

SABERTOOTHED CAT PALEOPATHOLOGY AT RANCHO LA BREA
SHAW, C. A., George C. Page Museum, 5801 Wilshire Bl., Los Angeles, CA 90036

The vertebrate fossil collection from Rancho La Brea, housed at the George C. Page Museum, includes over 5,100 osteologic specimens exhibiting various bony, muscular and ligamentous injuries and diseases that provides information about prey capture and social behavior in the sabertoothed cat, *Smilodon*. Elements of the vertebral column display evidence of repeated heavy compression damage, in addition to torsion and flexion injuries. There is evidence of associated accumulative impact injuries to all chest structures (skeletal, cartilagenous, ligamentous) and many examples of osteophytic response to injuries at attachments of flexor muscle groups in the upper extremities and extensor attachments in the lower extremities.

A preferred prey capture technique is strongly suggested by these chronic injuries. Hunting by stealth, *Smilodon* initiated its attack with a short run followed by a sudden, hard impact, with a flexion grasp of the forearm and manus in the final moment of the charge. In part, these flexor and extensor injuries support a paradigm where a prey species is stunned upon impact and is drawn forcibly toward the attacker.

The asphalt traps at Rancho La Brea have been perceived as an ideal place where seriously injured carnivores could obtain a steady diet by scavenging. However, the low number of disabling osteopathologies observed in sample of *Smilodon* suggests survivorship and morbidity rather than modified feeding behavior. Survival of individuals long after grievous injury is indicative of cooperative social behavior in this species.

A NEW SAUROPOD DINOSAUR FROM THE EARLY CRETACEOUS OF OKLAHOMA

WEDEL, M. J., and CIFELLI, R. L., Oklahoma Museum of Natural History and Dept. of Zoology, Univ. of Oklahoma, Norman 73109.

An apparently new brachiosaurid sauropod, represented by an articulated series of four mid-cervical vertebrae, has been recovered from the Antlers Formation (Aptian-Albian), southeastern Oklahoma. Most Early Cretaceous North American sauropod material has been referred to *Pleurocoelus*, a genus which is largely represented by juvenile material and is not well understood. The new taxon is morphologically and proportionally distinct from *Pleurocoelus*. Among well-known sauropod taxa, the new taxon is most similar to *Brachiosaurus*; particularly noteworthy are the neural spines, which are set forward on the centra and are not bifurcate, and the extremely elongate cervical ribs. In addition, the new taxon shares with *Brachiosaurus* a transition point midway through the cervical series, at which the neural spine morphology changes from very low (anteriorly) to very high (posteriorly). The Cretaceous taxon is unique, however, in the posterior placement of the diapophyses, lateral excavation of the neural spines, and the extraordinary degree of vertebral elongation (e.g., C8=1.25 m; 25% longer than *Brachiosaurus* and, perhaps, the longest cervical known). Additional sauropod material from the Early Cretaceous Cloverly and Trinity Formations may be referable to the new Oklahoma taxon, which appears to be the last of the giant North American sauropods and represents the culmination of brachiosaurid trends toward lengthening and lightening of the neck.