

separating the entoconid from the strong posterolophid, encircles the posterior margin of the tooth. A thickening of the enamel in the middle of the posterolophid evidently represents a vestigial hypoconulid. Although faint, this structure is notable inasmuch as Mein (1970:22) characterized all other *Cryptopterus* as having a smooth posterolophid without any hypoconulid. There is no sign of a posterolabial inflection in the molar from Haile XV A.

DISCUSSION.—Although the affinities of the Haile XV A flying squirrel might reasonably be sought among other North American sciuropterines, such comparisons prove unsatisfactory. The North American record consists of *Glaucomys* of Pleistocene and Recent age and a late Miocene sample of two small species from the Cuyama Valley of California described as *Sciuropterus* by James (1963), but assigned to *Cryptopterus* by Mein (1970). James (1963) suggested that the North American Miocene species might have been ancestral to *Glaucomys*, or at least that no closer ancestry is known. Mein (1970) was more skeptical of a direct relationship. In either event the Haile XV A specimen, far from bridging that gap, differs in a number of basic features from what would be expected of a Latest Pliocene *Glaucomys* ancestor. Whereas Recent *Glaucomys* is even smaller than the Cuyama Miocene fossils, the Haile XV A specimen is much larger. Neither an anteroconid nor an antero-lingual cingulum (of any size) occurs in either the California Miocene specimens or in *Glaucomys*, yet both features are found in the Haile XV A specimen. The protolophid directly connects the protoconid to the metaconid in both the Miocene Cuyama specimens and in Recent *Glaucomys* specimens, whereas it is interrupted by an anteroconid in the Haile XV A specimen. The talonid valley is not crenulated in the Haile XV A specimen, and the trigonid lophulids are heavier than in other North American flying squirrels.

Turning to the Old World fauna, we find a much greater variety of both fossil and Recent genera with which to make comparisons. These include several taxa whose size equals that of the Haile XV A specimen, and some that exceed it. It seems evident that the phylogenetic development of the flying squirrels was centered in Eurasia, and it is fortunate that a relatively complete fossil record of the group is known from Europe. Mein (1970), who recently published the most complete phylogenetic review of the sciuropterine squirrels, recognized three broad groups of fossil and Recent genera based on lophule development and enamel crenulation. His arrangement is as follows:

GROUP I (Enamel smooth; lophules absent)

Recent Genera: *Glaucomys*, *Eoglaucomys*, *Iomys*.

Fossil Genera: *Cryptopterus*, *Petauria*.