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PRELIMINARY STUDIES ON THE PRODUCTION OF GUANO AND THE SOCIOECONOMICS OF GUANO COLLECTION IN NIAH CAVE, SARAWAK

Charles Leh and Leslie S. Hall

INTRODUCTION

Guano is the term applied to the accumulation of droppings found under the roosts of swiftlets and bats in caves. Guano has long been used by the farmers in Sarawak as a source of fertiliser as it has a high content of Nitrogen, Phosphorus and Potassium. In Sarawak, guano has been collected from Niah Cave since the arrival of domestic farmers who planted rubber and pepper. This probably occurred around the beginning of the 19th century (Harrisson, 1958). In the 1950's, Tom Harrisson, the then Curator of the Sarawak Museum, established a system of licensing guano collectors. Pits, varying in depth from 3 to 29 feet deep, have been dug in the floor of Niah Cave by guano collectors. The deeper guano deposits contain a greater amount of phosphate. The collection of the old guano (*tahi timbang*) phosphate deposits was permitted with the issue of a Licence B. A fee of RM1.00 was collected for each Licence B, which was valid for only one working day. The guano collector, usually a native of the Niah area, could dig into the old guano deposit and fill as many bags as they could carry in a day. Within a short period of less than 40 years, practically all of the old phosphate rich guano deposit of Niah Cave was removed. As a result deep guano collection was abolished in January 1985, resulting in protests from local longhouse communities. It was obvious that such a method of guano phosphate exploitation was harmful to the cave ecosystem. What remained of the damp and degraded guano deposits was often only bare rock and subsoil. This situation was regarded as unsatisfactory, as the animal life population supported by the guano deposits had greatly diminished. The invertebrates on the guano deposits (particularly moths) were part of a food chain which produced food for the swiftlets (*Aerodramus maximus*, *A. vanikorensis* and *Collocalia esculenta*), which in turn produced nests for the local bird nest industry (Cranbrook, 1984).

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The more traditional method of collecting fresh guano (*tahi sapu*) by sweeping the cave floor for swiftlet and bat droppings each day was allowed to continue by issuing collectors with a Licence A. Such collectors were to

be native of the Niah area and a fee of RM1.00 was collected from the issue of each Licence A for a day's collecting. Since the stoppage of Licence B for digging guano, Licence A was the only choice for hundreds of local collectors who depended on guano collecting for a livelihood. It was because of this situation that the collection of guano was not totally stopped in 1985. Conservationists claimed that guano collecting was destroying the cave ecology, but most of them were unaware that the livelihood of so many people depended on guano collection. As a compromise, the number of guano collecting days per licence holder was reduced to five a week. However this reduced harvesting still continues to cause damage to the ecology of Niah Cave. The harvesting returns of birds' nests in Niah Cave have been reduced, possibly because the swiftlets which feed on insects inside, around the entrance, and outside the cave, now have less food due to the depletion of the guano and its associated animal life.

Guano collection in Niah Cave has, since the 1950's, been overseen by the Guano Committee which is chaired by a Mandor of the collectors. A Guano Fund was set up by the late Tom Harrisson to take care of the affairs of the collectors and their families. Monies collected from the issuance of Licences A and B were the income of the Guano Fund. The Guano Fund built a store and upgraded the landing at Pangkalan Lobang in the 1950's to carry out their guano business. At one stage in the 1960's, the guano workers formed their own Guano Workers' Multipurpose Cooperative to run the shop and the guano business. However, they made a loss and the Guano Fund's shop was subsequently tendered out on a monthly rental. This rental was then used to pay off the debt of the Guano Workers' Cooperative. The Guano Fund is the sole guano agent in Sarawak who can purchase from the guano collectors and market it outside.

From the rental of the Guano Fund shop and licence fee collection, the Guano Fund was able to pay a Mandor monthly. The Mandor oversees all guano collecting activities. In the 1970's, the Guano Fund donated a sum of RM10,000 towards the construction of the Tanjung Belipat primary school. The guano fund committee also granted a small donation to the Surau in Niah. A major contribution by the Guano Fund was the building and maintenance of the 3 km plankwalk from Pangkalan Lobang to Niah Cave. In 1985, the Ministry of Social Development contributed a large sum to improve the old plankwalks in view of the caves' tourist potential. Today the Guano Fund is still on a sound financial footing, and is regularly advised by the Sarawak Museum.