

Psst... Wanna Buy a *T. rex*?

Paleontologists fret about dinosaur sales

By RICHARD MONASTERSKY

In the space of 9 minutes on Oct. 4, onlookers at Sotheby's auction house in New York watched as a pile of old bones turned into a treasure. The largely complete skeleton of a *Tyrannosaurus rex*, known around the world as Sue, sold for \$8.36 million to the Field Museum of Natural History in Chicago—an amount that shocked many of the auction participants and sent waves of concern rippling through the world of vertebrate paleontology.

Researchers who study dinosaurs voice mixed feelings about the sale. Almost universally, paleontologists express



Toothy treasure: The Tyrannosaurus rex called Sue had teeth ranging from 7.5 to 12 inches long. Much of the fossil remains hidden inside rock and must be removed, a process that may take 2 years.

relief that the exceptional fossil will end up in a highly regarded institution, where it will be available for scientific study and public display. At the same time, many foresee chilling consequences from the auction of the *T. rex*, particularly the high price it garnered.

"Everything changed on that day," says J. Keith Rigby Jr., a paleontologist at the University of Notre Dame (Ind.). "This sale may be the single most damaging action in the history of vertebrate paleontology."

"I'm very sad about it," comments Peter Dodson, a paleontologist at the University of Pennsylvania in Philadelphia. "As far as paleontology goes, I think it's a very serious setback."

The greatest concerns center on how the sale will affect the burgeoning commercial fossil market. Will the hope of instant millions cause landowners to bar academic paleontologists from their land and deal instead only with commercial

collectors? Will fossil hunters, with visions of *T. rex* dancing in their heads, be motivated to steal valuable specimens from public lands? A recent case in Montana suggests the answer might be yes.

Finally, many paleontologists wonder whether museums should be fostering the commercial market by bidding against each other—potentially driving the price of fossils up to a level that harms academic research.

The bidding war over Sue is only the latest conflict to swirl around this relic from the Cretaceous period. During its lifetime, the *T. rex* suffered several injuries at the jaws of other tyrannosaurs and eventually succumbed to a skull-piercing bite.

More than 65 million years later, a fossil dealer named Peter Larson and his team discovered the skeleton on a ranch near Faith, S.D., in August 1990. Larson excavated the fossil and paid the relatively small sum of \$5,000 to the landowner, a Sioux named Maurice Williams. Larson then took the specimen back to his business, the Black Hills Institute of Geological Research in Hill City, S.D., where he planned to build a museum around it (SN: 11/11/95, p. 316).

By law, though, Williams could not sell the fossil without the permission of the Department of the Interior because the federal government held the land in trust for Williams. Federal marshals and FBI agents seized the fossil, and Williams ultimately gained ownership of it. Because of the trust arrangement, the Bureau of Indian Affairs was charged with obtaining the "highest and best" use of the fossil for Williams. He and the bureau decided to sell the dinosaur in a public auction at Sotheby's. Williams pocketed \$7.6 million from the auction, all taxfree.

Larson and Williams have accused each other of dishonesty, and observers have questioned both their accounts of the original deal.

Larson was tried and convicted of illegally collecting other fossils and violating customs rules (SN: 4/6/96, p. 223). He finished serving a 2-year sentence last month.

Before the auction, paleontologists feared that the fossil would go to a private individual, thereby making it unavailable for study and display. They were particularly anxious because it is the most complete *T. rex* specimen known, retaining more than 90 percent of its bones. In a century of searching, scientists have discovered only 21 *T. rex* specimens, with just 4 exceeding 60 percent completeness.

"We felt it was critically important to get it into a public institution," says John J. Flynn, a paleontologist at the Field Museum. "The only way to ensure that, once it went to public auction, was for a museum or a university to buy it."

The Field Museum purchased the fossil with support from a group of corporations and individuals, including McDonald's Corp., the Walt Disney Co., and the California State University system. In addition to sponsoring the purchase, this coalition will provide several million dollars in additional funds for removing the fossil from the surrounding pieces of rock, for scientific research, and for educational programs.

Flynn and other paleontologists credit the Field Museum with saving the dinosaur from ending up in the living room of some wealthy individual. "It's important to realize that there were many private bidders involved in the bidding. My understanding is that the bidder directly below us prior to the purchase was a private party," says Flynn.

Television newscasts of the auction made similar claims about the second-to-last bidder, but this perception is incorrect, says David N. Redden, Sotheby's executive vice president, who served as auctioneer.

"All of the bidders from at least halfway up in the bidding process were institutions or institution-related. They all were planning public exhibitions, and they all would have been appropriate homes for the dinosaur," says Redden.

These public institutions bid against each other and quickly drove the price into uncharted territory for fossils. As the bids topped \$7 million, only three groups

remained in contention: the Field Museum; the North Carolina State Museum of Natural Sciences in Raleigh; and the Jay I. Kislak Foundation of Miami, a non-profit research institution. North Carolina dropped out at \$7.2 million. The Kislak Foundation gave up at \$7.5 million.

Arthur Dunkelman, the administrative director of the Kislak Foundation, said it was unusual for his institution to take an interest in a dinosaur fossil; the foundation is best known for its research on Mesoamerican archaeology and history. The foundation planned to donate the fossil to one of the natural history museums in Florida, says Dunkelman. "We don't have anything like this dinosaur in Florida. We felt it would be wonderful to bring this fossil here."

