

exceptions to the rule, might have made their way to distant islands by flight, for they are often met with on the wing far out at sea. Unquestionably, the total exclusion of quadrupeds in general, which could only reach such isolated habitations by swimming, seems to imply that nature does not dispense with the ordinary laws of reproduction when she peoples the earth with new forms; for if causes purely immaterial were alone at work, we might naturally look for squirrels, rabbits, polecats, and other small vegetable feeders and beasts of prey, as often as for bats, in the spots alluded to.

On the other hand, I have found it difficult to reconcile the antiquity of certain islands, such as those of the Madeiran Archipelago, and those of still larger size in the Canaries, with the total absence of small indigenous quadrupeds, for, judging by ancient deposits of littoral shells, now raised high above the level of the sea, several of these volcanic islands (Porto Santo and the Grand Canary among others), must have existed ever since the Upper Miocene period. But, waiving all such claims to antiquity, it is at least certain that since the close of the Newer Pliocene period, Madeira and Porto Santo have constituted two separate islands, each in sight of the other, and each inhabited by an assemblage of land shells (*helix*, *pupa*, *clausilia*, &c.), for the most part different or proper to each island. About thirty-two fossil species have been obtained in Madeira, and forty-two in Porto Santo, only five of the whole being common to both islands. In each the living land-shells are equally distinct, and correspond, for the most part, with the species found fossil in each island respectively.

Among the fossil species, one or two appear to be entirely extinct, and a larger number have disappeared from the fauna of the Madeiran Archipelago, though still extant in Africa and Europe. Many which were amongst the most common in the Newer Pliocene period, have now become the