

BIOLOGY

Congressmen Urge Lab For Wildlife Disease

RABIES, ANTHRAX and brucellosis, wildlife diseases that affect man and domestic livestock, may be controlled or even eliminated.

This is the promise of a new national laboratory that congressmen want to establish to study wildlife diseases.

A bill (S. 2086) has been introduced by Senator Gordon Allott (R. Colo.) and several other interested senators to provide for such a laboratory. Now in the report stage in the Senate Committee on Interstate and Foreign Commerce, the bill authorizes some \$3,500,000 for the construction and equipping of the wildlife disease laboratory.

In his remarks introducing the bill, Sen. Allott pointed out that while the U.S. has no extensive research program devoted to the study of wildlife diseases, the Soviet Union has a well-equipped and well-staffed laboratory for just such study. Some 28 full-time scientists and 60 "technical and subprofessional employees" in addition to an undetermined number of assistants make up the staff.

The laboratory would be established, equipped and maintained by the U.S. Department of the Interior, Sen. Allott's office told SCIENCE SERVICE and the Colorado State University at Ft. Collins has been suggested as a possible site. The recently opened National Seed Laboratory is also located at the Ft. Collins campus.

Scientists at the wildlife disease laboratory would conduct research into wildlife diseases and problems relating to their causes as they affect man, livestock and wildlife itself. Federal, state and local agencies, in addition to private organizations and universities, would work with the laboratory.

It is not too likely that any action will be taken on the bill this year. However, its passage in the next session of Congress seems possible.

Science News Letter, July 4, 1959

PUBLIC HEALTH

Radiation Dectector May Check Water

RADIOACTIVE FALLOUT in drinking water will have to be "slick" to escape the watchful eye of a new electronic detector.

Continuous monitoring of drinking water supplies was one possible use suggested for the unit by its developers, petroleum researchers at the U. S. Bureau of Mines.

The battery-powered, portable device was developed specifically, however, to check effectiveness of modern techniques of water-flooding. Waterflooding is a method to recover left-over oil in which water is pumped underground to force the left-over oil towards producing wells. The monitor detects and records the movement of the water, "tagged" with radioisotopes, and determines how thoroughly the water is penetrating the oil-bearing reservoir sands.

The 20-pound detector was designed by electronic specialists F. E. Armstrong and E. A. Pavelka of the Bureau of Mines Petroleum Experiment Station at Bartlesville, Okla.

It can be mass-produced for about \$500 to \$600, compared with a retail price of at least \$3,000 for non-portable commercial models, Mines Director Marling J. Ankeny said.

The low price, the useful battery life of over 300 hours, and the portability, should open many industrial and defense uses for the detector, Mr. Ankeny predicted.

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ORNITHOLOGY

Booby Is Smart Bird Despite Reputation

DICTIONARY writers may have to upgrade their definition of "booby." There is evidence that it should not mean a "dunce" or "stupid fellow."

Calling a man a booby probably goes back to the booby gannet, a large sea bird that some persons decided looked stupid. Now there is evidence that the bird's looks are deceiving.

For the second time in several years, a booby has been found far from its usual salt water home, but near good fishing grounds. The booby was found near Parker Dam on the California side of the Colorado River, Laurence M. Huey of the Natural History Museum, San Diego, reports.

This shows the rapid adaptability of the booby in entering new territory when conditions are suitable. Formerly the Colorado River was silt-laden and a large fish population could not survive in its waters.

But now, Mr. Huey explains in *The Condor* (May-June), dams built by man have regulated the river flow and many fish live in the clear water, attracting birds.

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MATHEMATICS

Station May Broadcast After Loss of Power

A RADIO STATION capable of broadcasting even after losing its electric power source may result from current work.

The research is being done by Dr. Charles P. Wells, professor of mathematics, and Dr. Alfred Leitner, associate professor of physics, both at Michigan State University, under a grant from the U.S. Army.

If an antenna were broadcasting on exactly the right frequency for its size, they theorize, it would continue to broadcast after losing its power source.

This might even make it possible to design a satellite that could broadcast after its batteries fail.

The two scientists are calculating how certain sizes and types of antennas would perform under given conditions. Their problem is one of pure mathematics. Once a solution is found, engineers can go ahead with the design work, they indicated.

