Who Owns the Past?

Around the world, scientists are losing bones and artifacts in clashes with native cultures—and some worry that this means the end of archaeology and anthropology

Archaeologist Jim Allen fears not only that the discovery of a lifetime is slipping through his fingers, but that government officials are helping to pull it from his grasp. Allen and colleagues from La Trobe University in Victoria, Australia, have been excavating sites in southwestern and northwestern Tasmania that together hold a continuous record of nearly 35,000 years of human habitation—a rare and invaluable find. Last year, the Tasmanian aborigines, backed by a cultural heritage law, demanded the return of everything the archaeologists had found.

The aborigines won't tell the scientists what they plan to do with the artifacts and animal bones. But Allen fears they may be thrown in a lake and lost forever, the fate of some artifacts returned last year. So he has refused to hand them back. The Tasmanian government, in turn, has refused to renew his excavation permit. But Allen and his colleagues aren't backing down. "We've spent 8 years excavating in Tasmania with government grants, and we're not just going to have that effort snuffed out," says Tim Murray, head of archaeology at La Trobe.

Allen and Murray are not alone in their plight. Just last week, aboriginal elders, backed by a similar law, told anthropologists they may rebury the remains of the oldest Australians—bones unearthed 20 years ago by archaeologists at a burial site at Lake Mungo in New South Wales—and with them possible clues to the colonization of the whole Pacific. And this is not just a problem down under. Across the globe, archaeologists and anthropologists are making the unhappy discovery that governments are giving cultural traditions and religious beliefs higher priority than scientific inquiry. For instance, the Attorney General of Israel, to avoid violating strict Jewish customs concerning human remains, has brought an abrupt end to research that used bones to paint a detailed picture of migration, settlement, and the origins of some human diseases. And in the United States, a federal law that has resulted in the repatriation of thousands of bones and artifacts to Native Americans in recent years (*Science*, 1 April 1994, p. 20) is now being invoked to force the return of hair fragments containing valuable ancient DNA (see box on p. 1425).

While scientists testify to the importance of accommodating traditional beliefs—and acknowledge that many researchers have run roughshod over those beliefs in the past—they say their science is being irrevocably harmed. "It's like saying a biologist can't use a microscope anymore, or a chemist can't use any chemicals," complains Israel Hershkovitz, a physical anthropologist from Tel Aviv University, currently on sabbatical at the Cleveland Natural History Museum. He and others also argue that what's at stake is more than their profession—information of value to all humanity is being irretrievably lost: "These bones were our window onto the past, and now they've shut the window."

Israel: The end of anthropology?

One window recently slammed shut is Israel's Antiquities Authority, which once housed one of the world's most diverse collections of skeletons of ancient populations, recovered from sites across the country. "Nearly all the human bones have been transferred," says Amir Drori, the Antiquities Authority director. "There's almost nothing left." The bones were moved to the Religious Affairs Ministry, and because they are being reburied in large, unmarked pits, Drori says that the transfer spells "the end of anthropology in Israel. It is no longer possible to do this research in this country."

T. MURRAY/LA TROBE UNIV.

Battle over bones. These bone points are among ancient artifacts excavated by Australian researchers—and aborigines want them back.

The bones' reinterment results from a new interpretation of Israel's 1978 Antiquities Law handed down last summer by the country's Attorney General, Michael Ben-Yair. Previously, anthropologists had been allowed to study the bones—as long as they returned the remains from Jewish, Christian, and Moslem graves for reburial when their research was completed. But over the last few years, ultra-Orthodox Jews have insisted that such studies violate strict Jewish law, which forbids the disturbance of Jewish cemeteries; further, they argued that their customs apply to all burials, regardless of religious affiliation. They then began staging noisy demonstrations at excavations, destroying sites and often endangering the archaeologists, and ultimately involving the police.

