# Reagan Axes Science Budget

President Ronald Reagan's fiscal austerity drive "to bring about a fundamental redirection in the role of the federal government" is nowhere more evident than in the revised blueprint for 1982 federal research spending. No agency and few programs were spared significant budgetary or programmatic reductions.

Stirring the loudest outcry in the science community is a move by the new administration to virtually strip the National Science Foundation of its science-education role. Part of NSF's stated mission is to strengthen science education programs at all levels, and, in 1967, science-education programs accounted for one-third of the agency's budget. Since then its percentage of the budget has fallen, but to nowhere near the less than 1 percent now proposed. The $111.9 million that Jimmy Carter recommended be spent for graduate fellowships, teacher training and curriculum development through NSF in the coming fiscal year has been slashed by $102 million. The remaining $9.9 million is earmarked for completing the support of fellowships already underway.

A growing scientific and technical illiteracy in this country threatens the quality of technical decisionmaking by the nation's electorate, according to a government study last year (SN: 11/1/80, p. 276). And Donald McCurdy, president of the National Science Teachers Association, contends that these "documented failures and deficiencies in American science education can be attributed in part to the erosion of funding support for science education at NSF over the past 15 years." But NSF Director John Slaughter defended the cutback, saying that the agency's education programs have tended to be "too diffuse" and funded at levels too low to do a quality job.

Funding for research in the behavioral, neural, social and economic sciences would also plummet at NSF — an average of 32.6 percent — owing to the administration's view that these programs are too "narrowly focused or of lesser immediate priority." Meanwhile, "high priority" core-research programs in the "hard sciences" would gain, in some cases substantially. The increase would be 19 percent for math and physics, 22.4 percent for engineering, 18.2 percent for ocean-drilling work, 11 percent for astronomy and 6.5 percent for biology.

**Biomedicine** Biomedical research did not fare as badly in Reagan's budget as did some areas of science. The new budget includes $3.98 billion in fiscal year 1982 — compared with Carter's request for $4.1 billion — for research administered by the National Institutes of Health and the Alcohol, Drug Abuse and Mental Health Administration. It cuts proposed FY 1981 spending by NIH $76 million from what Carter had proposed and then proposes increases for FY 1982 similar to those Carter had proposed. No single institute was singled out for dramatic cuts.

The program that had previously supported 5,000 new and competing project grants through NIH will only fund 4,900 in FY 1982. Similarly, there will be support for only 10,000 research trainees, down 500 from the previous year.

The Food and Drug Administration budget includes $28 million in 1981 for construction of new laboratory facilities within its Bureau of Food and Drugs, but there is no mention of the $15 million previously proposed for 1982 construction of new laboratories for its Bureau of Veterinary Medicine.

**NOAA** With substantial cutbacks in one program and elimination of several others, the proposed 1982 budget for the National Oceanic and Atmospheric Administration is $800 million — down 23.9 percent, or about $200 million — from that proposed in January. In terms of dollars, the program most affected is Landsat, which was transferred from NASA to NOAA last year. Under the new budget proposal, the two currently operating Landsat satellites would be maintained; two others had been planned but would now be eliminated for a savings of $121.7 million. According to the budget document, existing satellites "will provide sufficient data to assess the market potential for future land remote satellite sensing data."

Also eliminated, is the nascent National Oceanic Satellite System, a program that would have been dedicated solely to gathering information about the world's oceans. This information, according to the administration, "currently is collected through other means," although those means are unspecified. The Coastal Zone Management and Sea Grant Colleges programs would be terminated also.

**NASA** While the space-shuttle-dominated budget for the National Aeronautics and Space Administration is trimmed only 7.4 percent overall from the Carter version, its science section — planetary exploration, physics, astronomy and life sciences — is slashed by more than three times that amount. The Galileo Jupiter mission and the earth-orbiting Space Telescope are intact, as is almost the whole Carter plan for the shuttle. But the Venus Orbiting Imaging Radar project and the Gamma-Ray Observatory satellite have been cut by 75 and 85 percent, respectively, leaving what one NASA official calls "about enough money to keep the papers shuffling" and delaying both launchings — assuming that the missions survive subsequent cuts — until at least 1988.

