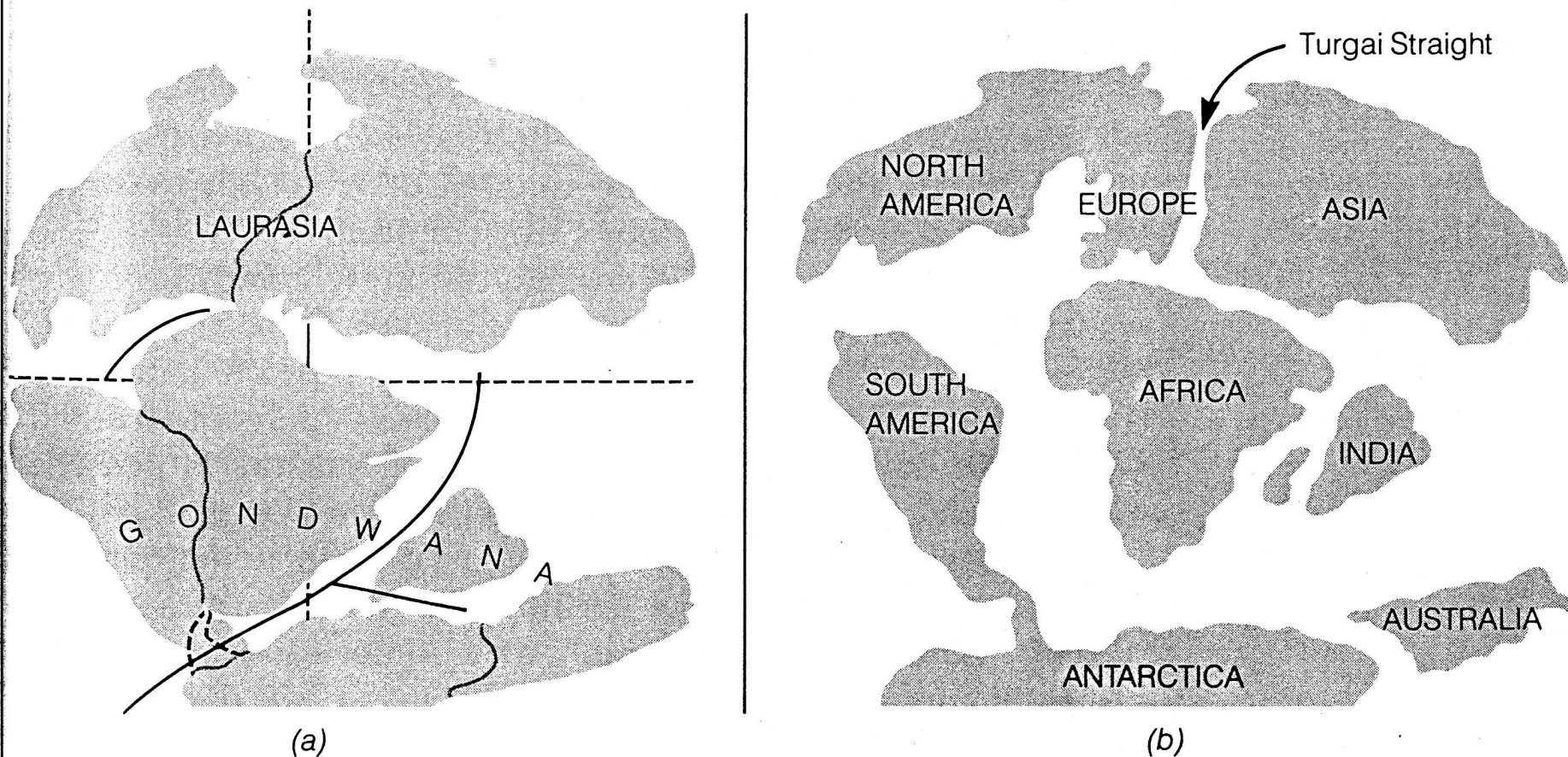
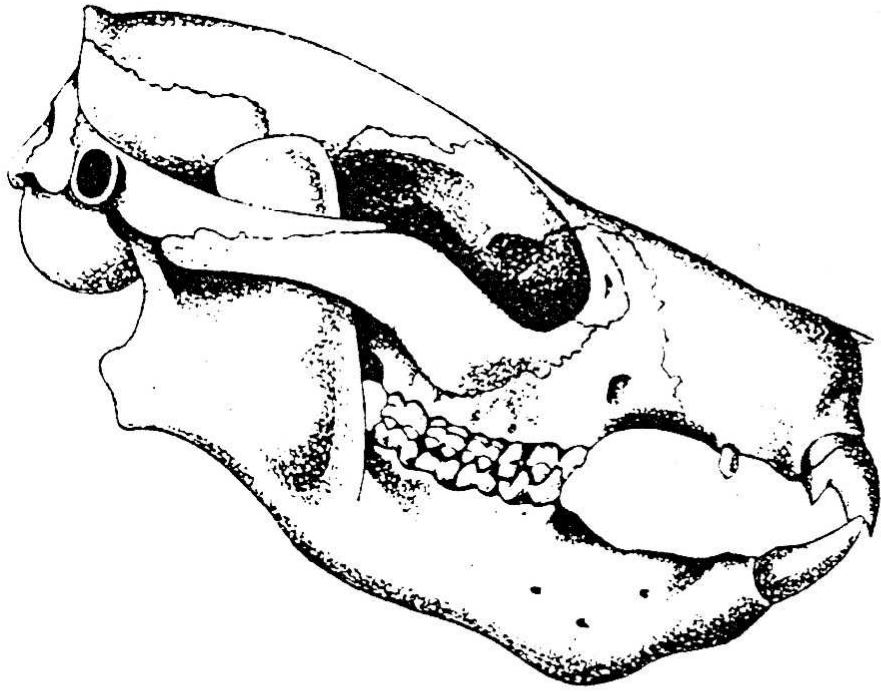


Éra	Perioda	Čas v mil. let	Epocha	Kulturní stupeň	Kulturní období	
K E N O Z O I K U M	kvartér	0,01	holocén	neolit	azilien	
		0,04	(svrchní)	mladý	magdalénien solutrén gravettien aurignacien chatelperonien	
				střední	moustérien	
		0,15	pleistocén (střední)	paleolit (starý)	↑	↑
					↑	↑
					↑	↑
		1	(spodní)		↑	↑
					↑	↑
					↑	↑
					↑	↑
	terciér	2	pliocén		oldowan	
		5	miocén	hominoidi, vznik hominidů		
		25	oligocén	antropoidní primáti, vznik hominoidů		
		35	eocén	ploopice, vznik antropoidních primátů?		
53		paleocén	praprimáti, ploopice			
65						

**Figure 9-2** Continental drift. Changes in position of the continental plates from Late Paleozoic to Late Eocene. (a) The position of the continents at the end of the Paleozoic (c. 250 m.y.a.). Pangea is breaking up into a northern land mass (Laurasia) and a southern land mass (Gondwanaland). (b) The position of the continents during much of the Paleocene and Eocene (up to c. 45 m.y.a.). Note that North America and Europe are still joined but are separate from Asia.

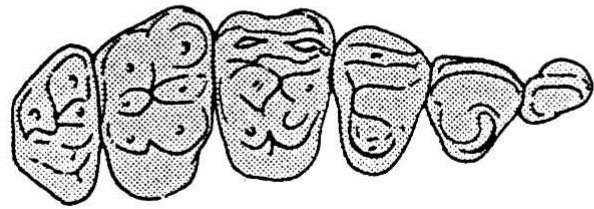




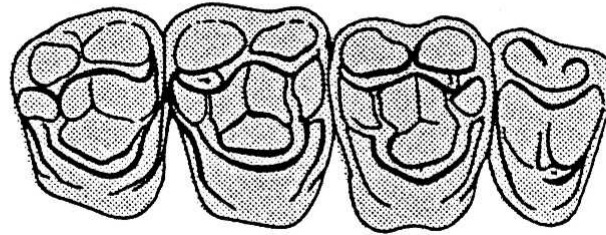
PURGATORIUS



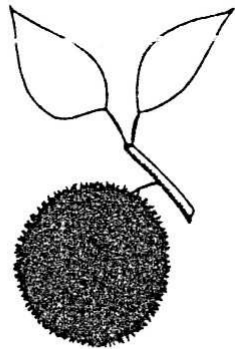
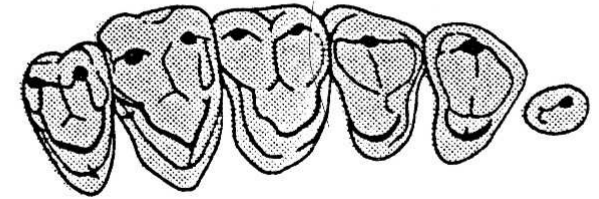
Rooneyia



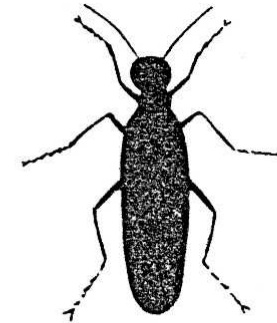
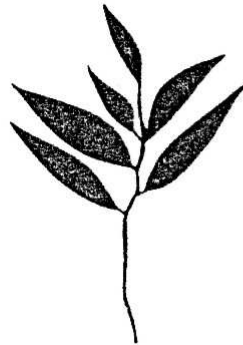
Macrotarsius

