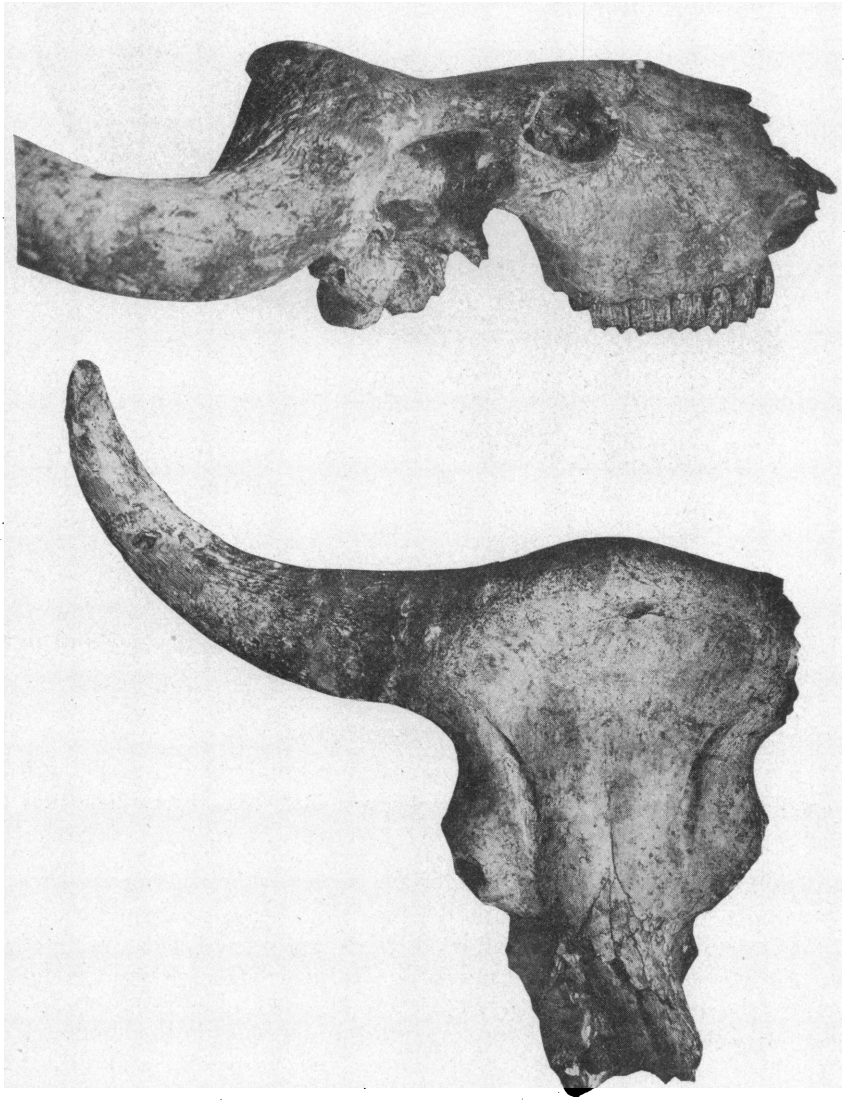

Fig. 26. *Bibos* ? *geron* Matsumoto. No 18465, skull, top and side views. One-sixth natural size.

