

# SCIENCE

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## THE ORIGIN OF SPECIES THROUGH ISOLATION.

For me, it is the chorology of organisms, that is to say, the study of all the important phenomena embraced in the geography of animals and plants, which is the surest guide to the study of the real phases in the process of the formation of species. (Moritz Wagner.)

It is now nearly forty years since Moritz Wagner (1868) first made it clear that geographical isolation (räumliche Sonderung) was a factor or condition in the formation of every species, race or tribe of animal or plant we know on the face of the earth. This conclusion is accepted as almost self-evident by every competent student of species or of the geographical distribution of species. But to those who approach the subject of evolution from some other side the principles set forth by Wagner seem less clear. They have never been confuted, scarcely even attacked, so far as the present writer remembers, but in the literature of evolution of the present day they have been almost universally ignored. Nowadays much of our discussion turns on the question of whether or not minute favorable variations would enable their possessors little by little to gain on the parent stock, so that a new species would be established side by side with the old, or on whether a wide fluctuation or mutation would give rise to a new species which would hold its own in competition with its parent. In theory, either of these conditions might exist. In fact, both of them are virtually unknown. In nature a closely related distinct species is not often

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