That's when the Attorney General got involved. The Minister of Police asked Ben-Yair to clarify the law, and he came down squarely on the Orthodox side: The Antiquities Law gave scientists the right to study humanmade objects, not their makers. Rabbi Meir Rogosnitzky, director of the Society for Protection of the Sanctity of the Dead, an organization whose purpose is to prevent scientists from studying human remains, explains that "in Jewish belief, life is not simply a dead end." The body and the soul are connected even beyond death, he says, and "the claim of scientific research is insufficient legal justification for the traumatic violation incurred by investigative treatment." Many scientists believe that the government has supported such beliefs in an effort to gain political allies among the Orthodox Jewish party in the Knesset.

Not only did the ruling apply to new excavations, where skeletal remains are now quickly placed in boxes and handed over to religious officials, but to all human remains unearthed since 1978, which practically emptied the Antiquities Authority collection. The authority was only able to retain human bones older than 5000 years, as Orthodox Jews believe that humankind began at approximately that time. (Because of this, physical anthropologists believe that Israel's prize Neandertal and early *Homo* specimens are not subject to the law.)

But that newly created 5000-year blank spot is an important stretch in human development, anthropologists say. Israel during this time was a crossroads of human migration, with a variety of cultural groups passing through. "No one knows where the Phoenicians or Hittites came from," says

A Tangled Affair of Hair and Regulations

A year ago, Rob Bonnichsen's technique for recovering ancient hairs, randomly shed at an archaeological site thousands of years ago, was hailed by scientists as a breakthrough. The reason: The hairs contained enough DNA to help track early human migrations (*Science*, 5 August 1994, p. 741). But Bonnichsen, director of the Center for the Study of the First Americans at Oregon State University, Corvallis, now finds the hair enmeshed in a struggle between science and Native American rights.

After Bonnichsen found the hairs in southwestern Montana, the Confederated Kootenai-Salish Tribes of the Flathead Reservation and the Shoshone-Bannock Tribes of the Fort Hall Reservation filed a formal repatriation request last October under the 1990 Native American Graves Protection and Repatriation Act (NAGPRA). The request went to the Bureau of Land Management (BLM) in Billings, the government agency charged with enforcing the act locally, and 3 months ago the BLM asked Bonnichsen to turn over all of his samples to the FBI to determine if they really were human. Although the BLM has now agreed to take only four hair samples, Bonnichsen is upset by the government's interference in his research. "I don't see how human hair that was naturally shed has anything to do with NAGPRA," he says, asserting that the law was intended to cover human remains in burials. The hairs he has recovered are "scattered all over the site; it is *not* a burial."

But the Native Americans—who declined to comment for this story—have told the BLM otherwise. "They take a very strict line and regard the hair as human remains," explains Gary Smith, the archaeologist for the BLM in Montana. "In their culture, hair is very sacred—even that which we think of as randomly shed." While waiting for the FBI to complete its analysis, Bonnichsen is negotiating with the Native Americans, hoping to strike a compromise so that the BLM will renew his permits for the Montana site.

There may be more such disputes if recently released draft recommendations from the Department of the Interior's NAGPRA Review Committee become official. The draft deals with so-called "unaffiliated" remains and funeral goods—material now housed in museums and universities that cannot readily be identified as the property of a particular tribe. Much of this is ancient, dating as far back as 12,000 years, so it is of special interest to prehistorians studying early human settlement patterns. It also predates the origins of historic Native American tribes, according to the scientists. Many Native Americans, however, argue that, unaffiliated or not, this is the stuff of their ancestors.

"If scientists ... hope to convince Native Americans about the scientific value of their research, ... now is the time to speak up."
—Frank McManamon

The review committee agrees, explicitly turning control over all unaffiliated human remains and associated funerary objects to the tribes. Frank McManamon, the chief archaeologist in charge of NAGPRA at the Park Service, notes that the wording of the act does not address how far back in time Native Americans can lay claim to ancestral remains. Comments on the draft recommendations will be discussed at the next review committee meeting in October in Anchorage, Alaska. "If scientists or others disagree about these recommendations, or if they hope to convince Native Americans about the scientific value of their research to all of humanity, now is the time to speak up," he says.

–V.M.

