Trevor Gardner, former assistant secretary of the Air Force for research and development, then suggested de-emphasizing Mercury and giving higher priority to "more reasonable programs, doable things on which target dates are feasible," such as the development of a communications satellite, a weather satellite, an international television satellite, and—"if we want to dream a bit" —a postal satellite. Kusch added: "We want to propose a challenge in an area in which we are likely to win, rather than taking up the Soviet challenges."

In closing, Pollard said that there was only a minority feeling in the group that the space program as a whole might be de-emphasized. There was unanimous agreement that this country is committed to an international space race "whether it likes it or not," and that therefore the entire program should be "overhauled" and speeded up. There was a suggestion that space-program problems are not only a matter of funding and that there should be "civilian management and thought, together with help from the military, like the Soviet system." A formal report on space is being prepared for release in the near future.

Science and Politics

Occasionally members of the Democratic Advisory Committee on Science and Technology emphasize their nonpolitical attitude toward work on the committee. For example, physicist vice chairman Richard B. Roberts of the Carnegie Institution of Washington said recently: "We are not trying to start a political controversy. What is important about the committee is that there is enough interest in what it has said to have launched legislation in the Congress."

The statement on "Science and Politics" that was released at the 24 January press conference expressed the following opinions:

"We feel that the citizen-scientist has a responsibility to think about the problems of science and society and to communicate his thoughts to those who can convert ideas into the fabric of national policy. . . .

"We are aware that we are breaking new ground in formalizing a relationship between science and politics. To those of us who are participating in this new venture, it appears that developments so revolutionary as the A-bomb, the H-bomb and the ICBM make it mandatory that new techniques in government . . . be tried."

Navy Craft Makes Record Descent to Ocean Floor

The Navy's bathyscaphe *Trieste* descended to the floor of the Marianas Trench in the Pacific Ocean on 23 January in a record dive of 37,800 feet, or more than 7 miles. This is probably the greatest ocean depth so far explored. The previous record depth was 36,198 feet, attained in August 1957 by the Russian ship *Vityaz*. The *Trieste* was piloted by Navy lieutenant Don Walsh of San Diego. He was accompanied by Swiss scientist Jacques Piccard who, with his father Auguste, designed and built the undersea craft.

The project was part of an oceanographic research program—Project Nekton, headed by Andrew Rechnitzer —that is being conducted by the Navy's Electronic Laboratory in San Diego and the Office of Naval Research in Washington. This was the third dive in a series that started in November to gather information about sunlight penetration, underwater visibility, natural underwater sounds, transmission of man-made sounds, water currents and temperatures, sea-floor configurations, and the effect of deep-water pressures on various mechanical devices. At full depth, the *Trieste*'s hull sustained a pressure of 16,883 pounds per square inch.

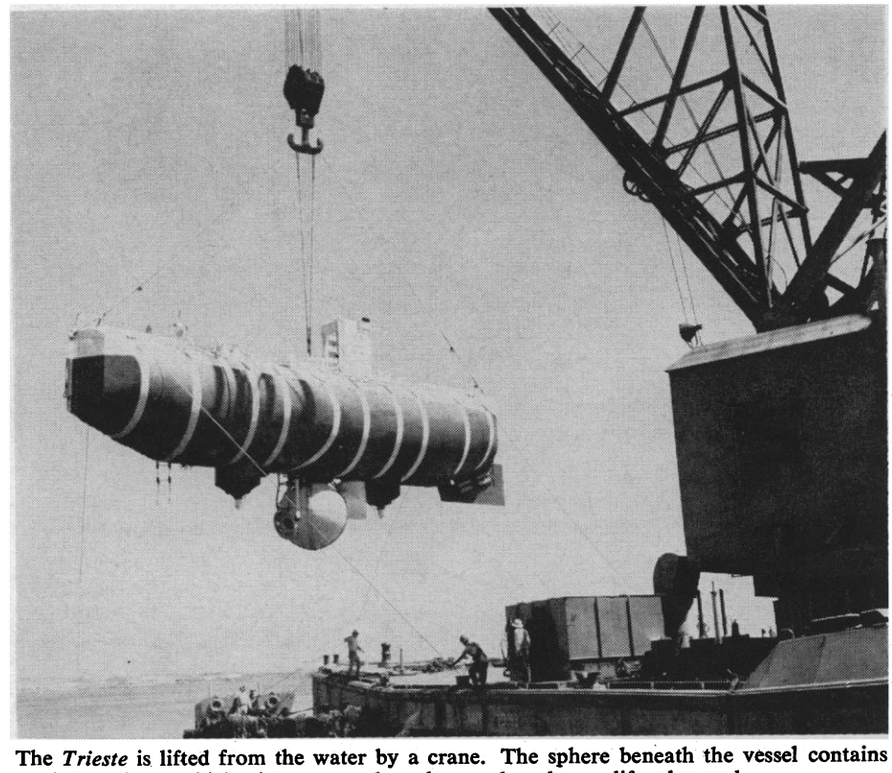
The vessel weighs 70 tons. A steel float that is 50 feet long and 11 feet deep provides buoyancy. Beneath this float is a 6½-foot, two-man cabin with two windows. The *Trieste* carries 10 tons of small iron pellets as ballast. To return to the surface, these shots are released at the rate of 1 ton for each 3000 feet of ascent.

Descent Described

The recent Marianas descent, which occurred approximately 250 miles southwest of Guam, took 4 hours and 48 minutes. The two men stayed on the bottom about 30 minutes, then began the trip to the surface, which took some 3 hours and 17 minutes. Both men emerged wet and shivering but were otherwise in good condition. Walsh made the following remarks about the trip:

"When the tube was flooded and we determined that the door was not leaking, we then ordered the ballast tanks flooded and the dive began. Unlike a submarine, the bathyscaphe *Trieste* is submerged by the topside crew on orders from the pilot in the sphere. This saves a great deal of weight in not having to install operating mechanism and additional wiring. . . .

