

Parallelisms Between the Insect Fauna of Hawaii and that of Samoa

BY F. MUIR

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The publication of "Insects of Samoa" by the British Museum (Natural History) is of interest to entomologists in Hawaii. As each part appears, entomologists can compare this insect fauna in the south Pacific with that of Hawaii. This comparison reveals some interesting parallelisms and leads to some interesting conclusions. Taking the part by G. J. Arrow on the Clavicornia and Lamellicornia (Pt. IV, Fasc. 1, pp. 35-66) we find him making certain remarks that have already been made about the Hawaiian Lamellicornia. In Samoa, as in Hawaii, the only native representatives of the great group Lamellicornia are a few species of Lucanidae, the Scarabaeidae being only represented by seven species, all evidently of recent introduction. In commenting upon these immigrants he says, "The, in several cases, too successful establishment of those immigrants, which have become serious pests, shows that there are no local conditions inimical to their kind to account for the deficiency. The explanation is probably to be found in that fact that while the Lucanidae pass their early stages in rotting wood, the scarabaeid Lamellicornia nearly all do so underground, so that the ocean, which may have brought the former in drifting logs from other shores, formed an impassable barrier to the latter, until surmounted by human agencies." This is practically what has been remarked about the absence of this large group from Hawaii.

The Clavicornia consists of fifty-seven species, mostly small and mostly species breeding in rotting wood. Among them there are twelve species so far only known from Samoa, five species known only from Hawaii and Samoa, twenty-eight species of wide distribution and six species known from near-by islands. Thus nearly fifty per cent are such that have the power of being carried over large ocean areas and so have become world-wide. While much more work is still to be done in Samoa before we can make a final judgment, yet I believe we will not be far wrong if we conclude as follows:

(a) The Samoan Islands are oceanic and have never been connected to any other large land area, not even to the Fijian Islands.

(b) The amount of endemism does not justify us in regarding the islands as of very great antiquity, not near so great as Hawaii. The small amount of island endemism also leads to this same conclusion.

(c) The similarity between the Hawaiian and Samoan insect fauna does not indicate any connection between these two archipelagoes, but to similar means of being populated owing to similar conditions of isolation.

The study of the Fulgoroidea also leads to similar conclusions. So far there is nothing that we can regard as a "Polynesian" insect fauna in Samoa, but perhaps this may be revealed when we have fuller knowledge of the insect fauna of the islands more to the east and southeast.