Also confirmed in the formal NASA budget announcement this week was the cancellation of a space probe that would have taken a pioneering look at one of the sun's poles. It was to have been the counterpart of a similar craft being built to visit the other pole by the European Space Agency under a cooperative program said to depend heavily on the joint observations. ESA (stung also by NASA cuts affecting its Spacelab research module for the shuttle) has called the decision "unacceptable," declaring it "a unilateral breach of the Memorandum of Understanding between the two agencies" that "would be detrimental to future space cooperation between Europe and the United States." Tense talks continue.

Besides science, the administration's NASA plan deletes proposed new programs and trims existing ones in aeronautical research (recently found by a National Research Council panel to be in "urgent" need of strengthening) and in such "applications" areas as agriculture, geology and oceanography. Furthermore, notes acting NASA administrator Alan Lovelace, administration estimates of subsequent-year budgets suggest that "new starts" look similarly ill-fated for FY 1983, 1984 and perhaps even 1985.

**EPA** With a proposed reduction of 13 percent, the new fiscal 1982 budget for the Environmental Protection Agency is set at $1.4 billion. The Construction Grants program, which provided 75 percent of the cost of state construction of sewage treatment plants, leads the list of cutbacks. The administration would turn this responsibility back to the states, reducing the 1981 authorization from about $3.5 billion to $1.7 billion and allocating nothing for the program in 1982. Other water programs stand to lose about $90 million, while air pollution programs would lose relatively little — the primary reduction reflecting a completion of standards for auto-exhaust emissions. The most significant increase in the proposed 1982 budget would boost the hazardous-waste cleanup "superfund" by $200 million and 500 personnel. According to an EPA spokesman, this increase reflects the congressional and popular support for such a program in the wake of Love Canal.

**USGS** At $538 million, the U.S. Geological Survey's budget has been cut $37.7 million from the FY 1982 figure proposed in January. However, the basic program of the agency — which includes surveys, investigations and research — would pick up $20 million over the previously proposed 1981 figure. Development funds for the National Petroleum Reserve in Alaska, which the administration hopes to lure industry into

taking over, would be nearly eliminated from the 1982 budget.

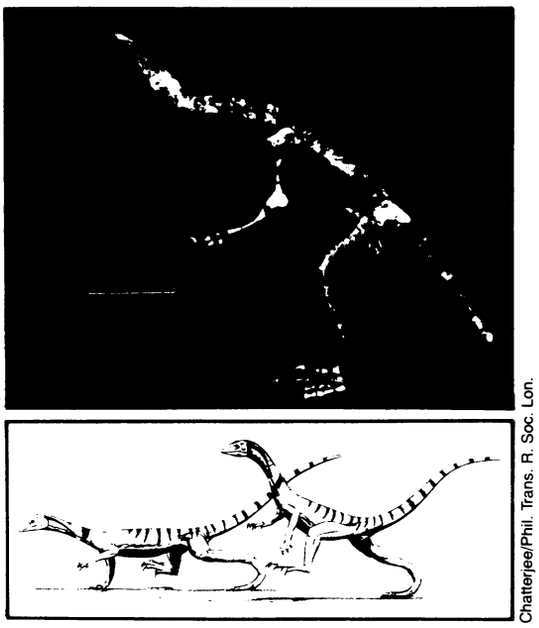
**DOE** Beyond the massive cuts announced for the Energy Department on Feb. 18 — which tended to mirror Office of Management and Budget proposals announced a few weeks earlier (SN: 2/21/81, p. 116)—the only new policy offering announced this week was restoration of funds for the Clinch River Breeder Reactor. This signals Reagan's aim to renew the nation's nuclear vigor, evidenced elsewhere in the budget with money to design an even bigger breeder and research funds to augment cleanup of the beleaguered Three Mile Island nuclear plant. The other big spending initiative would step up filling of the Strategic Petroleum Reserve — a project that would end up totaling 28 percent of DOE's budget. □

