

PREHISTORIC ETHNOZOOLOGY OF THE VIRGIN ISLANDS

Alfredo E. Figueredo

The Virgins are a group of small oceanic islands with a waif fauna (cf. Darlington 1938, 1957). Since European settlement, a great number of the endemic species have disappeared. Contrasting with this, however, new 'wild' species have been introduced by the white man (eg. Virginia deer). In a future paper, I will try to show how a similar situation probably occurred when the red man entered the Islands. The ethnozoölogy of such fragile, isolated ecosystems tends to be very dynamic, as various extinctions and introductions effect their changes.

This paper reflects what must have been largely a stable faunal period during the Neo-Indian Stage. It is unlikely to be of much help in understanding the fauna present in the Islands before the first human colonization. As there is no published information for the Meso-Indian Stage, and no Palaeo-Indian Stage is recognized for the Virgin Islands, the corresponding time span has been omitted from consideration. Some notes about the present range (if any) of the various species will be given, along with whatever palaeontological information is available.

It was proposed at first to list only those species found in unmistakable archaeological contexts and discuss them in that light. In two cases, however, animals will be considered whose remains have not been found archaeologically. That is because their aboriginal introduction has been suspected. Also, 'ethnozoölogy' here is not meant to include invertebrates or fishes. Those organisms are worthy of a full treatment that shall not be attempted at the present time. Neither is a presentation of all conceivably useful animals included.

Briefly, then, what follows is a catalogue of animals used as food or as pets by the Neo-Indians of the Virgin Islands, augmented with various pertinent observations. It is being done by an amateur so as to order his thoughts, and provide others with a handy reference to guide future work.

Microenvironments, niches, etc., will have to be dealt with (when possible) under the various separate headings. That is because the Virgin Islands vary so much in weather (cf. Bowden et al. 1970), physiography (cf. Meyerhoff 1926), and other concomittant factors (both between islands and in different parts of the same island), that a comprehensive presentation is best made through the animals themselves, who are less voluble than their environment.

Rock Iguanas

The genus Cyclura is known from Neo-Indian archaeological contexts in St. Thomas (Miller 1918: 509-510). The species identified there, C. mattea, seems more closely related to C. cornuta (of Hispaniola) or C. stejnegeri (of Mona Island) than to C. pinguis of nearby Anegada, which is the only other Virgin Island for which there is a record for the genus (op. cit.). Miller (id.: 510) feels that C. mattea may have been introduced by man, but that the evidence is inconclusive. Among other factors, he cites that the animal is different

from the Hispaniolan and Monan forms (two possible proveniences), and that the extinct Puerto Rican species (intermediate geographically) is poorly known.

Virgin Islands rock iguanas are only extant in Anegada (Carey 1972), where they have not been reported archaeologically. It has been suggested that Iguana iguana (when and if introduced by man; vid. infra) drove out the native rock iguana. Lazell (1973: 23-24) denies this strongly, demonstrating how the niches of the two (tree and rock) iguanas would not overlap significantly. For what it's worth, one may consider the fact that Cyclura mattea appears in St. Thomian archaeological contexts that also happen to be free of Iguana iguana (which is now common, whereas Cyclura mattea is extinct), while Anegada (home of Cyclura pinguis) is outside the present range of Iguana iguana.

Tree Iguanas

Iguana iguana is not known from any archaeological context in the Virgin Islands. In manuals, however, it is common to read under its heading: 'Introduced for food by the indians' (Seaman 1961: s.n.). It is impossible to deny its presence aboriginally on the basis of negative evidence. Simply not enough recovery of faunal remains has taken place.

Lazell (1973: 24) thinks that the tree iguana entered the Virgin Islands with no help from man. He cites geographic and individual variation convincing him 'that no human introduction is responsible for the presence of Iguana iguana anywhere in the Lesser Antilles' (ibid.). However, he leaves unchallenged Underwood's argument that if tree iguanas were introduced, 'one would expect them to be on the principal islands....' (op. cit.: 23). It happens that the tree iguana is known even from tiny Peter Island (Grant 1932c: 341). The range, then does not correspond to that expected from introductions only in the larger, inhabited islands.

