for making comparisons and for measuring changes through time."

Included in the Melbourne collection is a series of 50 crania from Coobool Creek, all of which date to around 10,000 years. Milford Wolpoff, of the University of Michigan, had planned to study this series later this month in an attempt to address one of the most interesting questions of Australian prehistory: did the indigenous population derive from two separate migrations of Indonesian and South Asian people some 40,000 years or so ago? Migrations are frequently hypothesized in prehistory but are often difficult to investigate. The Australian material, particularly Coobool with its age intermediate between the supposed event and the present, offers an unparalleled opportunity to test a specific case. According to Thorne, the Coobool material is likely to be reburied.

Although there is a good deal of uncertainty about the pace of future events, discussions on the fate of various parts of the university and museum collections are expected to spread over months rather than weeks. "We will start from the position that everything should be put back in the ground, but we are prepared to discuss individual cases," a lawyer for the Aboriginal Legal Service told *Science*. "People who want to do research will have to justify its importance."

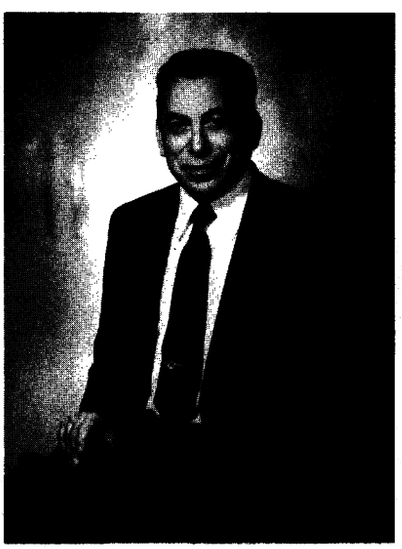
Meanwhile, Australian archeologists, who have been very active in raising the consciousness of the Aboriginal community to their heritage, are beginning to face potential problems themselves. According to several anthropologists in Victoria, reburial may eventually include cultural material in addition to skeletons, which, for archeologists, would be a cruel twist of irony. And the strength of feeling that is gathering can be further judged by the demands, now beginning to be voiced, that books containing sacred Aboriginal pictures should be removed from libraries.

There is a clear parallel between American Indians and Australian Aborigines in terms of the iniquities dealt them throughout history, but the contemporary combination of others' guilt and their own political clout appears to be handing the Aborigines an opportunity to grasp much more quickly and more completely what they now want: to wrest their heritage from the hands of their colonizers. But whether burying the whole of their heritage is the best way to preserve it, rather than entering into a collaborative scholarly appreciation of it as the American Indians have, is a matter that requires some dispassionate discussion.—**ROGER LEWIN**

New NSF Chief Asks Hard Look at Budget

National Science Foundation director-designee Erich Bloch has not yet moved into the foundation's front office, but he has already made his presence felt by asking NSF managers to scrutinize their operations and identify where significant cuts in the budget might be made.

The purpose of the exercise, according to NSF officials, is to provide leeway to fund new programs. Bloch's request was made as a result of his involvement in the preparation of next year's budget which is now in the final stages at NSF. Foundation sources say that several worthwhile initiatives were being proposed for inclusion in the budget, but it was thought that the Office of Management and Budget would not provide the substantial additional funds needed to pay for them. Bloch then requested that the whole NSF budget be examined to provide a basis for making informed choices on the budget. Foundation officials say that Bloch also sees the exercise as helping him to understand what priorities the NSF staff puts on its programs.



Erich Bloch

Trying to elicit NSF staff's priorities.

One insider noted that government budget-makers ordinarily focus on the "margin," that is the programs affected by funding changes from one year to the next. Bloch, with his IBM background, seemed to be following the more usual practice in industry of looking at both the margin and the "base," or total previous budget, to establish priorities.

Some observers are interpreting Bloch's request as a sign that NSF is bracing for big cuts in the next budget. These members of the Washington science bureaucracy read the signs as indicating that, whoever may win the November elections, the pressures generated by the huge federal deficit will result in sharp reductions in controllable expenditures, among which R&D is vulnerably included. NSF officials reject this suggestion, insisting that there is "no hidden agenda" behind the Bloch exercise and claiming that NSF anticipates another favorable budget whatever the outcome of the election.

Bloch, an IBM vice president, was nominated on 6 June (*Science*, 22 June, p. 1318) to replace Edward A. Knapp who is returning to Los Alamos National Laboratory. Bloch was named to a recess appointment on 2 July, which would give him legal standing as director for the rest of this Congress pending Senate confirmation. Bloch, however, is winding up his duties at IBM and has not yet been sworn in. Knapp is expected to remain as operating head of NSF until September when Bloch is scheduled to take over formally.—**JOHN WALSH**

Science Panel Plans Bush Report Update

The House Science and Technology Committee will embark in January on a 2-year study of U.S. science policy. In announcing the project, science committee chairman Don Fuqua (D–Fla.) noted that the committee is concerned that prevailing policies which were strongly influenced by Vannevar Bush's famous 1945 report, "The Endless Frontier," may not be adequate to the demands facing U.S. science in the future.

