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THE SURVIVAL OF THE UNLIKE[1]

SOME years ago, studying the agaves or century plants of the West Indies, I found that they represent not only many species but numerous rather distinct groups, and that the aggregates of individuals that we call species, and of species in these larger groups, resemble and differ from one another in a sort of proportion to the depth of water between the islands on which they are found, which was translated into differences somewhat proportionate to the length of time that their habitats have been separated by water barriers.

Those of near-by and apparently rather recently separated islands were not found to differ progressively and adaptatively in a single character such as flower-shape or size of seed-vessels nor was there a correlated difference in these respects, but sometimes one and sometimes another such character was different, while no indication was evident that the plants were not living under essentially identical conditions so far as pollination and dissemination are concerned.

When the idea of organic evolution was presented before the Linnean Society in 1858 in a convincing way, by Darwin and Wallace, the latter spoke of the process as a survival of the fittest, and the former, as the result of natural selection, in the struggle for existence which effects kinds or species as well as individuals of living things.

The dissociation of parts of the ancestral stock of these West Indian agaves without any marked climatic difference in their homes appeared to me to have left each final island with a stock essentially in harmony with its environment and capable of deviating considerably in flower and fruit proportions from

[1] Address of the president before the Illinois Chapter of the Society of the Sigma Xi, May 19, 1920.