

It seems to me possible that these birds may carry Alpine plants as seeds and spores attached to their feathers from one island to another, for great distances. They make their holes in the ground where it is densely covered with herbage, and often become covered with vegetable mould. The *Procellariæ*, widely wandering as they are, have probably had a great deal to do with the wide distribution of much of the Antarctic flora. Grisebach\* lays stress on the range of the Albatross (*Diomedea*) from Cape Horn to the Kurile Islands, as possibly accounting for the occurrence of Northern species of plants amongst the Southern flora, and also the wide range of the Antarctic flora. He supposes the seeds, however, to be swallowed by the Albatross, with its food, after being washed down into the sea by rivers, and perhaps swallowed by fish.

When I mentioned, in conversation, to Mr. Darwin, the matter of the birds possibly picking up seeds whilst nesting, and so conveying them, he at once objected that at nesting time these birds, like all others, do not wander, and do not fly to a fresh nesting place directly after nesting. It seems to me, however, that though this objection is almost fatal to the suggestion, birds may occasionally leave an island with mountain seeds attached, and alight in the higher parts of a distant island from habit. The fact that they do nest amidst the mountain flora is at all events to be noted.

With regard to the Albatross, it is to be noted that at Tristan da Cunha these birds nest in the terminal crater, at a height of 8,000 feet. Former Albatrosses may have nested in high tropical mountains; the plants are possibly very much older than the present species of Albatrosses. The great Albatross has, on a very few occasions, been found as a straggler, north of the equator in the Atlantic, and has reached Europe. It is most extraordinary that the bird has not established itself permanently in the Northern Atlantic. The genus, probably, once extended north in the Atlantic, as it does in the Pacific, for a form possibly ancestral has been described by Prof. Owen as *Cimoliornis diomedeus*, a fossil bird nearly allied to *Diomedea*, which occurs in the lower chalk at Maidstone.† The immense rapidity of birds' flight must always be borne in mind in considering their aid in distribution of plants. A journey of 4,000 miles, at 40 miles an hour, is only four days' and nights' flight.

As the date of sailing of the ship was uncertain, we were obliged to give up the attempt to reach Papeno Valley, and we

\* A. Grisebach, "Vegetation der Erde," Bd. II., S. 496.

† "Trans. Geol. Soc.," 2nd Series VI., Tab. 39, fig. 2. "Quart. Journ.," 1846, II., p. 101.