

By next June, when the enlarged operation begins, oceanographers and geologists will have much more detailed data from which to work, including a detailed photo-mosaic map, to be made by the U.S. Navy research ship Mizar in October, covering four square kilometers of the site. In addition, a towed magnetometer and other instruments will add to the tools being used to study the ongoing growth of the earth. □

## Surgical treatment for senility shows success

Senility—transient memory loss—is a common problem in older people. There has been virtually no treatment for it, with the possible exception of oxygen (SN: 3/18/72, p. 188). Now, a team of Philadelphia neurosurgeons has come up with a simple surgical procedure that can reverse one kind of senility. This senility is caused by cerebral ventricles (cavities in the brain) enlarging and filling with fluid.

Henry A. Shenkin and his colleagues at Episcopal Hospital first diagnose a patient for enlarged ventricles. The surgeons remove fluid from the ventricles and replace it with air. The amount of air that fills them tells whether they are enlarged or not. If a patient has enlarged ventricles, he or she then undergoes a ventricular shunt. In this simple procedure, the surgeons insert a tube into the brain, run it down the neck under the skin and through the body into the abdominal cavity. The tube drains fluid from the ventricles into the abdominal cavity.

Shenkin and his colleagues have applied the technique to 28 senile patients. Eighteen (64.3 percent) of them have lost their senility. □

## Wanted: More women in higher education

In a time of shortages of almost everything, it seems a shame to waste any natural resources. But that is exactly what is happening, says the Carnegie Commission on Higher Education. A large supply of superior intelligence in the United States is going unused. This supply is found among women, says the commission in *Opportunities for Women in Higher Education*, a report issued this week by commission chairman Clark Kerr.

The report points out that at each level of advancement within the educational system in the United States, the percentage of women who participate declines. Women constitute 50.4 percent of high-school graduates, 43.1 percent of those who earn bachelor's degrees, 36.5 percent of those with

masters and doctors degrees, 24 percent of those who are faculty members and 8.6 percent of those who are full professors. On the average, the commission estimates, women faculty members receive \$1,500 to \$2,000 less a year than do men in comparable positions.

To overcome these disadvantages, the commission favors the removal of "all improper barriers to the advancement of women; and active search for their talents, and special consideration of their problems and for their contributions." The report suggests, for instance, more mathematical training for women at the precollege level, and counseling that is free of the concept of male and female careers. At the college level, the report calls for opportunities for women to return to college after they have started their families. At the faculty level, the commission favors special efforts to recruit women and policies that provide for child-bearing and child-rearing leaves and ease rules that prohibit husbands and wives from working at the same institution.

In the commission's judgment, the 1970's are an important time for the improvement of the faculty status of women because the number of openings will decline as college enrollments level off and begin to decrease. But even with affirmative action programs, the report predicts that it will take until the year 2000 before women are proportionately represented in higher education. □

## Leonard Carmichael dies; headed Science Service

In 1927, a Ph.D. holder from Harvard, teaching at Princeton, was offered a full professorship at another university at such an early age that he insisted on beginning the new appointment at a lesser rank to avoid antagonism about his youth.

In the early 1930's, a university department head was a co-developer of the electroencephalograph, at a time when some of his peers doubted that there was even an electrical brain pattern for the instrument to measure.

During World War II, a university president spent almost a year of nights on railroad sleeping cars commuting to Washington to organize recruitment of scientists for research in the war effort.

In 1953, a new chief administrator took over the Smithsonian Institution and began an 11-year tenure during which the museum's catalogued objects grew from 37 million to more than 57 million and the number of visitors almost tripled.

All of these—the prodigy, the scientist, the mobilizer, the museologist—were the same remarkable man: Leonard Carmichael, who died Sept. 16, of cancer, at the age of 74.

## A bacterial cause for male infertility

Male infertility is complex and not always easily diagnosed. It can be caused by inadequate production of sperm, obstruction of sperm transit through the male seminal tract, unsatisfactory deposition of sperm in the female vagina or impotence (inability to attain or sustain an erection). These factors in turn can be caused by physical obstructions, hormonal imbalances, trauma, radiation, adrenal tumors, drugs or psychological disturbances.

Now Swedish bacteriologists have evidence that some cases of male infertility are caused by a kind of bacterium known as the T mycoplasma. Hakan Gnarpe and Jan Friberg of the University of Uppsala report their findings in the Sept. 14 NATURE.

T mycoplasmas were first associated with spontaneous abortions and stillbirths in 1970. Then Gnarpe and Friberg isolated T mycoplasmas from the semen of men with unexplained infertility. They suspected that the bacteria might have caused the infertility and gave the men antibiotic treatment. Afterward the wives of 30 percent of the men became pregnant. The next challenge was to find whether the bacteria actually attach themselves to the sperm cells of men with reproductive failure. Scanning electron micrographs showed that the bacteria indeed do so. □

Besides his many other accomplishments, which resulted in numerous awards including two Presidential citations, Carmichael served for 20 years on the board of trustees of Science Service, publisher of SCIENCE NEWS, including 12 years, from 1954 to 1966, as its president. Last year he was named its President Emeritus.

He was born in Philadelphia on Nov. 9, 1898. Just as in his early life he absorbed knowledge from all around him—he learned metalworking, for example, from his physician father's chauffeur—there was little if any time during the succeeding half century when Carmichael was not teaching, advising or directing several organizations at a time. He taught at numerous universities, headed the American Psychological Association and American Philosophical Society and served on many panels, boards and committees both in and out of government.

Lists of his credentials could fill a book, but an indication of his advanced thinking is his doctoral thesis, completed more than 50 years ago but later republished under the title, "*Heredity and Environment: Are they Antithetical?*" □