



Whose ancestor? Mold of skull made before Corps of Engineers seized Kennewick's remains.

where the bones have resided, per court order, since last October.

The skeleton already has a colorful history (*Science*, 10 April 1998, p. 190). Discovered in July 1996, the bones were seized by the Corps of Engineers on behalf of Native Americans under a 1990 law, the Native American Graves Protection and Repatriation Act. A group of scientists promptly sued for the right to study the remains, which have been claimed by a coalition of five tribes as well as a group representing ancient Nordics. A Portland court order kept them above ground but in limbo at Pacific Northwest National Laboratory in Richland, Washington, where tribal groups visited them occasionally for ritual purposes.

The Corps has turned decision-making over to the Interior Department, and last spring a federal judge gave the department permission to proceed to examine evidence bearing on Kennewick Man's identity. Now he's finally ready for a full inspection. The first step involves scrutiny of bones, teeth, soil samples, and a rock spearpoint embedded in the pelvis to establish whether the man fits the law's definition of a Native American, which includes the words "of, or relating to, a tribe, people or culture that is indigenous to the United States." McManamon says the term applies to anyone found to be in an area before the Europeans got there, and it's not necessary to find "a biological link between modern tribes and ancient remains."

If the findings are inconclusive, McManamon says scientists will check with Native Americans, with whom they have been consulting continuously, before applying invasive procedures such as radiocarbon dating of bones and attempts at DNA analysis. If Kennewick is deemed to be a Native American, says McManamon, scientists will then explore the archaeological record and local tribal histories to establish whether he has "cultural affiliation" with any modern tribe.

Scientific observers are gratified that scientists are finally able to get at the bones, but they're upset with Interior's procedures and its

definition of Native American. The term, by that interpretation of the law, encompasses "Norse remains in Maine ... and a lot of Japanese shipwrecks," complains anthropologist Robson Bonnichsen of Oregon State University in Corvallis, one of the plaintiffs in the court case. He and others contend that the law requires a relationship to present-day populations. Bonnichsen is also dubious that the government will find any connection with modern-day Indians given that the only artifact is a spearpoint, and the skull—which looks like a cross between a Polynesian and a member of Japan's Ainu tribe—is quite different from those of today's Native Americans.

Interior spokesperson Stephanie Hanna says a preliminary report from the expert team is due in mid-March and data will eventually be made public. The remains will ultimately be given to the tribe in question if a cultural affiliation is established. But the scientists' suit is only "on hold," says plaintiffs' lawyer, Alan Schneider, pending the outcome of the current exercise.

—CONSTANCE HOLDEN

Culture Collections Seek Global Help

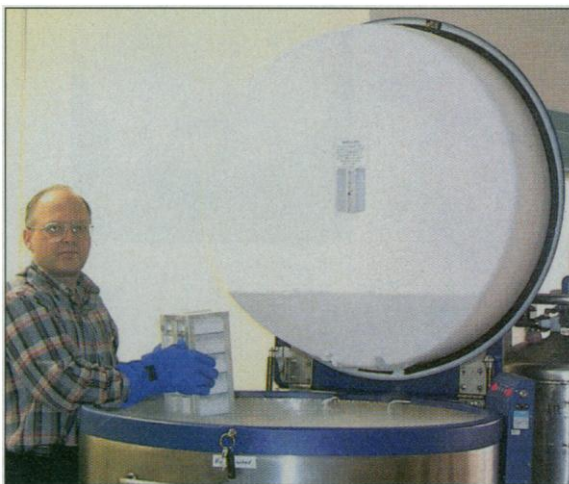
TOKYO—The explosion of interest in biodiversity has generated a wave of popular support for preserving and cataloging the world's plant and animal species. But their less flashy brethren—organisms such as

Development (OECD) is expected to launch a major study later this year that could lead to an international agreement on preserving these biological materials. Scientists and government officials who gathered here last week for two meetings* asked for OECD's help, and the idea has been embraced by officials at the Paris-based grouping of the world's 29 leading industrialized democracies. "There is a growing awareness among policy-makers beyond the scientific community that biological resource centers are vital ... for future research in the life sciences and biotechnology," says Solomon Wald, who heads the OECD's working group on biotechnology. Adds Alan Doyle, a microbiologist with the Wellcome Trust in London: "It takes some wider group with enough influence to get policy changes, and the OECD seems to be the right vehicle for this."

