

## CELEBRATING THE DUGONG

Nobody knows much about the religious life in Stone Age Arabia. Now, a 5500-year-old ritual mound in the Arabian Gulf gives a provocative clue: coastal dwellers venerated dugongs as mythic ancestors.

When paleontologists first came upon the 10-square-meter mound of bones in 1989 on the island of Akab, 190 kilometers northeast of Abu Dhabi, they assumed it merely contained the remains of dozens of butchered dugongs. But when archaeologist Sophie Méry of the French national research agency, CNRS, and colleagues excavated the site, they discovered an intricately constructed monument. Akab's Neolithic fishers had first laid jawbones of dugongs—4-meter-long mammals related to the manatee—flat on the ground, wedged them in place with ribs, and drenched the assemblage with a red-ochre solution. On top they placed dugong skulls—all pointing toward the east—and bundles of ribs, as well as rare tubular stone beads and other ornaments.

"The discovery led us to various lines of questioning," says Méry, who has published the find in the latest issue of *Antiquity*. "Was it a sanctuary, a trophy, or a grave?" No similar site of this age has been discovered anywhere in the world. But, the authors note, aboriginal Australians built almost identical dugong bone mounds for hunting rituals beginning in the 14th century. Méry thinks similar rites took place on the Gulf coast 5000 years earlier. "The evidence," says Mark Beech, an archaeologist at Abu Dhabi Authority for Culture and Heritage, "looks very convincing."



## A Matter of Scales

Growing numbers of farmed salmon in northern Europe are escaping and mingling with their tastier, sturdier cousins from the wild. Tracking this phenomenon is difficult because the two populations look alike.

But chemical signatures in fish scales may reveal a fish's origin, British salmon sleuths write in the *Marine Ecology Progress Series*. Fish scales accumulate tree-ring-like layers that reflect a fish's diet and the waters it has inhabited over the course of its lifetime. Pellet fish food contains slightly higher levels of manganese than is found in the diet of a wild fish. Clive Trueman of the National Oceanography Centre in Southampton and Elizabeth Adey of the Scottish Association for Marine Science in

Oban, both in the United Kingdom, used a mass spectrometer to measure manganese levels in the scales of salmon from several Scottish farms and from the wild. They found that they "could easily distinguish between time a fish had spent at sea and in fresh water," Trueman says. By comparing the scale chemistry—cheaper than DNA analysis—ecologists can track the presence of intruders, the authors say, and determine where countermeasures are needed.

## Iran Science Officials in Plagiarism Flap

Four scientific journals have retracted research articles by top Iranian government scientists, including the minister of science, after concluding that they include plagiarized material.

The flap started late last month when *Nature* reported that much of a 2009 article in the journal *Engineering with Computers* was copied verbatim from a 2002 article by South Korean researchers in the *Journal of Physics D: Applied Physics*. Both articles describe experiments involving tungsten alloy rods ricocheting off steel plates. The first author on the 2009 paper is Iran's science minister, Kamran Daneshjou, who wrote it with his former Ph.D. student Majid Shahravi, an engineer

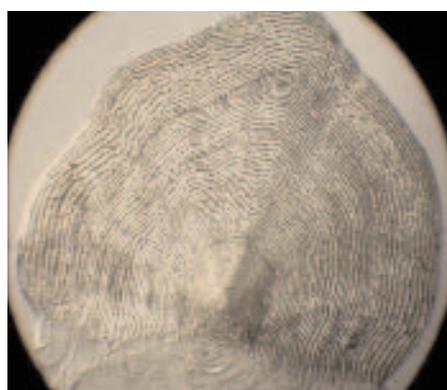
at the Iran University of Science and Technology (IUST) in Tehran. Then *Nature* reported that another 2009 article by the same pair plagiarized a 2006 article by U.S. researchers.

Iranian émigré scientists have expressed

outrage and noted with irony that Daneshjou helped orchestrate the election—widely rejected as a fraud—of Iranian President Mahmoud Ahmadinejad. But some researchers in Iran are sticking up for Daneshjou and pointing the finger at his co-author. "After [Shahravi] has officially admitted his complete fault on this matter, he must be punished accordingly,"

says engineer Seyyed Hasheminejad of IUST.

In an interview with Iranian media, Shahravi denied any plagiarism, noting that articles by others had been cited in footnotes. But late last week, the plagiarism scandal had widened to include a 2006 paper co-authored by Iranian roads and transportation minister—and Ahmadinejad's former Ph.D. adviser—Hamid Behbahani.



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