

*On Land and Sea: Native American Uses of  
Biological Resources in the West Indies*  
Lee A. Newsom and Elizabeth S. Wing

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The earliest colonists arrived in the West Indian archipelago up to 6,000 years ago, most likely from Central America. Perhaps 500 years later, a second wave of migration, this time from South America, began to work its way north through the Southern Caribbean and the Lesser Antilles. These Archaic cultures were followed, beginning around 500 B.C., by ceramic groups from northern South America. By the time of European contact, complex chiefdoms were present on some islands. *On Land and Sea* examines the archaeological evidence for plant and animal use by the prehistoric inhabitants of these islands. The book gives equal weight to zooarchaeology (including invertebrate and vertebrate species) and paleoethnobotany in order to present a complete account of what is known about prehistoric subsistence in the West Indies.

Following the introduction are concise but thorough chapters on environmental setting, initial human colonization, and zooarchaeological and paleoethnobotanical methods. Terrestrial faunal resources on the islands tend to be relatively depauperate, especially compared to the abundant and diverse marine species available, while vegetation communities within and among the islands of the West Indies, are, perhaps, more diverse than one might expect. In addition to the obvious contrast between coastal and interior environments, ecological communities include cloud forest, rainforest, thorn woodland, savanna, and desert scrub.

The meat and potatoes of the book are four chapters in which Lee Newsom and Elizabeth Wing review the prehistoric biological remains from the four subregions of the West Indies: the Southern Caribbean (including Aruba, Bonaire, and Curaçao), the Lesser Antilles (including Antigua, Barbados, and Grenada), the Greater Antilles

(including Jamaica, Hispaniola, and Puerto Rico), Vieques and the Virgin Islands, and the Bahamas Archipelago (the Commonwealth of the Bahamas and the Turks and Caicos Islands). In fact, the book contains complete species lists, quantified by minimum number of individuals (for animals) and ubiquity (for plants), for more than 60 prehistoric archaeological sites. This alone should make *On Land and Sea* an invaluable reference for archaeologists interested in the West Indies, but Newsom and Wing also address larger issues, including overexploitation of resources; plant and animal domestication; status differences in food use; medicinal, mind-altering, and ritual uses of plants and animals; and connections between the West Indies and both South America and Central America.

Interpretation is hampered by the relatively few sites investigated from any one island or subregion. Puerto Rico, with data from only 10 sites, has the most, while several islands are represented by only a single archaeological site. No information, unfortunately, was available to the authors from Cuba, the largest island in the West Indies.

Detailed faunal and floral data is only available for three sites in the Southern Caribbean. The situation is somewhat better in the Lesser Antilles, where a greater number of excavated sites allows some comparisons between Archaic, early ceramic, and late ceramic period occupations. Plant remains indicate an apparent change through time from tropical/subtropical dry forest to a more dry scrub environment, possibly due to land clearing by humans and the use of trees for fuel.

The Greater Antilles include some of the largest islands in the Caribbean and hence tend to have a broader resource base than other island chains. In combination with the smaller Vieques and Virgin Islands to their east, this subregion has almost 30 sites from which faunal and/or floral data has been analyzed. Introduced plants, possibly including cultivated fruit trees originally from the mainland, are present during the Archaic, and there is an expansion of agriculture throughout the ceramic period. Some small domesticated or managed mammals, including dog, guinea pig, hutía, and Jamaican cony, are present during the ceramic period, but faunal assemblages in most sites, as in the rest of the West Indies, are dominated by fish and other marine resources.

Permanent settlement in the Bahamas Archipelago is relatively recent, beginning around A.D. 700–750. There is, as yet, little direct evidence for plant use on these islands, but faunal assemblages indicate the use of a diverse array of fish, shellfish, and birds.

Despite the limitations of the available data, Newsom and Wing are able to document both geographic distinctions in resource use among the islands and diachronic trends across the West Indies. Biological remains from archaeological sites provide evidence of a decrease in body size of animal prey species (including fish and crabs), a decrease in the abundance of carnivorous reef fish, an increase in the use of offshore fish as opposed to reef fish, and the replacement of primary forest plants by second-growth species. These are all interpreted as evidence of overexploitation by humans. It is analysis like this, as well as the basic data that underlies it, that makes this book a work of interest not only to archaeologists of the West Indies but also to researchers

interested in island biogeography and the interrelationships of humans, plants, and animals.

T. CREGG MADRIGAL