

pool currently take two forms. The Plant Introduction Service of the Department of Agriculture collects plants from around the world, catalogues them and screens them for viruses. The National Seed Storage Laboratory in Colorado maintains seeds in cold storage. Finally, the committee recommends a form of technology assessment—a national monitoring committee to warn of potential hazards of new or widespread agricultural practices.

In a sense, technology was responsible for the 1970 corn blight. What is needed now, says the committee, is "technology assessment." The benefits of developing crops that can be efficiently harvested must be balanced against such undesirable side effects as vulnerability to epidemics. □

## When floods strike: A review of forecasts

The painful lesson of Hurricane Agnes was that the nation's system for predicting and protecting itself against floods needs serious examination.

The cost of Agnes, announced last week by the Office of Emergency Preparedness, was 118 human lives and over \$3 billion in damage. Agnes dropped an estimated 25.5 cubic miles of water on the eastern United States—one-fourth of the volume of Lake Erie.

Also last week, Robert M. White, director of the National Oceanic and Atmospheric Administration, asked the National Advisory Committee on Oceans and Atmosphere to review and

evaluate the nation's flood forecasting and warning program and its performance during Agnes' floods. NACOA, chaired by William A. Nierenberg of the Scripps Institution of Oceanography, has been in existence for just a year. This is the first such study NACOA has tackled. A five-man ad hoc working group headed by William D. Carey, vice president of Arthur D. Little Co., is now working out the procedures for the study. The review may be completed in a couple of months.

The floods in some areas had just barely peaked when the first complaints about flood prediction were voiced. Rep. H. John Heinz (R-Pa.) alleged that in the Pittsburgh area, riverside communities were not warned of impending floods until 4 a.m. on June 23, "only four hours before the flooding reached the critical stage. Due to the lateness of the hour, citizens were totally unaware of the situation."

In response to these charges, the House Government Activities Subcommittee held hearings on June 29. What became apparent in the course of the hearings was that where warnings came too late the fault lay at least as much with local communities as with the National Weather Service. A Weather Service spokesman had previously said that its forecasters had, in most cases, given 12 hours' warning, but that they had no way of telling how and whether the warnings reached the public (SN: 7/1/72, p. 5).

Where disaster preparedness is concerned, says Heinz, "The states have taken little or no initiative in meeting their responsibility to their citizens." He points out that the Disaster Relief Act of 1970 provides Federal grants to the states to develop disaster preparedness plans, but fewer than one-third of the states have taken advantage of it. Though the maximum available is \$250,000, Pennsylvania requested only \$14,850. "Furthermore, many of the states participating in this program have formulated plans which exist only on paper." For example, Pennsylvania has applied for a Federal grant for a plan approved by OEP but implementation of the plan, says Heinz, is "totally inadequate." One of the provisions of the Pennsylvania plan is for a public warning system for each city, borough, town and township. Yet at the subcommittee hearings, Weather Service witnesses said there were no means available to them in the Pittsburgh area to alert the public to the flood danger.

Last Thursday Heinz introduced a bill making it mandatory for states to develop and maintain disaster preparedness plans. The plans would have to be in accordance with Federal standards to be formulated and enforced by OEP. The bill contains sharp teeth: any state

## Death with dignity: The debate goes on

The ability to prolong life brings with it the ability to prolong dying. In using his skills, a physician may thus actually be inflicting unnecessary suffering on a terminally ill patient. In an emotional example of this dilemma, Arthur E. Morgan, former president of Antioch College in Yellow Springs, Ohio, cried as he told how nurses forced his dying wife's jaws apart to make her eat. Morgan's statement was among those taken last week by the Senate Special Committee on Aging during three days of hearings on the problem of dying with dignity.

Many of the witnesses testifying insisted that death, like life, should be achieved with maximum dignity. "It is clear beyond question that a time comes when it is no longer appropriate to continue extraordinary means of support for the hopelessly unconscious patient," said Henry K. Beecher of Harvard Medical School.

