compete with knapweed.

"The big deal is that *Centaurea* is interacting really, really differently with its long-term neighbors than with its new neighbors," says Callaway. His next step will be teasing out whether knapweed's as-yet-unidentified root chemicals affect its competitors directly or have an indirect effect by changing how soil microorganisms interact with plants. **–MARI N. JENSEN**

Mari N. Jensen is a science writer in Tuscon, Arizona.

EDUCATION

Gates Gives Cambridge A Rival to Rhodes

Cambridge and Oxford universities compete in everything from chess to cricket, but for nearly a century Oxford has had the field to itself with its Rhodes Scholars program for attracting non-British students. Now Cambridge, thanks to a new $210 million trust announced on 11 October by the Bill & Melinda Gates Foundation, is launching a new high-visibility scholars' program of its own, which each year will fund at least 225 students from outside the United Kingdom.

The university will select Gates Cambridge Scholars based on merit, not need, focusing on academic ability and leadership potential. The program will support students from any country; Rhodes Scholars, in contrast, must come from one of 19 jurisdictions. The scholars, who will receive about $40,000 a year in support, will live together in what will be called the Gates House. "We are hoping that the young people we select will be motivated to use their education to put something back into society for the benefit of a much wider community," explained Bill Gates Sr., CEO of the foundation and father of the Microsoft co-founder, in a prepared statement. The Gates Foundation currently has roughly $21 billion in assets, making it the largest philanthropy in the world.

Gates Cambridge Scholars will be able to pursue either a graduate degree or a second bachelor's degree, a particular attraction for students who have attended undistinguished schools in poorer countries. Although the program will not evaluate a student's financial situation, "the large bulk of the scholarships will go to people who wouldn't be here otherwise," predicts Anne Lonsdale, pro–vice chancellor for international relations at Cambridge.

Cambridge already has scholarship funds set up for overseas students, but the new gift dramatically changes the amount of available resources. "Instead of having to worry about every penny that goes into scholarships, suddenly we have all this money," Lonsdale says. "We're deeply happy."

–JON COHEN

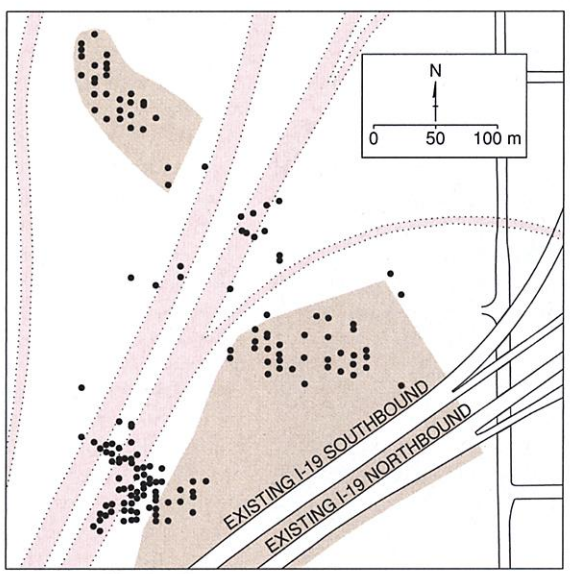
ARCHAEOLOGY

Arizona to Take High Road to Preservation?

TUCSON, ARIZONA—Building freeways is big business in this rapidly growing state. So it's news when state transportation officials agree to weigh a proposal to set aside a scientifically valuable parcel of a federal highway project for future research rather than excavating it and selling it to the highest bidder. Should it proceed, Arizona could set a new standard of stewardship for government agencies that determine the fate of ancient relics.

The renovation of Interstate 19 at its intersection with I-10, a major north-south corridor in the state, almost inevitably means uncovering the remains of previous civilizations. And antiquities laws require extensive investigation of any major site. These efforts, which often include surplus lands that are intended for sale, can be a boon to science: Eight major digs involving I-10 over the past 5 years have yielded important findings about the origins of prehistoric village life in the Southwest. However, even a careful excavation leaves one fewer site for the next generation of researchers.