The North Carolina museum viewed Sue as a potential star for a building, currently under construction, that will feature a fossil exhibit hall. The museum had previously purchased another Cretaceous dinosaur from South Dakota, but Sue seemed exceptional in a variety of ways, says museum director Betsy Bennett. "Sue has research value, and it has educational value. But it also has what I call 'that dynamic hook' to get people into the museum so we could tell them the whole story [about life in the Cretaceous]."

Recognizing such potential in the fossil, the Friends of the Museum raised pledges of \$7.2 million from private anonymous donors for the specific purpose of buying Sue.

For big natural history museums, a *T. rex* such as Sue draws crowds, boosts gate receipts, and provides opportunities for research. By purchasing fossils at such exorbitant prices, though, the larger museums are hurting individual scientists and smaller museums, according to many researchers.

"What bothers me more than anything else is that public institutions in the United States are encouraging commercial collection of fossils," says paleontologist John R. Horner of the Museum of the Rockies in Bozeman, Mont.

Commercial collectors excavate fossils with the primary purpose of selling those specimens; they often destroy, or simply do not collect, the valuable information at the site that helps put a fossil in context, says Horner. He argues that museums should sponsor fieldwork, which can provide important specimens at a cost far below that charged by commercial dealers.

Museums, though, may not have that choice. North Carolina's Bennett says that donors were more interested in funding the purchase of Sue than the museum's excavations. "It would be wonderful if we could raise that kind of money [for fieldwork]. But it is clearly much more difficult to come by."

Horner says that commercialization of

fossils has harmed his work in several ways. Two ranchers recently contacted Horner to take back dinosaurs that he had collected on their property. The landowners originally agreed that the fossils would reside in the museum, and Horner's staff had put effort into preparing the fossils. Nonetheless, Horner gave them back.

What's more, researchers say that it is getting harder to obtain access to dig on private land or to cross such property in order to reach public sites. "I have gone back to some landowners I've worked with in the past and I can't get on the land because I can't pay them what some of these commercial collectors can pay," says Horner.

Still, he and other paleontologists recognize that ranchers and other landowners have a legal right to make money off their property. "I can't blame them, because many of them are having a tough time," he says.

In the United States, fossils on private property belong to the landowner. On some types of federal land, collection of invertebrate fossils is allowed, but only researchers with permits can legally collect vertebrate fossils, which are usually rarer. Most states bar commercial collecting of vertebrate fossils from state land as well.

Last year, Congress briefly considered rolling back the protection of vertebrate fossils on public land. "Now that Sue was sold at that price, I think you can expect that people who want to take our public resources and sell them will be more interested in doing so. I'm very much opposed to that. The public should not

have to pay for what it already owns," says Louis L. Jacobs, president of the Society for Vertebrate Paleontology and a researcher at Southern Methodist University in Dallas.

Commercial collectors view the scientific hand-wringing over Sue as unnecessary. Larson, who collected and then lost the dinosaur, questions whether the auction of this unusual skeleton with its well-publicized history will affect the price of most other fossils. "The dinosaur we call Sue is an anomaly, a media star. She's not just your average pile of bones."

Steve Hess, owner of EXTINCTIONS in Clarita, Okla., says there is a glut of dinosaur skeletons on the market now. "I don't think Sue will drive up the price of fossils."

One test might be the fate of the only other *T. rex* currently for sale. Jim Wyatt, who owns Fossilnet in Garland, Texas, has put a price tag of \$12 million on a skeleton that he estimates is 70 percent complete and whose bones are better preserved than Sue's. The price includes full preparation and mounting—work

that was not included in the price of Sue.

Wyatt and other dealers say that the auction will actually benefit paleontology by spurring greater interest in museums and fossils in general. If museums can increase their ticket sales by displaying dinosaur fossils, "that provides surplus income, and they can fund all the other research they want to do."

The case of another dinosaur skeleton highlights the downside of Sue's auction. In September, would-be thieves attempted to steal a tyrannosaur specimen that paleontologist Rigby had been excavating near Fort Peck, Mont., in the northeastern part of the state.

The perpetrators belonged to a family that had formerly owned the fossil site but had lost it in a foreclosure, which put the land under federal control. When they heard about Sue's impending sale and recognized the economic potential of Rigby's find, they began to remove the fossil. "The sale of Sue caused my problems. The two cases are inextricably linked," says Rigby.

In the end, a watchful public saved the fossil. Before the family could remove the dinosaur, contacts of Rigby's in Montana alerted him, and he notified police before irreparable damage could occur. Last month, more than a third of the population surrounding Fort Peck offered pledges totaling \$55,000 for a new museum to house the fossil. "In my entire career, I have never encountered an issue that has galvanized the public like this," says Rigby.

The Montana event and Sue's auction both

J. Keith Rigby Jr. measures the pubis bone of a dinosaur found in northeast Montana by him and a crew of Earthwatch volunteers. The dinosaur's bones closely resemble those of T. rex, and their dimensions indicate that this specimen may exceed Sue in size.



demonstrate a growing public interest in dinosaur fossils, which many scientists attribute in part to the Jurassic Park movies. At the same time, however, paleontologists complain that funding for dinosaur studies has shrunk, making it more difficult to glean information from these ancient beasts.

With the fossil market bullish these days, academics no longer have the sole claim on *T. rex* and its kin. Society sees dinosaurs serving the public in myriad ways: as topics of research, commercial objects to be bought and sold, attractions to spice up a museum, and even mascots for a city. It's a large weight to place on the shoulders of an extinct beast. □