In summary, Rennell appears to be populated chiefly by species that are widespread elsewhere in the Pacific. Of the twenty species considered to be native to Rennell, none is peculiar to the island, and only one is limited elsewhere to the Solomons and Santa Cruz Islands as a whole. At least seventeen, or 85 %, are in what I have referred to elsewhere (1959b) as "Stage-I" in the speciation pattern exhibited generally by Pacific ants; that is, they range widely and continuously out of one or the other of the three principal faunal source areas Australia, tropical Asia, and New Guinea. They are relatively recent invaders of the Solomons and have not yet undergone differentiation at the species level. The proportion of Stage-I species on Rennell is very high. It can be compared with the following percentages of Stage-I species in the subfamily Ponerinae for various other parts of Melanesia and Polynesia: New Guinea 22 %, Bismarck Archipelago 56 %, Solomons 49 %, New Hebrides 82 %, Fiji 18 %, Samoa 83 %, Society Is. 100 %.

The Rennell fauna conforms to two rules of Pacific ant geography that have emerged in recent studies. The first is implied in the data given above, that with all other factors being approximately equal, the proportion of Stage-I species increases outward from the principal faunal source areas. The second is a simple corollary of the first: with increasing distance from the source areas the percentage of endemicity decreases. Both trends are reversed on the Fiji Islands and New Caledonia, which are old land masses that have been the sites of much local differentiation and radiation in ants. Finally, it may be noted that the increase of Stage-I elements at the expense of older, Melanesian-endemic elements in isolated islands results in the "oceanic" affinities of the Rennell ant fauna, a phenomenon similar to that already observed in the Rennell vertebrate fauna by several zoogeographers (Mayr, 1931; Braestrup, 1958; Volsøe, 1958). In fact, to call the Rennell fauna "oceanic" is, at least with respect to the ants, just another way of saying that the Rennell species are predominantly in Stage-I. I have discussed the reasons for this interesting effect in my earlier paper on the Melanesian Ponerinae (WILSON, 1959b). The geographic and ecological evidence suggest that the Stage-I species are generally endowed with (1) superior dispersal powers; and (2) the ability to thrive in "marginal habitats" on the larger islands of Melanesia and thus avoid competition with the major part of the older (Stage-II and III) fauna, which is concentrated in the more luxuriant parts of the rain forest.

Isolated islands such as Rennell tend to be populated heavily by Stage-I species both because they can be reached only by a minority of groups with adequate dispersal facilities and because a relatively large percentage of their area is covered by the marginal habitats favored by Stage-I species. These conclusions are in essential agreement with the independent opinion of BRAESTRUP (1958) concerning the origin of the vertebrate fauna of Rennell Island.