Conservation of the herpetofauna on the Dutch Windward Islands: St. Eustatius, Saba, and St. Maarten

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Abstract. The Dutch Windward Islands (St. Eustatius, Saba, St. Maarten) support a collective herpetofauna consisting of two frogs (both introduced), six turtles (one introduced, one of uncertain origin, and four sea turtles, of which three are known to nest in the islands), 15 or 16 lizards (depending on whether the iguanas of Saba are a species distinct from *Iguana iguana*), and three snakes (one introduced). Although politically united, the islands are distinct biogeographic entities and binary similarity indices for the herpetofauna are 0.38 for St. Eustatius/Saba, 0.35 for St. Eustatius/St. Maarten, and 0.20 for Saba/St. Maarten (with values varying only little when the introduced species are included). Only three species, *Eleutherodactylus johnstonei*, *Hemidactylus mabouia*, and *Thecadactylus rapicauda*, are found on all three islands. Species given formal recognition as being in need of protection include the sea turtles (listed in CITES appendices and the IUCN Redlist), *Geochelone carbonaria* (CITES), *Iguana delicatissima* (CITES and IUCN), *Iguana iguana* (CITES), and two species of *Alsophis* (IUCN). Other species of conservation concern include two species of *Ameiva*, both of which are restricted to areas of considerable human activity on islands where mongooses (*Herpestes javanicus*) are established, and *Mabuya* sp., which may be extirpated on St. Maarten. Three factors largely responsible for the status of these species are: (1) large size and economic value (turtles and iguanas), (2) persecution by people who fear them (snakes), and (3) diurnally active, terrestrial, and vulnerable to predation by mongooses (snakes, *Ameiva*, *Mabuya*). Non-governmental organizations on each island are largely responsible for conservation and related educational efforts. Specific recommendations for each island are listed.

Key words: Amphibians; conservation; Dutch Windward Islands; reptiles.

Introduction

Although part of a political entity (the Netherlands Antilles, which also includes Bonaire and Curaçao, two of the three “Leeward Islands”) and geographically proximate, each of the Dutch Windwards is a distinct biogeographic element (Powell et al., 2005; fig. 1). St. Eustatius (Statia) is part of the St. Christopher (St. Kitts) Bank, which also includes St. Christopher and Nevis. Saba is an isolated...
seamount volcano separated from the nearby Saba Bank. St. Maarten not only shares an island with St.-Martin, an overseas department of France, but is part of the Anguilla Bank, which includes Anguilla, St.-Barthélemy, and satellites. In addition, islands of the Anguilla Bank are part of the “Limestone Caribees,” also called the outer-arc islands of the Lesser Antilles. These very old islands, originally of volcanic origin, have weathered considerably and have been submerged during periods of high ocean levels. Consequently, limestone deposits of marine origin cover the volcanic core. The Limestone Caribees, due to erosion by wind and water, also lack substantial elevations. The highest peak on St. Maarten/St. Martin is Pic Paradis, with an elevation of about 400 m asl (above sea level). In stark contrast, Saba and the islands of the St. Kitts Bank (which includes St. Eustatius) belong to the “Volcanic Caribees,” also called the inner-arc islands. These much more recently formed islands are characterized by active or dormant volcanoes, substrates of volcanic origin, and substantial elevations. The highest peak on Saba is Mount Scenery (870 m a.s.l.) and the Quill on St. Eustatius is slightly over 600 m a.s.l. The greater elevations function to “snag” clouds, which results in mesic conditions,