NEWS IN BRIEF

● **EPA ACTS ON DDT**: The Environmental Protection Agency (EPA), in response to an order from the U.S. Court of Appeals in Washington, D.C., has canceled federal registration for all remaining uses of DDT. Companies have 30 days in which to present appeals to EPA and may continue interstate marketing of DDT until the appeal has been decided. However, EPA will also hold an intensive 60-day review to decide whether interstate sales of DDT and the weed-killer 2,4,5-T should be immediately suspended as an "imminent hazard" to health. The use of DDT is currently allowed only on cotton, citrus fruit, and certain vegetable crops.

● **UNITED STATES TO AID MUSEUMS**: The National Endowment for the Arts has announced that it has set aside $1 million of its fiscal 1971 budget for a comprehensive program to aid the nation's museums. Grants will be awarded in three categories: improvement of collections, upgrading of staffs, and development of pilot programs to expand the availability of museum resources. The museum allocation will probably be raised next year. President Nixon has indicated that he will urge Congress to appropriate $60 million for the National Foundation on the Arts and the Humanities for fiscal 1972—nearly double this year's budget (*Science*, 4 December).

● **FAVORABLE DISTRIBUTION**: A survey conducted by the National Science Foundation has disclosed that in 1970 the highest median income among U.S. scientific and technical personnel went to statisticians, who averaged $16,900 a year. They were followed by computer scientists ($16,500) and economists ($16,300). The biennial survey covered 313,000 scientists whose median income was $15,000—a 14 percent increase over the figure reported for 1968.

● **NEW PUBLICATIONS**: *Federal Support to Universities, Colleges, and Selected Nonprofit Institutions, Fiscal Year 1969, A Report to the President and Congress* (NSF 70-27), prepared by the National Science Foundation, is available for $1.50 from the Government Printing Office, Washington, D.C. 20402.

might manage to get through the canal. In particular, the Battelle group found it "highly improbable that blue-water species like the sea snake and the crown-of-thorns starfish could get through the canal except under the most unusual circumstances." The Battelle group also said it had found "no evidence for predicting ecological changes that would be economically deleterious to commercial, sport or subsistence fisheries."

However, the Academy group seems to have been much less sanguine about the likely ecological impact of a new canal. The Academy report stresses that "available information is altogether insufficient to allow reliable predictions of particular events resulting from the excavation of a sea-level canal in Panama." But its report goes on to note that previous canal projects have sometimes led to "economic disaster" for certain fishing industries and have made it necessary to launch costly programs to repair the damage. Though it acknowledges that no predictions can be made with certainty, the Academy group warns that a sea-level Panamanian canal might produce major adverse consequences.

One previous instance in which a new canal caused great damage, according to the Academy group, involved the invasion of the Great Lakes by the sea lamprey, a predatory fishlike creature found in the North Atlantic. For thousands of years the sea lamprey was barred from the inner great lakes by Niagara Falls, but a system of manmade canals then allowed the lamprey to penetrate the inner lakes where it fed ravenously on valuable lake trout and other fish. In only 10 years the annual catch of lake trout in Lake Huron and Lake Michigan fell from 8.6 million pounds to 26,000 pounds. "This was an economic disaster for the fishing industry, one that has since been repaired only by years of research that finally led to an effective control of the invader through a costly management program," the Academy group said.

Another previous instance of major impact cited by the Academy group was the Suez Canal, where studies have shown that transmigration and colonization of marine plants and animals occur; that mobile, active organisms and fouling organisms are generally first to make the transit; that large-scale population changes occur; and that "significant economic impact sometimes results." Mayr, the head of the Academy group, told *Science* that a certain valuable species of sardine found in the eastern Mediterranean seems to have been "considerably affected" by competition from a less desirable species that invaded through the Suez Canal from the Red Sea. Mayr visited Israel last year to review work done on Suez Canal effects by a group of scientists at the University of Jerusalem. He said the Israelis reported that the "most remarkable thing" they had found was that it was nearly impossible to predict just what marine life would manage to get through the canal.

Points of Disagreement

In assessing the possible impact of a sea-level canal through Panama, the Academy group disagrees completely with some of the conclusions of the Canal Study Commission and of Battelle. Whereas Battelle found it "highly improbable" that the sea snake would get through the canal, the Academy group said the poisonous snake—a potential menace to predatory fish and to the tourist trade—"should have no real difficulty moving through a sea-level canal." The Academy report also concludes that the canal itself would provide "a nearly optimal habitat" for certain large Pacific sharks and that these sharks "could become rapidly established on the Atlantic coast of Central America, unless an effective barrier is employed." And whereas Battelle said it found no evidence that commercial or sport fisheries would be affected, the Academy report warned that some species, including certain shrimp, could be replaced by economically less valuable species. Mayr told *Science* it is "an indefensible statement" to say there will be no adverse effects on fisheries since no one really knows what will happen. The Academy group also warned that a sea-level canal might allow passage of parasites and pathogens from one ocean to another where they might cause serious destruction of organisms that lacked natural resistance to them.

Mayr's general impression of the canal commission's report is that it has made a number of "casual" and "misleading" statements, and that it has set up some straw men and then knocked them down while ignoring the most important fears expressed about a sea-level canal.

In order to lessen the potentially adverse impact of a new canal, the Academy report stressed that it is "essential" to install a barrier of warm fresh water