

Islands. In addition many of these species reach their northern or southern limits of distribution within Honduras, as do several other more common species, and therefore have limited invasion potential within the source area. Twenty-four species are limited in distribution to ecological formations above 1500 meters (lower montane wet forest and lower montane moist forest formations), and another 14 are not known to occur below 600 meters in Honduras. An additional 23 species inhabit ecological formations other than the one (tropical moist forest) represented on the Bay Islands. Excluding these species, 117 species are left that occur at proper elevations and in proper vegetation types. Of these, so far as we know, 29 have invaded the Bay Islands.

Why more of the 117 species have not invaded the Bay Islands can be answered only in general terms, for as yet we do not have sufficiently detailed information about their ecological requirements. We can nevertheless discuss in a general way those characters of the members of the Bay Island herpetofauna that promote vagility, and conversely those characters of the rest of the 117 species that promote sedentation.

Certainly no single factor is responsible for the exclusion of much of the mainland coastal herpetofauna from the islands. One feature shared by a large percentage of the mainland-derived, nonendemic segment of the Bay Island herpetofauna is occurrence in most major habitats on the mainland. Meyer (1969) distinguished nine ecological formations (after Holdridge 1962) in Honduras. Occurrence in a greater number of these formations would appear to indicate a greater versatility or ecological latitude. The species that have colonized the Bay Islands inhabit from one to six of the nine formations, an average of 4.0. Only 9 of the 29 mainland-derived, nonendemic Bay Island amphibians and reptiles are found in fewer than four formations on the mainland. The rest occur in from four to six formations, are relatively versatile, and correspond to one of the major factors of vagility noted by Williams (1969). Of the nine species that are not presently known to occur in more than three ecological formations in neighboring Honduras, one is a turtle (*Chrysemys ornata*) and one a crocodylian (*Crocodylus acutus*), both of which could swim to the islands. *C. ornata* is known only from Utila and may have invaded it during the last glacial period. Two of the nine are lizards, one a gecko (*Sphaerodactylus continentalis*), a group notorious for its dispersal ability, the other a teiid (*Cnemidophorus lemniscatus*), a beach animal on both the island and the mainland, relatively tolerant of insolation, and probably preadapted to gaining a quick toehold on an island beach. The rest are snakes (*Boa constrictor*, *Coniophanes bipunctatus*, *Elaphe flavirufa*, *Oxybelis fulgidus*, and *Tantilla taeniata*), all of which are probably more widely distributed