The working group on biotechnology is expected to adopt the idea at its spring meeting. It would then probably form a task force to study six aspects of managing such collections: access and distribution; quality assurance; efficiency and the avoidance of duplication; funding and sustainability; education, training, and research; and networking. Wald says the task force, with experts from interested countries, will develop policy principles that could form the basis for an international agreement to promote the health of the biological resource centers. The study is expected to take a year or more.

Researchers say that such help is badly needed because efforts by the scientific community have fallen short. Many present-day collections trace their roots to a dedicated individual or group that collected specimens for academic interest, or to companies that collected materials for commercial purposes. Brewers, for example, often started collections of yeasts. But regardless of their origin, most of the major collections are now under the wing of universities or public institutions. Perennially short of money, they face major challenges in keeping up with the times.

One of the most pressing needs is to improve, or in many cases to establish, the capacity to manage the rapid accumulation of genetic information about their holdings. "The centers are being crushed by the volume of new strains and the avalanche of



Heavy demand. Culture collections are struggling to serve a growing number of users and uses.

yeasts, bacteria, fungi, and cell lines—haven't been able to capitalize on that interest. "The collections are taken for granted," laments Jennie Hunter-Cevera, a microbiologist at Lawrence Berkeley National Laboratory in California. "What you cannot see, you don't value."

Help may be on the way, however. The Organization for Economic Cooperation and

* OECD Workshop on Scientific and Technological Infrastructure, Tokyo, 17 to 18 February, cosponsored by Japan's Ministry of International Trade and Industry; Microbial Resources Centers in the 21st Century: New Paradigms, Tokyo, 16 February, sponsored by World Federation of Culture Collections.

genetic information," says Hideaki Sugawara, an informatics specialist at Japan's National Institute of Genetics in Mishima. Adds Raymond Cypess, president of the American Type Culture Collection (ATCC) in Manassas, Virginia, which holds over 78,000 material samples, "[the centers] are really information resources."

Accordingly, meeting participants strongly backed the creation of what Wellcome Trust's Doyle calls "a virtual biological resource center." The idea is to put online all the genomic and functional information on the holdings of individual collections, with search capabilities for researchers worldwide. But there are daunting obstacles, chief among them the many different database and classification standards already in use.

Aside from informatics, curators are also struggling to find the right balance between unnecessary duplication of holdings and the need to keep key strains at each center for logistical and strategic reasons. There is also debate over whether a self-sustaining not-for-profit corporation, such as the ATCC, or a publicly funded institution, such as is common in Europe, offers a better model for the long-term viability of a collection.

Participants don't expect the OECD task force to come up with all the answers. But Doyle says he'll be satisfied if the effort contributes to "the future stability of culture collections."

—DENNIS NORMILE

CANADIAN BUDGET

Health Research Gets Fundamental Overhaul

OTTAWA—It's rare for the head of a major government research organization to applaud politicians for abolishing his agency. But for Henry Friesen, president of the Medical Research Council (MRC) of Canada, last week's announcement that the MRC would be replaced in a year's time by a new Canadian Institutes of Health Research (CIHR) marks a major step forward in his effort to fundamentally change the nature of Canadian biomedical and health research.

Friesen first proposed CIHR as a way to create a national network of "virtual" research institutes. His hope was that the concept might persuade the government to pump more money into health research (*Science*, 8 May 1998, p. 821). Now the idea has emerged as a key element in a "health and welfare budget" that Finance Minister Paul Martin unveiled last week. That budget, for the fiscal year beginning 1 April, takes advantage of a projected surplus to commit \$325 million more for a grab bag of research initiatives that includes bolstering Canada's space program and expanding programs to renovate aging academic labs and

foster collaboration with industry.