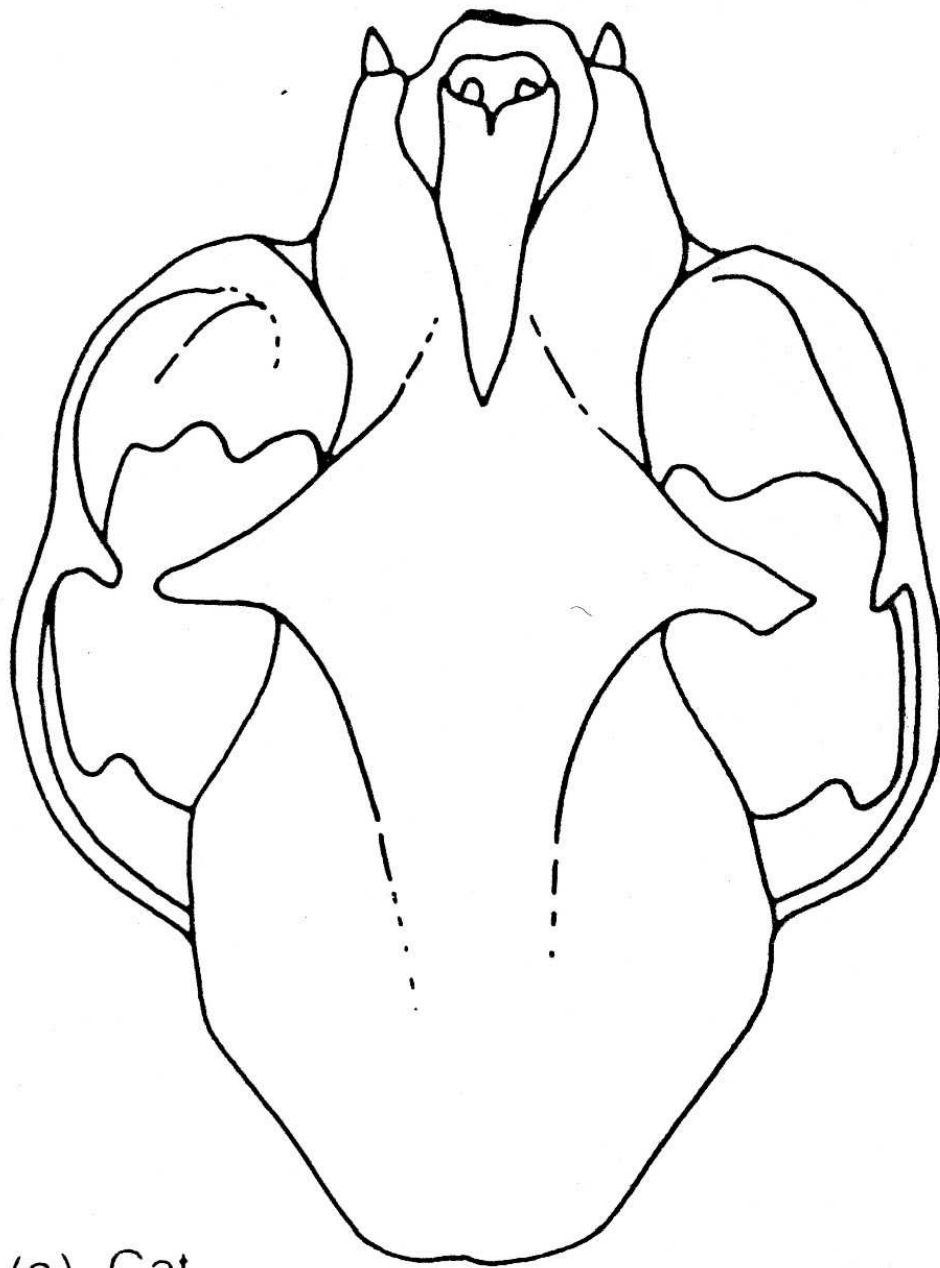


Tetonius

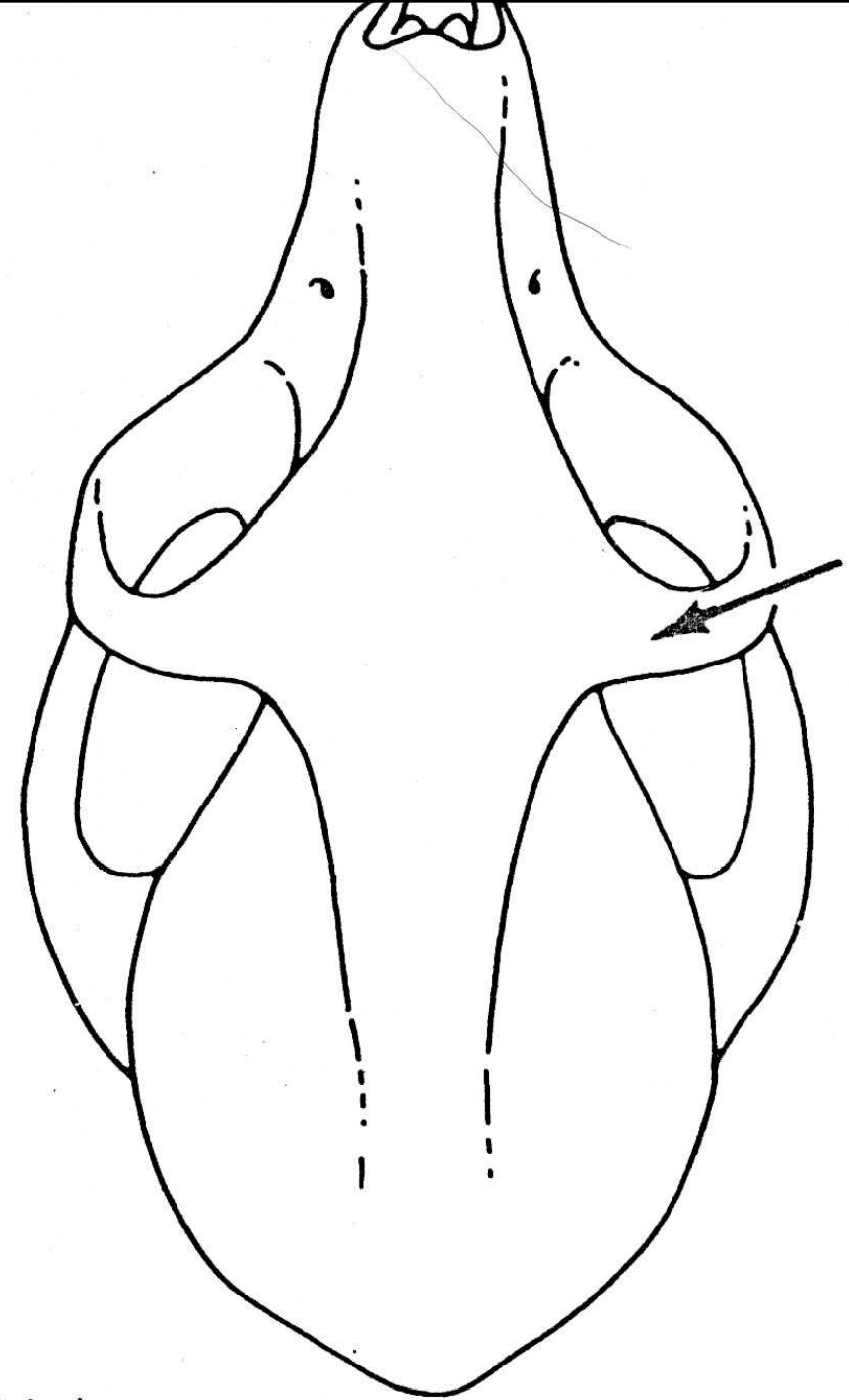


Ekgmowechashala





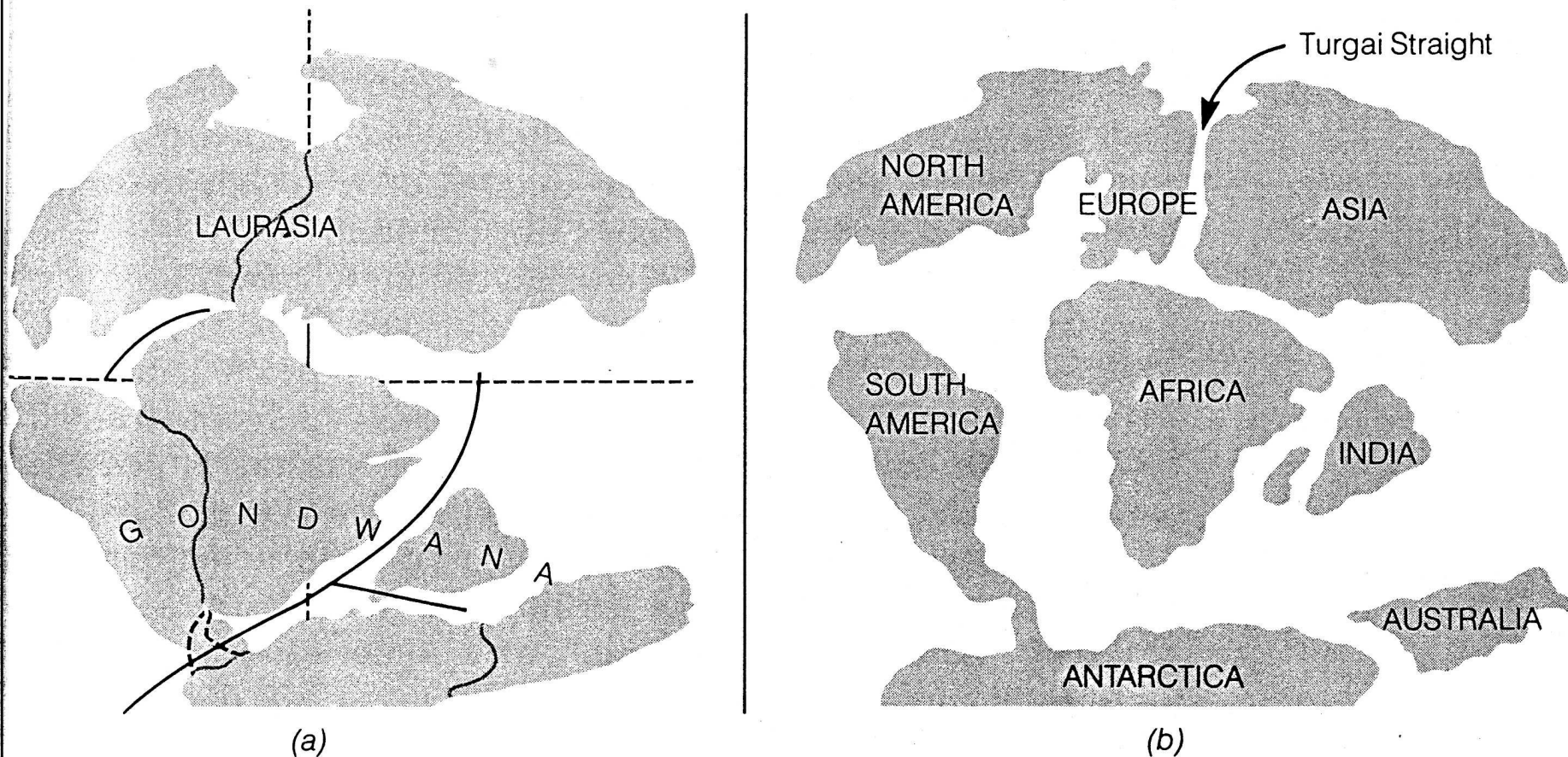
(a) Cat

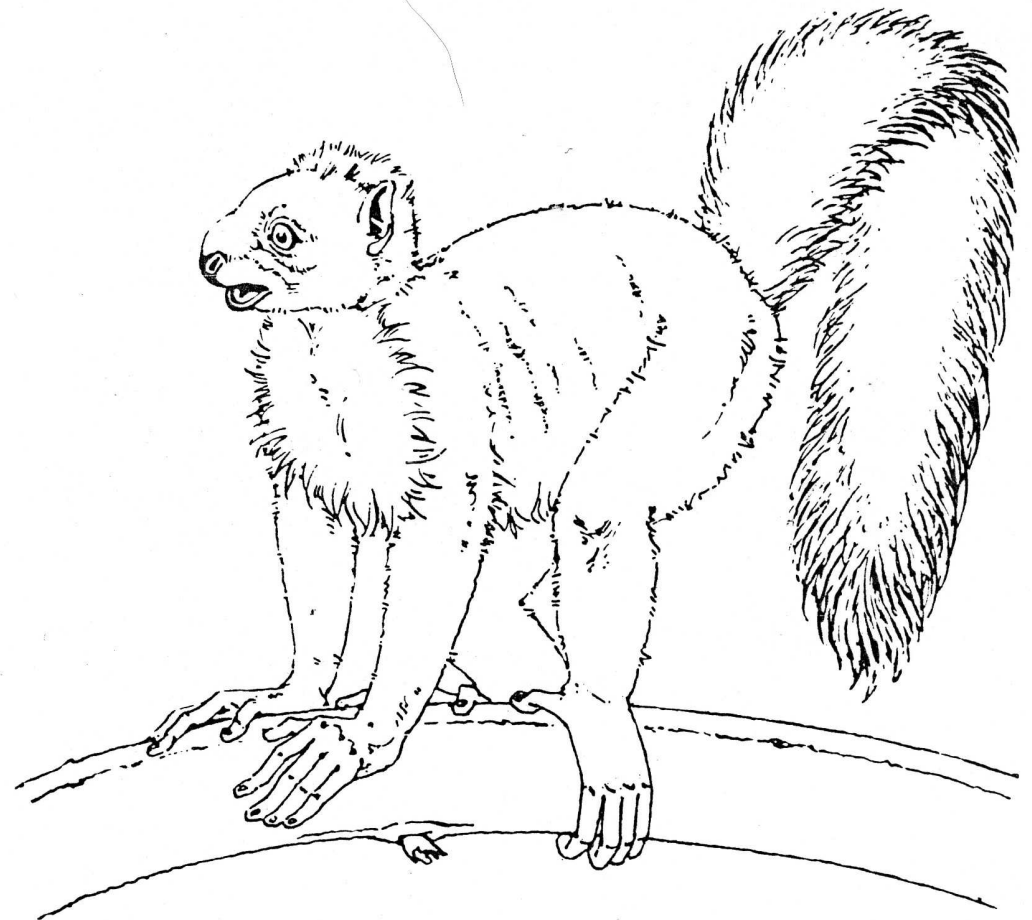
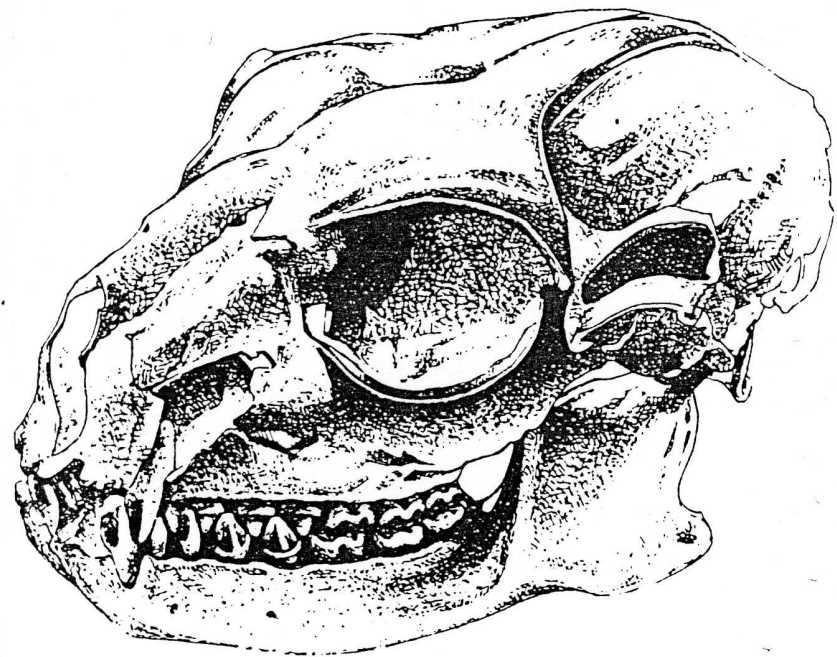


(b) Lemur

**Figure 1** Postorbital bar. A characteristic of primates.

**Figure 9-2** Continental drift. Changes in position of the continental plates from Late Paleozoic to Late Eocene. (a) The position of the continents at the end of the Paleozoic (c. 250 m.y.a.). Pangea is breaking up into a northern land mass (Laurasia) and a southern land mass (Gondwanaland). (b) The position of the continents during much of the Paleocene and Eocene (up to c. 45 m.y.a.). Note that North America and Europe are still joined but are separate from Asia.





