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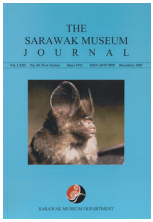

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ORIGIN OF THE ELEPHANTS *ELEPHAS MAXIMUS* L. OF BORNEO

Earl of Cranbrook, J. Payne and Charles M.U. Leh

INTRODUCTION

Under *Elephas indicus*, the Sarawak Museum register (p. 350) records a past holding of two skulls, without tusks of the Asiatic elephant (now *Elephas maximus*) collected in North Borneo by H.H. the Rajah and H.W Crocker, respectively, together with three isolated molars without provenance, and the disarticulated skeleton and mounted skin of a juvenile male from South China. Notes on the opposite page refer to a fossil molar found in a cave at Bau by a former Curator [R.WC.] Shelford which,on 22 Sep. 1926, could not be located bya later Curator, E. Banks, but was subsequently found ("in Mus.")on 24 Dec. 1929 (Appendix A). Unfortunately, none of these specimens is any longer present in the Museum.

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The earliest written record of elephants in Borneo was also the first reported European contact. When, in 1521, the remnants of Magellan's Spanish-backed circumnavigation reached Brunei, the chronicler of the voyage, Antonio Pigafetta, recounted that the delegation from the flagship *Victoria* was conveyed to and from the ruler's palace on elephants caparisoned in silk (Stanley of Alderly, 1874: 110 – 117, quoted by Bastin & Winks, 1966: 38 - 42; Harrisson & Harrisson, 1971: 29-30; Nichols, 1975). This custom had been discontinued by the time later visitors reported on their experiences of Brunei: neither Forrest in the 1770s (Forrest, 1780) nor James Brooke and his companions in the 1840s (Mundy, 1848) saw elephants at the royal court. At the other extremity of Borneo, Knapen (2001), quoting Groeneveldt (1880) and Schwaner (1853-54), stated that, according to a Chinese source, the sultan of Banjarmasin used to ride an elephant. The origin of these royal elephants was not explained.

The status and taxonomic distinctiveness of the elephants of Borneo has subsequently been controversial. In the 19th century, zoological exploration of Borneo established that wild elephants occurred naturally in a restricted region of the northeast, in what is now eastern Sabah and northern East Kalimantan (summarised by Medway, 1977). Within that area, the population was sufficiently large for marauding elephants to be a nuisance to pioneer planters (Pryer, 1881). For the following century, the known range of the elephant population remained broadly within the same bounds (de Silva, 1968). Payne *et al.* (1985) suggested that this distribution reflected the combined constraints of the natural availability of minerals and prolonged hunting pressure.

Shelford (1899) interpreted the Bau fossil as secure evidence that the Asiatic elephant "was once an indigenous inhabitant of Borneo". But he also believed that, "after lingering on for some time", this original population had become extinct, and that the existing elephants of the northeast were descended from "some pairs which were introduced some years ago, certainly within the memory of living men. These pairs were presented by a Sultan of Pahang ...and, after they had been kept in semi-captivity for a year or two, were turned loose into the jungle". His successor E. Banks (1931: 60; 1949: 80), on the same evidence, and Davis (1962), on the grounds of Koenigswald's (1958) mistaken identification (below), believed that the existing elephant population was indigenous. Other 19th century authors, Dutch (Müller, 1839-40; Jentink, 1884) and British (St John, 1862, vol. 1: 95-96; Pryer, 1881), accepted the local tradition that these elephants were not native but descended from introductions.

Shelford's version (above, and repeated by Poulton, 1916: 41) was one of several variants. Other sources attributed the release to a Sultan of Sulu (who controlled an extensive area of northeastern Borneo prior to its cession to the North Borneo Company), with one of two motives: either to found a population of elephants that would, by their presence, demonstrate his sovereignty over the territory (Harrisson & Harrisson, 1971: 30); or to divert a gift of elephants that would otherwise have been unwelcome additions to

the existing nuisance stock on his own island (St John, 1862, vol. 1: 95). On a visit to the island, St John (1862, vol. 2: 243) was reinforced in his opinion that Sulu was the origin of Borneo elephants by hearing confirmation that, "within the remembrance of the oldest men then alive", feral elephants had indeed been found in that island.

Opinion was divided on the taxonomic position of the Borneo elephants. Chasen (1940: 190), who considered that the Sumatran elephant was distinct from the continental Asian form, wrote: "from the scanty evidence available the Bornean herds, descendants of an introduced stock, seem to resemble the continental form rather than *sumatrensis*", and placed Bornean elephants with Peninsular Malayan in the subspecies *Elephas maximus indicus* Cuvier. Pocock (1943) disagreed and, from his study of specimens in the British Museum (Natural History), allocated all Sundaic elephants, including those of Borneo, to the subspecies *Elephas maximus sumatrensis* Temminck. Meanwhile, Hubback (1942) had implied that the Borneo population was distinctive, stating that "many, possibly most of the mature male elephants in Borneo have very straight tusks and do not conform with the usual curved tusks of *Elephas maximus*." On the basis of this statement, in a revision of the taxonomy of Asiatic elephants Deraniyagala (1950, cited in Deraniyagala, 1951) described a subspecies *Elephas maximus borneensis*, taking as his type an illustration in the *National Geographical Magazine*. This name was synonymised with *Elephas maximus indicus* by Davis (1962) and, later, by Corbet & Hill (1992: 240), who again noted that the Bornean population was "possibly introduced".

Any doubt of the distinctiveness of Borneo's wild elephants was removed when Fernando *et al.* (2003) published mtDNA analysis and microsatellite data indicating that the extant population is derived from Sundaic stock but has undergone independent local evolution for some 300,000 years since a postulated Pleistocene colonisation. Shim (2003), however, has re-opened the debate by suggesting that the introduced Sulu elephants and the north-east Borneo population, if derived from them, might be descended from the now extinct Asiatic elephant of Java which was named *Elephas maximus sondaicus* by Deraniyagala (1950, in Deraniyagala, 1951: 50), describing it as