Lazell was convinced of a natural distribution without undoing Underwood's argument that the range of the tree iguana would be limited to the principle Virgin Islands. With the wide range that it seems to have (including some of the smaller islands) the case for a non-human introduction is strengthened.

It remains to be demonstrated when the tree iguana entered the Virgin Islands, and, if it took place in pre-Columbian times, why its remains are not common in kitchens middens. Lastly, one may add that the bones of Cyclura mattea (which is a rock iguana found archaeologically on St. Thomas) are not commonly met with. Perhaps the prehistoric Virgin Islanders ate iguanas sparingly.

Sea Turtles

Obviously an important part of the diet during Meso-Indian and modern, as well as Neo-Indian times, we lack, however, good published data for sea turtles. The bulk of the collections have not been analyzed, yet those that have (Miller 1918; Sleight 1962) list Chelonia mydas only.

Tortoises

Testudo tabulata is a tortoise that has not been found in an archaeological context. Seaman (1961: s.n.) feels that 'This is definitely not a native, but when and how it reached the Virgin Islands is unknown.' Grant records it from Water Island, Lovango Cay (1932b: 333), the Capella Islands (1937: 516), and Tortola (1932c: 345). It used to be common on St. Thomas (Grant 1932b), but is now very rare or extinct. It is also very rare on Tortola.

Jack Dammann (personal communication) feels that it may have been intro-

duced by the Indians. On the other hand, he adds, it ranges very far on its own. It is interesting how Grant (1932a: 39) records a fresh-water turtle (Pseudemys) rafted from Puerto Rico to Vieques after a hurricane. Perhaps here too we have a natural distribution.

Today, Testudo tabulata is found chiefly on out-of-the-way, small keys. It has become extinct on most of the large islands. As with Iguana iguana, its present range suggests a distribution that was formerly widespread. Little geographical variation, on the other hand, is common with these tortoises.

The genus Testudo, of course, is quite ancient in the Antilles (cf. Leidy 1868 and Williams 1952), where its populations have extended to and shrunk away from wide areas many times in the (distant) past. This could very well be a continuing process.

Flightless Rail

An extinct, flightless rail 'about as large as a small domestic fowl' (Wetmore 1927: 340) has been found in Neo-Indian archaeological contexts on St. Thomas and St. Croix (Wetmore 1918). It is also known from central Puerto Rico.

Nesotrochis debooyi may have lived in the hills rather than the low, mangrove-strewn coastal valleys where its remains are found in the Virgin Islands (cf. Wetmore 1937). Indeed, it seems to have run over dry ground (op. cit.: 10) and has been tentatively identified with a recently extinct bird of the Puerto Rican highlands (Wetmore 1927: 342). It is almost certain that its remains will be excavated on some of the other Virgin Islands, since it is quite abundant in all the places where it is found.

Domestic Fowl

The late Carl O. Sauer suggested that the domestic fowl (Gallus gallus) might have been found in pre-Columbian America (1952: 57-60). It should be noted, then, that its remains have been discovered in undisturbed Neo-Indian archaeological contexts at least twice in the Virgin Islands (de Booy 1919: 35-36; Wetmore 1918: 515-516; 1925). In one case it was suggested that the deposit was not particularly old. However, the associated ceramics are entirely prehistoric, and in another case (de Booy op. cit.: 29) the aboriginal deposit was sealed under a thick layer of sterile earth.

Here are Theodoor de Booy's words about this: 'It is a source of considerable mystification how to account for the presence of these remains of a domestic fowl in what undoubtedly is a pre-Columbian deposit. The only logical explanation is that a rat may have carried the remains of a fowl in its burrow in later days' (op. cit.: 35-36). It may very well be that this peculiarity needs further study.

Manatees

Manatee bones are found often in Neo-Indian archaeological sites (e.g. de Booy 1919: 35). A problem is that here we are before a substance which is also a useful raw material for the manufacture of various artifacts (cf. op. cit.: 97). It may have been a popular trade item.