Patricia Smith, a physical anthropologist at Hebrew University. "And what was the genetic relationship between them and the Jews or Romans?" By sampling the bones for their DNA, scientists might glean answers to these questions.

Moreover, farming villages were growing into cities during this period—and with that transition came new types of diet and disease, which left their marks on bones. "It had a tremendous impact on health," says Hershkovitz. "New diseases were introduced, while old ones disappeared. In the bones you can see how biology follows cultural events." Ariela Oppenheim of Hebrew University has been searching DNA from these bones for the origin of thalassemia, a blood-cell disease much like sickle-cell anemia, which primarily afflicts people of Middle Eastern and Mediterranean ancestry.

Now the database for such research—the human bones—is beyond the reach of archaeologists and physical anthropologists. "It's the death verdict for us," laments Hershkovitz, adding, "I might as well close the door on my office and move to the States." For Smith, the Attorney General's decision "means that Israel has turned its back on the 20th century."

Researchers have asked the Minister of Education to propose a revision to the Antiquities Act that would protect human remains of great age from reburial, thus preserving them for future study. But the political climate seems to be worsening: A bill giving the Ministry of Religion control over all human remains, regardless of age, is expected to be introduced in the Knesset.

Australia: Aboriginal rights

The political climate has also turned hostile toward anthropological and archaeological research in Australia, since national and state laws enacted in the last decade gave aborigines the rights to approve all excavations relating to their cultural heritage—a heritage that involves some of the earliest settlements in the Pacific. "The old days when you could get in your Land Rover, head out to the desert, and do whatever you wanted are over," says Rhys Jones, an archaeologist at the Australian National University in Canberra.

Jones and others hasten to say that such cooperation is a good development, as in "the old days" aborigines were never consulted about the disposition of any stone implements or human remains that belonged to their ancestors, Australia's first settlers. But now, on occasion, it's the archaeologists who are not consulted.

"It's all a matter of who controls the past," says Jones. "I take the global view: that Australia's deep historical sites are part of the universal history of humankind. But some aborigines view those sites as belonging only to them—and that exclusionist view can cause trouble."

It has in the state of Tasmania, where Allen, Murray, and their colleagues have squared off against the Tasmanian Aboriginal Land Council (TALC) and the government of Tasmania itself. Through the Tasmanian 1975 Aboriginal Relics Act (which is currently being revised), TALC recently demanded that researchers return artifacts excavated from three major sites, but the scientists have refused to do so until they complete their research. "We are standing firm on the need to do scientific archaeology," says Murray. As a result, the Tasmanian government has refused to renew their re-

search permits or to issue any new ones.

The disputed sites are rare areas of long-term continuous human occupation, and one, which lies at 44 degrees south, represents the world's most southerly human occupation at the height of the Ice Age and shows how humans adapted to the severe conditions of those times. "They were living right at the end of the world," says Allen, "and only a few hundred meters from glaciers." While Murray says he and his colleagues will return the artifacts and faunal remains from the sites, he is adamant that they will do so only after completing their analyses—and when they have a guarantee from the government that the stones and bones will not be destroyed.

Last year TALC did scatter a sampling of 12,000- to 17,000-year-old artifacts over ancestral lands that had been flooded by a dam. The aborigines did this "to heal" the site, according to Greg Lehman, an aborigine and the heritage officer at the Tasmanian Aboriginal Centre. And he adds that it's no concern of the scientists what the aborigines decide to do with any of these materials. "We will do what is right according to our customs and values. We're prepared to argue our rights to this material at any level—to the High Court of Australia if it comes to that," Lehman says.

P. SMITH/HEBREW UNIV.

Will science get buried? Laws in Israel call for the immediate reburial of this skeleton, before any scientific analysis is undertaken.

Other Australian archaeologists are closely watching the Tasmanian standoff, but few believe their colleagues will have the final say. "I went through a whole decade of difficulties like that," says Alan Thorne, a physical anthropologist at the Australian National University in Canberra. "But in the end there was nothing I could do—and in fact, we're coming into a much better time, working collaboratively with the aborigines."

