

*baudinii*, *Rana pipiens*, *Anolis sericeus*, *Basiliscus vittatus*, *Ctenosaura similis*, *Mabuya mabouya*, and *Boa constrictor*, are widely distributed on the mainland, geographically, ecologically, and altitudinally, and all occur on the coast of Honduras opposite the islands.

Four species are members of the dry-adapted component, *Gymnophthalmus speciosus*, *Drymarchon corais*, *Enallus flavitorques*, *Leptotyphlops phenops*. The ranges of all four on the mainland extend into relatively dry habitats in the tropical moist forest formation (Holdridge 1962), the ecological formation occurring on the Bay Islands.

One species (*Cnemidophorus lemniscatus*) is a member of the coastal component and as such occurs directly across from the islands on the beaches of the mainland.

The largest segment of the Bay Island herpetofauna (45%) belongs to the wet-adapted component of the mainland, represented by 16 species: *Hyla microcephala*, *Leptodactylus melanonotus*, *Rana palmipes*, *Chrysemys ornata*, *Crocodylus acutus*, *Sphaerodactylus continentalis*, *Anolis lemurinus*, *Iguana iguana*, *Coniophanes bipunctatus*, *Dryadophis melanolomus*, *Elaphe flavirufa*, *Leptophis mexicanus*, *Oxybelis aeneus*, *O. fulgidus*, *Tantilla taeniata*, *Tretanorhinus nigroluteus*. All these species except *Chrysemys ornata* have been recorded from the Atlantic coastal plain opposite the islands, and all occur in the tropical moist forest formation.

#### FACTORS PROMOTING VAGILITY

It is important not only to try to explain why certain members of the adjacent mainland herpetofauna occur on the Bay Islands, but also why the other members of the adjacent mainland herpetofauna do not occur there, if indeed they do not.

We can easily exclude from consideration as possible island colonizers the mainland species restricted to elevations above those that occur on the islands. Also easily excluded are those mainland species that do not inhabit the vegetation types represented on the islands. In Honduras this would include xeric formations. The failure of successful colonization also involves less easily demonstrable factors such as occurrence in and restriction to areas of deep shade, rainforest or montane situations, limited physiological tolerance (incapability of withstanding the rigors of the colonization voyage), peculiar ecological requirements not available on the islands, limited abundance, and limited invasion potential within the source area (Williams 1969).

As mentioned above, 196 species inhabit mainland Honduras. Eighteen of these have extremely limited distributions, are known from a single specimen, and are probably not in position to colonize the Bay