

# Fossils Are for Everyone

BY GREG RETALLACK

One of the thrills of childhood is finding a fossil, a truly ancient relic of extinct life. There is sheer excitement in seeing the elegant outline of a seashell or the delicate tracery of veins on a leaf emerge after cracking open an ordinary-looking stone. Some of us never grow out of our childhood fascination with fossils and pursue careers in paleontology. Many others return to an interest in fossils during retirement. Now, however, fossil lovers of this country could find themselves frustrated by government regulators.

A bill (S3107) introduced last year by Max Baucus, Democrat of Montana, aims to restrict access to fossils from federal lands to selected university and museum scientists. If you cannot claim such affiliation to obtain the necessary permits many months in advance, you or your child could face felony criminal and civil charges for merely picking up a fossil. Penalties could amount to \$10,000 and one year in prison for each violation. Even owning fossils from public lands would be a violation of this draft bill. Any development that involves digging would pay to assess fossil resources in areas to be excavated.

The costs to support such a program of permits and enforcement would be considerable. Federal agencies now issue few fossil-collecting permits at taxpayer expense. In New Mexico, a policy of preventing fossil hunting on federal lands is enforced by two officers with two four-wheel trucks and 10 guns. Taxpayers also paid for the recent seizure and transportation of a partly prepared skeleton of the dinosaur *Tyrannosaurus rex* by Acting U.S. Attorney for South Dakota Kevin Schieffer, in company with nine FBI agents, four national park rangers, two agents of the Department of the Interior, an agent from the Bureau of Indian Affairs, a highway patrolman, a deputy sheriff and troops of the South Dakota National Guard. This 10 tons of bone and rock was not going anywhere and was no secret to scientists or the public. It remains unclear why such a valuable specimen was subjected to damaging transportation before court determination of its ownership, after which it will now suffer an additional potentially damaging move. These are fossils, not drugs.

Baucus's bill was drafted to protect fossils of backboneed animals such as dinosaurs. But shark teeth common in many rocks would be protected as well as microscopic fossil teeth abundant in many limestones. Enforcement of the bill would thus be open to abuse. Copycat legislation outlawing collection of all kinds of fossils is currently under consideration in Oregon and several other states. All this legislation is modeled on the Archeological Resources Protection Act of 1979,

which was designed to stem the plunder of Native American archeological sites. There are profound differences between fossils and artifacts that make parallel legislation unwise.

Fossils are common and paleontologists are few. Some rocks such as limestone are made entirely of the calcareous skeletons of fossils. Almost all sedimentary rocks contain some kind of microfossils. While federal spending on paleontological litigation and enforcement is increasing, funding for paleontological research has dwindled. In such a political climate, amateur and commercial collectors have become increasingly important for specimens and information that advance the science of paleontology. Baucus's bill would send that valuable resource underground.

**Amateurs can help:** The assumption in Baucus's proposed bill that amateurs are inept or unworthy is mistaken. Many important fossils and localities were initially discovered by amateur collectors, ranchers and quarry operators. All of the six existing skeletons of the most ancient bird fossil *Archaeopteryx* were found by quarrymen in southern Germany. The site for the fossil ape *Kenyapithecus* was discovered by a Kenyan farmer. Most professional paleontologists owe at least part of their success to amateurs.

The prologue to Baucus's bill portrays commercial collectors as ruthless profiteers, but private enterprise has long been important to paleontology. Natural-history cabinets since at least the 18th

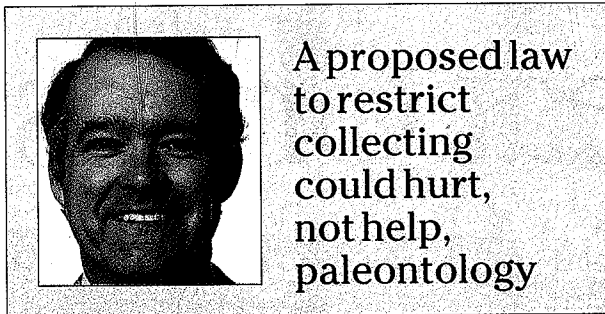
century have been stocked by commercial suppliers of specimens. Dinosaur displays in North American museums owe much to commercial collectors such as the famous Sternbergs of Kansas. We may suffer sticker shock when we see a mounted skeleton of the duck-billed dinosaur *Edmontosaurus* on sale for \$330,000 or the spiny trilo-

bite *Dicranurus* for \$10,000. But museums in Tokyo, Cardiff and elsewhere have made comparable outlays, realizing that they could spend much more than this supporting less lucky collectors or less skilled preparators. Most unusually valuable fossils end up in public collections, either by donation, by will or by initial purchase.

Rare and scientifically valuable fossils turn up when people are actively collecting a lot of fossils. Articulated trilobites are prized as rare fossils, yet there is a quarry in the desert near Delta, Utah, that has yielded at least a half million trilobites per year to commercial collectors. The supply is far from exhausted. If you know what a trilobite is, it is probably because you have seen these small gray fossils in local-school teaching collections or for sale as curios, refrigerator magnets or bolo ties. Along with these millions of *Eldrathia*, retailing for some \$2 to \$6 apiece, have come a host of rarer kinds of trilobites and other kinds of fossils that would not have been available to professional paleontologists were it not for commercial interest in these quarries.

I am not the only paleontologist who feels that the proposed regulation of fossil collecting is unnecessary. In 1987 a committee of the U.S. National Academy of Sciences recommended that "the science of paleontology is best served by unimpeded access to fossils and fossil-bearing rocks in the field." Should only professional paleontologists be able to collect fossils, but not you? Is there a future for paleontology if kids cannot find fossils?

*Retallack teaches paleontology at the University of Oregon.*



A proposed law to restrict collecting could hurt, not help, paleontology