**FIGURE 9-1** Smilodectes. An Eocene adapid. (From "The Early Relatives of Man" by E. L. Simons. Copyright © 1964 by Scientific American, Inc. All rights reserved.)

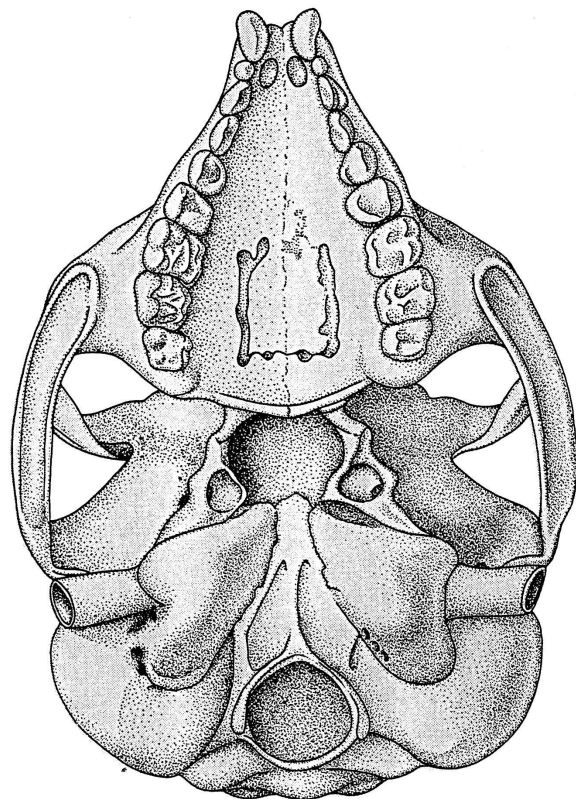
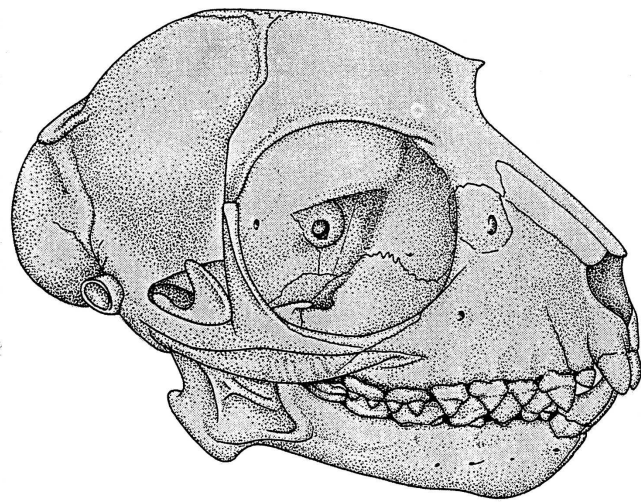


FIGURE 9-2 *Necrolemur*. The skull of the omomyid *Necrolemur*.

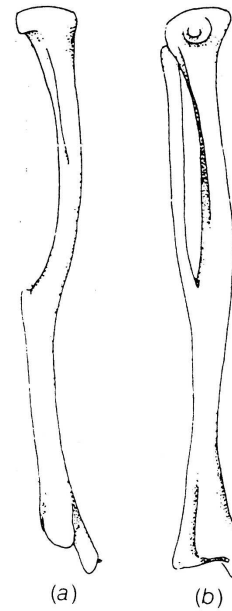
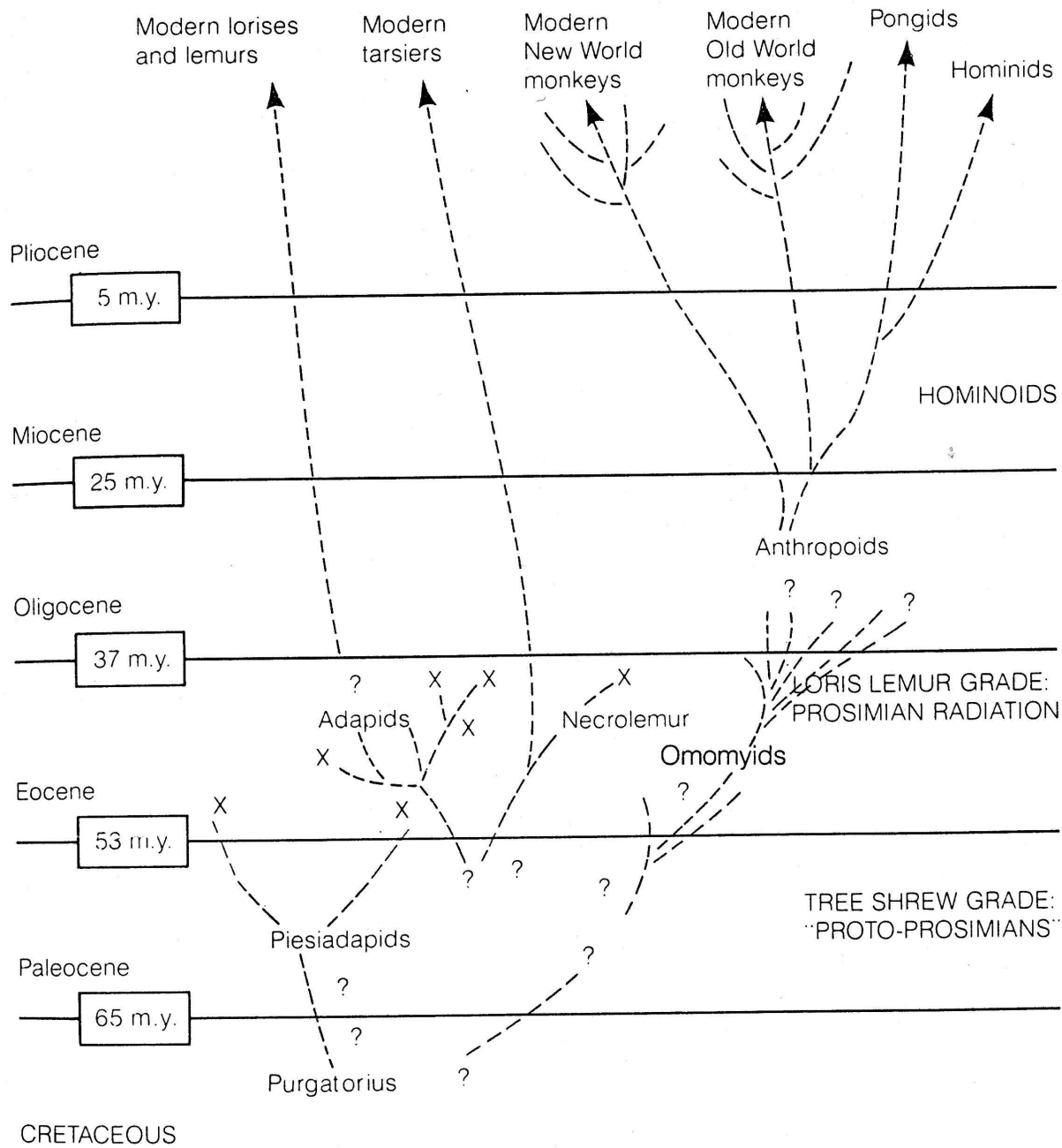


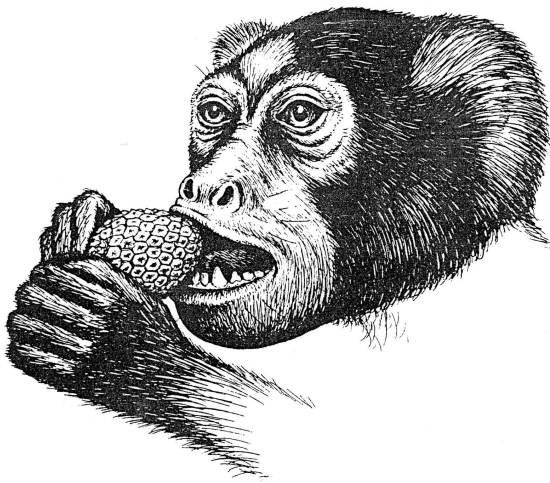
Figure 9-4 Tibio-fibula. (a) *Necrolemur*; (b) modern tarsier. Note the two fused lower leg bones—a characteristic feature of tarsiers. (© 1959 by W. E. Le Gros Clark.)



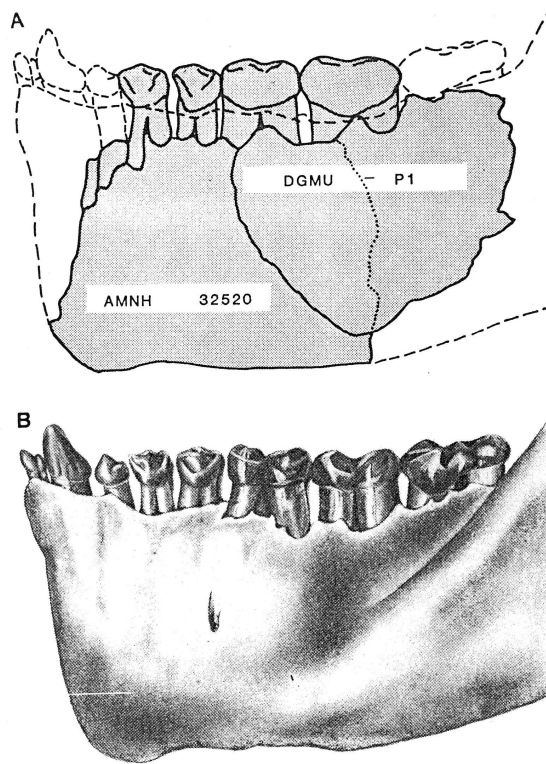
**Eocene Primates (53 m.y.-37 m.y.)**



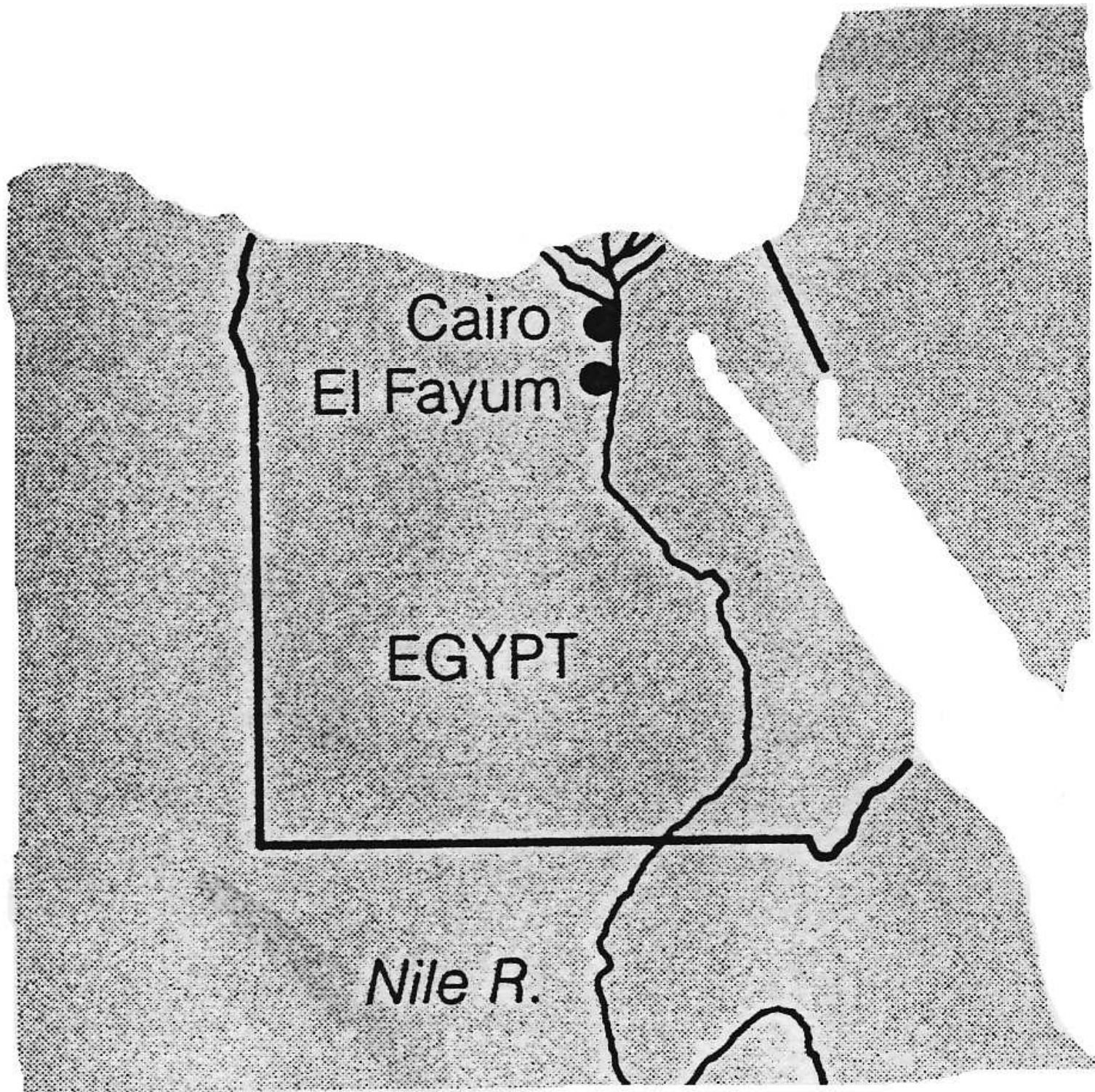
**Figure 9-3 Summary, early evolution.**



