

Space rocks wanted: cash paid

SAN DIEGO

Meteorites have become prime targets for high-end curio dealers, reaching as much as US\$10,000 a gram at auction. Professional scavengers have reacted with a flood of space rocks, forcing scientists to take radical steps and set up a centre at the University of Arizona that will buy samples on the open market.

"We don't want to shut down the trade in meteorites, because we can't," says cosmo-chemist Dante Lauretta of the university's Lunar and Planetary Laboratory in Tucson. But the aim is to preserve as many of the finds as possible for scientific analysis, he says.

Meteorites made of material ejected from the Moon and Mars command the highest prices. But their popularity is pushing up the cost of all meteorites — including those known as chondrites, which are highly prized by scientists because they formed early enough to offer insight into the origins of the Solar System.

Over the past decade or so, the promise of bounty has spurred meteorite hunters to scour areas such as the Sahara Desert, the Gobi Desert and Patagonia, where arid conditions preserve specimens for millions of years.

Historically, scientists at a number of insti-



Pebble dash: collectors race to pay stratospheric sums for meteorites like this.

tutions, including the University of Arizona, have analysed material for collectors or dealers — in return receiving a portion of the meteorite for scientific study. "But there are so many meteorites coming out of the Sahara now that scientific institutions are overwhelmed," says Lauretta. "It would take us two years to analyse everything we have."

So he and his colleagues have set up the Southwest Meteorite Center to buy samples of meteorites before they are divided up and disappear unrecorded into private collections.

With an initial fund of about \$200,000, the

Kansas in 1882.

The centre will also buy collections from private individuals, and is raising funds to create an endowment for future purchases. The samples will be stored in a climate-controlled facility and made available to scientists who want to study them.

Long-time meteorite dealer Marvin Killgore of Payson, Arizona, will curate the repository. He has lent it a significant portion of his personal collection, which consists of 3,300 kg of meteorites from 37 countries.

Rex Dalton

centre will buy meteorites wherever it can, as well as continuing to analyse rocks for dealers in return for samples. The researchers began the search for samples on 4 February at a meteorite auction held ahead of the annual Tucson Gem and Mineral Show, where the world's major players wheel and deal. "It was quite an adventure," said Lauretta, after appealing to a packed house of about 250 dealers and well-heeled customers. "We were very well received."

The top sale of the day was \$6,750 for a newly discovered 11-kilogram piece of the Brenham pallasite. This famous meteorite, which consists of olivine crystals in an iron-nickel matrix, struck

Journal lays bare remarks from peer reviewers

Editors of a journal launched this week are out to revolutionize peer review. By publishing signed reviews alongside papers, they hope to make the process more transparent and improve the quality of the articles. But although journal editors seem intrigued by the experiment, most say they'll take some persuading to change the traditional, anonymous system.

At *Biology Direct*, an open-access journal launched by BioMed Central on 6 February, manuscript editors and peer reviewers will, in effect, be merged into one editorial board. Prospective authors will approach board members and if three agree to review a paper, it will be accepted.

Reviewers' comments will be signed and published with the final paper, along with responses by the author. An author has the right not to make suggested changes, but the suggestions will be there for anyone to see. An author who disagrees with the comments can retract the paper.

Several journals, including the *BMJ* (*British Medical Journal*) and the *Medical Journal of Australia*, have experimented with naming peer reviewers, but *Biology Direct* is going further by routinely posting those reviews as part of the paper.

"I like the direct relationship the author can have with a reviewer, and the transparency of the end result," says David Lipman, director of the US

National Center for Biotechnology Information and one of the journal's lead editors. He believes readers will get a more nuanced picture of science.

"We don't have that artificial, black-and-white situation where, because it got through peer review, it is all fine," Lipman says. "It will be those interactions with the peer reviewers that make it interesting."

Responses to the idea have been positive. "I love the fact that David Lipman is doing this," says Drummond Rennie, deputy editor of the *Journal of the American Medical Association*. "I have always felt that the only ethically sound system of review was one where everyone knew everyone's identities."

Diane Sullenberger, executive editor of the *Proceedings of the National Academy of Sciences*, says she'll be watching *Biology Direct* with interest, although her journal will not open its peer-review system any time soon. "If there was evidence in the literature that open peer review really had a significant advantage over blind review I think we'd see more of it," she says.

Lipman says that the new journal's policies are likely to evolve. "It is an experiment," he says. "But I think the overall approach can't help but succeed. If we are really successful, the better journals will take what they think works from it."

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