

*Pampatherium*. This increase in size may be seen by comparison of the two femora in Figure 9.

Inasmuch as the increase in size noted above occurred gradually, many intermediate stages logically would be expected. A series demonstrating the changes in size between *Kraglievichia* and *Pampatherium* appears in Figure 10. The dermal plates illustrated are from various Plio-Pleistocene stages in Florida. Plates from the Early Blancan Haile XV A site are the smallest, followed by those from the Early Irvingtonian Inglis IA site. Still larger plates occur in the later Irvingtonian Coleman IIA site, and the largest plates of all are those from the Rancholabrean Branford IA locality.

Another major trend in chlamytheriine evolution is the shift from peg-like to bilobate tooth shape and from an oblique to a parallel orientation. This change seems to have progressed in an anterior direction, inasmuch as an increase in the number of anteriorly-situated bilobate and parallel teeth may be seen in the transition from *Vassallia* through *Pampatherium* (Castellanos 1937).

The Haile XV A specimen differs from previously described specimens of *Kraglievichia* and *Pampatherium* in the nature of the anterior upper dentition. In South American specimens of *Kraglievichia*, the first four teeth are oval in cross-section rather than reniform and have their long axes turned lingually. In *Pampatherium* the first three teeth show this condition, but the fourth is usually bilobate and parallel with the rest of the tooth row. In James' (1957) specimen the first four teeth are oval, but the long axis of the fourth tooth parallels the rest of the tooth row, rather than being canted lingually. The peg-like appearance of the fourth tooth is presumably a primitive condition that recurred in an aberrant individual. The incipiently bilobed condition in the fourth upper tooth of *Kraglievichia floridanus* represents the transitional condition between *Kraglievichia* and *Pampatherium*, although the features of the feet remain primitive in several respects.

Chlamytheres apparently originated in South America, because all pre-latest Pliocene records of this group are restricted to that continent. The oldest genus is the Eocene *Machlydotherium*. No chlamytheres are known from the Oligocene, but *Vassallia* is present in Miocene deposits, and both *Vassallia* and *Kraglievichia* occur in the Pliocene of South America. *Kraglievichia* is here reported in Blancan deposits of North America. *Pampatherium* is present throughout the Pleistocene in both North and South America. This distribution presents some interesting geographic and phylogenetic problems.

Until now the evolution of the chlamytheres was thought to have occurred exclusively in South America, with only the end product,