*Figure 15-3 Artist's reconstruction of Amphipithecus based on actual fossil evidence and the order of development of anatomical features observed in primate evolution.*



*15-2 The reconstructed mandible of Amphipithecus.*



Cairo  
El Fayum

EGYPT

*Nile R.*

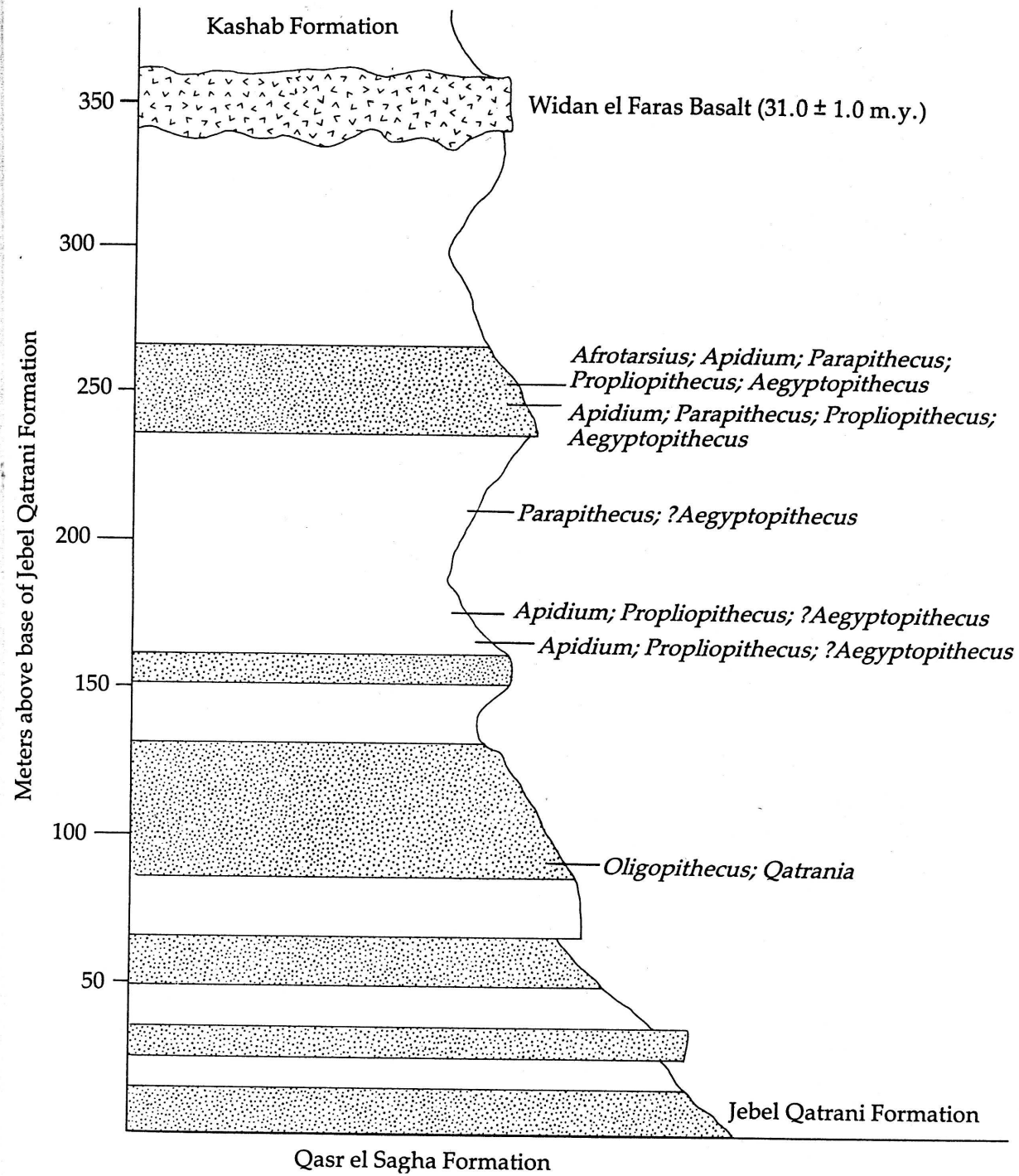


FIGURE 9-4 The Qatrani Formation, Fayu



FIGURE 9-5 *Apidium*. A reconstruction of *Apidium*, a member of the family Parapithecidae from the Fayum.

Oreopithecus bambolii



FIGURE 9-7 Aegyptopithecus. The reconstructed postcranial skeleton of *Aegyptopithecus zeuxis*. Bones shown in color have been recovered.

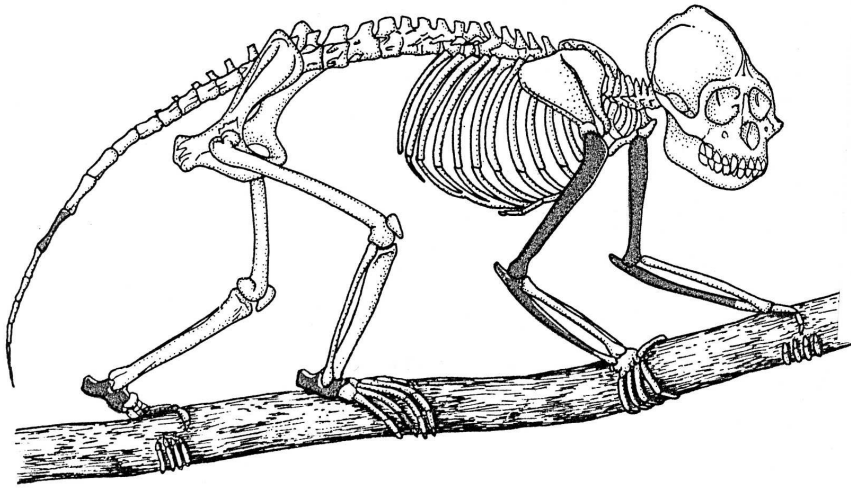
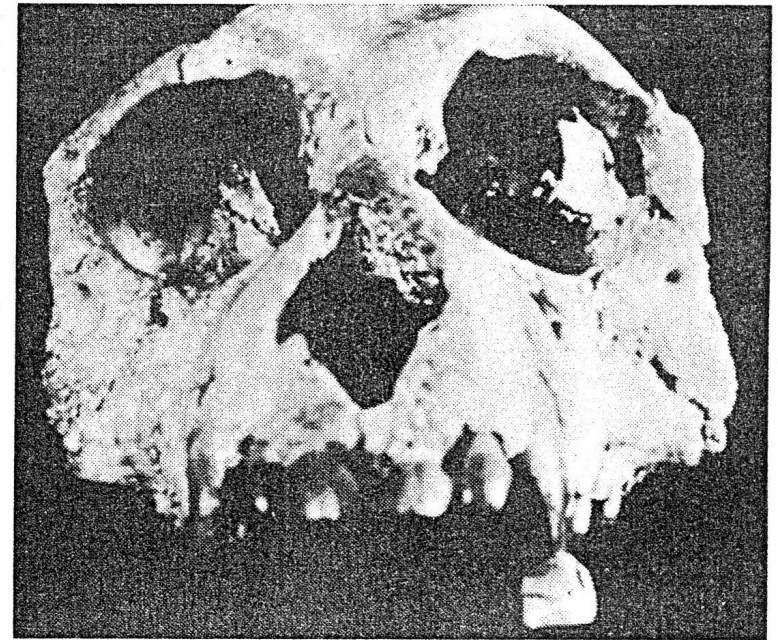
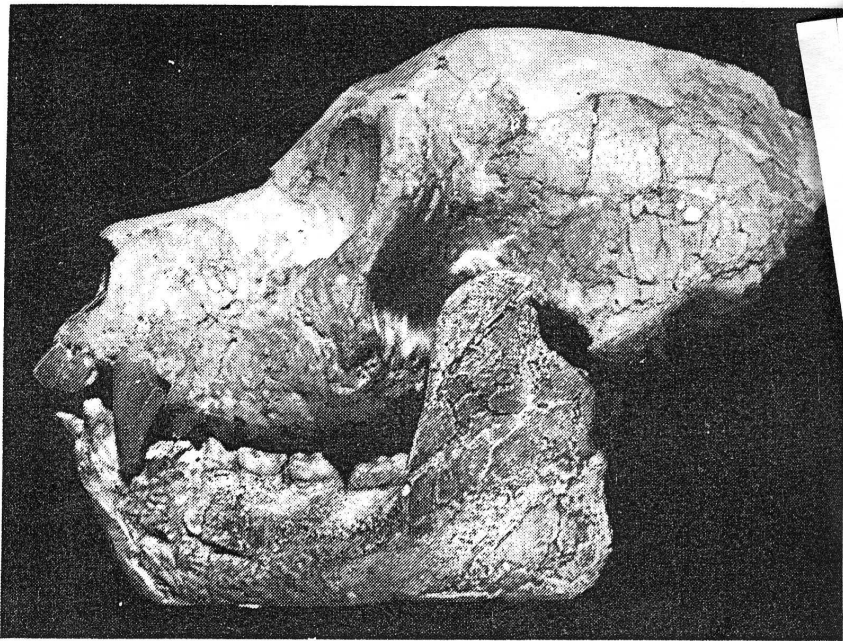


FIGURE 9-6 Aegyptopithecus. The reconstructed skull of *Aegyptopithecus zeuxis* from the Oligocene of the Fayum.



(a)



(b)

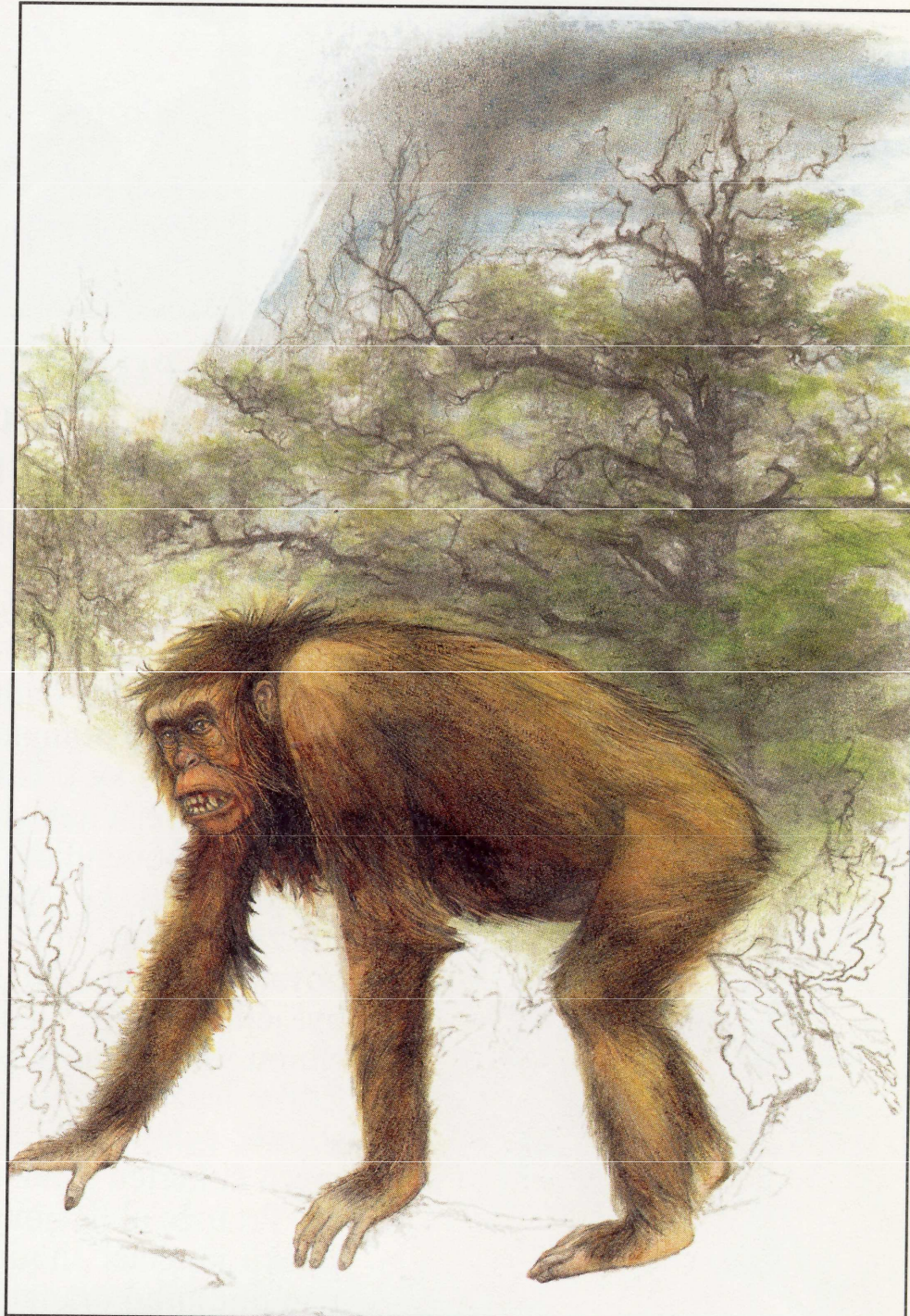
Figure 9-6 *Aegyptopithecus* skull from the Fayum, Egypt. Oligocene, circa 28 m.y.a., discovered in 1966. (a) Front view; (b) side view.