Committee sources say that initiative for the study came from Fuqua and other committee members who feel that it is time to look at the principles and assumptions underlying science policy in a way that it is not possible during the piecemeal process of legislative authorization.

Fuqua is naming an 18-member bipartisan task force of committee members, which is expected to meet when Congress returns from its current recess, to begin fashioning the agenda for the study.

While the prospective study of science policy is billed as comprehensive, its limits will apparently match the committee's jurisdictional boundaries. The National Aeronautics and Space Administration, the National Science Foundation, and National Bureau of Standards are the main agencies in the science committee's domain. However, House rules give the Science and Technology Committee special oversight powers over all nonmilitary research. That includes R&D for agencies such as the National Institutes of Health and Department of Agriculture over which other committees have legislative jurisdiction.

To keep things manageable, the study is expected to concentrate on policy for federally supported basic and applied research, leaving out industrial policy which touches on such matters as innovation and patent and antitrust law. The main focus, therefore, will be on relations between the federal government and universities.

—JOHN WALSH

Shuttle Flight Scrubbed

The 12th flight of the space shuttle, originally scheduled for June, has been formally scrubbed and its principal payloads moved to the following flight, the National Aeronautics and Space Administration (NASA) announced on 12 July. Under a new plan, the next flight will be launched in late August and its astronauts will be responsible for accomplishing in 6 or 7 days a series of tasks that was formerly spread across 2 weeks.

The last flight was delayed first by a computer failure and then by the malfunction of a valve in one of the shuttle's main engines shortly before the scheduled lift-off (*Science,* 20 July, p. 292). At the time of NASA's decision to cancel the flight outright, 3 weeks of intensive investigation had failed to turn up any solid clues as to why the valve had malfunctioned. Similarly, the computer failure had been traced to a "contaminated" transistor, but no one knew how or why the contamination occurred. In addition, an unrelated problem with a satellite booster also remained unsolved.

NASA officials made light of these problems in their announcement, emphasizing that the shuttle had operated properly in shutting down after the computer and engine malfunctions. But they left open the possibility that continuing uncertainty about any or all of these problems might cause additional changes in the schedule and manifest for the new flight. As it is, technical problems with the shuttle and its associated equipment have been responsible for the elimination of four flights from the original schedule for 1984.—R. JEFFREY SMITH

Fuel Switch May Shut Some University Reactors

A. Francis DiMeglio, spokesman for the operators of U.S. research reactors, says that several university programs may close down if the Nuclear Regulatory Commission (NRC) carries out the new rule it published on 6 July. The rule requires the owners of 31 non-power reactors in the United States to come up with plans in the next year for ending the use of high-enriched uranium (HEU) fuel.

All but a few reactors that can show they have a "unique purpose" will be asked to convert to low-enriched (LEU) fuel. Those likely to be exempted are reactors at the Massachusetts Institute of Technology, the University of Missouri, the National Bureau of Standards, and perhaps Union Carbide's plant in Tuxedo, New York.

The change is being ordered to make weapons control policy appear more consistent. The United States' credibility will improve if it abides by the same limitations on bomb-grade fuel that it is asking other countries to follow (*Science,* 2 March, p. 912). The principle is commendable. But researchers point out that the NRC rule will affect only a small fraction—perhaps 10 percent—of the HEU shipped by this country, and that the federal government's own research reactors will not be affected.

DiMeglio is director of the University of Rhode Island's reactor and chairman of the National Organization of Test, Research, and Training Reactors. The group will meet on 23 August at McMaster University, Ontario, and, according to DiMeglio, will probably draw up a unified response to the NRC at that time.

Although Congress recently appropriated $2 million to help universities make the change from HEU to LEU, university officials say it is unlikely that federal aid will be enough to outweigh the cost of changing to low-grade fuel. "Engineering departments have been hard strapped to keep current as it is," says DiMeglio, and nuclear engineering has been particularly at a disadvantage because of low enrollment. "Some deans are going to look at this new rule and see it as just the first of a whole string of new requirements." They are nervous about another new rule waiting in the wings at the NRC that would require improvements in campus security systems. "Deans may decide that it's better to put their money into something that doesn't have these problems, like robotics," DiMeglio says.—ELIOT MARSHALL

Morocco Reports Lethal Radiation Accident

Moroccan newspapers reported in June what appears to be the gravest accident on record involving a radioactive source. According to *L'Opinion,* six members of a family have died and 20 other people have been exposed to high levels of radiation from an industrial device. Several of the survivors have been flown "overseas" for treatment, *L'Opinion* notes. A health physicist associated with the World Health Organization (WHO) says they have been taken to the clinic of Dr. Henri Jammet at the Institut Curie outside Paris. It is one of two WHO radiopathology centers in the world (the other is in Oak Ridge, Tennessee) that provide emergency treatment for radiation victims.

Although few details are available, officials at the Nuclear Regulatory Commission in Washington believe the device that did the damage was an iridium-192 radiography source used in photographing metal welds. It seems to have been taken without authorization from a site where a nuclear plant is being built near Medina.—ELIOT MARSHALL