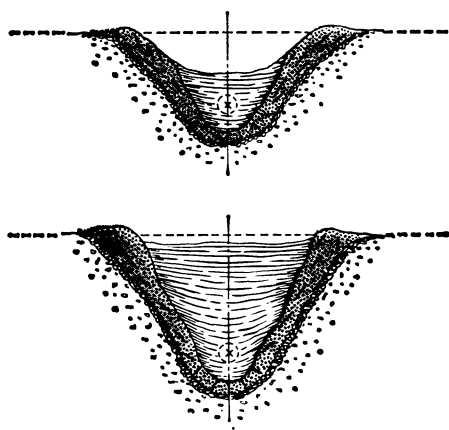


where the nuclear nations spurted ahead during the 1950's. They are trying to catch up in these fields, and they fear that renouncing one advanced technology will put them farther behind in others while their top scientists would depart to the U.S. and other nuclear countries.

Their fears are not eased by U.S. statements that the technology gap can only be closed by creation of bigger markets through European political union. Neither is the U.S. assurance, issued by an interagency committee last week, that the brain drain is not a serious threat, liable to be received with enthusiasm. The report said the



Nuclear cratering: peaceful A-bomb.

U.S. could take some remedial steps to help developing nations lure back their people, but no steps should be taken to prohibit the migration of scientific talent.

Despite this unrest, the non-proliferation treaty will probably contain a blanket prohibition of nuclear explosives development. This is because both the U.S. and the Soviet Union agree that the treaty would be meaningless without it.

Although the U.S. and Russia are on the same side in the technology question, the problem of controlling the flow of fissionable material produced by nuclear reactors has raised controversy.

There are two agencies that monitor the movements of fissionable material: the International Atomic Energy Agency in Vienna, and Euratom, the West European agency. Euratom was set up first, and has regulated the use of material among its member nations. The IAEA, which the U.S. has strongly supported, also regulates the flow of fissionable material among member nations.

The Euratom nations are reluctant to give up authority to the IAEA, and the U.S., although aiming for a single, world-wide inspection system, has sup-

ported Euratom's claims. But Russia, which considers Euratom as an agency of NATO, has insisted that the European club join the rest of the world in the inspection system to insure against the proliferation of nuclear weapons.

The Phillips Report's Tortured Trail

It was the most mysterious piece of writing since the Dead Sea Scrolls.

Within days after the Jan. 27 fire that killed three astronauts in an Apollo space capsule, guarded references began appearing to a scathing report sent more than a year before from the National Aeronautics and Space Administration to the prime Apollo contractor, North American Aviation. Produced by a NASA team under program director Gen. Samuel Phillips, the elusive document reportedly blasted North American for the same shoddy work and poor engineering that the accident investigators found 13 months later.

Yet Congressional investigators were unable to dig the report up. North American President J. Lee Atwood testified under oath that "Gen. Phillips has not given us a copy of any report." Even NASA head James Webb, notorious for his loud protestations that he always gives Congress whatever it needs, produced only a watered-down summary when pressed by the House Science and Astronautics Committee.

In the 10 days that followed, the Phillips report was sought unsuccessfully both by Congress and the press. Then on April 26, came the climax: Representative William Ryan (D.-N.Y.) announced that he, at last, had a copy. Declining to reveal his source, he gave NASA three days to make the entire report public on its own, which it tacitly refused to do. When Ryan revealed the document himself neither NASA nor North American would comment on its authenticity, but prompt signs of life in both organizations gave it weight.

On the same day, NASA announced a series of conferences with half a dozen other large space companies to work out "a revised plan for the Apollo program" that almost certainly meant the space agency was thinking of taking some of its business elsewhere. Included among the conferees was the newly-merged McDonnell-Douglas Corp. McDonnell built both the Mercury and Gemini spacecraft.