AEGYPTOPITHECUS  
ZEUXIS





**DRYOPITHECUS FONTANI  
LIDOOP EVROPSKÝCH LESŮ**





POROVNANI<sup>1</sup> S GORILI<sup>(a)</sup> LERKOU<sup>↓</sup>

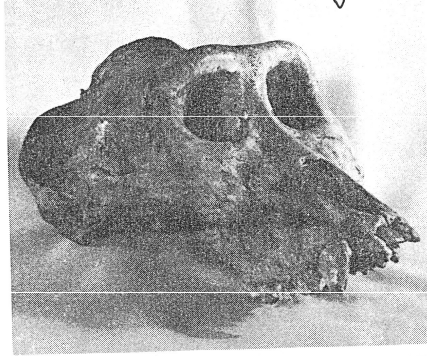


FIGURE 9-10 Proconsul. The lower jaw of *Proconsul africanus* from Rusinga Island, Kenya.

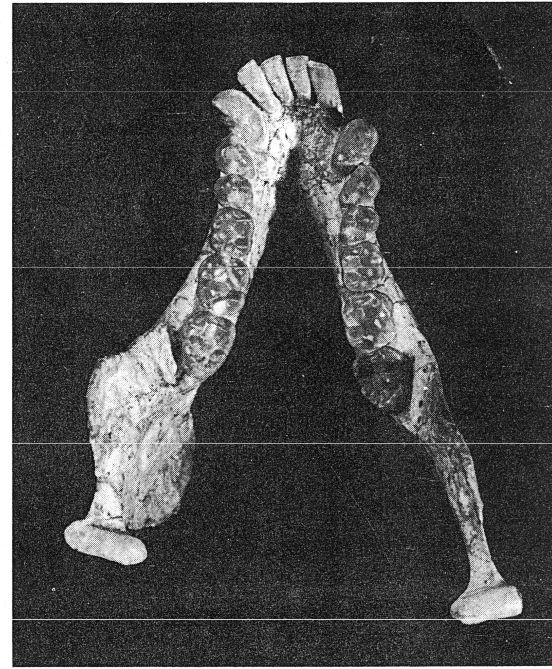


FIGURE 9-12 Proconsul. A reconstruction of the skeleton of *Proconsul africanus*. Bones shown in color have been recovered.

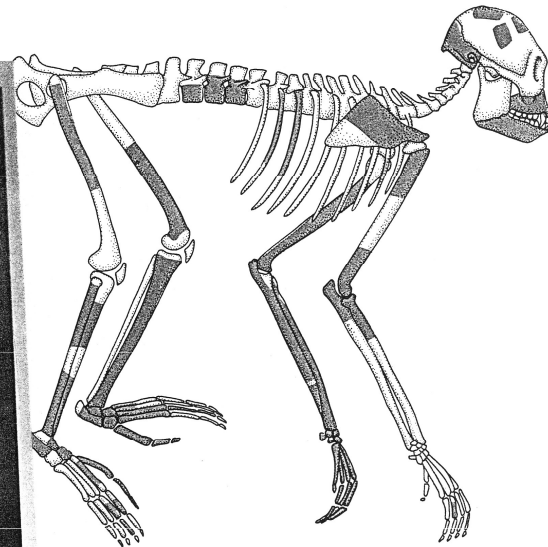
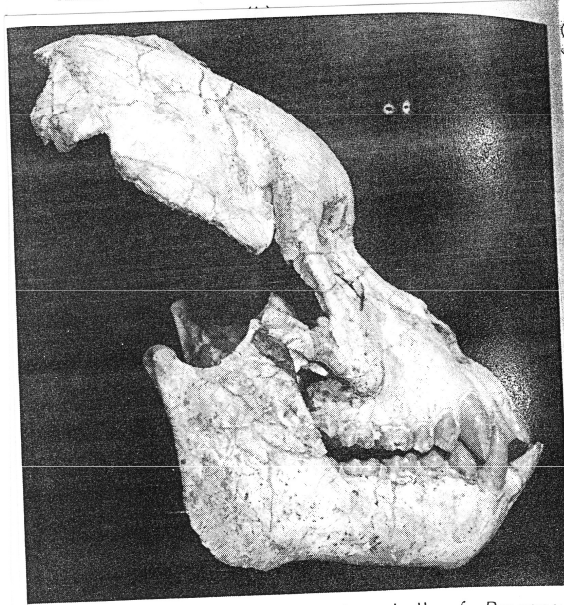


FIGURE 9-11 Proconsul. The skull of *Proconsul*

*PROCONSUL AFRICANUS*



FIGURE 9-14 *Facial skeleton of Sivapithecus.*

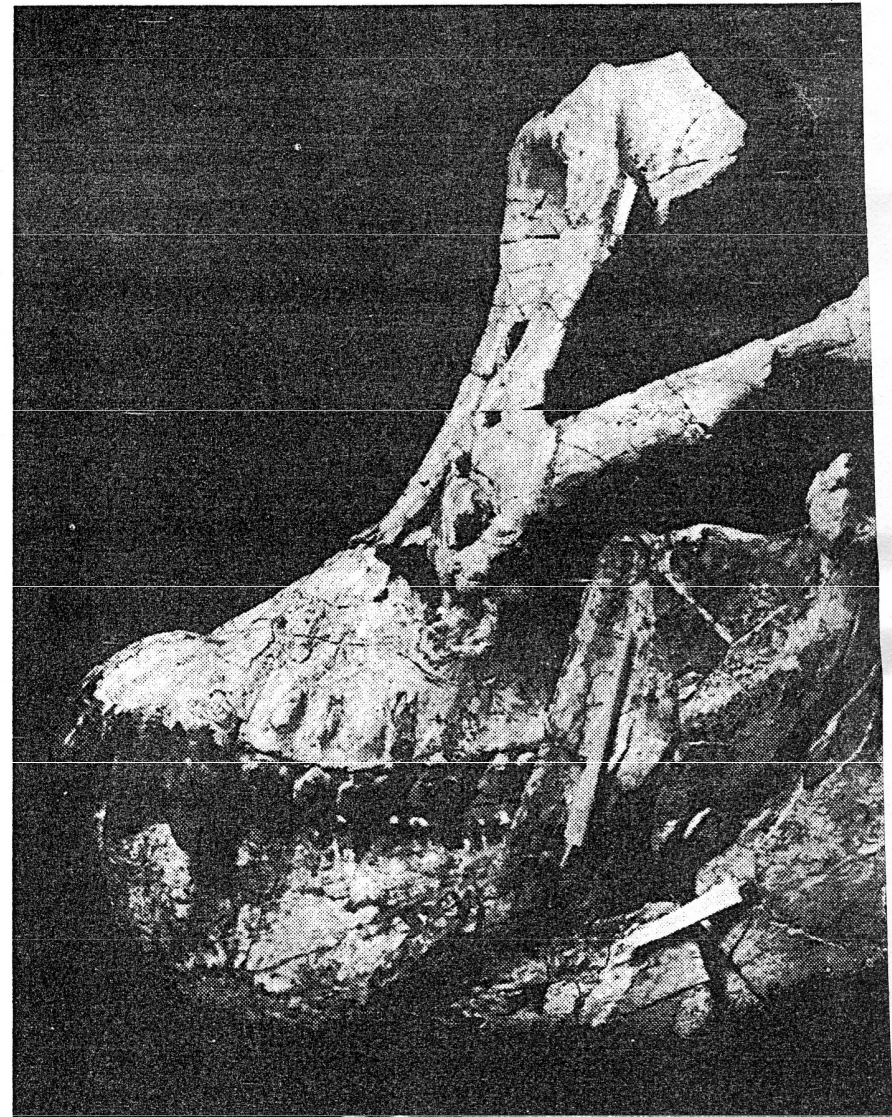
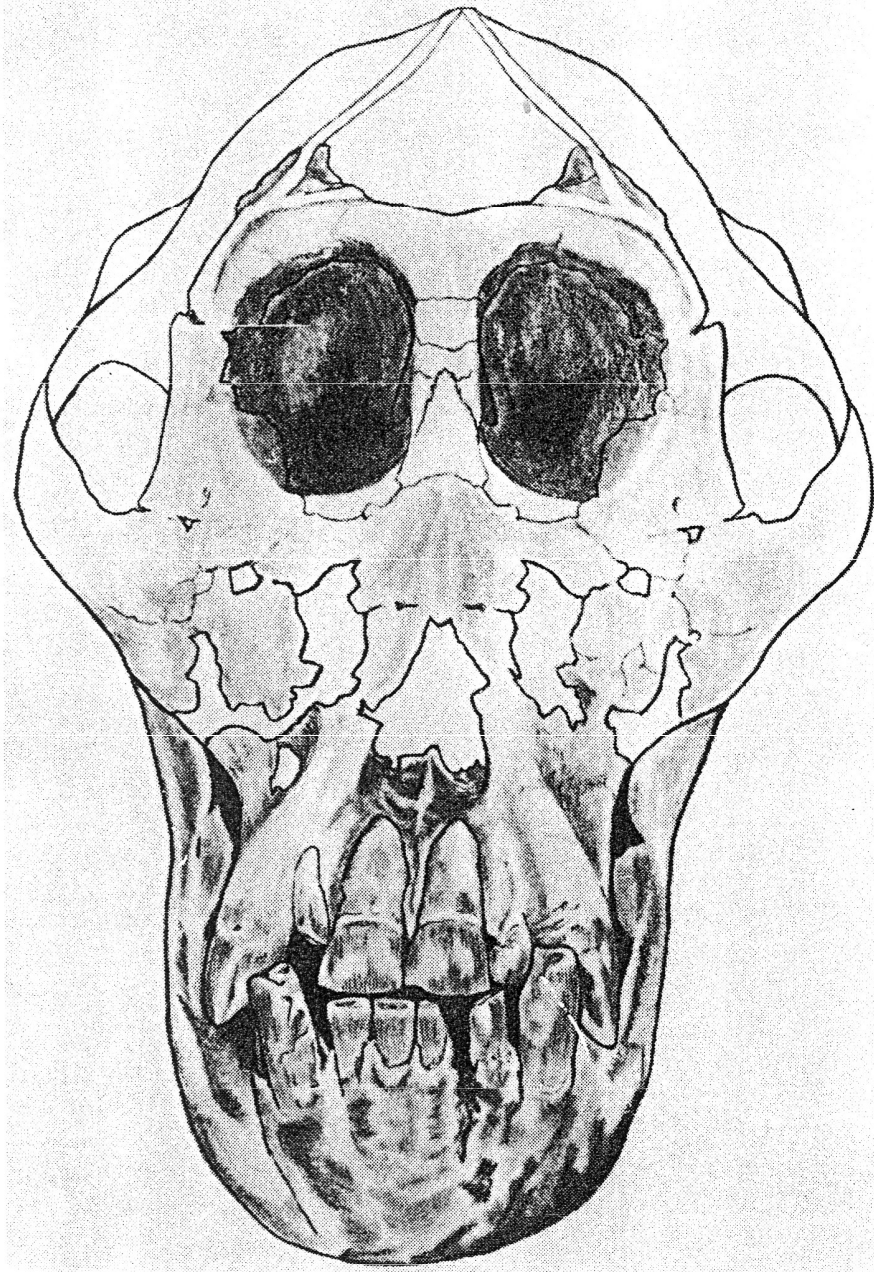
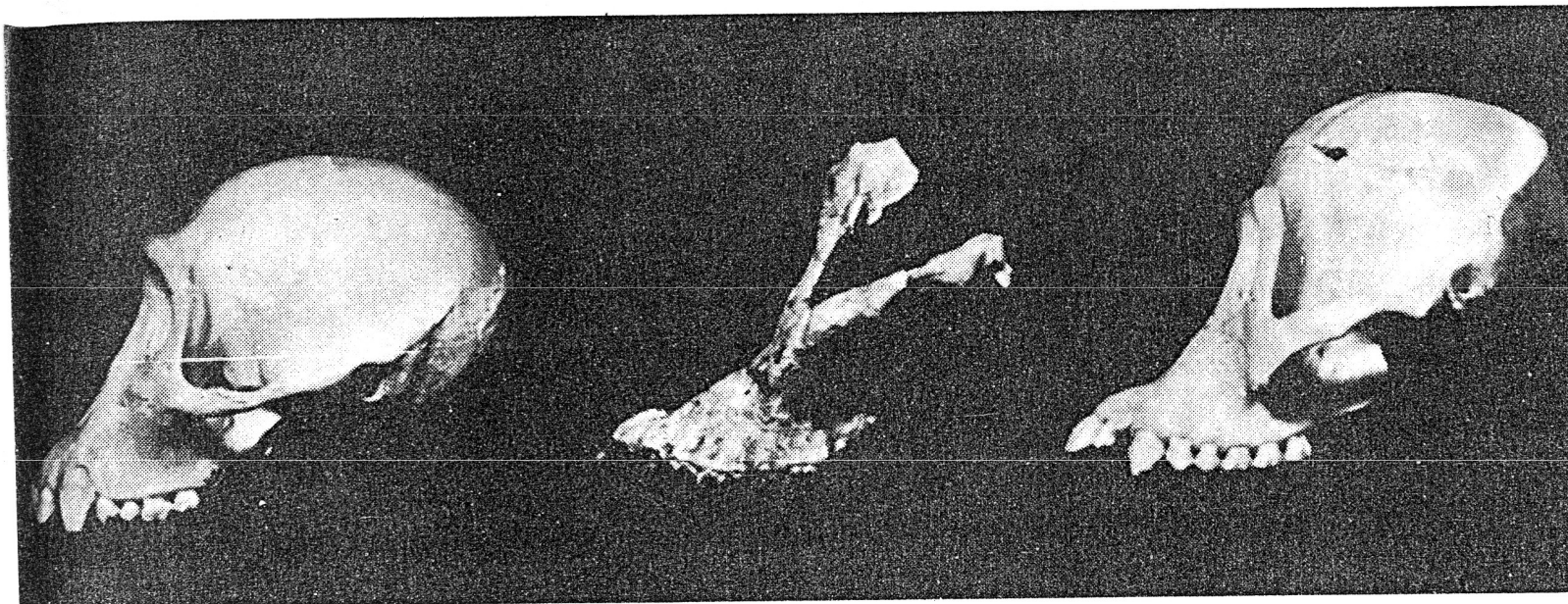
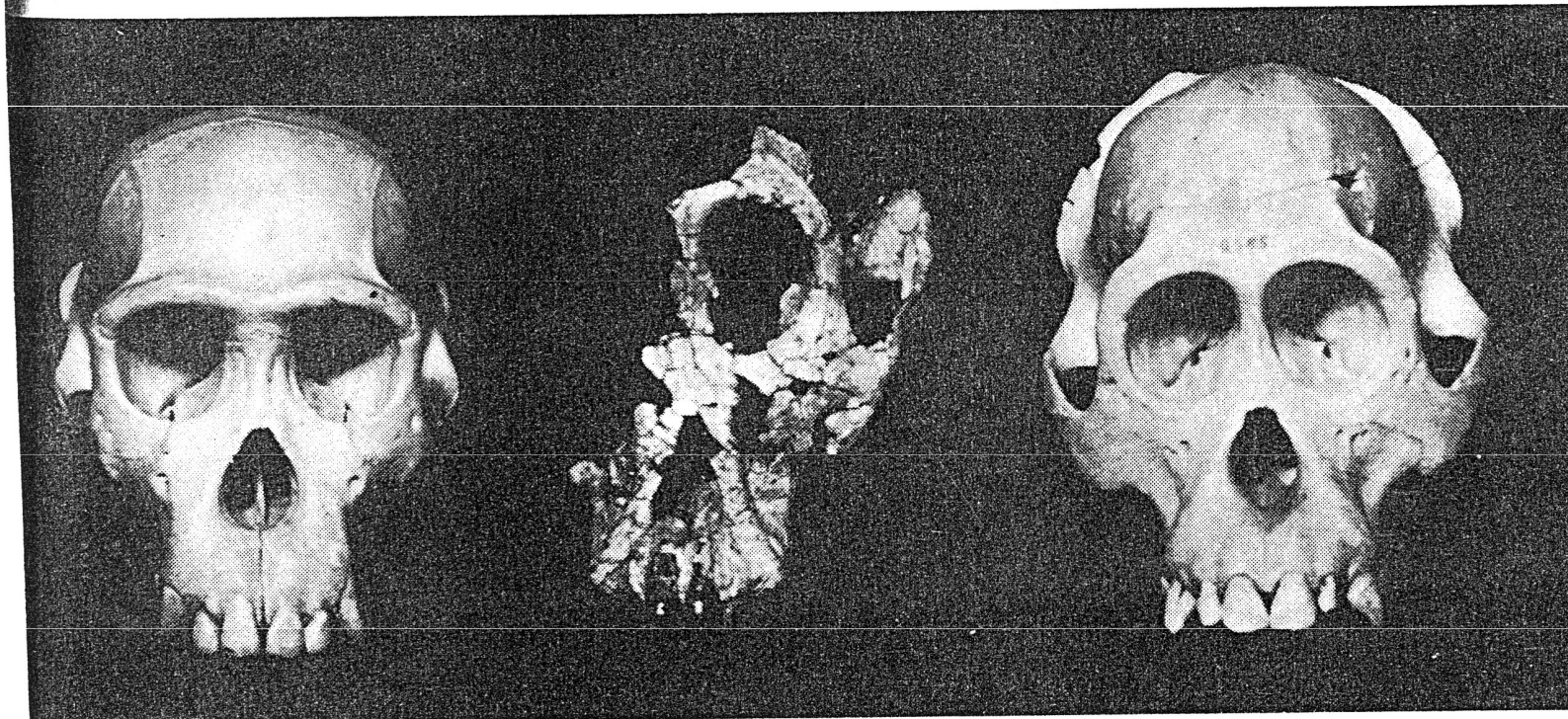