That dilemma has led to a novel plan for a small parcel near a $60 million, three-level interchange barely 2 kilometers from downtown Tucson. Under the plan, one of the nation's most prolific road-building agencies would retain and actively manage a plot of unneeded land for the sole purpose of preserving its archaeological resources. "This is a big deal," comments Jim Walker, the southwest regional director of the Archaeological Conservancy, a nonprofit group based in Albuquerque, New Mexico, that acquires and preserves key archaeological sites. "Highway rights-of-way are hot zones for archaeology, and we need to preserve much more raw data in the ground for more advanced research. This sets an important precedent for preserving archaeology rather than doing a one-time excavation before the bulldozers come in."



KEY: • prehistoric pit house
area to be preserved
proposed interchange alignment

The preserve plan, which has been tentatively embraced by the highway department, entails key portions of the so-called Julian Wash site, one of the largest and longest occupied Hohokam culture village sites in the Tucson area. About half the 22-hectare site has already been destroyed by urban development and road building, and next year construction begins on six lanes of new freeway that will slice through other sections of the site (see map).

The state has retained Desert Archaeology Inc. (DAI) of Tucson to conduct extensive "data recovery" on the site in compliance with the National Historic Preservation Act. These excavations will likely reveal scores of pit houses and other features reflecting the village's continuous occupation from 500 B.C. to A.D. 1150. That period encompasses the arrival of agriculture and pottery in southern Arizona and the rise of the Hohokam, one

Scientific road kill. These ceramic jars from a Hohokam pit structure (*right*) were uncovered during excavation preceding the realignment of I-19 (*above*) in Tucson.

CREDITS: (TOP TO BOTTOM) GEO-MAP INC.; H. D. WALLACE

of the main prehistoric cultures of the Southwest. "Julian Wash is important because it was a very large village and very long-lived," says Henry Wallace, the DAI project manager overseeing the dig. "This excavation will give us important data on key questions about site organization, early economies, and cultural change over time."

The current dig, however, does not address two other pieces of the site, totaling 4 hectares, that will be opened up when the Arizona Department of Transportation (ADOT) shifts existing lanes of traffic a couple hundred meters to the west. Such land would ordinarily be sold off when the interchange project is completed. However, researchers believe crucial sections of the prehistoric village lie intact beneath the present roadbed. It is this area that DAI wants ADOT to set aside as a fenced preserve, at least until another entity can assume control, and perhaps indefinitely.

The idea has taken some getting used to. "This has never been done before," says Bettina Rosenberg, the department's historic preservation coordinator. "And we're not in the preservation business." Indeed, while other state transportation agencies may retain archaeological features along their rights-of-way, none seems to carry them on otherwise salable property, and none seems to protect them with so formal an arrangement as ADOT is contemplating. Still, the department has warmed to the preserve idea in part because of the challenge of selling a relic-filled parcel that requires perhaps $2 million in archaeological excavation—by ADOT or the developer—before it can be built upon. Such a sale might also be very time-consuming. "We're seeing this as good for archaeology, and it will save us the cost of doing more data recovery," says Rosenberg. She and DAI scientists note that the preserve would leave the cost of future excavations to others.

Archaeologists, for their part, are ecstatic about the stewardship. William Lipe, an anthropologist at Washington State University, Pullman, stresses that the "finite" number of archaeological sites makes it imperative that "you put some sites in the bank for future research." And Stephen Lekson, a curator at the University Museum of the University of Colorado, Boulder, suggests that the speed of technological advances—ranging from carbon dating in the 1940s to archaeomagnetic dating in the 1970s to the present era's use of ground-penetrating radar—vastly improves data collection. "We need to keep sites around, because we keep getting better at analyzing them," he argues. "Let's leave some raw data for the archaeologists of the future."

