

who call themselves the Laboratory Research and Technical Staff (LabRATS). Doyle and his helpers scrounge most of the money from receptive departments and grants from foundations. The university won't commit hard funding until more labs are eager for assessments.

That's been a big challenge. In its first year, Doyle and his crew only visited labs they were friendly with, racking up 11 assessments. But in early January, the program started cold-calling professors, and the reception was far more chilly. Out of 27 invitations, only four labs have said yes.

Why the cold shoulders? "People don't want to take time away from their projects," says LARS co-founder Maynard, even if it's only for a couple of hours. And researchers just don't give conservation a high priority, adds UCSB paleobotanist and campus sustainability crusader Bruce Tiffany: "Scientists think about being green in their personal lives, but when it comes to work, they start thinking about publications and promotions." To that end, they typically don't want to risk using recycled reagents or tweaking delicate equipment just to save a few watts.

The lack of tangible incentives is also a roadblock, says Doyle. Sustainable lab practices often save money, especially when energy is involved, he says, but labs don't see those savings because the university pays the bills. UCSB campus energy manager Jim Dewey agrees. "Researchers aren't going to make compromises just to save the campus money," he says. And if making a change costs the lab itself cash, forget it. "Researchers are not held responsible for meeting carbon goals," Dewey says. "They're held responsible for meeting their budget."

Labs in hot fields—especially those run by young professors—also worry about competition. Doyle recommends that researchers turn off their water baths at night to save energy. But heating those baths back up in the morning can take precious time. "The pressures on productivity are huge," he says. "If you ask a lab to do something that will slow them down, it won't work out."

Spreading the word

Despite faculty resistance, Doyle's program has begun to win converts on campus. After the LabRATS visited a soil science lab in the fall of 2006, the researchers began pestering the recycling office about recycling pipettes, paper, and electronics. "Apparently, we got them thinking, and they started calling every other day," says Maynard. In other instances, lab members have become LabRATS themselves and have helped spread the word to

Do-It-Yourself Recycling

What if your lab went through enough plastic pipette tip boxes a month to fill a small backyard pool, and your university didn't recycle any of it? Such was the case in the Johns Hopkins University laboratory of Bert Vogelstein as it plowed hot and heavy into the cancer genome project in early 2006. "The sheer volume of what we were wasting was annoying to me," says postdoc Devin Dressman.

So Dressman took matters into his own hands. He hauled the plastic boxes to a local recycling pickup site and made reusable cardboard receptacles back in the lab. "Most people were really into it," Dressman says of his labmates.

Eventually, Dressman convinced his building manager that the program made financial sense. Johns Hopkins pays about 66 cents a kilogram to destroy biohazard trash, he notes, so the campus reduces those costs by recycling the harmless pipette boxes. The entire medical campus is now recycling the boxes, and efforts are under way to get the rest of the university involved. "It's a win-win situation for everybody, and it's self-sustaining," says Dressman. Best of all, he no longer has to schlep plastic across town himself. "My goal was to take myself out of the picture," Dressman says. "I'm not here to do recycling, I'm here to do research." —D.G.



Tip top. Devin Dressman sits on a throne of recyclable pipette tip boxes.

other labs. "Once you tune people in, some people get really turned on," says Doyle.

Over the next year, Doyle hopes to reach even more scientists. One goal is to incorporate "eco-training" into the safety course that all faculty members and students must complete before working in a lab. Another project involves creating a Web site for surplus equipment to make it easier for scientists around campus to find and trade used equipment.

Still, Doyle says that to make more than an incremental impact, he'll need to get the university involved. If UCSB were to mandate a similar program in every department—what Doyle describes as going from retail to wholesale—he predicts it could save the campus hundreds of thousands of dollars in utility bills and equipment purchases. So far, university officials have shown no sign of wanting to set any requirements. With enough faculty support, however, they just might. A positive sign is that LARS just got permission from the dean of the Division of Mathematical, Life, and Physical Sciences to assess all eight labs in the department's new marine science building.

Doyle thinks his approach could work at

other institutions, too, at least on a similarly small scale. "The challenge is finding a blend of dedicated staff and students to make the communications happen and to look for the conservation opportunities," says Doyle, "but our experience is that there are strong personalities and dedicated conservationists on most campuses." They just need the right tools, says Doyle, and he is planning on publishing his survey questions and other techniques on the Web.

For now, however, Doyle is focused on the task at hand. A couple of hours after visiting the Kosik lab, the LabRATS finish an assessment of an ecology lab run by Bradley Cardinale. The lab runs out of a World War II Army barracks, and Doyle jokingly refers to it as a recycled building. Cardinale's lab has done a good job optimizing its equipment to save energy, but Doyle suggests decommissioning a few unused overhead lights and unclogging a cold-room compressor. Cardinale seems eager to comply. "I think it's going to be a very successful program, and it makes a lot of sense for academics to get involved," he says. "If we don't take leadership for sustainability, who will?"

—DAVID GRIMM