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Supplementary Materials for

Early Holocene human presence in Madagascar evidenced by exploitation of avian megafauna

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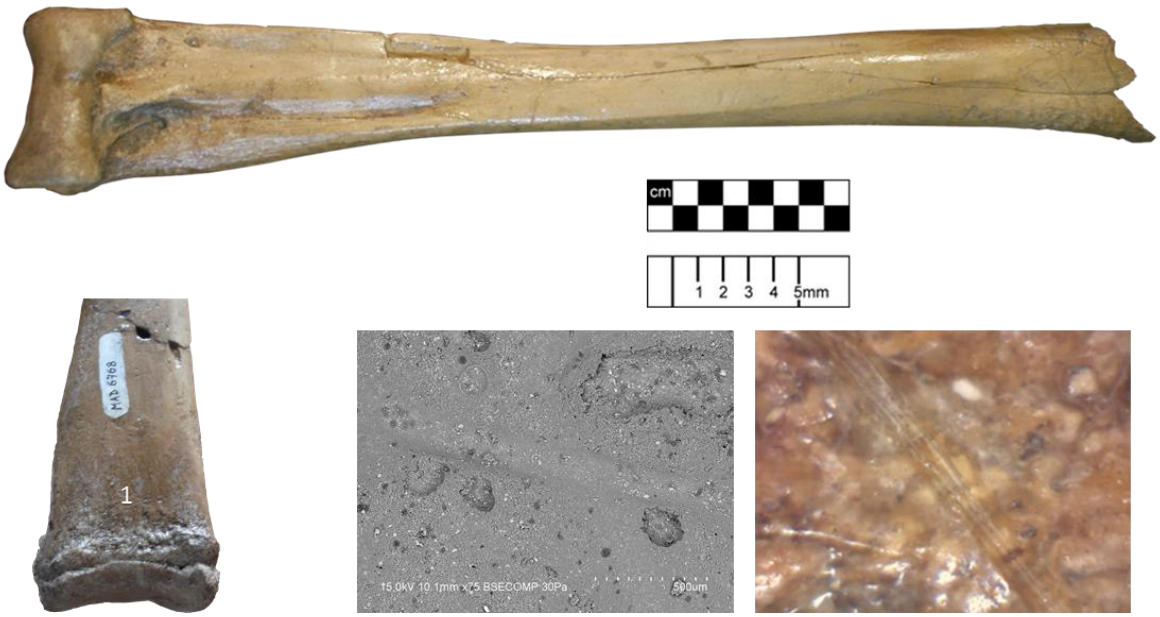

Fig. S1. *Mullerornis* sp. tibiotarsus from Lamboharana (MNHN MAD6768) dated to 6415 to 6282 years B.P., exhibiting a shallow, laterally oriented linear anthropogenic mark on the distal end of the posterior fascia of the diaphysis. The specimen also exhibits damage from scavenging, likely by an endemic large carnivore (*Cryptoprocta* sp.); plurifocal overlaid furrows with undefined margins are present on the remaining portion of the proximal epiphysis, with two non-boring round puncture marks 3.5 mm and 2.68 mm in diameter present 29 mm apart on the medial fascia. Photo credit: James Hansford, Zoological Society of London.

Fig. S2. *A. maximus* tibiotarsus from Ambolisatra (MNHN 1906-16-67) directly dated to 1182 to 1057 years B.P., exhibiting four linear anthropogenic marks disseminated across the proximal epiphysis. The centrally-oriented bevelled grooves with v-shaped floors all share similar characteristics of approximate size and cross section (maximum length×width: 1, 20×3 mm; 2, 16×5 mm; 3, 14.2×4 mm; 20×1.5 mm), but show both defined and undefined periosteal fracturing surrounding the marks due to penetration of cortical bone creating marginal post-mortem periosteal instability. The marks are not parallel (grooves 2–4 are clustered around the lateral articular surface). These marks are consistent with deep clefts made by chopping actions from a sharp, hard tool on fresh bone, with their presence on the proximal epiphysis representing evidence of disarticulation at the knee joint. Photo credit: James Hansford, Zoological Society of London.

Fig. S3. *Mullerornis* sp. tarsometatarsus from an unknown locality on Madagascar (MNHN MAD6662) directly dated to 1270 to 1054 years B.P., exhibiting an open-ended linear anthropogenic groove on the lateral portion of the distal epiphysis (16 mm length, 2.5 mm maximum depth, 3 mm maximum width), oriented laterally across the articular surface and angled toward the posterior distal epiphysis of the central condyle. The bevel of the proximal aspect has an even surface with no relief, the distal aspect and margin is more rugose, and the floor is an off-center v-shape with a distal bias. This mark is consistent with a kerf made by a single-edged, sharp, hard blade cutting into fresh bone. The orientation and morphology of this kerf is consistent with a perimortem disarticulation of the lateral phalanges through a cut with an acute angle of incidence on fresh bone. Photo credit: James Hansford, Zoological Society of London.

Fig. S4. *A. hildebrandti* tarsometatarsus from Antsirabe (MNHN MAD384), which failed AMS dating due to low collagen yield. This specimen exhibits a missing large triangular portion bisecting the medial tarsal diaphysis on its medial fascia (1). The distal fascia is uneven and shows signs of breakage. The proximal fascia of the cleft is even and straight with no relief, and extends past the limit of the distal fascia ending in a groove with a v-shaped floor. Two additional grooves with centrally oriented bevels and v-shaped floors are present; one parallel and adjacent to the distal edge of the cleft, the other on the posterior fascia of the medial condyle. The lateral toe is missing a small portion of the distal process (2). The exposed fascia is even and straight with well-defined limits and few striations. The morphology and orientation of the distal cleft is similar to chop marks found on long bones of lemurs (*21*) and may be further evidence of immobilizing the animals through hobbling (striking at their legs), as part of hunting. The morphology and orientation of the kerf found on the toe are consistent with disarticulation of the phalanges using a very sharp, bladed tool**.** Photo credit: James Hansford, Zoological Society of London.