

the facts, especially the presence of unique species and genera on oceanic islands which have come into geologic existence at different times, can be accounted for by positing the development of new species and new genera in extreme isolation.

FOOTNOTE #1

"If the difficulties be not insuperable in admitting that in the long course of time all the individuals of the same species, and likewise of the several species belonging to the same genus, have proceeded from some one source; then all the grand leading facts of geographical distribution are explicable on the theory of migration, together with subsequent modification and the multiplication of new forms."

-- Charles Darwin, "Summary" to Chapters XII and XIII of *The Origin of Species*

FOOTNOTE #2

"Darwin regarded fresh-water organisms as the most noteworthy exception to the principle that organisms separated by a barrier are quite different. River systems and lakes are, of course, separated from one another by barriers of land. While many fresh-water systems frequently empty into the same ocean, salt water is a barrier to most fresh-water organisms which is no less formidable than land. Hence one might expect an unusual degree of differentiation in fresh-water floras and faunas. But the opposite is the case. There is great similarity between fresh-water organisms throughout the world, and many individual species are world-wide in distribution. Darwin believed that this could be accounted for by the fact that most fresh-water organisms must, in order to survive, be adapted for frequent short migrations from pond to pond or from stream to stream within a limited locality. But these migrations will inevitably lead to longer ones occasionally. Given time on a geological scale, this should result in very widespread species.

"All of this is not to say that there is a single, world-wide fresh-water flora and fauna. Discontinuities do exist among the inhabitants of fresh-water systems. But they are less marked than might at first be expected, and they correspond to the most ancient and imposing geographical barriers."

-- Edward O. Dodson, *A Textbook of Evolution* (Philadelphia: The W. B. Saunders Company, 1952), pp. 27-28.