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McGill
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Foundations & Philosophy of Science Unit

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Professor Stephen Jay Gould
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Dear Gould

As you know, I am a faithful and admiring reader of your column in Natural History. As such you may allow me to express my strong disagreement with your latest contribution, "A quahog is a quahog". Here is why.

1. You want your readers to choose between nominalism ("Species are just arbitrary though convenient groupings") and the thesis that species are entities, i.e. real things on the same footing with chairs and atoms. But this is not a dichotomy. There is room for a tertium, namely that species are concepts but not arbitrary ones: they represent objective commonalities.
2. The concept of a natural kind, which you seem to ridicule at the beginning, is the one you adopt when you reject the claim that species are artificial kinds. I would add that, although there are several ways of defining a natural kind, the best is that devised by physicists and chemists, and not yet adopted by biologists. This is the definition of a class (species, genus, or what have you) by a set of laws. Example: in physics the field genus is definable as the collection of things spread out in space, capable of propagating, lacking a mass, etc. --in sum satisfying some field equations.
3. If biospecies are natural so are the higher taxa. To stick to one criterion in defining species only to adopt nominalism with regard to genera is not only methodologically inconsistent but also at variance with your scientific practice. Thus when you measure the distance between species in a certain genus, or even family, by means of the so-called molecular clock (protein differences), you adopt the notion of a natural class (genus, family, etc.).
4. To claim that species must be real since they are recognized cross-culturally is like arguing for the supernatural on the strength that most peoples believe that there are supernatural agencies. Only a conceptually muddled chap like E. Mayr could have originated such a line of defense.

The conclusion I draw from this story is, of course, that the discussion on the reality or unreality of species is still a hot topic among biologists because they refuse to exactify their concepts the way physicists learned three centuries ago, namely with the help of mathematics.

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Cordially

Mario Bunge