Walter W. Sackett, a physician and member of the Florida House of Representatives, explained that the concept of "death with dignity" implies permitting a person to die a natural death without the application of all the heroic modalities known to modern medicine." Euthanasia or mercy killing has nothing to do with this philosophy, he stresses, because those terms imply the application of some positive method of ending a life. Estimating that 75 percent of the nation's doctors practice "death with dignity," Sackett has introduced a bill in the Florida legislature that would make their activities legal. Similar bills are under consideration in Wisconsin, Utah, Hawaii and Montana.

Sackett's bill would allow a competent person to create a document

(a living will) asking that he be allowed to die under the existence of certain circumstances. In the absence of such a document, a relative would be allowed to signify to the physician that heroic measures not be applied. Or, in the case of an individual with no known relatives or guardian, Sackett's bill would allow three members of any recognized hospital to make the decision.

Laurance V. Foye Jr., director of Education Service for the Veterans Administration, warned that the living will would convert a possibly fatal outcome into a certainly fatal one. He considers the phrase "death with dignity" to be obscure and believes the philosophical and humanitarian arguments used in favor of letting a person die with dignity are medical problems. These problems, he said, "relate directly to the responsibility and decisions of the physician in his relationship with his patient. . . . If a physician withholds maximum effort from patients he considers hopelessly ill, he will unavoidably withhold maximum effort from an occasional patient who could have been saved. This approach and concept cannot be fostered or condoned, legally or otherwise."

Legal acceptance of the "death with dignity" philosophy is not likely to come out of the Senate hearings, at least not in the near future. Sen. Frank Church (D-Idaho), committee chairman, said, "We are not floating trial balloons on proposals for Government action. We realize that we have a long way to go before we can even begin to think about changes in public policy, if indeed such changes should prove to be desirable."

not meeting minimum standards for disaster preparedness would be denied Federal assistance for disaster relief. On the other hand, if the state's plan is approved, the Federal share of funds for implementing the plan would be increased to 90 percent.

Meanwhile, the National Weather Service is developing better forecasting methods. NWS is installing a number of automatic flood warning systems in the eastern United States. An enclosed float device somewhat like the bulb in a toilet tank activates an electric current when the water reaches a critical level. The electric signal goes to an alarm in a firehouse or police station. When the alarm is triggered, however, it is up to the community officials and the news media to see that the public is alerted.

The first such system was installed near Wheeling, W. Va., a little more than a month before Agnes struck, and NWS spokesmen say it performed beautifully. The Weather Service plans to install seven more of the systems within the next two years. □

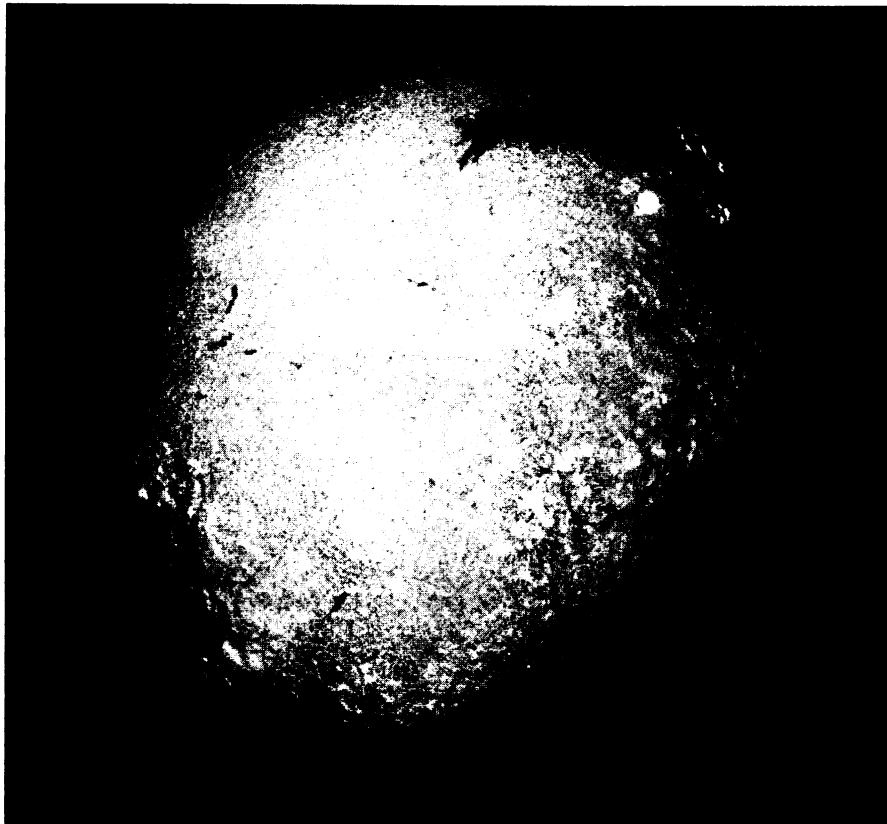
## Scholarly access to Government documents

