

Chamisso,¹ when describing the Radack Archipelago, situated in the western part of the Pacific, states that "the sea brings to these islands the seeds and fruits of many trees, most of which have yet not grown here. The greater part of these seeds appear to have not yet lost the capability of growing." It is also said that palms and bamboos from somewhere in the torrid zone, and trunks of northern firs, are washed on shore: these firs must have come from an immense distance. These facts are highly interesting. It cannot be doubted that if there were land-birds to pick up the seeds when first cast on shore, and a soil better adapted for their growth than the loose blocks of coral, that the most isolated of the lagoon-islands would in time possess a far more abundant Flora than they now have.

The list of land animals is even poorer than that of the plants. Some of the islets are inhabited by rats, which were brought in a ship from the Mauritius, wrecked here. These rats are considered by Mr. Waterhouse as identical with the English kind, but they are smaller, and more brightly colored. There are no true land-birds; for a snipe and a rail (*Rallus Phillippensis*), though living entirely in the dry herbage, belong to the order of Waders. Birds of this order are said to occur on several of the small low islands in the Pacific. At Ascension, where there is no land-bird, a rail (*Porphyrio simplex*) was shot near the summit of the mountain, and it was evidently a solitary straggler. At Tristan d'Acunha, where, according to Carmichael, there are only two land-birds, there is a coot. From these facts I believe that the waders, after the innumerable web-footed species, are generally the first colonists of small isolated islands. I may add, that whenever I noticed birds, not of oceanic species, very far out at sea, they always belonged to this order; and hence they would naturally become the earliest colonists of any remote point of land.

Of reptiles I saw only one small lizard. Of insects I took

¹ Kotzebue's First Voyage, vol. iii. p. 155.