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Anthropometric analysis of the Beckwith Wiedemann Syndrome and development of a potential screening instrument. E.S. MOORE, Indiana University, Bloomington, IN 47405, R.E. WARD, Indiana University Purdue University Indianapolis, Indianapolis IN 46202, P.L. JAMISON, Indiana University, Bloomington, IN 47405, M.E. CARLIN, John Peter Smith Hospital, Fortworth, TX 76104.

Beckwith Wiedemann Syndrome (BWS) is a rare condition with complex inheritance that can involve genetic imprinting; a situation in which the sex of the parent from whom the relevant genetic information was derived influences the phenotypic expression of the condition. We have developed a phenotypic discriminant function from thirteen easily derived facial measurements that effectively segregates affected from normal individuals (97% correct classification in a sample of 19 affected and 19 unrelated normal individuals.) This function emphasizes a number of variables such as a decreased nasal length and greater than normal ear width that are not included in published clinical descriptions of BWS and illustrates the unique value of a morphometric approach to syndromic description as an adjunct to the more subjective descriptions used by dysmorphologists.

More importantly, the discriminant function offers a potentially powerful tool for identifying family members who carry the chromosomal or genetic defects associated with BWS but who do not have a "full-dose" of the phenotypic expression. Identification of such "at risk" individuals could provide both more accurate genetic counseling and lead to a clearer delineation of the unusual genetic mechanisms behind this condition.

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Personality, ecology and DNA: male reproductive tactics in Old World Primates. J. MOORE, Anthropology Dept. UCSD, La Jolla CA 92093

Mating systems of Old World primates have been typologically characterized (C. neglectus remains an interesting enigma). However, knowing that e.g. "M. fascicularis" lives in multi-male groups and mating is polygynous is only the first step. Deeper understanding of male reproductive behavior requires posing two general sets of questions: what determines variance in male RS within mating systems and what are the causes of intraspecific variation in both mating systems and in the prevalence of different male tactics.

The first efforts to understand variance in male RS lead to development of the "priority of access (POA) model, with its emphasis on competition;

subsequent work has drawn attention to the possibility of non-agonistic alternative tactics. In the absence of direct measures of male RS it was difficult to evaluate such models, but recently DNA analyses have begun to provide the needed data. It should not be surprising to find that the emerging picture is more complicated than expected. I review some such complications and suggest that attention to phylogenetic and ontogenetic determinants of personality may help understand the variable findings of paternity analyses.

That many mating systems can vary between sites has long been recognized, though the determinants are not well understood. Ecological factors may influence in predictable ways an adult male's behavioral options and the development of his personality, making it theoretically possible to tie together typological characterization, individual tactics, and geographical variation in modal tactics. The paradigm suggested by Chisolm (1993, *Curr. Anthropol.* 34:1-24) provides a valuable starting point for primatologists to consider.

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Systematic angular and linear measurement side bias in five samples of human dentitions. D. H. MORRIS, Arizona State University, Tempe, Arizona 85287

Angular and linear measurements were made on maxillary first molar occlusal polygons (constructed by drawing lines which connect the four cusp tips) of young Bushmen, Sotho, Asiatic Indians, and whites from southern Africa, and Papago Indians from southern Arizona.

Both types of measurements show systematic side bias in the samples. The two kinds of measurements are inseparably related: when a change occurs in one, corresponding change(s) must occur elsewhere in the occlusal polygon.

The differences in measurements in the five samples are presented and some of their possible sources are considered (measurement error, differential attrition). It is proposed that handedness in introducing food into the mouth may be responsible for the side bias which is observed.

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Craniometric variation in medieval and recent Italian populations. MULLEN, G. J. Department of Anthropology, University of Illinois at Urbana-Champaign.

Studies of medieval human skeletons in Italy have increased greatly in number since Battaglia's (1934) first