"It stayed light outside until about 800 feet, when we saw our last bit of daylight. The trip to the bottom was long but uneventful; both Jacques and



The *Trieste* is lifted from the water by a crane. The sphere beneath the vessel contains a window from which pictures can be taken and undersea life observed.

myself were kept quite busy recording our data and piloting our inner-space craft.

"At around 6000 feet we began to feel the chill creeping into the sphere and we took a few minutes out to change into our heavy clothing. . . .

"We inched our way from 5500 down to 6300 fathoms, a distance of some 4800 feet. The bottom was touched as lightly as a feather, though we did stir up a cloud of mud when the sphere touched. After about 20 minutes of data-taking on the bottom, we released shot and headed for the surface."

Geological Survey Reports Accomplishments during 1959

Increased mapping activities, widespread investigations in geology and water resources, and new production highs from mineral and petroleum leases on public lands are described by the U.S. Geological Survey in its annual report for fiscal year 1959. During the year the survey marked its 80th anniversary (3 March 1959).

In topographic mapping, activities were carried on in every state, the District of Columbia, Puerto Rico, and the Virgin Islands. A total of 2439 maps were prepared for printing and distribution, of which more than 1600 constituted new mapping. A stock of some 30 million—about 21,000 different quadrangles—is available now, covering nearly half the total area of the United States.

Nearly 355 permanently marked triangulation stations were established to provide control for areas totaling more than 30,700 square miles. A new map of Tennessee was published, and maps of a number of other states are being compiled. Cooperative programs totaling $4 million were in effect in 34 states, Puerto Rico, and the Virgin Islands, the federal government meeting half the cost.

Research Appraises Resources

Survey geologists, continuing investigations and appraisals of United States geologic and mineral resources through comprehensive research programs, carried on approximately 425 active projects. Results of geologic investigations were reported in 27 professional papers, 65 bulletins, 91 maps, and 2 circulars published by the Geological Survey, in 43 reports released in open file, and in approximately 250 articles published in scientific journals.

New geophysical data about various areas of the country were provided through airborne radioactivity and magnetic surveys. Several new geologic, geophysical, and geochemical studies were directed toward the discovery of concealed ore deposits. Geologic mapping and stratigraphic studies designed to aid exploration programs in the mineral fuels field were in progress in 30 states, and Survey scientists participated in a special study of the nation's productive capacity of petroleum through 1975.

Water-resources investigations included the systematic collection, analysis, interpretation, and publication of hydrologic and related geologic data. Stream-flow data were obtained from about 7100 gaging stations. Some 640 ground-water investigations were in progress, and sediment and chemical quality studies were being made throughout the country, covering the most important river basins and groundwater aquifers.

Survey conservation activities were aimed at assuring proper development and use of water and mineral resources on federally controlled lands. This work required field surveys; preparation of maps and reports dealing with water power, fuels, minerals, and chemicals; and on-site supervision of mining and drilling operations.

Approximately 33,623 cases concerned with mineral classification were handled; 400 miles of stream-channel surveys and nine dam-site surveys were investigated; the operation of 4018 mining properties, in 34 states, and of about 151,000 oil and gas properties was supervised. Yields from the oil and gas properties were appreciably higher than in the previous fiscal year.

Hospitalization Rate for Persons over 60 Years of Age

More men than women at age 60 and over go to the hospital, but the men stay a shorter time than the women, it is reported by statisticians of the Metropolitan Life Insurance Company. Experience among Metropolitan's personnel indicates that the hospital admission rates in 1957 and 1958 averaged 156 per 1000 annually for men and 98 per 1000 for women. However, the average stay was 16.8 days for men, and 27.8 days for women.

The group under study, all aged 60 and over, included office and field personnel at work, on disability pensions, or retired. The statisticians point out that these persons are protected under a liberal hospitalization insurance program. The yearly hospitalization rate among males rose from 159 per 1000 at ages 60 to 64 to 185 per 1000 at age 75 and over. In each age group more men were hospitalized for nonsurgical than for surgical conditions. The two types of cases were about even for women.

The duration of hospitalization per case increased steadily with advance in age among both men and women, and for surgical as well as for nonsurgical conditions. Among males, the average stay per case for all causes combined increased from 13.3 days at ages 60 to 64 to 24.6 days at age 75 and over. Among the women, the average rose correspondingly from 16.3 to 37.5 days.

Among males, abdominal and urologic operations accounting for nearly three-fifths of the surgical cases. Heart disease accounted for one-third of the nonsurgical cases. Ranking next in order of frequency were digestive disorders, respiratory conditions, circulatory conditions other than heart, and diseases of the central nervous system. In general, the pattern of hospitalization for women resembled that for men, with abdominal operations the leading type of surgical condition and heart disease the most frequent cause of hospitalization for nonsurgical conditions.

AAAS Laurentian Hormone Conference

The 1960 Laurentian Hormone Conference of the AAAS will be held at Mont Tremblant Lodge, Mont Tremblant, Quebec, 4–9 September. Investigators interested in attending this conference should make application to the Committee on Arrangements of the Laurentian Hormone Conference, 222 Maple Ave., Shrewsbury, Mass., at as early a date as possible and in any event no later than 13 May. The conference rate is $14 per day per person. Since the number of participants is necessarily limited by available accommodations, all applicants are screened; invitations to attend are issued by the second week in June.

The meeting is divided into five sections—on testes function, hormones and reproduction, aldosterone, hormones and electrolyte metabolism, and hormones and organic metabolism. The program includes work by the following investigators from Canadian and European institutions: H. Nowakowski and