understanding of primate evolution, ranging from interpretations of *Australopithecus* facial architecture, the genetic factors leading to bipedalism, cranial size in New World primates, and our understanding of dental evolution. In this talk I will provide a brief overview of the multifaceted integration of genetics into how we interpret and study the primate fossil record.

Microwear of the canine and the incisor of Neolithic Japanese.

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Studies of dental microwear using a scanning electron microscopy (SEM) have made comparative analyses of features of the striations and pits on heavily worn occlusal surfaces of teeth of Neolithic western Japan (e.g., Hojo, 1989, 2000, 2002, 2005). In the present study SEM micrographs were taken from the high-resolution casts of the canine and compared to those of the molar and the incisor from West Kyushu seacoast, and the method of making casts was almost the same as my previous studies. The areas of SEM micrographs at x500 were analyzed using Microwear Image Analyzing Software Version 2.2β (Ungar, 1996). As for the striations, the canine on the labial mesial area showed N = 34, the mean length = 41.6 microns, and the mean breadth = 3.3 microns; the second incisor on the labial mesial area showed N = 25, the mean length = 41.4 microns, and the mean breadth = 1.9 microns. The difference in the breadth of the striation between the canine and the second incisor was significant by t-test ($p < 0.001$). The striations of the canine and the incisor were parallel, and the striations of the canine were thicker than those of the second incisor. Many parallel thick lines on the canine might occur by hard use. This Neolithic Japanese might pull substances with sand grains on the lower canine. Many thick parallel lines were not observed in the second molar of this Neolithic Japanese (Hojo, 2005).

Body proportions of the Point Hope sample.

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Given the well-documented fact that human body proportions covary with climate (presumably due to the action of selection), one would expect the Point Hope Inuit skeletal sample from northern Alaska to be characterized by a cold-adapted body shape. Comparison of the Point Hope Inuit sample to a large (n > 900) sample of European and European-derived, African and African-derived, and Native American skeletons (including Koniag Inuit from Kodiak Island, Alaska) confirms that the Point Hope Inuit evince a cold-adapted body form (e.g., in terms of mean index values for brachial, crural, and limb/trunk indices, the Point Hope and Koniag samples are consistently the most cold-adapted of the groups). Analyses also reveal some unexpected results. For example, while one might suspect the Point Hope sample would show a more cold-adapted body form than the Koniag, given their more extreme environment – this is not always the case. Additionally, while univariate analyses of means consistently show the Inuit samples to be more cold-adapted in body shape than the Europeans, multivariate analyses that include a myriad of body shape variables such as femoral head diameter, bi-iliac breadth and limb segment lengths, fail to effectively discriminate the Inuit samples from Europeans, at least when individuals, rather than sample means, are considered. In fact, in terms of body shape, the European and the Inuit samples tend to be cold-adapted and are separated in multivariate space from the more tropically-adapted Africans, especially those groups from south of the Sahara.

The brain endocast of *Homo floresiensis*: microcephaly and other issues...

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The discovery of a dwarfed hominid living under 20K ago, with a brain roughly 400 ml large, and associated with stone tools of Upper Pleistocene elements has led to considerable controversy regarding the hominid's taxonomic position, possible pathology, and an opportunity to re-assess fundamental assumptions regarding the relationships between brains and behavior, particularly with regard to size. While the original **Science** paper by Falk et al (2005) provided an analysis ruling out pathology, namely microcephaly, the microcephalic endocast chosen was not a good representative of this spectrum of small-brained pathologies. With the cooperation of several colleagues, we have been able to study some 6 microcephalic endocasts, which represent the condition *microcephaly vera*, as well as Seckel's syndrome. Our studies, while unable to rule out completely the possibility of brain pathology in the Flores Island hominid, suggests that none of the microcephalics studied thus far, including one measuring 400 ml, shares any patterns of pathology with the hominid endocast, unless the size alone is taken to be pathological. In addition, we find that the endocast volume is 400 ml, not 417 ml as reported in *Science*, and argue that features of the frontal and temporal lobes described as advanced may instead indicate some form of pathology (possibly microgyria). Gyri on the anterior frontal lobe do not match patterns seen in either normal modern humans, earlier *Homo erectus*, or in the microcephalic endocasts we have examined.

The primates of El Pital Sector, Ecuador: Pilot data suggest a new *Cebus* in Machalilla National Park.

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Ecuador is the native habitat of several Neotropical primates. Some areas, and the primate fauna they support, remain little studied to date, as is the El Pital sector of south-central Ecuador within Machalilla National Park. Because there are human habitations in the park, their impact on the resident fauna cannot be assessed until initial numbers are known and sampled longitudinally. To establish baseline data, I conducted a pilot study between May and August, 2005. Census data were collected on walks of random transects during which the numbers and kinds of primate fauna and their location were recorded. Twenty capuchins (*Cebus* sp.) in 3 groups and 198 mantled howler monkeys (*Alouatta palliata*) in 15 groups were mapped. It may be that living within park boundaries increase their numbers in comparison to unprotected areas. Groups were found between 2 to 11 kilometers distant from human habitations. Each individual in all groups was also photographed. These data suggest that a previously undocumented type of *Cebus* may inhabit the park. Additional data, including fecal and hair sampling are needed to clarify the taxonomic status of this form. Ecotourism is a growing source of income for Ecuador. We suggest that Machalilla National Park is part of this trend because it may protect diversity by reducing hunting pressure on the primate fauna while promoting concurrent economic development of local communities.

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Increased human-chimpanzee sympatry in southeastern Senegal: Impli-