# Proposed cuts stir psychology lobby

Eight distinguished psychologists from across the country met last week at the American Psychological Association in Washington, but they did not assemble to discuss important research findings. Their designation was "Board of Scientific Affairs," and their purpose was to begin to formulate a plan of action (and reaction) to deal with the impending cuts in federal funds for the behavioral and social sciences. It was not an easy task for scientists unused to participating in political lobbying and persuasion. Their initial suggestions included a plan to mobilize APA membership, especially at the upcoming convention, to communicate the needs of psychology research and education to legislators, and a motion was made to pressure the National Academy of Sciences to more forcefully urge the appointment of a presidential science advisor. Scant mention was made of fortifying lobbying efforts on the Hill, but the Association for the Advancement of Psychology, a lobbying group that works on behalf of APA policy, is gearing up for rougher times. "We want to organize the community for an ongoing process," says executive director Clarence J. Martin, "not just encourage individual letter writing where responsibility stops after the letter is mailed."

The AAP began its "research support network" last fall, and now has about 500 psychologists listed in a word processing system with descriptions of their areas of specialty, funding sources and agency contacts, and ways they are willing to become politically active. AAP officials expect to receive more applications for the network in the coming weeks. "I'm sure that lobbying for more appropriations will be the highest priority for psychologists," says University of Michigan psychologist Wilbert McKeachie. "But we haven't approached the level of organization of other scientific disciplines." □

# Dinosaur dinner is new genus



*Bones of 1.3m reptile (top right) were found beneath rib cage of another fossil skeleton (left) as marked by dashed lines. Reconstruction of ingested reptile at bottom right.*

Chatterjee/Phil. Trans. R. Soc. Lon.

More than a decade ago, a pair of 180-million-year-old fossil skeletons of the crocodile-like reptile *Parasuchus hislopi* were found side by side in the flood plain deposits of central India. Remarkable for their close proximity, the fossils were soon found to be even more unusual: Beneath the rib cage of each *Parasuchus* lay a fossil skeleton of another reptile. Apparently, each *Parasuchus* had gobbled the same type of reptile for its last meal. And it turns out, as reported by Sankar Chatterjee in the Dec. 19 PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY OF LONDON, the identical prey may represent a new genus and species of eosuchian reptiles.

Chatterjee has named the newly found reptile *Malerisaurus robinsonae* for the Maleri geological formation in which it was found and in honor of Pamela Robinson, a paleontologist who studied extensively in the region. A member of the group from which snakes and lizards are believed to have evolved, *Malerisaurus* is notable for its large hindlimbs, which the skeleton shows to be almost twice as long as the forelimbs. From this, Chatterjee, who is with the Department of Geosciences at Texas Tech University in Lubbock, infers that *Malerisaurus* was probably bipedal — ran on its hind legs. From other skeletal and geological evidence, Chatterjee concludes that the animal probably lived near the water's edge, was an insectivore and that each individual was mature — about 1.3 meters long — at the time of death. The cranial bones are "disassociated and jumbled," he notes, implying that the predator "... oriented its prey head first, like modern crocodiles, during initial capture and swallowed the body whole." As for why *Parasuchus* died so shortly after their last meal: "Perhaps the prey was poisonous to eat." □

# Mixed ruling in evolution trial

What began as a widely publicized court battle between evolutionists and fundamentalists ended last week when a judge in Sacramento, Calif., ruled that existing state educational policies did not violate the religious liberties of persons who believe in the biblical version of creation. But Superior Court Judge Irving Perluss also directed state education authorities to distribute to schools and textbook publishers a policy statement saying that Darwin's theory of evolution should be treated not as "dogmatism," but as "a conditional statement where speculation is offered as an explanation for the origins of man...."

At first, the case appeared to mirror the Scopes Trial of 1925, in which a biology teacher was found guilty of violating Tennessee law, which prohibited the teaching of evolution. Kelly Segraves filed the California suit on behalf of his children to argue that they were being denied their right to be taught the biblical story of creation. He and his lawyers insisted that they were not advocating the teaching of religion in public schools, but wanted the presentation of another scientific version, what they called "scientific creationism." Their demands were tempered during the trial, and in the end they settled for a policy that requires science teachers to acknowledge the existence of other theories. Segraves, director of the Creation-Science Research Center, plans to continue his cause and has not ruled out an appeal. Both sides claimed victory after the decision was handed down on March 6. □