Manatees are extinct in Virgin Islands waters. In 1974, one was captured along the southern shore of Vieques a few months before my arrival there on archaeological field work. Ray (1960) has suggested that their range might

have been wider (and extended to the Lesser Antilles) in recent times. However, for the reasons cited above, it is possible that the safest archaeological contexts may be of little value in establishing the immediate presence of the Sirenian.

Hutias

By far the most common mammal found in Neo-Indian archaeological contexts is Isolobodon portoricensis (cf. Sleight 1962 and Wing 1966: 8). This extinct species of a hystricomorph rodent with no perceptible variation, had a range that extended from Hispaniola to the Virgin Islands. Miller (1918: 508) felt that 'Dispersal by pre-Columbian man suggests itself as the most probable means by which such a distribution could have been effected'.

Clough (1972) has done the most recent biological study of a hutia population (in this case, Geocapromys ingrahami), and has found them to be extremely numerous in a small island environment with no predators. The estimated hutia biomass (or standing crop) was 21.3 kilograms per hectare (op. cit.: 820). This can be converted to 31,950 kilocalories per hectare (ibid.). Obviously, even if hutias were only fractionally as productive on the Virgin Islands, they would have been quite an important source of food.

The genus Capromys has been reported in Neo-Indian archaeological contexts for St. Croix (Beatty 1944: 184) and St. Thomas (Buxton et al. 1938: 48). This is strange as there are no records of Capromys nearby. Also of concern is that no precise information has been published regarding the determinations. Until more data becomes known, little can be said of the matter.

It is interesting to remark that Isolobodon portoricensis has been found in contemporary owl pellets around Constanza, Dominican Republic (Miller 1930: 2). If it is not extinct, its rediscovery and study would certainly be rewarding, particularly if it has been manipulated genetically by man at some time. Perhaps a colony might be established on one of the uninhabited Virgin Islands that have been set aside as preserves.

Agouti

Dasyprocta aguti has been found in an archaeological context only on St. Croix (Beatty 1944: 184), where it has never been recorded alive in modern times (ibid.). On the other hand, it used to be quite numerous on St. Thomas, until it became extinct over fifty years ago. Alston (1876: 348) found skins of the living variety similar to those of St. Vincent and St. Lucia.

As St. Croix has been shown by a reappraisal of Contact documents to have been inhabited by Caribs (Figueredo in press), and the archaeological contexts published by Beatty (op. cit.) are uncertain, it may well turn out that the Caribs brought the agouti with them to St. Croix from their older settlements in the Windward Islands (of course, it is dangerous to rely on negative evidence for the other Virgin Islands).

Insectivores

Mrs. Katheryne Kay-Willock (lately Assistant Archaeologist for the Government of the Virgin Islands of the United States) informs me (personal communication) that bones of the small insectivore Nesophontes sp. have been found in the aboriginal midden at Magens Bay, St. Thomas. I have no data on who made the determination.

Should this unpublished record be reliable, it would extend the range of Nesophontes to the whole length of the Antillean Geanticline. It is interesting that Nesophontes also may still be found alive in the region around Constanza (Miller 1930: 2).

Dogs

Canis familiaris is reported from one kitchen midden on St. John (Sleight 1962: 40) and may have been the only domesticate in the Virgin Islands' prehistory. At least, it is not controversial to suggest its presence.

CONCLUSIONS

It seems apparent that the Virgin Islands afforded their Neo-Indian inhabitants an abundance of faunal resources rare for oceanic islands. While it has been suggested that the tree iguana, tortoise and hutia were introduced by the Indians, and (even if they may not have had chickens) they brought their dogs and let agoutis loose, still these bountiful little islands could offer them rock iguanas, sea turtles, flightless rails, and perhaps an occasional insectivore (to which must be added magnificent marine and floral resources.

Hopefully the study of aboriginal domesticates, semi-domesticates of introduced animals will gain ground in the West Indies, and we will be able to round out an already interesting picture of insular adaptation: firstly to a rich environment, and then to the conscious alteration of that environment.

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