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IN SCIENCE

EDUCATION

Reach Critical Point In Science Faculty Supply

THE ACUTE PROBLEM of the quantity and quality of future college faculties appears to have reached a crisis that may be resolved in either direction.

Although a six-year downward trend in the supply of well-qualified teachers seems to have been checked during 1958-59, there are no apparent resources to draw on for the greatly increased needs expected in the next ten years, according to a report by the Research Division of the National Education Association.

Without expanded budgets, colleges and universities will be forced to choose between too few and too poorly prepared teachers, the report concludes. Citing data on degrees held by newly employed teachers, the report shows that the percentage of those holding doctor's degrees declined to 23.5% in 1956-57, rose to 25.3% in the following year, but fell to 23.8% during 1958-59. Similar trends were seen among those holding a master's degree or less.

Of those earning doctorates in English, foreign languages and history, at least 75% become educators. However, careers in teaching attract much smaller numbers of those receiving doctorate degrees in the critical fields of science and mathematics.

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ASTRONOMY

Television Aids Telescope In Balloon Look at Sun

TELEVISION will join a telescope in a balloon look at the sun from above most of the earth's atmosphere.

For a series of flights to be made this summer, a 12-inch telescope is being equipped with a closed circuit television link so the telescope can be pointed at and focused on the sun from the ground by remote control. The telescope-camera will photograph an area with a width one-tenth the sun's diameter. It will be linked optically to a motion picture camera to obtain a continuous record of images appearing in the telescope reflector. The television photographs taken on the ground will cover about a fifth of the area shown in the telescope.

Dr. Martin Schwarzschild of Princeton University is director of the project to scan the sun from a balloon above the earth's turbulent atmosphere. The upcoming balloon observations are sponsored jointly by the Office of Naval Research and the National Science Foundation.

They also jointly support plans for Stratoscope II, a 36-inch telescope expected to be flown in 1961 to examine objects other than the sun, such as planets, stars and galaxies.

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E FIELDS

PUBLIC HEALTH

Great Drop Predicted In Infant Death Rate

REDUCTIONS in death rates from 1955 to 1970 in the United States will be much greater, proportionately, for infants and children than for adults and older people, Dr. James D. Tarver of Oklahoma State University has reported.

Using 1930-1954 mortality rates as the basis for his projections, Dr. Tarver predicted that infant mortality rates would decrease nearly 50% during 1955-1970.

He accounted for the relatively high reductions in infant and child mortality by the fact that infants and children have benefited the most from recent progress in medical knowledge and sanitation.

Dr. Tarver said increases in longevity will be larger among nonwhites than with whites and greater among females than with males. In 1970, white females should continue to top the longevity list with a life expectancy of 77.8 years.

An intensification of geriatric problems, due to the greater number of older people, was one of the results he predicted.

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ARCHAEOLOGY

Mayan Stone Monument Bears Date 32 A.D.

A DATED STONE monument has been unearthed by an expedition from the University of Pennsylvania Museum. The monument was erected at a time almost within the lifetime of Christ at Tikal, ceremonial center of the ancient Maya Indians.

It is the oldest known dated monument of the lowland Mayas, the date it bears being equivalent to 32 A.D. by one correlation and 292 A.D. by another.

Tikal, a large and important center of the Mayas, was inhabited possibly as early as 1500 B.C. and dominated the region from about 200 A.D. to 900 A.D. It was in Tikal that scientists discovered an ancient "sky-scraper temple," the height of a modern 20-story building.

Tikal, located in northern Guatemala, is now being explored and partially restored by the University Museum in cooperation with the Guatemalan Government.

Since work on the restoration has started, Tikal has become a tourist attraction. Scheduled airplanes make stops there three times a week and a lodge has been erected for overnight guests.

One of the important finds made this year by the expedition is a magnificent stone altar. Carved on the altar is a snake, although the Mayas lacked metal implements for stone carving and must have used hard stone (basalt or flint) rubbed against stone to do the carving.

A tomb was found which must have been the burying place of a very important person, but, unfortunately, nothing was found in it—neither human bones nor tomb furnishings. It had been sacked in Mayan times.