No one is more pleased than Bill Doelle, DAI's president. Although DAI stands to lose several million dollars in potential fees for excavating the preserve site, Doelle says he's willing to pay the price to conserve archaeological sites. "This business has to be about more than just digging for dollars. We have an ethical duty to the future of archaeology, and to Native Americans with ancestral ties to these villages, to leave some archaeology in the ground." **–MARK MURO**

Mark Muro writes from Tucson, Arizona.

RESEARCH FUNDING

Windfall for French Biomedical Agency

PARIS—Researchers at France's giant biomedical research agency, INSERM, are rejoicing over a 16% hike in the organization's research budget for 2001. The windfall, announced by INSERM director-general Claude Griscelli last week, is the biggest such increase since 1983. It will give the organization's 260 laboratories an extra $13 million over the current research budget of about $83 million. In addition, 100 new research posts will be created, bringing the total number of scientists to nearly 4000.

The new money represents "a significant sum," says neuroscientist Marc Peschanski, director of the INSERM Laboratory of Neuroplasticity and Therapeutics near Paris. "It will really mean something" to the labs. Geneticist Judith Melki, director of the Molecular Neurogenetics Laboratory in the Paris suburb of Evry, adds that the influx of new money will help boost the "rather modest" support that INSERM labs have received in recent years.

Griscelli told *Science* that such a big increase was "entirely unexpected." Indeed, other public research organizations were awarded smaller amounts—the basic research agency CNRS, for example, will receive a 9% research boost. Griscelli says that one reason the government smiled so brightly on INSERM may be that the agency has been willing to shape its research agenda according to priorities laid down by the research ministry, which wants to see life sciences research pay off in new therapies and products (*Science*, 8 September, p. 1667). Whereas CNRS researchers have strongly resisted what many see as government meddling in research directions, INSERM has largely accepted the government's guiding hand. Thus the new money will be spent in a number of priority areas, including gene therapy, vaccines, psychiatric research, and epidemiology.

Griscelli insists that basic science will continue to receive strong support at INSERM: "I do not want to prioritize by diminishing funds for fundamental research."

–MICHAEL BALTER

ScienceScope

Mercury Bound? European space scientists have suffered from flat budgets and modest plans in recent years. But that may be about to change. Science managers meeting in Paris last week approved an ambitious long-term plan by the European Space Agency (ESA) for five new space voyages (*Science*, 22 September, p. 2019).

The most dramatic proposal is for a half-billion-dollar mission to Mercury called Bepi-Colombo (right). It would be launched in 2009, the same year a smaller NASA-funded craft is scheduled to reach the planet. Another satellite would study the sun, while a third—also a half-billion-dollar project—would map the galaxy starting in 2012. Together with NASA, ESA also wants to launch a gravitational wave observatory and a follow-on to the Hubble Space Telescope.

The 13 October approval came from the agency's science program committee. Sergio Volante, ESA's astronomy missions coordinator, says the agency hopes to convince government ministers at a meeting slated for late 2001 to sign off on a budget increase to start work in earnest.

Courting Openness Federal officials are facing two lawsuits challenging their handling of controversial science issues. The Natural Resources Defense Council, an environmental group, last week sued the Department of Energy (DOE), charging that a panel examining a troubled laser project had violated a federal law requiring openness and peer review. The group has asked a judge to bar DOE officials from using the panel's upbeat report on the National Ignition Facility, a $4 billion laser being built at Lawrence Livermore National Laboratory in California, to win continued funding from Congress. The panel was riven by conflicts of interest, the group says.

A few days earlier, the Competitive Enterprise Institute (CEI) and several members of Congress sued President Clinton and science adviser Neal Lane to block the release of a congressionally mandated report on how climate change may affect the lives of U.S. taxpayers (*Science*, 23 June, p. 2113). CEI seeks a "scarlet 'J' of junk science stamp [on the report] until [it's] brought into compliance," says CEI attorney Chris Horner. Government officials said both groups' charges were unfounded.

Contributors: Judy Redfearn, Robert Koenig, Andrew Lawler, David Malakoff and Jocelyn Kaiser

CREDIT: ESA