in the national wilderness forest areas for the few commodities they may yield than we need to melt down the bronze in our monuments or to grow crops on historic battlefields." Put somewhat more seriously, the conservationist's reply to the need-for-resources argument runs like this, according to a staff member of the Senate committee: Should we destroy the remaining wilderness areas just to delay for a decade or so the inevitable shift from current sources of basic materials to the new ones the future will surely demand?

Passage Held Possible

The Senate Interior and Insular Affairs Committee, in voting whether to send the wilderness bill to the Senate floor, will provide the first test of strength on the measure. The committee is comprised of ten Democrats and five Republicans, all of whom live west of the Mississippi River. Because the commerce of the West has most to lose through passage of the bill, it is expected that the Senators from this area will attempt to amend the measure in such a way as to protect commercial interests. With this general revision, according to informed sources, the bill will have an even chance of getting from the committee to the Senate floor. Once there, according to these sources, it has a better-than-even chance of passage. However, the House of Representatives, which has the companion bill, HR 1960, before it, is expected to wait until the Senate acts before starting hearings. This delay, in addition to the fact that 26 of the 31 members of House Interior Committee are also from middle and far western states, makes passage of the wilderness bill by the whole Congress this year a chancy business.

Compton Criticizes Secrecy in Science

The Subcommittee on Constitutional Rights of the Senate Committee on the Judiciary held its first public hearing on secrecy in science on 28 April. The hearing was a phase of the subcommittee's continuing study of freedom of information and secrecy in government. Arthur H. Compton, Nobel-Prize-winning physicist of Washington University, presented the day's testimony.

In opening the session, Senator Thomas C. Hennings, Jr. (D-Mo.), chairman of the subcommittee, explained that the purpose of the new hearings was to explore the extent to which restrictions on the free dissemination of scientific information may be interfering with scientific development and progress in the United States. He commented that the subcommittee, in the course of its work in the field of freedom of information, had heard many complaints to the effect that undue secrecy has been hindering the work of scientists and has even caused many young people to avoid science as a career. He emphasized that the aim of the subcommittee's present study is to seek the views of the scientists themselves in an attempt to determine whether or not this actually is so. Hennings said: "If this is so, it is stupid and shortsighted, and something should be done about it immediately."

As a preliminary step in the subcommittee's study of secrecy and science, Hennings has written to all American Nobel-Prize-winning scientists to ask for their comments. As soon as these have been received and collated, they will be made a part of the record of the hearings. In the course of its present study, the subcommittee plans to consider the opinions of as many scientists in as many different fields as possible.

As the first witness in the new hearings, Compton opened his remarks by observing that the situation relating to secrecy in science had improved substantially since 4 years earlier, when he had testified before Congress on the subject. He referred to the difficulties that some scientists had encountered in applying for passports to attend meetings abroad, mentioning especially Linus Pauling's passport problems before he went to Europe to receive the Nobel Prize in 1954. He also described briefly the obstacles that arose from the requirement for political screening of visiting scientists, when international meetings were held in this country. He observed that the present policy, which requires a strong reason for denial of passports and visas, has eased the situation and represents a "substantial advance."

He pointed out that at the time of his earlier testimony there was a rather "loose and indiscriminate questioning of the loyalty of many, many scientists." He said that although this situation has also been alleviated, the effect of the questionings of past years is still considerable. He commented: "I find that there are, particularly among younger men, doubts about the advisabiliy of entering the scientific professions for fear that they will be considered as persons unloyal to the United States."

The Scientist's Role

After these preliminary remarks, Compton described for the subcommittee some of the ways in which secrecy in science can retard scientific advance. He urged that the ultimate responsibility for security in a research program rest with the scientist-administrator of that program. Excerpts from his testimony follow.

"A point which I would like to emphasize today is the importance of putting the responsibility for loyalty and maintenance of appropriate security in the hands of those who are responsible for conducting research. This would apply not only for research, which is my own special interest but, as far as I can see, likewise to such matters as conducting the work on the national defense or on the international policy of the United States. . . .

"Fifty years ago it was the common practice in science for a man to put a trademark, so to speak, on a certain aspect of science which he himself had started to investigate. If he would publish a paper, it was notice to his scientific colleagues that this was his little private province and that other people should keep off the ground and let him develop it and see what he could do.

"This is a point of view which has almost completely disappeared within the last generation. And it has disappeared because it has been found that the speed of advance has been much greater when a number of people approach the same problem from different points of view and compare ideas so that each can contribute, can fill in gaps in the other person's information, and thus the information grows more rapidly.

"This has been found mutually so advantageous that it has become the modern pattern of science, and the openness of information in science is a part of this same process that has been going on with the development of patents in industry and so on.

"It has come in recent years, since World War II, also into the field even of national defense, which is perhaps the most sensitive field that we have, where the present standard is generally accepted that the things of fundamental scientific interest, meaning by 'fundamental' science the science which is basic to the development of various aspects of weapons, will be made open but one will retain for one's self, that is, for the welfare of the nation, information with regard to the particular methods of application of this scientific knowledge which would involve special techniques for development of weapons or development of tactical use of weapons and things of that kind. These are things which are of such immediate importance to the nation concerned that they will be maintained. . . .

Clearance Procedure Inefficient

"One of the real difficulties that has come in connection with the development of the scientific aspects of national defense has been the question of clearance. . . .

