three-quarter-inch zebra mussel can filter all the organic matter from a liter of water each day, expends half its body weight as gametes during spawning, and has free-swimming larvae with the potential to spread throughout an entire lake.

Ecologists know less about what makes a community open to invasion. But it appears that the combination of disruption of natural areas and movement of species is increasingly perilous to natives. For example, disturbed areas, which tend to have relatively few species, tend to be vulnerable to invasion, said ecologist Mack at the Indiana meeting. Mack also believes many communities that seem to resist invasion, such as the Arctic, are in fact simply off the beaten path. If so, then remote communities too will suffer an onslaught of exotic species as they are opened to commerce.

Unfortunately, the pattern of human activity tends to give itinerant organisms a perfect setup. First, says fish biologist Moyle, we disturb large areas—by logging, burning, plowing, damming—and often wipe out or weaken some native species in the process. Then, by trafficking in and out with a diverse cast of stowaways, we can introduce new immigrants into a disturbed area, setting in motion another round of species extinctions. "It's like a one-two punch. The exotics are the ultimate method of extinction after weakening species by habitat loss and disturbance," Moyle says.

The notorious zebra mussel provides a case in point. North America happens to have an unusually diverse fauna of freshwater bivalves. Many of these already have a tenuous hold on survival, thanks to pollution and habitat alteration. Enter the zebra mussel, which attaches itself to any hard surface it finds, including other clams, which it buries with extra weight and outcompetes for food. The result is a recipe for extinction. "We have over 20 species of endangered mussel in Tennessee," says ecologist James Drake of the University of Tennessee. "When the zebra mussel hits I suspect we'll lose them all."

No one knows whether the current flurry of interest in exotic species will be sustained when zebra mussels fade from the news. Meanwhile, a rising tide of organisms continues to accompany people and cargo in their travels around the world. In recent weeks, U.S. Department of Agriculture officials have become alarmed over a new intruder in the Northwest: the Asian gypsy moth, whose flying females disperse even faster than their established European cousins. While ecologists and managers gather their voices, such troublesome examples may help keep less visible exotics on the unwanted aliens list. ■ ELIZABETH CULOTTA

# Baltimore Resigns at Rockefeller

*New York*—Following weeks of behind-the-scenes turmoil, Rockefeller University president David Baltimore has submitted his resignation to the university's board of trustees, ending an 18-month term of office that never escaped the shadow cast by Baltimore's involvement in a disputed 1986 paper on genetics and immunology that appeared in *Cell*. Baltimore's letter of resignation, dated 2 December, was expected to be accepted by the board at a meeting on 3 December. In the letter Baltimore said he planned to stay on as professor and continue to head his own laboratory group. Richard M. Furlaud, chairman of the board, said Nobel laureate neurobiologist Torsten Wiesel would serve as acting president until a permanent replacement can be found.

"The reason I have decided to take this step," Baltimore said in his letter, "is that the *Cell* paper controversy created a climate of unhappiness among some in the university that could not be dispelled." Baltimore added that he "did not anticipate that this matter would become such an extended personal travail for everyone involved. Trying to govern the university under these conditions has taken a personal toll on me and my family which I can no longer tolerate."

Baltimore's administration won high marks in some respects. Since taking over from retiring president Joshua Lederberg in July 1990, Baltimore began restoring fiscal equilibrium at Rockefeller, which had operating deficits of nearly $30 million over the last 2 years. In addition, he pushed to reform the university's academic structure so that gifted younger researchers would not have to wait years to become heads of their own laboratories. Those reforms won him support among the university's junior faculty.

But the 1975 Nobel laureate (he shared the prize with Howard Temin of the University of Wisconsin for the discovery of reverse transcriptase) was vehemently opposed by many members of the university's senior faculty. His appointment in the fall of 1989 prompted an unusual show of public opposition by some senior faculty, who questioned his handling of the controversy surrounding the *Cell* paper, which has been the focus of two university inquiries, two NIH investigations, and a highly charged congressional hearing on scientific fraud during which Baltimore tangled with Representative John Dingell (D–MI).

Baltimore's critics faulted him for failing to heed the warnings of Margot O'Toole, the postdoc who first raised the possibility of inconsistencies in certain data in the *Cell* paper contributed by Baltimore's collaborator Tereza Imanishi-Kari—and for attacking the motives of the Dingell inquiry. Those criticisms simmered for a while, then boiled over when a draft report from the NIH Office of Scientific Integrity concluded that some of Imanishi-Kari's data had, in fact, been fabricated. An informal poll of tenured faculty taken last April, after the OSI report was leaked to the media, indicated that more than half of Rockefeller's roughly 45 full professors opposed Baltimore continuing as president, according to faculty sources.

During the late summer and fall Baltimore's support among the senior faculty deteriorated still further, and two senior faculty members, Anthony Cerami and Gerald Edelman, announced they were leaving for other institutions (though both tried to separate their decisions from the Baltimore controversy). The deep rift between the tenured professors and the board, who continued to support Baltimore, became clear during a confidential meeting on 17 October. In terms described by participants as "venomous" and "very confrontational," a dozen faculty members expressed to representatives of the board their concerns about continuing negative publicity associated with the *Cell* paper and its effect on Baltimore's ability to raise funds and recruit faculty. "What's very clear," said one participant, "is that people who were initially Baltimore's supporters spoke out against him at this meeting."

Another precipitating event seems to have come on 26 November, when James E. Darnell Jr., vice president of academic affairs, and a respected Rockefeller molecular biologist, tendered his resignation as vice president. The trustees had not decided whether to accept it at press time, according to university sources. Darnell did not return repeated phone calls to his office. Baltimore's decision to resign apparently was made during the week of 25 November. He called chairman Furlaud over the Thanksgiving holiday. "He said he'd been thinking it over and thought he ought to resign," said Furlaud. ■ STEPHEN S. HALL

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