pact caused dinosaurs extinction. B. Rothschild and Larry D. Martin (University of Kansas, Lawrence) said that the most likely explanation for the high frequency of avascular ne- crosis in Cretaceous mosasaurs is caisson disease or the bends (Sci- ence, v. 236, p. 75-77).

Of particular interest to those studying the evolution of tetrapod locomotion was a 1967 publication by David Carrier (University of Michigan) in Paleobiology (v. 13, p. 216-341). Carrier argued that the development of erect postures and parasagittal gait in therapsids and archosaurs fa- cilitated breathing while ramming thus circumventing a mechanical con- straint to locomotor stamina inherited from their ancestors.

The first newsletter of the Society of Avian Paleontology, affiliated with the society for the Study of Evolution, was published in 1987. In the popular press, Storrs Olson (Smithsonian In- stitution) reported the discovery of the largest flying seabird from the late Oligocene Chandler Bridge Forma- tion, South Carolina. Most of the ma- jor bones of the pseudodromant (born-toothed bird) were recovered and Olson said the bird had a wing- span of 5.4 m and weighed close to 45 kg. Erich Reiniger described the bones of a bird in the Oceanside IV fossil bed in Grand Canyon, Arizona (Science, v. 237, p. 768-769).

In a paper (Nature, v. 326, p. 871- 873) on the origin of egg-laying mam- mals, David Novacek and Shigtou- lad Paleobiology, Warsaw, Poland) and others suggested that Sterop- don (Cretaceous tetrapod fossils from Australia, is a thertin but they do not believe that its teeth are trichobranch. Consequently, they feel Steropodon was a herbivore from thertinos before the development of trichobranch teeth, possibly during the Jurassic. Impor- tant new early Cretaceous mammals from the Kaispavorn Plateau region of Utah were described (Nature, v. 325, p. 531-532). Journal of vertebrate paleontology, v. 7, p. 144a.

Two long-awaited books on fossil mammals were published in 1987. A popular book, Mammal evolution (facts and speculations) by K.G. Savage (The University, Queen's Road, England) is graced by hundreds of color illustrations by M.R. Long. It is the first major popular book on mammalian evolution to appear in a decade. Cenozoic mammals of North America: biochronology and biostra- tigraphy (University of California Press, 1987), edited by Michael O. Woodburne (University of California, Riverside), started at a Geological So- ciety of America meeting in 1973. This project has evolved over the last 15 years, and the resulting book now includes the latest information on correlation of Cenozoic terrestrial de- posits by means of fossil mammals.

Most of the attention in fossil mam- mals was focused on deciphering the complex matter of mammal phylogene- ny, which has seen little work since 1910. Several papers discussing the morphological versus molecular ap- proaches to relationships of orders of mammals appeared in Molecules and morphology in evolution: conflict or compromise? (Cambridge University Press) edited by J. Pinatton (British- Museum of Natural History).

The detailed relationships of mam- malian orders were discussed by 2 American Museum of Natural History paleontologists, Michael J. Novacek and Andrea R. Wyss (Cladistics, v. 2, p. 237-287). Novacek and Wyss present evidence for the monophyly of Cetidae (rods, elephant shrews, and rab- bits), Archonta (primates, tree shrews, bats, and dermopterans), the ungulates (hoofed mammals), and a monophyletic group for all placental except edentates and pangolins. Mark Fisher (Tubingen, West Ger- many) in his paper, "Relation of the Tachyglossidae (spiny anteaters) of New Guinea and Tachyglossidae of the Northern Hemisphere (Tachy- glossidae)" (Journal of Zoology, v. 11, p. 31-57).

The first work since 1937 on the phy- logeny of these animals also appeared in several papers (Zoological journal of the Linnean Society, v. 87, p. 341- 366). Journal of paleontology, v. 61, p. 388-423, Natural history, v. 96, n. 8, p. 26-33).

Ken D. Rose (Johns Hopkins Uni- versity) (Science, v. 236, p. 314-316) described nearly complete skeletal material of the archaic ungulate Chasmas (British Museum of Natural History). The skeleton is very similar to the living coatimundi (Nasua), with some adaptations for climbing, Wigh- art Von Koeningswald (Hessisches Landesmuseum, West Germany) de- scribed in a paper, "32", p. 997-977) the first known skeleton of the enigmatic Apatemyelidae. It had extremely elongated second and third fingers, like the aye aye lemur, which uses this finger for picking out insects from holes in trees. A bizarre Chinese Pa- laeococepan pantodactyl, which apparently had a proboscis or trunk like a tapir, was described in the Journal of verte- brate paleontology, v. 7, p. 155-161.

New Oligocene desmostylians were described that further support- ed the idea of a monophyletic group Tethytheria, which includes desmosos- tylians, sirenians, and proboscideaens (Smithsonian contributions to paleo- biology, v. 59). The interrelationships of Tethytheria were also discussed.

A comprehensive analysis of Late Quaternary mammalian biogeography and environments of the Great Plains and prairies was published in Illinois State Museum scientific papers (v. 22). William C. Johnson (University of Kansas) edited Quaternary environ- ments of Kansas (Kansas Geological Survey, Guidebook Series 5) which contains 5 papers on Quaternary ver- tebrate faunas.

Oscar Carranza-Carreñera (Univer- sidad Nacional Autonoma de Mexico) and Wade E. Miller (Brigham Young University) reported the rediscovery of 4 type specimens and 3 other impor- tant Pleistocene fossils from Mexi- co that were previously lost to science (Journal of vertebrate paleontology, v. 7, p. 335-341). Christopher A. Shaw (G.C. Page Museum, Los Angeles) and H. Gregory McDonald (Cincin- nati Museum of Natural History) re- ported the discovery of the skull of the first record of a giant anteater (Dinotheria, Myrmecophagidae) in North America, more than 3,000 km north of the modern distribution of anteaters. The paleoenvironmental significance of a high-altitude Irving- tonian fauna is discussed by Karel L. Rogers (Adams State College) in the Journal of vertebrate paleontology (v. 7, p. 385-390).

A new model, the "keystone herbi- vore" hypothesis, was proposed by William Everts-Smith (University of Wisconsin, Witwatersrand, Johannesburg, South Africa) to explain Pleistocene extinct- ions (Paleobiology, v. 13, p. 331-362). His hypothesis suggests that human hunting and gathering were responsible for the demise of the large megafauna (for example, proboscideaens), which in turn caused significant alterations in vegetation resulting in habitat degradation and the extinction of small megafauna (for example, bovids and cervids).

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