Field director of the expedition was Dr. Edwin M. Shook, on leave to the University Museum from the Carnegie Institution of Washington.

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PUBLIC HEALTH

Polish Health Service Plans Use of Live Virus

ALL CHILDREN in Poland between the ages of six months and seven years who have not yet had a third Salk shot will receive the live virus polio vaccine.

The oral vaccine that will be used is the Wistar Institute strain developed by Dr. Hilary Koprowski, director of the Institute. (See p. 3.)

Adoption of the Wistar polio vaccine strain for large-scale immunization in Poland stems from the investigation of the safety, efficacy and low cost of the vaccine begun last December by the Polish State Institute of Hygiene.

An earlier trial of the vaccine in the Belgian Congo showed that children vaccinated with this strain of the oral vaccine escaped death last winter during a polio epidemic. The epidemic claimed the lives of eight unvaccinated children in and around Leopoldville, the capital of the Belgian Congo.

Leopoldville and the surrounding area experienced 103 cases of paralytic polio from September 1958 through April 1959. Ninety-three of these cases were unvaccinated. Paralytic polio struck 10 children who had received Wistar live virus vaccine.

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MEDICINE

Scientists Find Link Between High I.Q., Gout

PROOF OF SOME truth in the belief that intelligent people are more frequently afflicted with gout has been reported.

There is a low level of positive correlation between the I.Q.'s and the level of uric acid in the blood of 817 G.I.'s.

A high level of uric acid is usually present in the blood of persons suffering from the painful disease that strikes the joints and big toes of its victims.

Many scientists, in studying the case histories of gout patients, have noticed that the relatively rare disease occurred most frequently among prominent and successful people.

It may well be that highly successful people eat richer foods than does the average man, or that a defect in the manner in which the body burns up this food may activate the brain, Drs. DeWitt Stetten Jr., and John Z. Hearon, National Institute of Arthritis and Metabolic Diseases, Bethesda, Md., explain in *Science* (June 26).

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BIOLOGY

Low Dose of Chemical Causes Tumor in Mice

SOMETHING INSIDE the newly born mouse seems to make it more susceptible to cancer-causing agents.

Results of experiments in which 12-hour-old mice were given single, small doses of a purified hydrocarbon should be considered in future cancer studies, a team of researchers report.

Although the young mice came from a strain that was relatively insusceptible to tumors and malignancies, eight out of 25 developed tumors of the lymphoid tissue within a very short time—by 24 weeks of age. Control mice survived and no tumors have appeared so far, Giuseppe Pietpa, Kathrynne Spencer and Philippe Shubik of the Chicago Medical School say.

Also, under normal conditions mice of this strain did not develop lymphoid tumors before 42 weeks of age.

The scientists emphasized in their report in *Nature* (June 13), that the development of leukemias and malignant tumors depends largely on "factors inherent in the animals at this stage of development."

It is not enough to study the laboratory transmission of these diseases in mice only in terms of the cancer-causing agent, the researchers suggest. Scientists need to consider the animals' response to the cancer-forming process as a whole.

These findings, the Chicago scientists indicate, are particularly significant in evaluating various virus concepts, in which a virus is believed to be a cause of cancer.

Science News Letter, July 4, 1959

PALEONTOLOGY

Footprints in California Canyon Point to Camels

RARE footprints of mammals that lived many millions of years ago have been found high on the wall of a small canyon.

The footprints of large and small camels, an antelope and several carnivores or meat-eaters indicate the possibility of a water hole before the sands came. One of the prints shows a well-developed heel and could have been made by a bear-dog, Raymond M. Alf of the Webb School of California, Claremont, reports.

It is very rare, he points out, to find mammal footprints from the geologic time scientists call the Tertiary period. This period, which saw the Age of Mammals, began about 60,000,000 years ago and lasted until about 2,000,000 years ago.

These footprints, found along the Avawatz Mountains near Baker, are the first to be reported from the Mojave Desert. The search for more prints will continue in order to gain more knowledge of the animals, climate and life in the Mojave Desert millions of years ago.

Details of the discovery appear in the *Bulletin of the Southern California Academy of Sciences*.

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