Cooley's anemia itself, or what is also known as thalassemia major, a child must inherit the gene from each of his parents. Trait carriers, who have thalassemia minor, are unlikely to have any physical manifestations of that condition.)

Testifying on the Cooley's bill before the House subcommittee, HEW and NIH officials declared that there is no reliable test that can be used in mass screening for thalassemia trait. Subsequently, they and investigators in the field have reiterated this opinion, adding that it would be wise to earmark some of the new money for research to develop an accurate and inexpensive screening technique.

Howard Pearson, a pediatric hematologist at Yale University, contends that a suitable test is already near at hand. Pearson, who has been deeply involved in both sickle cell and Cooley's programs in the New Haven area and who was one of the leading expert witnesses at the Cooley's hearings, reported then that his own studies of approximately 350 individuals point to a system, which automatically detects quantity and size of red cells, that can be used for screening on a large scale. He uses a Coulter electronic cell counter, which costs in the neighborhood of $50,000. Expensive as that may sound for anything involved in a mass screening program, Pearson points out that it is a piece of equipment that is standard in a large majority of hospitals.

Screening for thalassemia trait, he says, is important for two reasons. As is the case with sickle cell trait, the information obtained by screening can provide the basis for genetic counseling of couples who carry the gene for thalassemia. (Admittedly, it also raises certain psychological and social problems and is something that, ideally, must be done with the utmost concern and care that the people being screened be educated about what being a carrier means.) Just as important, if not more important, carriers of thalassemia trait need to be identified for their own physical good. It is possible, Pearson comments, for an individual with thalassemia trait to be diagnosed as having mild iron deficiency anemia and given iron to correct the deficiency. "Iron," he says, "is contraindicated in thalassemia trait. It can be bad for the patient." Therefore, anyone who carries the trait stands to gain by knowing it.

It is, of course, hard to say just what effect the national effort to combat Cooley's anemia will have. Certainly from the point of view of patients and their families, it can only help. Whether it will provide the extra measure of support that will lead to some discernible progress and whether it will, in fact, set a precedent for similar targeted attacks against other clearly ethnic genetic diseases is anything but clear.—BARBARA J. CULLITON

Environmental Legislation: Last Word from Congress

In a presidential election year, the last few weeks of congressional business are conducted in an atmosphere like the one that must have prevailed on the boat deck of the *Titanic*. When different parties control the White House and Congress, the contest to allocate credit and blame is likely to be particularly intense, and the last days of the 92nd Congress—adjournment came on 18 October—ran true to tradition. This year, with inflation a factor and a big deficit looming, the main issue was money, and the argument centered on which party was responsible for bloating the budget.

As the political witching hour approached for Congress, the usual bout of last-minute legislative bargaining occurred, and, for better or worse, a clutch of environmental measures received final action, including major water pollution control and pesticide regulation bills.

On the last day of the session, both the Senate and House voted to override a presidential veto of the Federal Water Pollution Control Amendments (S.2770). The bill authorizes some $24.7 billion over 3 years, including more than $18 billion for grants to the states for water treatment plants. The President said he had vetoed the measure on the grounds that the funds provided exceeded his request and might lead to higher taxes.

The new bill is not simply the most expensive environmental bill in history, it also changes the basis of pollution control. As the Senate Public Works Committee report puts it, the major effect of the legislation is "a change in the enforcement mechanism of the water pollution control program from water quality standards to effluent limitations."

Under the 1965 Water Act, states were to set water quality standards for their own waters; these standards had to meet federal requirements. Water was to be classified in different categories for different uses. Water used for drinking and swimming, for example, had to meet much higher standards regarding oxygen levels and bacteria content than water used for boating or, obviously, for receiving industrial effluents.

The program has not succeeded brilliantly. Many states have not established water quality standards acceptable to the federal government, and there have been serious technical difficulties in determining the relationships between specific pollutants and particular levels of water quality.

The new bill brings about a shift in criteria to effluent limitations. The timetable in the bill requires that by 1977 industry use the "best practicable" technology for treating wastes discharged into U.S. waters. By July 1983, industry must have installed the "best available" treatment equipment, and that same year is set for the goal of making all waters safe for fish, other wildlife, and people. The year 1985 is the target year for achieving the national goal of eliminating all polluting discharges.

Although most environmentalist organizations endorsed the bill, their enthusiasm was not unalloyed. The measure is an authorization, not an

appropriations bill, and there is a feeling that considerably less money will actually be expended than is called for in the legislation. In his veto message, President Nixon noted the bill will "confer a measure of spending discretion and flexibility upon the President and if forced to administer the legislation I mean to use these provisions to put the brakes on budget-wrecking expenditures as much as possible."