In 1958 President Truman made use of secret papers to document and publish his memoirs. These documents, still withheld from historians, have now been used by President Truman's daughter in documenting her forthcoming biography of her father. In 1970 President Johnson, during a televised interview, read from what he claimed was a classified document. Jack Anderson seems to have an unending supply of secret documents and memos. Daniel Ellsberg may eventually be condemned as a traitor for his involvement in the Pentagon Papers affair. From these examples it would seem that the present system of classification not only invites defiance of the system, but promotes unequal access to such papers among scholarly researchers.

For these and other reasons President Nixon was prompted last March to issue Executive Order 11652 on the classification and declassification of national security information and material. John Eisenhower, chairman of the Interagency Classification Review Committee, now reports that since the order became effective on June 1, the number of persons authorized to classify national security information has been reduced 63 percent, from 43,586 to 16,238. This may slow the rate of unnecessary classification and over-classification of Government documents, but some researchers feel it does not go far enough in declassifying and allowing scholarly access to such papers.

The Twentieth Century Fund, a re-

## An active sun in a normally quiet period



NASA

The sun is now in the portion of its 11-year sunspot cycle when activity is expected to be at a minimum. Yet the early days of August saw a severe disturbance on the sun that produced four major flares between Aug. 2 and Aug. 7 and severe magnetic storms on earth that disrupted communications and made the polar auroras visible at middle latitudes. "Of course," says David McLean of the Space Environmental Sciences Center at Boulder, Colo., "nobody pays really strict attention to the cycle in predicting specific events." A significant outburst can happen any time; in the statistical long run they cluster in the maximum parts of the cycle. The ones recorded in early August were among the most major ever recorded.

They all came from one active region of the sun, shown in the upper right of the photo (taken Aug. 10) just as the active area came around from the sun's far side. Their significance lies not so much in their optical as in their X-ray and radio properties. Optically flares are classed according to the area of sun they cover (0 the smallest; 4 the largest) and brightness (faint, normal, bright). The best of these was a 3 bright. General X-ray classifications run from C1 to C9, M1 to M9 and then X1 to X9. The Aug. 7 flare ran the X-ray sensors off scale at X5. But, says McLean, the very large centimeter-wave radio bursts that accompanied the flares were the real indication that this was an extraordinary event. The immediate cause of the magnetic storms is protons accelerated by the flare which reach earth 45 hours after the flare. These flares increased the proton count 800 times over the background level. □

search foundation in New York City, has recently issued a report that investigates the problems involved in independent scholarly research in diplomatic and military archives, the distortions that may result from unequal and privileged access to Government records and proposals for reform of the classification system.

The report, written by Carol M. Baker and Matthew H. Fox, describes the origin and development of the

classification process and the barrier it poses to scholars. The authors conclude that the Federal Government's 25-year embargo on military and diplomatic documents promotes public confusion and distrust about foreign affairs but does little to preserve the national security. They say the Truth in Government Act of 1971, proposed by Sen. Edmund S. Muskie (D-Maine), would be more comprehensive. The report calls for the establishment of an independent