FIGURE 9-13 Sivapithecus. The skull of *Sivapith*

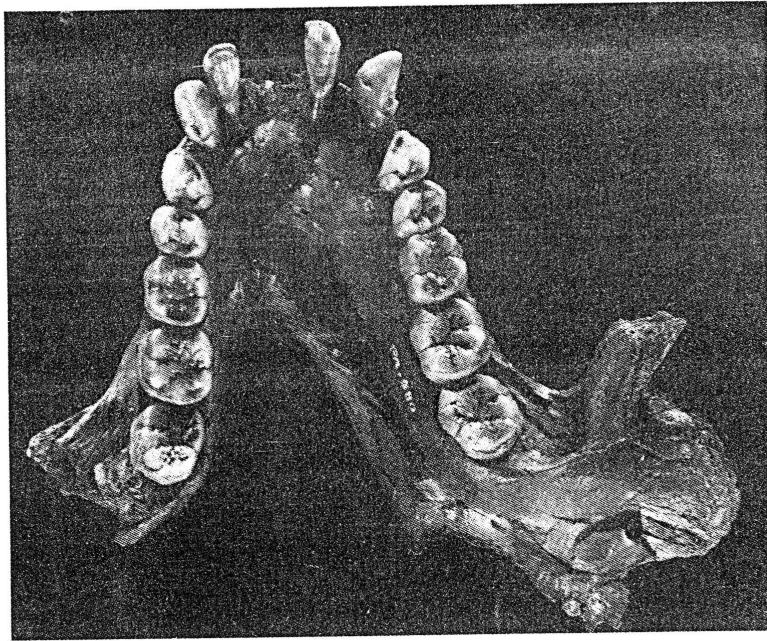


(a)

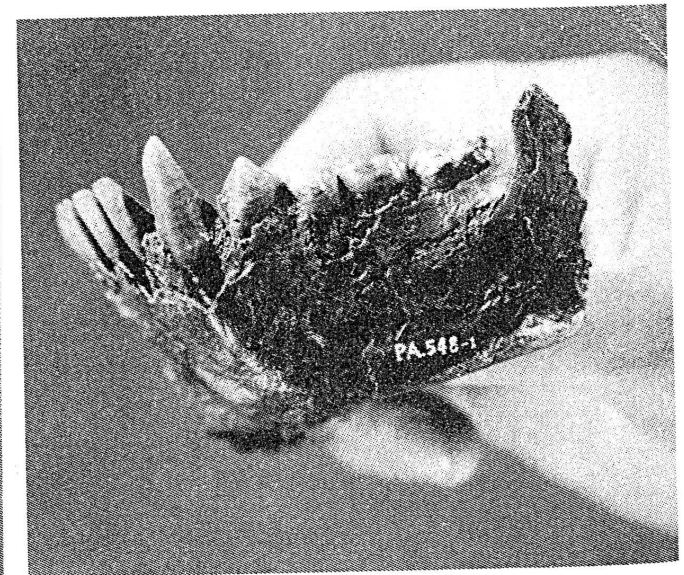
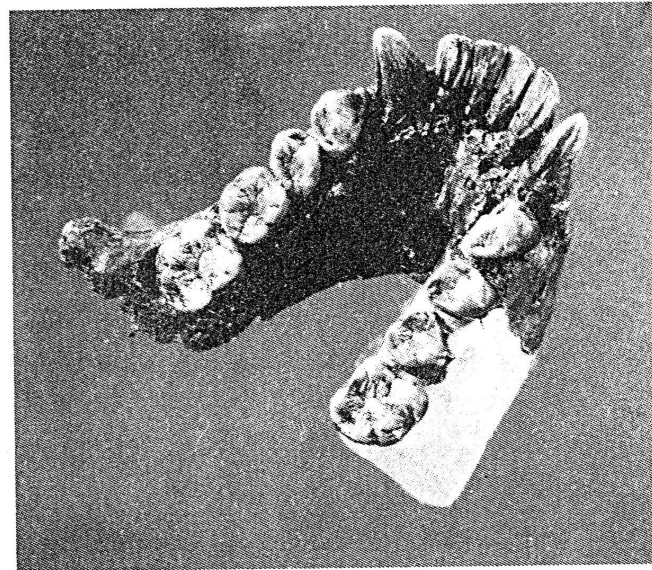


(b)

**Figure 9-14** Comp  
cranium (center) wit  
(left) and orangutan  
*cus* fossil is specime  
Potwar Plateau, Pakis  
(a) lateral view; (b) fr



*Figure 15-7 A Mandible of Sivapithecus from Li*



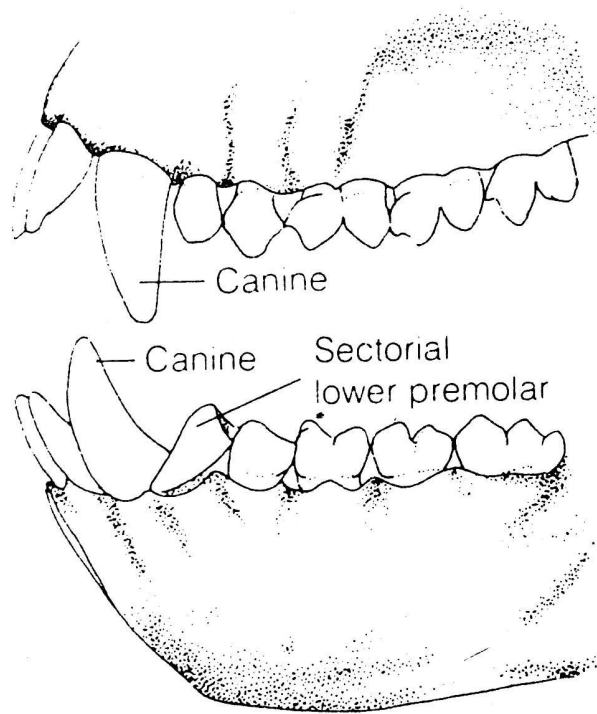
*Figure 15-8 (left) Note the large canines and the canine diastema (situated between the canine and the first premolar) of this Sivapithecus mandible. (right) A side view of the same mandible.*



