons, but to please non-taxonomists, especially customers of the web. It is here argued that nomenclatural ranks and taxonomic categories should be clearly distinguished and designated by different terms, and that the *Code* should be modified in order to make this distinction clear. Whereas taxonomic categories have biological definitions, nomenclatural ranks do not, as they express only a position in a taxonomic hierarchy. If used consistently (which is not always the case), the system of nomenclatural ranks is very useful for the storage and retrieval of taxonomic and phylogenetic information. Taxa referred to a given rank in different groups cannot therefore be considered equivalent by any criterion, so that using ranks for comparisons between taxa (e.g., for biodiversity richness assessment) is irrelevant and misleading. Although the current *Code* needs to be improved in several respects, the superiority of this nomenclatural system, which is theory-free regarding taxonomy as it relies on ostensional allocation of nomina to taxa rather than

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