An elated university community is praising the CIHR initiative, which would build on work at the country's 16 academic health centers. Like the MRC, the CIHR will be in the business of issuing extramural research grants. But the science it supports will encompass more health services and population-based research than did its predecessor, which focused primarily on biomedical research.

Through external advisory boards, Canadians will have a greater say in determining the type of projects to be supported, says Association of Universities and Colleges of Canada President Robert Giroux. "It's also coordinating and maximizing what's being done in all areas," he adds. Canadian Medical Association President-elect Hugh Scully sees CIHR as a shot in the arm for the entire Canadian health care system, and University of British Columbia President Martha Piper notes that "being able to network our brightest minds across many labs and institutions is really quite strategic."

But while the expectations for CIHR may be great, the initial funding is relatively modest and falls well short of the \$325 million-a-year boost in health research funding that proponents had requested during a year-long campaign. When the CIHR opens its doors next year, it will receive \$219 million, a \$39 million supplement to MRC's base budget. An additional \$72 million would come in fiscal year 2001–02. Friesen, who is in line to head the new institutes, says that the government is telling researchers "to walk

before we give you sufficient funds to run at top speed."

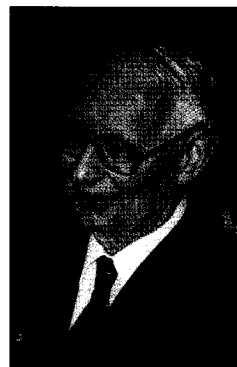
Indeed, the next 12 months will be anything but a stroll in the park for CIHR. A task force appointed by Health Minister Allan Rock and headed by Friesen will debate how the organization will be structured, where institutes will be based, and what they will concentrate on. It will also decide whether to roll under the CIHR umbrella roughly \$70 million a year in health research now being conducted by the Natural Sciences and Engineering Research Council (NSERC) and the Social Sciences and Humanities Research Council. Federal officials anticipate a year of "immense" and "intense" negotiations.

University administrators also give thanks for a \$130 million boost to the \$520 million Canada Foundation for Innovation, which this spring expects to award its first major grants for projects aimed at rejuvenating an aging research infrastruc-

ture (*Science*, 28 February 1997, p. 1256). CFI President David Strangway says he hopes the new money will generate "more imaginative" applications. The government also gave the Networks of Centers-of-Excellence program a 65% raise, to \$50 million. NSERC President Thomas Brzustowski said the monies will allow for as many as eight new centers linking researchers across campuses in joint projects with industry.

NSERC itself received an unexpected \$16 million increase in its \$305 million budget. The new budget also includes \$156 million more over 3 years for the Canadian Space Agency, which had threatened to withdraw from long-term participation in the international space station. The government has promised to stabilize its budget, now \$220 million but falling rapidly as several projects conclude, at \$195 million.

Ottawa was less responsive to a proposed 5-year, \$175 million national genomics initiative (*Science*, 3 July 1998, p. 20), which finance officials nixed after deciding that it lacked "maturity." And it gave the National Research Council only \$3 million of its \$16 million-a-year request to recover from 3 years of budget cuts (*Science*, 18 September 1998, p. 1781). —WAYNE KONDRIO



Still in charge. MRC's Henry Friesen is in line to lead new Canadian health institutes.

TO YOUR HEALTH

Increases for health and medical research figure prominently in Canada's new budget. The beneficiaries include:

Program	Increment
Canada Foundation for Innovation	\$130 million for infrastructure grants
Networks of Centers-of-Excellence	\$20 million
Medical Research Council	\$18 million
Social Sciences & Humanities Research Council	\$8 million for health and general grants
Natural Sciences & Engineering Research Council	\$21 million for health and general grants
Canadian Space Agency	\$27 million for ongoing operations
Canadian Health Services Research Foundation	Two endowments, totaling \$40 million, for health and nursing research
Canadian Institute for Health Information	\$62 million for information projects