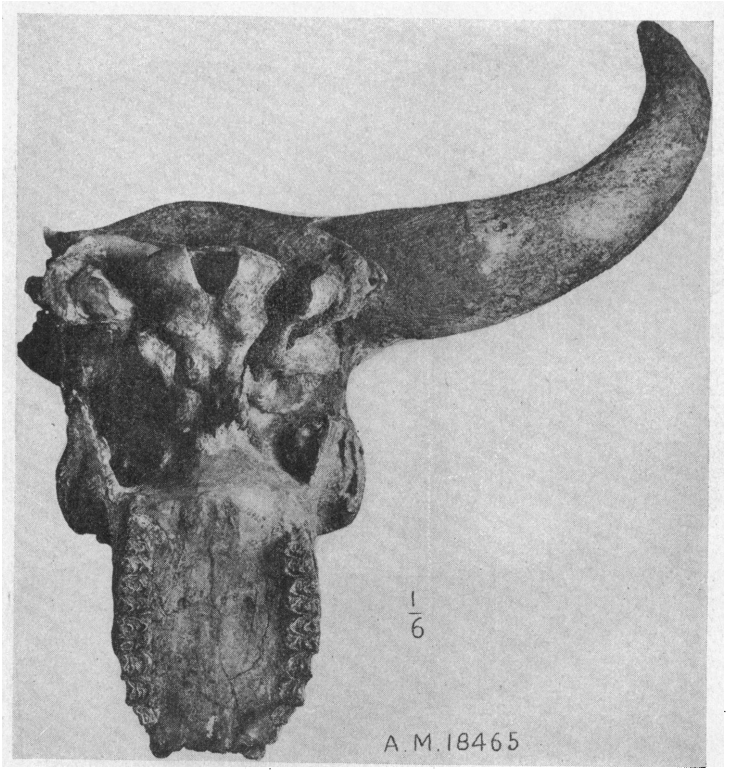

Fig. 27. *Bibos ? geron.* No. 18465, palatal view of skull. One-sixth natural size.

are really constant characteristics of the several genera of Bovinæ remains to be verified by more careful comparative study of the materials.

It is quite clear, however, that there are two distinct types of Bovinæ represented in the foot material; one with extremely short metapodials, the other of larger size and with metapodials somewhat longer than in the American bison.

AFFINITIES OF THE YEN-CHING-KAO FAUNA

The following faunal list is a preliminary one and may be considerably modified and better defined by further study. It will serve, however, to show the general character of the fauna.

PRIMATES		
Bunopithecus sericus	cf. *Hylobates*	Malaysia
Rhinopithecus tingianus	" *Rhinopithecus*	W. China
FERÆ		
Ursus kokeni	" *U. malayanus*	Malaysia
Æluropus fovealis	" *Æ. melanoleucus*	W. China, Thibet
Arctonyx rostratus	" *A. collaris*	" "
Cyon antiquus	" *C. alpinus*	" "
Viverra sp.	" *Viverra* sp. div.	" "
Hyæna sinensis	" *H. crocuta*	Africa
Felis aff. *tigris*	" *F. tigris*	India, E. Asia
GLIRES		
Rhizomys troglodytes	" *R. sinensis*	S.-W. China
Lepus sp.		
PROBOSCIDEA		
Stegodon orientalis	" *Elephas*	India
PERISSODACTYLA		
Tapirus augustus	" *Tapirus*	Malaysia, tropical America
Chalicotherium sinense		
Rhinoceros sinensis	" *R. indicus*	India
ARTIODACTYLA		
Bibos geron	" *B. gaurus*	India
?*Bos* (cf. *grunniens*)	" *B. grunniens*	W. China, Thibet
?*Antilope*		
?*Proboselaphus watasei*	" *B. nilghai*	India
Gazella	" *G. gutturosa*	Thibet
Cervus sp.	" *C. wapiti*, etc.	Central Asia
Sus sp. cf. *hyotherioides*	" *Sus* sp. div.	Malaysia

The above list is remarkable, as a cave or fissure fauna, for the scarcity of rodents (other than *Rhizomys*) and small carnivora. While the remains of large animals are abundant and varied, the bamboo-rat is the only rodent, except for a single hare jaw, and no small mustelids or viverrids appear.[1] It is no less remarkable that no trace of Equidæ is found in it, nor of camels, giraffes, typical Canidæ or machærodonts. This, coupled with the abundance of tapirs and deer, may point to a heavily forested condition. The abundance of *Stegodon* and entire absence of *Elephas* and the presence of *Chalicotherium* are the only observed indications of Pliocene age; for the most part the fauna appears to be quite closely related to modern species and might well be considered Pleistocene. The faunal affinities appear to be principally Chinese, partly Malayan, not much Indian; there is nothing especially suggestive of North American or of Siberian affinity. A more careful comparison

[1] In his second season (1922–3) Mr. Granger reports finding good material of small carnivora.—W. D. M.

and identification of the whole fauna, especially of the smaller ruminants, might show a clearer differentiation from the modern species than we have observed in this preliminary study, but could hardly alter materially the geographic and environmental affinities of the fauna. It is such a fauna as one might expect to find in the valleys of southwestern China at any time before the appearance of civilized man, and under climatic conditions similar to those now prevalent. The effect of the clearing and cultivation of the valleys and the lower slopes of the hills by man has been, broadly speaking, to drive the smaller animals to the mountains and to exterminate the larger ones. Some of the extinct types have left relatives, more or less distant, in the jungles of southeastern Asia, more resistant to human encroachment than the Chinese hills. But the tapir, rhinoceros, gaur and *Stegodon* of the Yen-ching-kao fauna, although their nearest existing relatives are of tropical habitat, do not necessarily indicate a warmer Pliocene climate in China. They may quite well have been species adapted to a temperate climate, such as is more definitely indicated by the geographic affinities of the remainder of the fauna.