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follow from 2015 to 2018. Range estimations were calculated using 90% Kernel Density Estimations, with site fidelity measured by general percent overlap among years for each group. The average home range was 5.82+1.88km^2 with a range of 2.98-8.89km^2. The overall percent range overlap year to year was 87.22+12.78%. Overall, the ranges of these groups was smaller than previously published ranges for western lowland gorillas, including an estimate from one of our study groups assessed earlier in the silverback's tenure. Year to year overlap was higher in our study compared to those published for mountain gorillas, which fits previous findings that western lowland gorillas have higher site fidelity than their mountain counterparts. Toward explaining differences between studies, we compare reported range estimates and methodologies. Our study provides a preliminary framework to understand general patterns of gorilla ranging as well as intra-specific variation across different habitats in the Congo Basin.

Arcus Foundation, Cincinnati Zoo, Indianapolis Zoo, Houston Zoo, Columbus Zoological Park, Nouabale-Ndoki Foundation, U.S. Fish and Wildlife Service

Who and when? Dental modification in coastal Ecuador

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Dental modification has been previously identified from several pre-Hispanic Ecuadorian burials, interpreted as an important marker of wealth and identity. However, most known cases are from museum collections or other circumstances without clear provenience or cultural affiliation. We sampled four individuals with dental modification from the Museo Arqueológico y Arte Contemporáneo in Guayaquil, Ecuador, in order to obtain more data on the practitioners and antiquity of coastal dental modification. Specifically, we tested four teeth for radiocarbon dates, and collected demographic and pathological skeletal data to identify patterns in dental modification. We identified three distinct types of dental modification (gold alloy insets, gold alloy appliques, and grooved cross-hatching). One probable male, two probable females, and one indeterminate individual presented some form of dental modification. All individuals were adults above the age of 20. Radiocarbon dates returned a range of 1065-352 radiocarbon years, suggesting this was an enduring practice over time. One calibrated range extends into the colonial period, perhaps indicating that people continued to practice dental modification even throughout Spanish presence. All individuals presented diffuse cranial porosity (indicating malnutrition or systemic bodily stress) and one individual had a well-healed maxillary fracture. We interpret these results as suggestive that dental modification was not restricted to elite individuals but may have been accessible to many coastal Ecuadorians over time.

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Prezygapophyseal articular facet shape of the first post-transitional (lumbar) vertebra in anthropoids

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This study aims to explore shape variation in the prezygapophyseal articular facet (PAF) of the anthropoid first post-transitional (lumbar) vertebra, the function of which is important as PAF shifts from having a coronal to a sagittal orientation, thus allowing movement in the sagittal plane but limiting lateral flexion. It was hypothesized that humans have divergent PAF shape among anthropoids due to the functional distinction of bipedalism from other locomotor strategies. 3D surface scans of the first post-transitional vertebra of a sample of anthropoids (n = 215) across ten genera (two atelids, two cercopithecines, one colobine, five hominoids, including humans) were captured using Macro and HDI structured-light scanners. Thereafter, configurations of 19 landmarks capturing the shape and relative position of the PAF were digitized and subjected to Generalized Procrustes analysis (GPA). A principal component analysis (PCA) based on a pooled within-sex covariance matrix was used to explore patterns of PAF shape variation among anthropoid taxa.

Overall, hominoids and Old World monkeys were separated from atelids on PC1 (29% variance) and PC2 (16% variance). On PC1, *Hylobates*, *Alouatta*, and *Ateles* showed more coronally oriented PAF, while *Colobus* and *Chlorocebus* showed more sagittally oriented PAF. *Pan*, *Pongo,* and *Cercopithecus* showed intermediate PAF orientation. Humans and gorillas occupied broadly similar ranges, which overlapped with Old World monkeys and atelids on PC1. In conclusion, humans showed highly variable but not distinctive PAF orientation among anthropoids. Moreover, there may be convergent characteristics in PAF between *Hylobates* and atelids due to functional similarities in suspensory behavior.

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The first voyagers in East Asia: Peopling of the Japanese islands in the Late Pleistocene

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Recent geographic, tectonic, oceanographic, biogeographic, and paleontolocal evidence clearly indicate that many islands of Japan have been isolated from the Asian continent during and after the Late Pleistocene. There are no secure evidence for the presence of archaic humans or Lower-Middle Paleolithic culture among more than 10,000 Paleolithic sites so far recorded from these islands. This situation, like in the case of Australasia, would allow us to have a useful yardstick to define the timing of modern-human dispersal as well as the origin of seafaring in this area of the world. By integrating currently available information from skeletal anthropology, archaeology, palaeogeography, genetics, and various other sources, here I construct a synthetic view about migration history in the Japanese Islands, and discuss Late Pleistocene seafaring in insular East Asia. Different parts of the Japanese Islands were colonized probably by different populations from the south and north around and after 38,000 years ago. Colonization of the long Ryukyu island chain in southwestern Japan was not easy. In some parts on their ways people had to voyage for long distances without seeing land, and in other parts they confronted ocean current. Combined with evidences from Wallacea and central Japan, this underlines not only purposive but also some level of advanced voyaging capability of MIS-3 modern humans in the West Pacific.

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Sociality and Longevity in wild white-faced capuchin monkeys

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The assumption that sociality is consequential to fitness outcomes is ubiquitous in the primatological literature, but direct evidence that variation in sociality between individuals explains variation in fitness related outcomes is still scant, particularly in Neotropical primates. In long-lived species, lifespan is one of the main fitness components. In this study, we investigated whether more social adult female capuchin monkeys live longer than less social females. We used 17 years of the