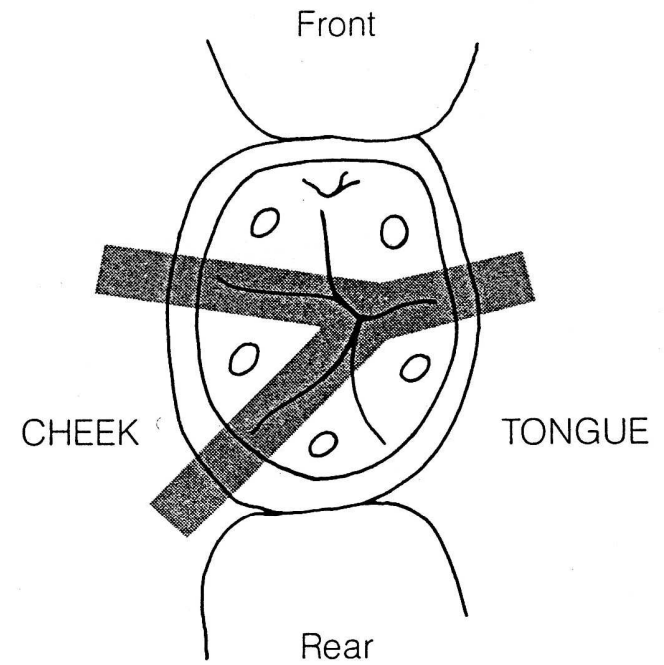
*SIVAPITHECUS INDICUS*







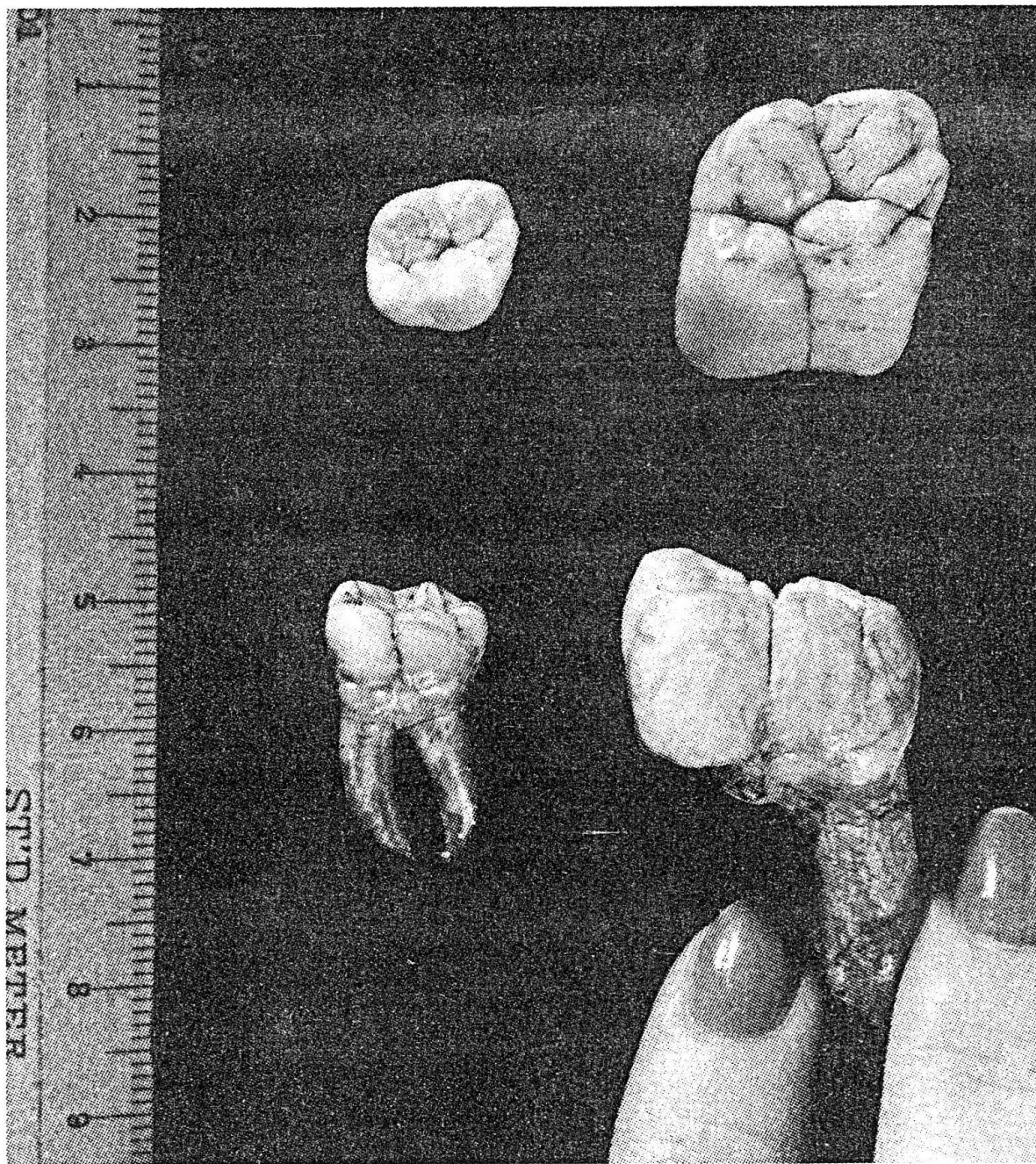
**Figure 9-9** Overlapping canines and sectorial lower first premolar. (Shown here in a rhesus monkey.)



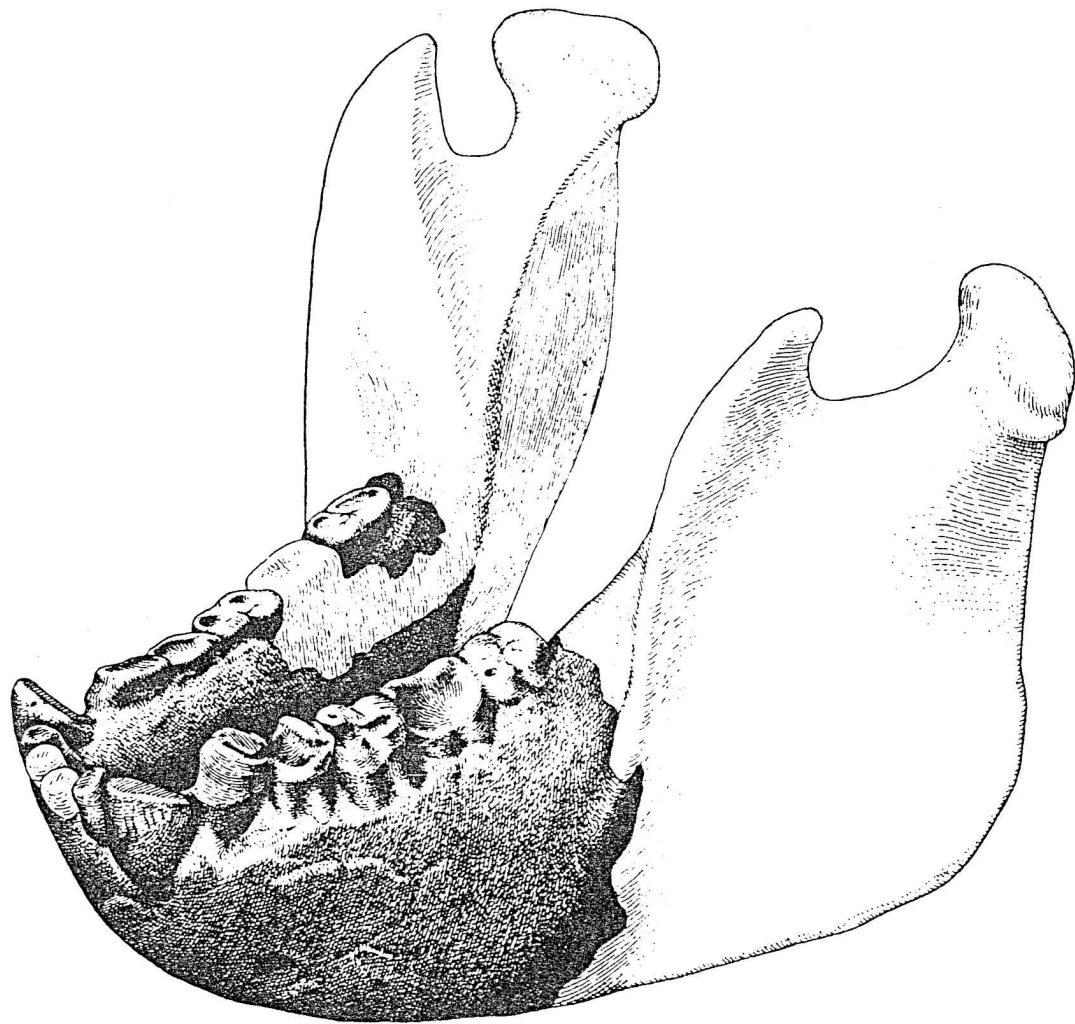
**Figure 9-8** The dryopithecine Y-5 pattern. A characteristic feature of hominoid molars.

**Table 15-1. Distribution of Some Major Hominoid Sites**

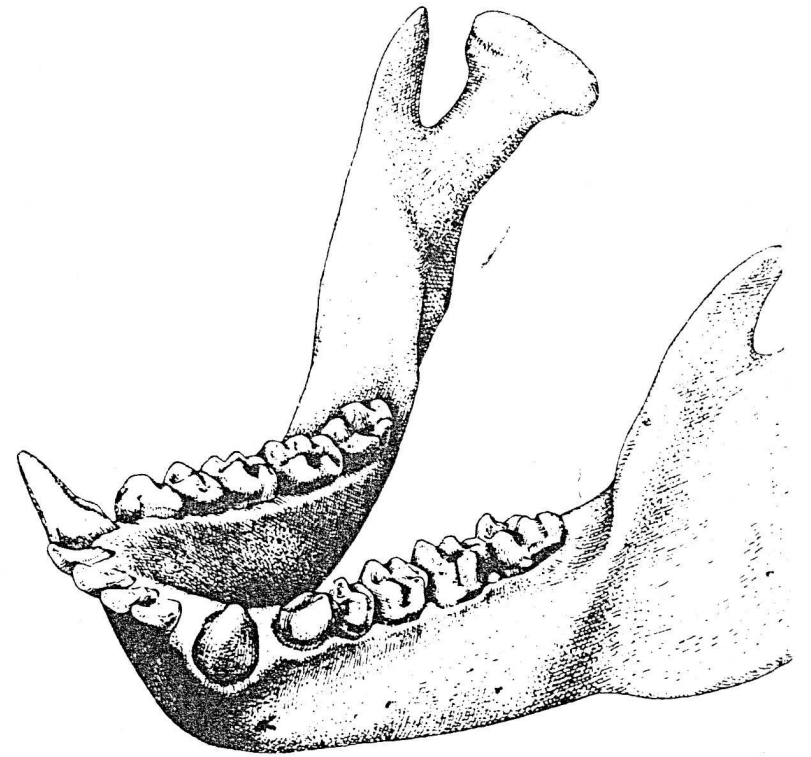
Site	Genus	Age
<b>Eurasia</b>		
St. Gaudens, France	<i>Dryopithecus</i>	Mid-Miocene to Pliocene
Eppelsheim, Germany	"	
Vienna Basin, Austria	"	
Georgia, USSR	"	Early Miocene
Italy	<i>Oreopithecus</i>	Late Miocene
Siwalik Hills, India	<i>Sivapithecus</i>	Early Miocene
Lufeng, China	"	
Turkey	"	
Saudi Arabia	"	
<b>Africa</b>		
Maboko Island, Kenya	<i>Proconsul</i>	Early Miocene–Late Miocene
Rusinga Island, Kenya	"	
Songhor, Kenya	"	
Koru, Kenya	"	
Moroto, Uganda	"	
Napak, Kenya	<i>Micropithecus</i>	
Fort Ternan, Kenya	<i>Kenyapithecus</i>	
Kalodirr, Kenya	<i>Turkanapithecus</i>	Early Miocene
Kalodirr, Kenya	<i>Afropithecus</i>	Early Miocene
Maboko Island, Kenya	<i>Nyanzapithecus</i>	Early Miocene
Songhor, Kenya	<i>Rangwapithecus</i>	Early Miocene



*Figure 15-11 Upper and lower molars of Gigantopithecus (right) compared with those of modern humans (left).*



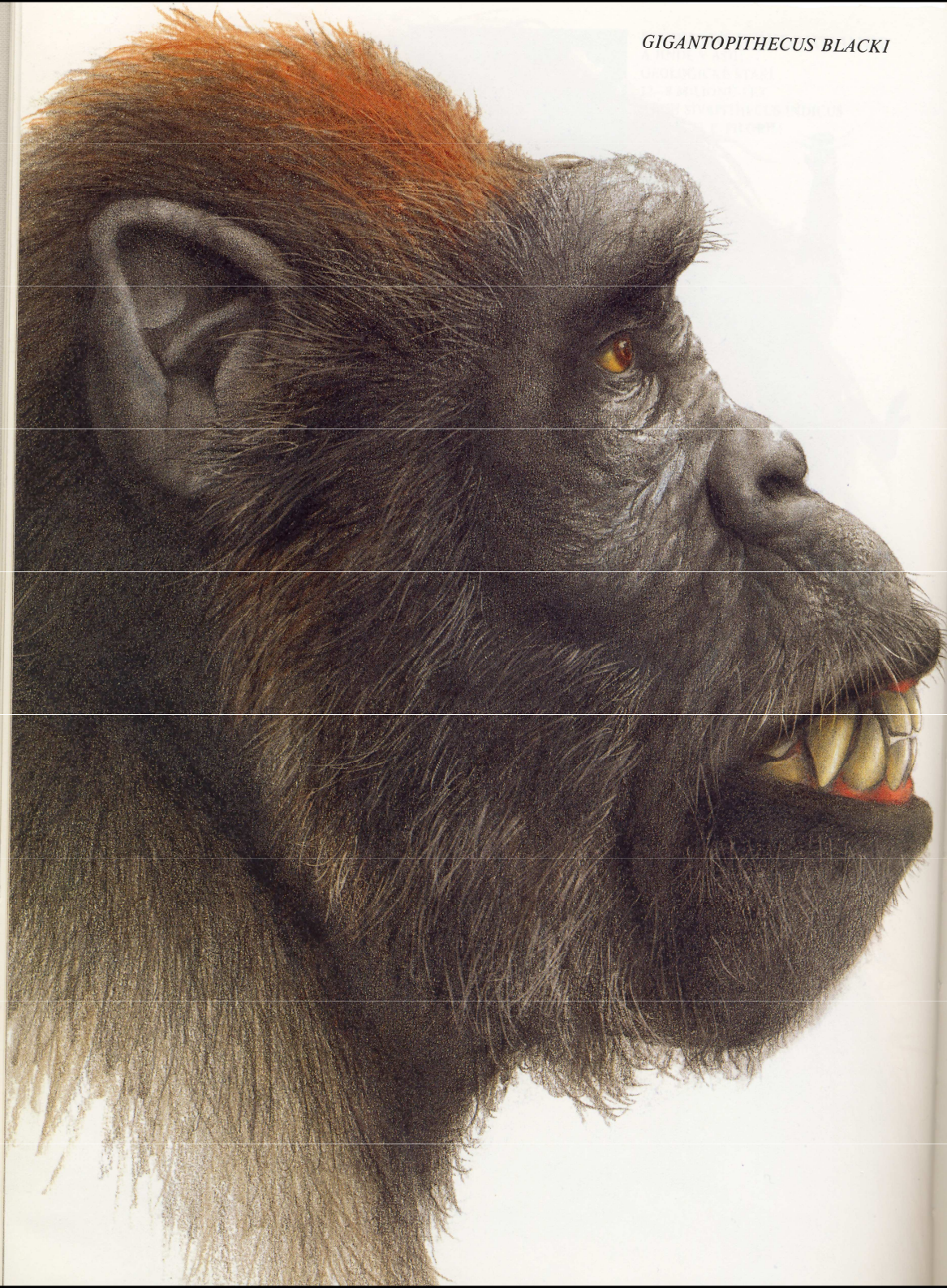
*Gigantopithecus*



*Gorilla*

**FIGURE 9-15** Mandibles of *Gigantopithecus* and Gorilla. (From "Gigantopithecus" by E. L. Simons and P. C. Ettel. Copyright © 1970 by Scientific American, Inc. All rights reserved.)