That was on a Saturday. North American waited until the weekend was over to announce a high-level shakeup in which the head of its Apollo-building Space and Information Division, conveniently on sick

leave at the time, was replaced by William B. Bergen, one-time head of Martin-Marietta Corp., who had been with North American for scarcely three weeks. At the same time, the division's executive vice president was kicked downstairs to the new post of assistant vice president, while the vice president formerly in charge of manufacturing took over his seat.

Ryan's "Phillips Report" should have been enough to curdle blood all over North American's California domain. Complete with a signed letter dated Dec. 9, 1965 and addressed to company president Atwood, the 20-page document accused the company of featherbedding, submitting misleading reports to NASA, delivering unfinished hardware and being more interested in money than in performance.

Even though the company was on the receiving end of the NASA report, the space agency is likely to fry as well. Though it is written in harsher terms, the Phillips report is shockingly similar to that of the Apollo accident investigators (SN:4/22). NASA thus knew about North American's incredible mishandling of its job, yet did little or nothing about it. The Phillips report recommended strongly that North American come up with some good excuses within about six weeks, and said that the investigators would probably return a month after that to see what was done.

But what happened? Someone knows and isn't telling, so Congress has to start prying again, giving the Phillips report what amounts to its own investigation. Webb is scheduled to appear this week before the House Subcommittee on NASA Oversight, and several of the other past witnesses from the weeks of hearings on the Apollo fire are likely to face return bouts.

Representative Ryan, who belongs to the House space committee, but not its NASA Oversight subcommittee, will unfortunately be on the outside looking in at the hearings. He has been frustrated before in his overseeing attempts, such as when subcommittee head Olin E. Teague (D.-Tex.) invited him to accompany the subcommittee to Cape Kennedy in the course of the accident investigation. Ryan's plan was vetoed by committee chairman George Miller, a Democrat from North American's home state of California, who said that only subcommittee members could go on such trips. Miller also has the power to appoint new subcommittee members.

When the Oversight subcommittee does take up the Phillips report, the document's specific criticism and recommendations will be examined intently in the light of NASA's action on them since they were made. Here are

some of the report's points:

- “. . . continued failure to meet committed schedule dates . . .”
- “. . . late, incomplete and incorrect engineering releases . . .”
- “. . . the main level of corporate interest appears to be . . . financial . . .”
- “. . . programs can be done, and done better, with fewer people . . .”
- “. . . there is little confidence that NAA will meet its schedule and performance commitments within the funds available for this portion of the Apollo program . . .”

Water Paradox

As delegates from more than 70 nations were preparing for the Water for Peace Conference in Washington May 23-31, United States support of a major Water for Peace Project—the International Hydrological Decade—has been slashed to the bone by Congress.

The IHD, a U.S.-inspired program for worldwide water resource studies, is expected to help provide much of the background information on which developing nations can base their water resource programs. In a sense, it is the cornerstone of President Johnson's Water for Peace promise to the world.

Of \$2 million requested to help pay the U.S. share of the costs of the 95-nation program, only \$500,000 was approved by the House of Representatives.

The International Hydrological Decade was first proposed by a panel on hydrology of the Federal Council for Science and Technology. It is a 10-year program designed to promote scientific research on water resources and train hydrologists from water-poor countries. Much of the \$2 million requested was to go for exchange of scientists among the participating nations and for fellowships for students from have-not countries.

The House Appropriations Committee's report declares, “this in essence is a foreign aid program for water. The Committee does not feel that this is an appropriate time to initiate a greatly accelerated international water program.”

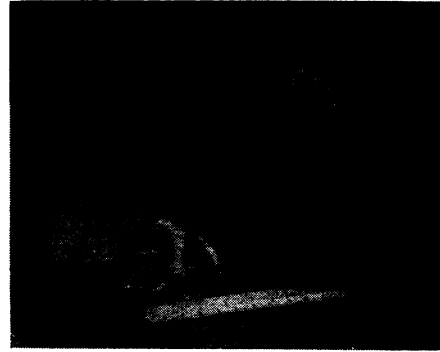
Dr. Raymond Nace, chairman of the U.S. National Committee for the IHD and a research hydrologist with the Geological Survey, says the budget slash will curtail, but not stop, the program.