Collaboration does have limits, though, and 2 weeks ago three aboriginal tribes told Thorne they wanted to take back from him skeletal material from Lake Mungo that is at least 35,000 years old, representing some of the oldest known Australians. "I suspect that they will want to rebury this material," he said after meeting tribal representatives, "although it has not been decided yet." The idea admittedly makes him "unhappy," but Thorne adds, "if that is the price we have to pay to be able to continue excavations and research, then we will do so."

Nor, he insists, does this spell the end for physical anthropology in Australia, for at other locales aborigines have asked him to study remains. Murray and Allen, too, although shut out of Tasmania, are working on other archaeological excavations with aborigines in the state of Victoria. "The aborigines here are inclusive," says Murray. "They want us to do this work, to help tell them about their history." But scientists elsewhere, from Canada to Egypt to Kenya, worry that the trend toward reburial will spread to their shores, giving local interests final say over ancestral remains once considered the heritage of all humanity.

–Virginia Morell

RUSSIAN SCIENCE

President's Council Lambastes Ministry

MOSCOW—The bitter struggle over control of Russian science, which has pitted the Ministry of Science and Technology Policy against the Russian Academy of Sciences (RAS), reached a new level late last month. At the first meeting of the Council on Scientific and Technological Policy—a powerful new committee headed by President Boris Yeltsin with Prime Minister Viktor Chernomyrdin as vice chair—the ministry came under fire for its efforts to set up systems of peer review and competitive funding to support the country's active researchers. Some of the ministry's supporters in the Russian parliament, fearing that the attacks could spell the beginning of the end for the ministry, quickly launched a counteroffensive.

The broadside at the council meeting came from RAS President Yuri Osipov, who has long fought the ministry's efforts to give high priority to competitively awarded research funding at the expense of the old Soviet-style block funding system controlled by the RAS. During a lengthy discourse on the problems facing Russian science, Osipov said: "In late 1991 and 1992, evident attempts were undertaken to demolish the historically established pattern of organization of Russian science, which had proved its value, and to violently transplant it with Western models."

The real purpose of Osipov's attack became obvious at the end of his speech when he called for the creation of a state committee for scientific and technological policy that would perform many of the functions currently carried out by the ministry. The committee would be presided over by "a prominent scientist and administrator ... who would deeply understand the problems of the development of science and technology in the interests of the state," Osipov said.

It is no surprise that the new council provided a forum for the ministry's opponents. It was the brainchild of Nikolai Malyshev, Yeltsin's science adviser, who first tried to eliminate the science ministry in late 1993 (*Science*, 14 January 1994, p. 166), and its members include Osipov, four of his vice presidents, and the presidents of other academies. But Osipov's attack is causing considerable unease among supporters of the ministry and the scientific community.

There were attempts to "violently transplant [the Russian science system] with Western models."

—Yuri Osipov

Details of the meeting were leaked to a Moscow newspaper several days before it was due to take place, prompting two members of the Duma, the lower house of Russia's parliament, to write to Yeltsin. Nikolai Vorontsov, chair of the Duma subcommittee on science, and Pavel Bunich, deputy chair of the committee on property, privatization, and economics, expressed support to the president for science minister Boris Saltykov.

Vorontsov is disturbed that powerful academy administrators hold so much sway with the government. He later told *Science* he thought Saltykov does a good job in supporting important scientific institutions outside the framework of the RAS, and took issue with Osipov's criticisms of Western-style funding models: "The peer review system is used not only in the West but also in the East and all over the world, so such accusations are totally inconsistent." Fedor Kiseliov, head of the division of tumor-transforming genes at the Blokhin Cancer Research Center in Moscow, says he approves of the ministry's changes and welcomes its system of competitively awarded grants.

So far, there has been no indication that the government will act on Osipov's advice. But Vorontsov fears that if the RAS representatives on the powerful new council get their way, it will only lead to further bureaucratization of funding distribution.

–Andrey Allakhverdov

Andrey Allakhverdov is a writer in Moscow.