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Philadelphia Team Discovers Large Plant-Eating Dinosaur in Montana

ast summer a team of researchers from the University of Pennsylva-✓ nia and the Academy of Natural Sciences of Philadelphia led by paleontologist Dr. Peter Dodson uncovered the 145 million-year-old remains of a large herbivorous dinosaur on federal land in southern Montana southwest of Billings. The Jurassic dinosaur was found in scenic dry grassland country in the foothills of the Pryor Mountains. It is believed to be a long-necked diplodocid sauropod dinosaur similar to the well-known taxon Apatosaurus. Diplodocid remains are widely distributed in Utah, Colorado and Wyoming, but this is one of the first reported discoveries in the state of . By the fourth day of excavation over 35 complete bones including a beautifully-preserved scapula (shoulder blade) 43 inches in length and a 54 inch rib as well as an 8inch claw and jaw fragments has been removed. The excavation site measured more than 18 by 30 feet.

The six team members included

graduate students Allison Tumarkin of White Plains, N.Y. and Matt Lamanna of Waterloo, N.Y., as well as Dr. William Donawick, all from the University of Pennsylvania. Additional members were from the Academy of Natural Sciences: Jason Poole, the Dinosaur Paleontology Lab Manager and attorney Patricia Kane-Vanni, a Museum Paleo-Educator and volunteer. Dodson, Tumarkin and Lamanna are all residents of Philadelphia. Donawick lives in West Chester, PA. Kane-Vanni resides in Bala Cynwyd and Poole in Lansdowne, PA.

Donawick is a large-animal veterinary surgeon at Penn's New Bolton Center and is a colleague of Dodson in the University of Pennsylvania School of Veterinary Medicine. Donawick joined the Tillett family by virtue of the marriage of his daughter Melinda to Will Tillett. It was Donawick and Tillett who first discovered the fossil locality in the fall of 1998 while Donawick visited his daughter in Lovell, Wyoming. Upon his return to Philadelphia, Donawick communicated the

discovery to Dodson, a veterinary anatomist and dinosaur specialist, and proposed this expedition.

The Tillett family have been ranchers in the area for several generations and are no strangers to dinosaur discoveries. In the 1960s Professor John Ostrom of Yale University collected dinosaur fossils for several summers on the Tillett ranch. In 1970 Dr. Ostrom honored the family by naming a plant-eating dinosaur found on the ranch Tenontosaurus tilletti.

The specimens will be prepared in public view in the Academy of Natural Sciences' Dinosaur Hall. They will then be housed in the Academy's vertebrate paleontological collections. The research is sponsored by the University of Pennsylvania, the Academy of Natural Sciences and a private donor. The excavation was carried out in federally managed land by permit from the Bureau of Land Management.

Update on Project: M.A.R.E. (Monitoring Abortions & Reproductive Efficiency in Pennsylvania)

Researchers at the School of Veterinary Medicine received funding from the Pennsylvania Department of Agriculture for a three-year study beginning January 1, 1999 to identify the causes of abortion and pregnancy wastage in horses in Pennsylvania. Dr. Patricia Sertich, assistant professor of reproduction, and Dr. Perry Habecker, assistant professor of pathobiology, are the chief investigators. The grant is underwriting the cost of necropsy, diagnostic tests, and associated costs—everything is provided free of charge to the mare owner.

The success of this project relies on the participation of Pennsylvania broodmare owners and their attending veterinarians. Early in 1999 horse breeders in the state were sent a short survey to determine their preventative management of broodmares and to solicit their participation for this project. (If you are a breeder and did not receive a survey, please call!) Owners who complete a Project: M.A.R.E. management survey and provide properly submitted specimens receive a complete necropsy and associated tests on aborted fetuses and neonates less than 48 hours old. The grant includes fetuses from: (1) broodmares owned by Pennsylvania residents, including mares boarded out-of-state, and (2) broodmares owned by non-residents but bred to a Pennsylvania sire.

Veterinarians who provide reproductive care for these breeding farms were also solicited to participate in Project: M.A.R.E. and received information and materials to properly submit diagnostic specimens for determination of the cause of pregnancy loss in any aborting mares. If possible, the entire conceptus, including fetal membranes, should be submitted to the New Bolton Center Laboratory of Large Animal Pathology & Toxicology. If it is not feasible for breeding farms and their

veterinarians to transport the concepti to the necropsy laboratory in a timely fashion, the Necropsy Kit may be used. Necropsy Kits are available without charge and contain all necessary collection supplies, submission forms, and other required materials including prepaid UPS overnight return shipping. Also included in each Kit is an elevenminute instructional videotape demonstrating the step-by-step procedure of how to conduct an effective fetal necropsy.

If you or someone you know would like to become enrolled in Project: M.A.R.E., please contact us. Results of the study will identify the causes of pregnancy wastage of mares in Pennsylvania. Once these causes are identified, we can develop research projects to help control the pregnancy loss. Please contact Patricia Sertich, V.M.D. at 610.444.5800 x2229 or Perry Habecker V.M.D. at 610.444.5800 x2385.