*GIGANTOPITHECUS BLACKI*





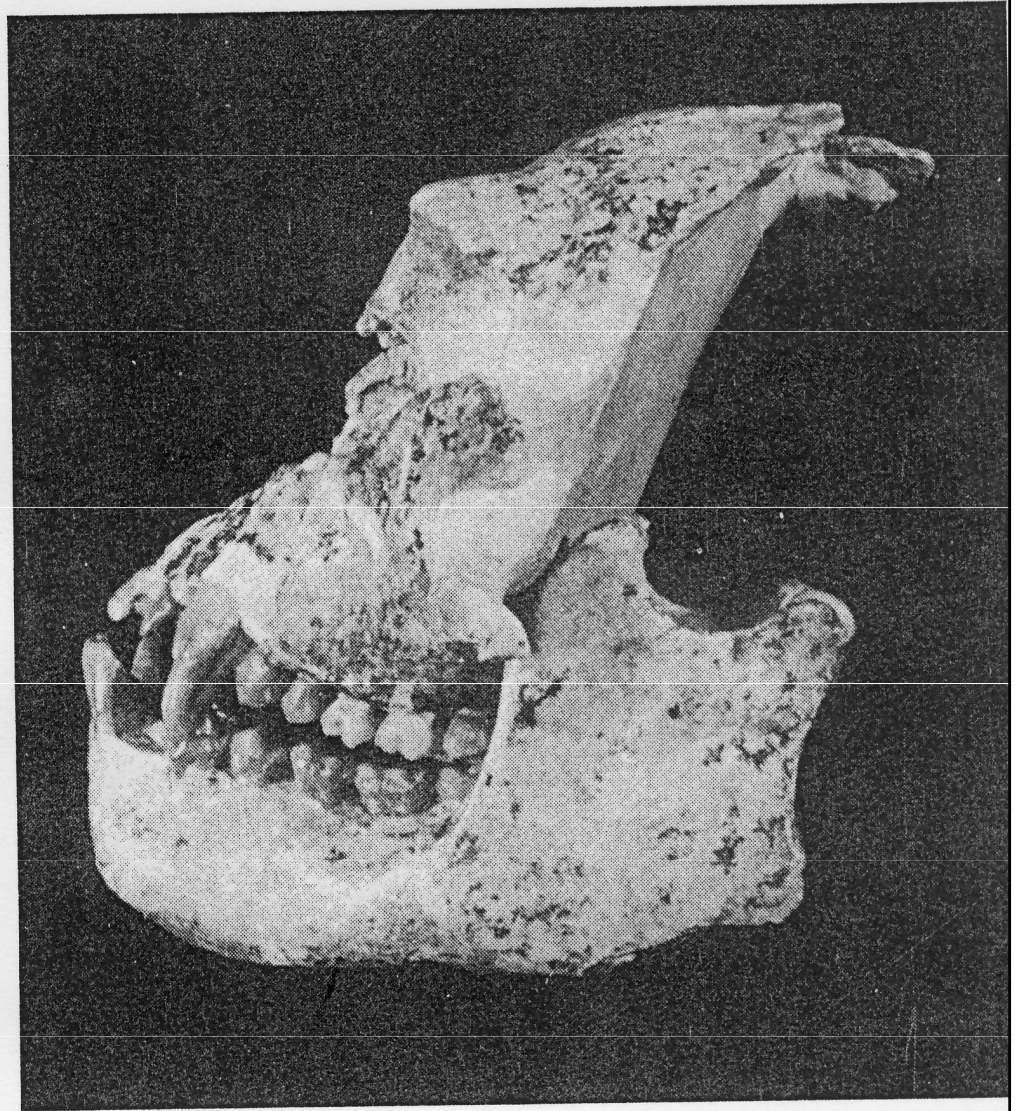
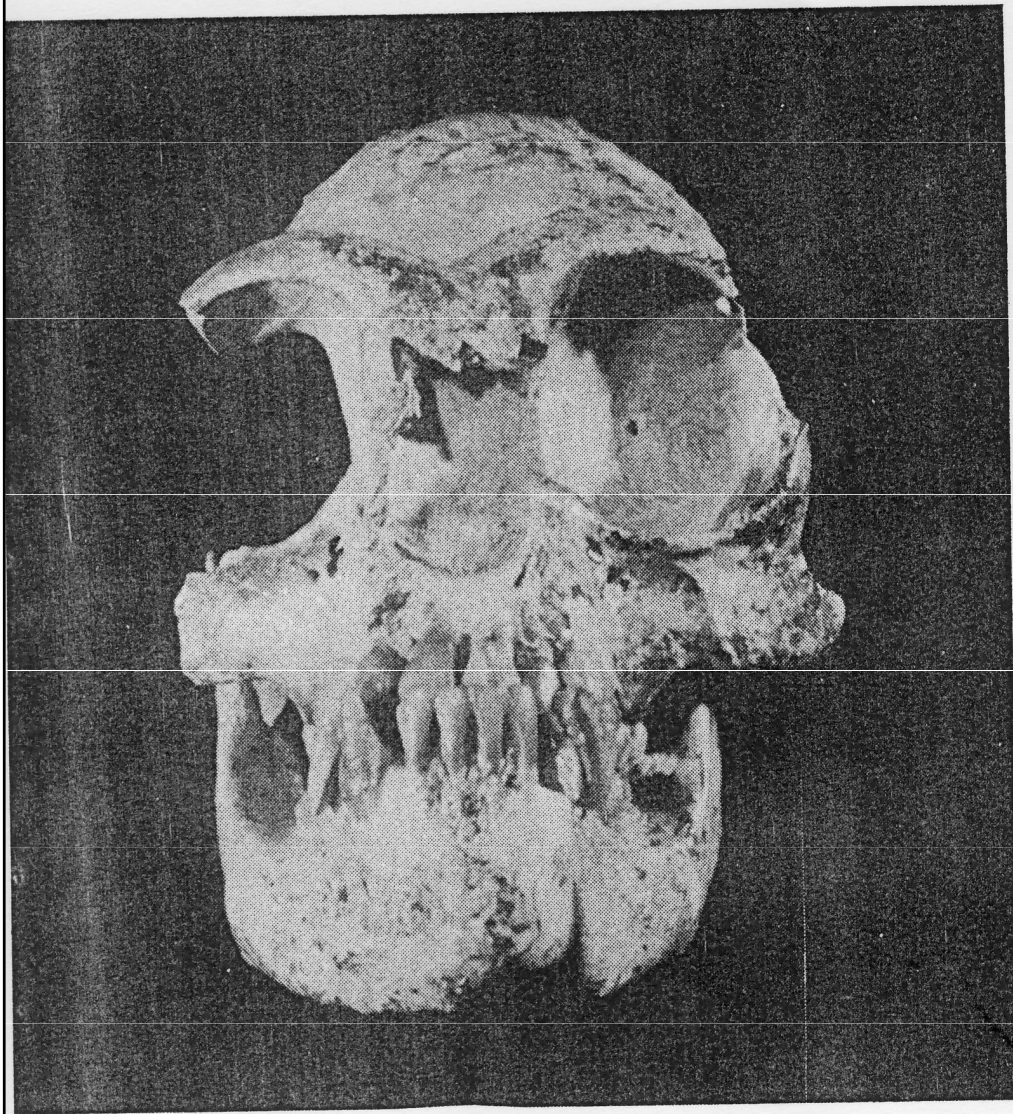
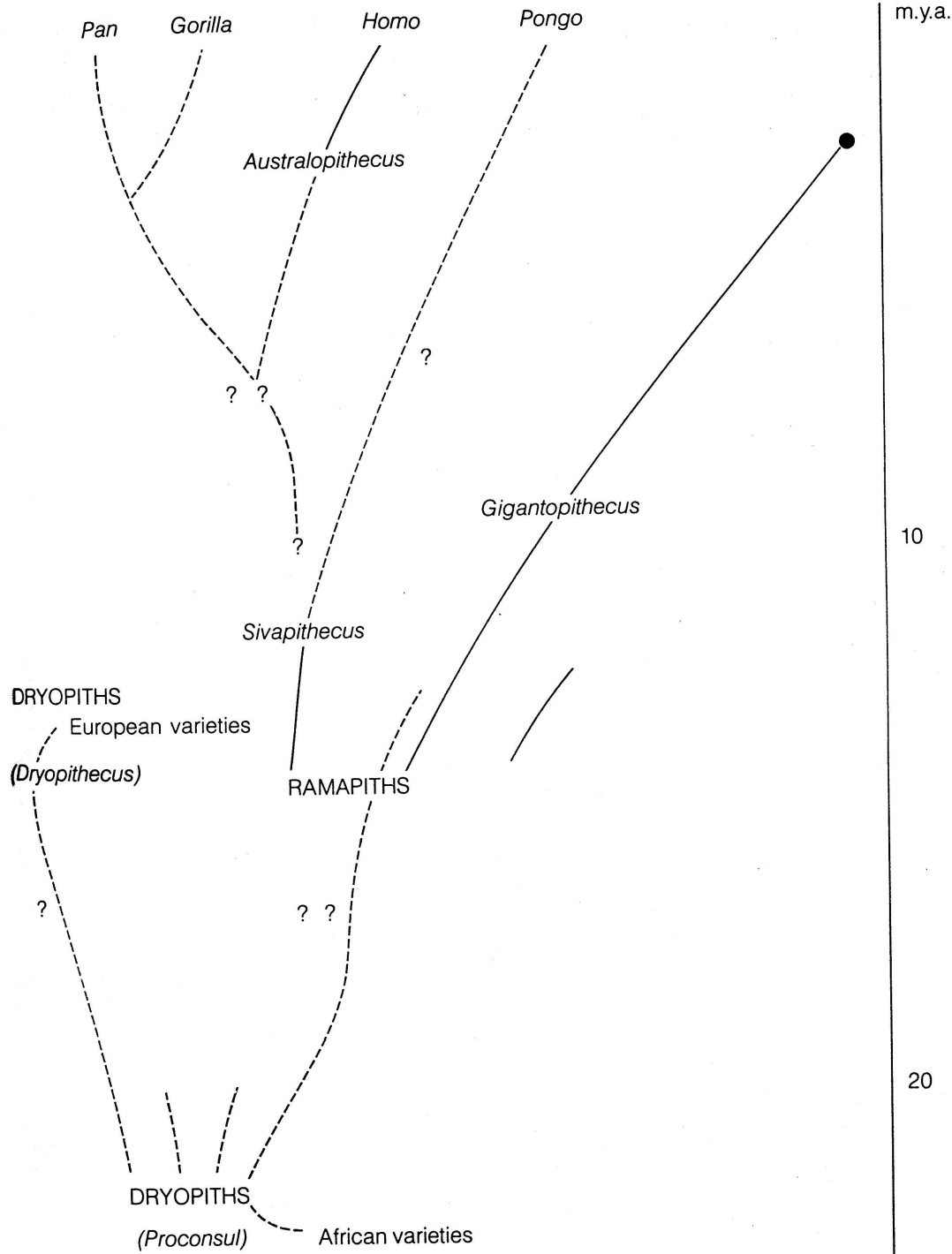


FIGURE 9-16 Pliopithecus.



**Figure 9-20** A possible relationship of hominoids.