Other features of the lengthy and complex measure have given rise to misgivings among environmentalists. Some see an ominous precedent in the section that exempts the Environmental Protection Agency (EPA) from the necessity of filing environmental impact statements under the National Environmental Protection Act (NEPA). The exemption applies to agency policies and actions but not to EPA-financed projects for construction of publicly owned waste treatment plants or permits issued by the agency.

Observers on Capitol Hill who are familiar with the history of pollution control legislation tend to discount the environmentalists' fears, pointing out that Congress intended that EPA be a regulatory agency not bound by NEPA. It seems possible that the environmentalist reaction was triggered by apprehensions that there will be strong efforts to trim the powers of NEPA in the next Congress.

The right of private citizens to go to court on environmental issues is recognized in the new law. Violators of mandatory provisions of the law may be sued, but plaintiffs—individuals or groups—must demonstrate that they have interests which were adversely affected in the violation.

The new bill also gives a firmer legislative foundation to the water discharge permit program, which until now has been based on the venerable Refuse Act of 1899. The EPA is now authorized to issue permits for the discharge of pollutants into U.S. inland or coastal waters and to set guidelines for state permit programs.

Perhaps the most interesting political byplay in the later stages of action on the bill occurred when a letter from EPA Administrator William D. Ruckelshaus recommending the legislation to the Office of Management and Budget was circulated on Capitol Hill. The letter, of course, set Ruckelshaus in opposition to an already fixed White House decision, and only the future will tell how badly Ruckelshaus has blotted his copy book.

Probably deserving to be ranked next in importance among the late-blooming environmental measures is the Federal Environmental Pesticide Control Act (H.R.10792). One of its provisions, however, has elicited sharper environmentalist criticism than any other aspect of the new laws.

The controversial feature is an indemnity provision. The House version of the bill, which emanated from the agriculture committee, provided that the government reimburse manufacturers or anyone else holding supplies of a dangerous pesticide banned from the market. The original Senate version did not carry the indemnity provision, but it was added to the final bill after what is viewed as an unusually open and effective application of pressure by the pesticide industry through the National Agricultural Chemicals Association (NACA) (this is detailed in *Congressional Quarterly* for 14 October).

An Inhibiting Factor

A spokesman for the Sierra Club, which had taken the lead in the unsuccessful fight against the indemnity provision, argued that the compensation clause would not only cost the government millions of dollars, but "the most serious effect will be to inhibit the [EPA] Administrator from using the suspension mechanism to protect public health and the environment and to prevent enforcement of the law." Other environmentalists feel that inclusion of the indemnity clause sets an unfortunate precedent since it is expected that an attempt will be made to extend the indemnity principle to food additives. (A cyclamate compensation bill died with the Congress when the Senate failed to act on it before the session ended.)

On balance, however, the new pesticide measure is welcomed by most environmentalists. Federal authority in the field has, until now, been based primarily on the Federal Insecticide, Fungicide, and Rodenticide Act of 1947, which essentially provided for the registration and labeling of products and contained little regulatory power. The new law makes EPA the chief regulatory agency in the pesticide field. It provides for tighter registration rules and, probably most important, streamlines the mechanism by which products found to be dangerous can be removed from the market. The law provides penalties for the misuse of pesticides and contains a section permitting citizen suits which appears to parallel the one in the water pollution control act.

Congress left behind a few other minor landmarks in environmental legislation when it broke camp. A coastal zone management bill (S.3507) establishes what amounts to a national land-use policy to protect shorelines, estuaries, and wetlands, and an anti-noise bill (H.R.11021) provides the first real foundations for federal noise control.

The coastal management bill would provide funds to help coastal states develop land-use plans to reconcile the need for industry, port facilities, power plant sites, and recreation with the preservation of the environment. A jurisdictional dispute over whether the Commerce or the Interior department should administer the legislation almost blocked passage, but in the final days of the session the issue was resolved, with authority given to Commerce. There seems to be an understanding that later enactment of broader land-use legislation will give Interior a share of the action.

Also enacted as the 11th hour neared was a law to regulate dumping in oceans and coastal waters (H.R.9272). A ban has been placed on the dumping of high-level radioactive wastes and of substances related to radiological, chemical, and biological warfare. Permits must be obtained from EPA for the dumping of other material except in the case of dredging rivers and harbors, which will be covered by EPA guidelines.

The noise control act has won a mixed verdict from the environmentalists. In a last-ditch compromise in the closing days of the session, several Senate amendments that would have tightened restrictions were dropped. The law makes EPA the agency responsible for identifying noise sources and setting noise emission standards. The one exception, and the one that caused a major dispute, is aircraft noise. The Senate amendment would have stipulated that foreign aircraft meet subsonic noise standards or be prohibited from landing in the United States, a provision aimed directly at the SST. Not only was this amendment ejected from the final form, but, in dealing with aircraft noise in general, the Federal Aviation Administration rather than EPA will, in effect, have the final word.

