

former alternative may be the more reasonable one, though the presence of three mainland-derived endemic species suggests that they may have become isolated as relicts earlier in time, perhaps in the Pliocene, from wide-ranging mainland counterparts. The presence of an endemic species on the Bay Islands (*Sphaerodactylus rosaurae*), if it is indeed endemic, derived from the West Indies, suggests chance over-water dispersal.

It also appears that over-water colonization of the Bay Islands by mainland elements has been largely by chance. This is suggested by the absence of several potential mainland colonizers and by the fact that the islands' herpetofaunal compositions differ from one another. Furthermore, the largest and most ecologically diverse island (Roatán) supports the largest number of species and the smallest and most ecologically uniform island (Utila) supports the fewest. This suggests that the relationship between area, ecological diversity, and species composition is similar to that reported for other continental islands not recently in contact with the mainland (Savage 1967).

Interisland dispersal has apparently been largely restricted to movements between adjacent islands. It is of course also possible that islands having species in common were colonized independently from the mainland. Only 8 of the 35 species now known from the islands are found on all three of the major islands, and only a single species, *Ctenosaura similis*, displays a leap-frog distribution.

LEVEL OF DIFFERENTIATION OF THE MAINLAND-DERIVED SNAKE SEGMENT

Mertens (1934) and Zweifel (1960) have noted that "insular populations of snakes tend to have higher average ventral counts than their mainland relatives." Zweifel (1960) demonstrated that such is the case for all of the snakes inhabiting the Tres Mariás Islands for which adequate samples are available. We have also compared the ranges and means for ventral counts (dorsal counts in the case of the worm snake) of mainland and island populations of the Bay Island snake species. Our results are given in Table 4. Data for six species, *Dryadophis melanolomus*, *Drymarchon corais*, *Elaphe flavirufa*, *Enallius flavitorques*, *Oxybelis aeneus*, *Oxybelis fulgidus*, are based on Honduran material; the rest are based on material from the length of the mainland range in Middle America.

Obviously the Bay Island snakes show no consistent pattern of ventral variation comparable to that demonstrated by Zweifel (1960) for the snakes of the Tres Mariás Islands. Of 8 species for which adequate information on ventral variation in both island and mainland populations is available, 4 species show an increase in the average number of ventrals