

jects in their members' states and districts. The space science portion of the House bill, for example, includes \$1.5 million for the planetarium at the University of North Carolina, Chapel Hill; Virginia Commonwealth University in Richmond would receive \$1 million for battery research in the Senate bill. Overall, each bill would add approximately \$200 million in such earmarks to NASA's budget—and steal money from core programs if the agency's total budget isn't well above the \$14.6 billion request.

—ANDREW LAWLER

MARINE SCIENCE

Mideast Pirates Give Oceanographers Pause

Oceanographers now have something else to worry about besides getting grants and battling rough seas: pirates. Two U.S. research institutions have confirmed to *Science* that they are stepping up security aboard research vessels plying certain Middle Eastern waters in response to growing piracy and terrorism.

Officials at the Woods Hole Oceanographic Institution (WHOI) in Massachusetts and Columbia University's Lamont-Doherty Earth Observatory in Palisades, New York, say they have hired shipboard "security consultants" to deter high-seas attacks. The unarmed experts "aren't going to shoot anybody or engage in hand-to-hand combat. ... The idea is to make people aware of how to

just as shippers reported a spate of attacks off the coasts of Yemen and Somalia. In the past year alone, pirates have tried to board at least 13 vessels in the Red Sea, up from none in 1999, according to the International Chamber of Commerce in London. The surge helped push the worldwide number of pirate attacks up 57%, the group says, with 72 seafarers killed in nearly 500 incidents.

Seeking smooth sailing, Pittenger hired a private firm to put two security experts aboard the *Knorr*. The duo—reportedly ex-military specialists—stood watches and taught the crew and scientists how to keep an eye out for suspicious vessels and how to respond if boarded. (A captain familiar with such training says using water hoses to repel boarders is one option.) Lamont-Doherty will also have security help aboard its vessel, the *Maurice Ewing*, when it cruises the Gulf of Aden and Red Sea later this month, according to officials at the National Science Foundation (NSF), which funded both cruises.

NSF says it is happy to help pay for the security, which cost about \$80,000 for the *Knorr* cruise. And Pittenger says the precautions make sense, "because research vessels have a modus operandi that makes them vulnerable. They stop a lot to collect data, have bright lights, and carry attractive-looking equipment" such as computers. Female scientists can also be targets for sexual assaults. What research vessels don't have, he adds, are safes stuffed with payroll cash—a magnet for pirates.

The chief scientist on the *Knorr* cruise is all for the extra help, saying the security team didn't hamper science and made the researchers feel safer. "We ran drills and learned to look around pretty carefully before we stopped to put an instrument in the water," says physical oceanographer William Johns of the University of Miami, Florida. If boarded, the researchers were instructed to gather in a predetermined area to avoid confusion and stay out of danger. "Luckily, we never had to do it," he says.

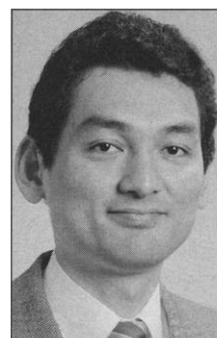
Although Pittenger fears that providing protection for science cruises may be "the wave of the future," he predicts that WHOI won't need the antipiracy consultants again anytime soon. "The crews are now pretty thoroughly trained and have plans in place," he says. That should help keep researchers focused on their work and not fretting about walking the plank.

—DAVID MALAKOFF

INTELLECTUAL PROPERTY

RIKEN Scientist Quits; Lab Says It's Clean

TOKYO—A Japanese research institute says that it did not do anything improper in a case of alleged economic espionage against the United States. Last week the Institute of Physical and Chemical Research (RIKEN)



Gone. Takashi Okamoto faces U.S. charges of economic espionage.

released a report denying that it directed Takashi Okamoto to steal biological materials from the Cleveland Clinic Foundation in Ohio and then hired him to gain access to trade secrets. RIKEN also announced that Okamoto has resigned as of 31 July.

This spring the U.S. Justice Department charged

Okamoto and Hiroaki Serizawa, a researcher at the University of Kansas Medical Center in Kansas City, with conspiring to steal trade secrets for the benefit of a foreign government. Okamoto is suspected of taking cell lines and DNA samples from the Cleveland Clinic, where he worked for 2 years before joining RIKEN's Brain Science Institute in 1999 (*Science*, 18 May, p. 1274).

A previous investigation by a team of scientists found that Okamoto had sent biological samples from the United States to a Japanese colleague, who later brought them to RIKEN when he joined Okamoto's lab (*Science*, 15 June, p. 1984). The materials then mysteriously disappeared. The team concluded, however, that the materials were never used in experiments at RIKEN.

RIKEN's latest report, prepared by a team of lawyers, investigated Okamoto's recruitment and hiring. RIKEN president Shun-ichi Kobayashi says that the two investigations show "that in no manner was RIKEN involved intentionally" in actions that violate the Economic Espionage Act of 1996 (www.riken.go.jp). But RIKEN officials admit they are still puzzled by Okamoto's actions and do not know what happened to the materials stored at RIKEN. Okamoto, who could not be reached for comment, refused to answer the investigators' questions.

Even so, some scientists are worried that the act could stifle scientific interaction. "[The act] has a very broad definition of a trade secret," says Masao Ito, president of the Brain Science Institute. "It could become difficult to freely exchange young people across borders." —DENNIS NORMILE



Secure science. U.S. oceanographers hope that they won't need help from Navy SEALs, above, in plying waters in the Middle East.

reduce a ship's vulnerability," says Richard Pittenger, who manages Woods Hole's research fleet.

Pittenger, a former Navy admiral, first hired security help in February for a month-long water-sampling cruise by the WHOI vessel *Knorr* in the western Gulf of Aden at the mouth of the Red Sea. The move came 3 months after saboteurs bombed the U.S. warship *Cole* in the nearby port of Aden and

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