H23 Preservation in Paradise I: El Marañon Cemetery, Isla de Coiba, Republic of Panama

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The attendee will learn guidelines for establishing time since death estimates from human skeletal remains in tropical environments.

This recovery mission afforded unique opportunities to investigate the process of skeletal degradation in a controlled tropical environment and to establish some guidelines for estimating time since death.

The Panamanian Truth Commission's directive is to investigate the deaths and disappearances by the Military Regimes of Torrijos (19681981) and Noriega (1981-1989). Excavation efforts were continued on the island of Coiba after the March 2002, field season in May-June 2003, in an effort to locate the graves of several "disappeared" believed to have been buried at the Marañon Cemetery, which is situated at the central encampment of the Penal Colony. The surrounding environment consists primarily of tropical rainforests with a rich red clay soil. The cemetery is oriented north to south and is clearly marked and demarcated by a barbed wire fence measuring 57.7 m at its longest by 21.9 m at its widest points. This paper presents some of the taphonomic processes responsible for skeletal preservation in a tropical environment.

The island of Coiba is positioned between 7°10'N and 81°32' - 81° 56' W and is the largest island in the Mesoamerican Pacific. Coiba is located 24 km offshore and is separated from the mainland on the east by the Gulf of Montijo and on the northwest by the Gulf of Chiriquí. It has an area of 494 sq km and a maximum elevation of 425 m. The island's first inhabitants were indigenous groups dating to 500 BC, which were expelled from the island by Spanish conquistadors sometime in the early part of the 16th century. It was soon abandoned by the Spaniards and it was only re-inhabited again in 1914 when it became a penitentiary, which currently houses approximately one hundred inmates. It was declared a national park on 17 December 1991. Because of its inaccessibility and reputation of having a penal colony comprised of maximum-security inmates, Coiba boasts of having 80 percent of its primary humid tropical forest. The average yearly temperature is 78.8 degrees Fahrenheit with an average precipitation of 3,500 mm.

Fourteen graves were excavated, opened and their contents analyzed in the field. A positive identification was made for Jeronimo Diaz Lopez via dental and traditional forensic anthropological means. Diaz "disappeared" in 1985 and his parents were informed by the military police that he had successfully escaped the island on a raft. This identification also allowed us to compare the taphonomic processes of all the burials and establish a rough estimate for degradation of skeletal remains in a tropical environment. In addition, the unique finding of a PreColombian "packet" style burial allowed us to establish some general parameters for weathering stages in a tropical environment. We adapted our definitions of weathering stages and their relationships to years from Behrensmeyer (1978). The one factor that we found that had a significant effect on the level of preservation was the proximity of a burial to coconut palm trees. The root system of these palm trees can travel a relatively long distance underground to feed off human remains, sometimes completely encasing skeletal elements. In this paper, we present some guidelines useful for establishing time since death estimates for remains found in tropical environments.

Taphonomy, Tropical Environments, Forensic Anthropology

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