New World Man

Man is supposedly a recent arrival in the New World, dating only from about 12,000 years ago. Though archaeologists have suspected he may

have been here longer, they have until now failed to turn up hard evidence.

That evidence may have been found in stone tools unearthed from an old riverbed near Mexico City. Their age is not yet firmly established, but the tools appear to be some 40,000 years old, which would mean man inhabited the Americas during the ice age.



Fremont Davis

Mastodon jaw from Valsequillo site.

“**This is premature** but it's beginning to look awfully good,” says Dr. J. O. Brew, director of Harvard University's Peabody Museum and general director of the archaeological program.

Since 1962 archaeologists Cynthia Irwin-Williams, representing Harvard, and Juan Armenta Camacho of the University of Puebla in Mexico have been turning up the artifacts—hide scrapers, leather-working instruments and projectile points—from an ancient geological deposit known as the Valsequillo Gravels, near the town of Puebla.

The tools are unsophisticated and generally unlike any other known New World artifacts. Moreover, they were found in association with the remains of such Ice Age animals as mammoth, mastodon and dire wolf, as well as extinct forms of camel and horse. Nearby beds of fossil shells date from at least 35,000 years ago.

Here the evidence ends and deduction begins—a process Dr. Meyer Rubin of the U.S. Geological Survey likens to “building a tower of tooth-picks.”

The tools themselves, being stone, could not be carbon-dated. Therefore, dates had to come from analysis of volcanic ash that overlies some of the sites, and from the shells.

“In no case,” says Dr. Rubin who did the carbon 14 analysis, “did I date a piece of charcoal from the same outcropping that contained the tools.” Surmising their age called for involved geological comparisons between the strata that contained the tools and those containing the volcanic ash and fossils. Dr. Rubin is convinced his dates on the ash—as old as 40,000 years—are correct. The loose link, he said,

is the geological correlation.

Like the rest of the Harvard team, Dr. Rubin is extremely cautious in accepting the idea that human life existed in the New World during the Ice Age. Anything prior to 12,000 years ago would mean glacial man, and so far the evidence has been mighty scarce. For 15 years, says Dr. Rubin, he has been dating such “evidence.” Each time it has fallen apart. “There was always something fishy about it.” But he concedes that this find is “pretty good.”

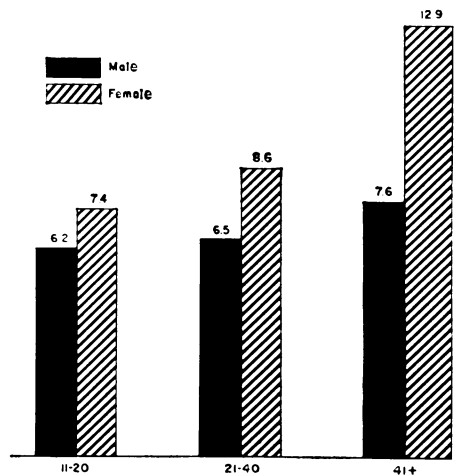
Meanwhile, the Harvard team proceeds with more correlations and more radiocarbon dating. Even if they establish the existence of glacial man, however, they won't know who he was. His own bones haven't surfaced.

New Smoking Tactic

The tobacco industry's ways of getting people to buy cigarettes have undone the Government's attempts to get them to quit.

So the Government has changed its tactics. Instead of calling for no cigarettes, it is pushing industry for safer ones.

In closed Congressional testimony, made public last week, Health, Education, and Welfare Secretary John W. Gardner said the campaign against



Absenteeism parallels cigarette use.

smoking “has not worked very well so far.” The only advance since the 1965 release of the Surgeon General's report, Smoking and Health, is that doctors are smoking fewer cigarettes, Gardner said.

The Secretary testified before the House Appropriations Subcommittee. He told subcommittee chairman Daniel J. Flood (D-Pa.) that the cigarette industry countered the Government's \$10 million campaign against smoking with