By its late-in-the-session actions, Congress has added significantly to the canon of environmental legislation. In

general, the actions followed a pattern of behavior that has prevailed throughout the current Administration. The Senate, by and large, has favored relatively liberal spending and tight regulation in the environmental field, while the House, like Administration, has both shown itself to be more conservative in funding and more sympathetic to industry views. In most cases, in the crunch of compromise, the Senate views have lost out. A major exception was the water pollution control bill, when House and Senate joined to override the veto by a huge, bipartisan majority. The vote was a case of constituent influence reflecting the difficulties that municipalities are having in financing water treatment facilities to meet increasing pollution problems and tightening water quality regulations.

As for other actors in the piece, the environmentalists seem to feel they are in their accustomed role of accepting half a loaf. The White House continues to press Congress to enact more of its proposals in the environmental field and at the same time tends to extract the sharper teeth from nascent legislation. And the EPA carries on like an agency uncomfortably in the middle.

—JOHN WALSH

Maine: Finding the Promised Land (without Losing the Wilderness)

Portland, Maine. The newest building on the campus of the University of Maine is the Advanced Study and Research Center. The bottom three floors house the law school. But the rest of the seven-story building is virtually empty.

When the construction bonds for the building were approved by Maine voters 5 years ago, the theory was that the center would house research projects in the social sciences with a direct bearing on Maine's current economic and social problems. Little seems to have been done to give this concept reality.

While the state's problems have become, if anything, more acute, the voters' attitude toward higher education seems to have soured. They rejected the university's proposals for capital construction in 1970 and 1971 referendums on bond issues. (A new bond issue, to be presented to voters on 7 November, will test whether this attitude still prevails.)

The Maine legislature, reflecting both this skeptical mood and limited state resources, cut the university's 1972–73 budget below the amount requested for on-going activities, thereby completely eliminating funds that were earmarked by the university for new programs. There is no university money for the Advanced Study and Research Center. So Halsey Smith, the director, is currently busy trying to round up already funded projects and foundation assistance.

The fiscal squeeze on the university and the sour attitude of the state's voters in the last 2 years reflect Maine's general economic situation.

The state has suffered more than most other areas of the nation from recession and inflation. Unemployment last spring was 50 percent higher than the national average, and in some of the more remote counties along the coast and inland it was two and three times the national rate.

More than that, the recession seems to have shocked the state's voters into a realization that they may be stuck indefinitely in the austerity from which Maine's politicians have been promising for at least 20 years to deliver them.

One effect has been to intensify demands that state expenditures and state policy produce more rapid economic growth. Aside from the veneration of Senator Margaret Chase Smith (R), the performance of the economy remains the dominant issue in Maine politics. The frustrating thing for Maine politicians is that they really have little power to affect the economy.

To add to their discomfort—and to the already formidable obstacles to economic growth—the economic issue has recently become joined to a new concern.

The principal opportunity for economic development at present appears to be the location of heavy industry on the Maine coast—which is also one of the areas of greatest need in the state. Thus the pressure for development of jobs meets head on with equally strong sentiments in Maine (and among national conservation groups) for preserving the scenery and environment that make the state a magnet for tourists and summer residents. The conservation interest is not merely sentimental, since tourism is Maine's second largest and fastest-growing industry. It brings in about $500 million a year, but, unlike industrial development, it offers mainly seasonal employment.

The politics of Maine have thus become divided between the developers and the preservers.

Of political necessity, all recent Maine governors—from Edmund Muskie (D) in the 1950's to the incumbent, Kenneth M. Curtis (D)—have been strong advocates of economic development, anywhere it can be had (provided the environmental effects can be controlled or ignored). The reason lies in the state's desperate need. Maine's economy has been stagnant for a generation. Incomes rose during the 1960's, carried along by the general rise in U.S. prosperity, but Maine ranked 45th among the states in rate of economic and population growth. Reflecting the efforts of state politicians to pull the economy up by its bootstraps, nearly half of the new jobs during the decade were on the public payrolls, and most of those were in the public schools.

Poverty as affecting as that in West Virginia or Mississippi is not uncommon in Maine's more remote communities along the coast and in the interior. The lack of jobs induces high outmigration from these counties, which have been losing population for two generations, and from the state.

Reflecting these conditions, from 1960 to 1970 Maine's population grew only 2.4 percent, despite average fertility. (The national population grew 13.3 percent.)

The new force in Maine politics is