"This has become really a highly organized—I think I would describe it as a 'bureaucratic'—matter in which there is a significant part of the responsibility

put in the hands of bureaus which have their own interests involved quite independent of the interests of advancing the scientific knowledge that may be the concern of groups. . . .

"I would take this as a typical example: Suppose a man is employed by the National Bureau of Standards on study of a problem in radioactivity. He will presumably have been cleared for work on this problem in Washington on this job. We may well suppose that in Los Alamos there comes to be a problem which needs investigation by a person of his ability, and the director of the Los Alamos scientific laboratory makes arrangements with the director of the Bureau of Standards to have this man transferred.

"But before he can be transferred, he will have to go through channels of clearance which will involve perhaps many weeks before the transfer can be made. And it may well be that his usefulness is over, that the job which he was supposed to do will already have been done by some other method with the expenditure of considerably more time and effort.

"This is the kind of thing to which I refer as the security techniques frequently destroying their own objective, because they become too highly organized.

"This seems to me to be at the moment one of the major problems that we face as a nation in connection with the security problem—namely, making it possible to make available to the part of the nation involved the skills of people in other parts of the nation, but, more generally, developing our security system in such a way that the essentials of secrecy, insofar as they are essential, can be maintained while transfers are made of individuals from one place to another for work. . . .

"[There should be] a greater centralization [of the security system], but with this thing kept in mind: That the responsibility for getting the job done is the thing that must be maintained as the matter of top importance. . . .

"I would personally like to see an office of security so developed that it can be used as a source of reference and advice to the individuals who are concerned with getting jobs done. . . ."

AAAS-Westinghouse Science Writing Awards

The American Association for the Advancement of Science has announced the establishment of two $1000 AAAS–Westinghouse Science Writing Awards to recognize outstanding science writing in the nation's newspapers and magazines. The awards are provided by the Westinghouse Electric Corporation through the Westinghouse Educational Foundation. The prizes will be made annually for excellence in science writing in the natural sciences, including engineering and technological applications but excluding medicine.

In making the announcement, Dael Wolfle, executive officer of the AAAS, said that the new awards program is intended "to recognize and encourage outstanding popular science writing, to stimulate public interest, and to foster a deeper understanding of the significance of science by the general public." He observed:

"Science and technology play a dominant role in human affairs today. Therefore, a broadly informed citizenry is essential, not only to continued scientific progress through public support of science but also to the solution of problems of major public concern which arise from such progress.

"Clear, accurate, impartial science writing in magazines and newspapers is an effective force in scientific communication to the nation as a whole. In administering the Westinghouse Science Writing Awards, the AAAS helps fulfill its purpose of advancing science directly and indirectly, and aids in discharging the responsibility all scientists feel toward building a broader public understanding of scientific developments and their implications to society."

The first of the new awards will be made during the winter meeting of the AAAS at Chicago in December 1959. The awards will be presented at the annual dinner of the National Association of Science Writers, an affiliate of the AAAS. Graham DuShane, editor of *Science,* will act as the administrator for the awards program.

To be eligible for the 1959 awards, a magazine article or a newspaper or press association report must have appeared in print between 1 October 1958 and 30 September 1959 in publications within the United States. Either a single article or a series of articles is eligible for an award.

In addition to the $1000 cash prizes for the authors, citations will be awarded to the newspaper and magazine in which the prize-winning articles appeared. At the discretion of the judges, special citations also may be awarded for distinguished service in science journalism.

Persons prominent in journalism, science, and public affairs will serve as the board of judges for the new program. The judges will be selected in the near future.

Entries in the Westinghouse Science Writing Awards competition will be judged on the basis of their initiative, originality, scientific accuracy, clarity of interpretation, and their value in promoting a better understanding of science by the layman. Deadline for entries in the 1959 competition is *10 October.*

The new competition is open to all who are engaged in science writing, irrespective of their professional employment or what previous awards they may have won in other competitions. However, only articles that have appeared in magazines directed to the general public are eligible. This excludes work that has appeared in trade journals or professional magazines.

International Atomic Agency Plans New Activities

At the end of its April meetings, the board of governors of the International Atomic Energy Agency decided that the agency should make a study of problems involved in the setting up of one or more isotope training centers in Arab and other countries in Africa and the Middle East. The director general was authorized to send experts to carry out surveys on the spot. Requests for IAEA's assistance in establishing such training centers had been received from several member countries. Letters from member countries had suggested that the existing facilities in Cairo and Ankara be used as a basis for such centers.

The board also accepted a United States offer of $600,000 for the agency's functional laboratory to be built at Seibersdorf near Vienna; the Netherlands will contribute a gamma spectrometer for the laboratory.

During its 2-week session, the board dealt with several other issues concerning major sectors of the agency's activities. It approved draft agreements with the U.S.S.R., the United Kingdom, and the United States for the supply of nuclear materials and authorized the director general to sign the agreements. The U.S.S.R. has agreed to supply 50 kilograms of uranium-235, the U.K. 20 kilograms, and the U.S. 5000 kilograms. The agreement with the U.S. also provides for the supply of additional quantities of nuclear materials matching the total of such supplies provided by other member states prior to 1 July 1960.

Another important subject before the IAEA governors was the agency's technical assistance activities. The group approved the sending of two preliminary assistance missions—one to Argentina, Brazil, and Venezuela, and the other to China (Taiwan), Japan, Korea, the Philippines, and Viet-Nam—to make detailed surveys for determining possible lines of agency assistance to these countries. A third mission will visit Argentina and Brazil to investigate the possi-