

## GENERAL SCIENCE

**Hearings on Science Bills To Begin Oct. 8**

► LEADING scientists, industrialists, labor leaders and government officials will urge increased Government support of scientific research in joint hearings before the Senate committees on military affairs and commerce for three weeks beginning Oct. 8.

Following President Truman's message asking for a single federal research agency for scientific research, joint hearings have been arranged for the Kilgore-Johnson-Pepper, Magnuson and Fulbright bills.

Those who have been invited to appear during the first week are: President Isaiah Bowman, Johns Hopkins University; President James Conant, Harvard University; Dr. Harlow Shapley, Harvard University; Eric Johnston, U. S. Chamber of Commerce; Ira Mosher, National Association of Manufacturers; William Green, American Federation of Labor; Philip Murray, Congress of Industrial Organizations; Edward O'Neal, Farm Bureau Federation; Charles Goss, National Grange; James G. Patton, National Farmers Union; Dr. Vannevar Bush, Office of Scientific Research and Development; Harold D. Smith, Bureau of the Budget; Secretary Robert P. Patterson, War Department; Secretary James V. Forrestal, Navy Department; Dr. Jerome C. Hunsaker, National Advisory Committee on Aeronautics; Secretary Henry A. Wallace, Department of Commerce; Secretary Harold L. Ickes, Department of Interior.

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## BOTANY

**Japanese Honeysuckle Has Some Redeeming Traits**

► JAPANESE honeysuckle, a trailing vine with sweet-scented flowers that has become a smothering pest in open woodlands all along the Atlantic coast from Connecticut to Florida and inland as far as Tennessee, has some redeeming traits. Like one of those baffling characters in fiction, the villain who isn't altogether bad, it offers shelter and food to game birds and deer in time of stress, C. O. Handley, leader of the Virginia Co-operative Wildlife Research Unit here, reports in the *Journal of Wildlife Management*, (Oct.).

The tangled thickets of the vine, scrambling over bushes and fallen trees, offer almost ideal cover for bobwhite quail,

wild turkeys and other upland game birds, as well as for cottontail rabbits. Turkeys sometimes make their nests in such thickets.

Game birds, and some song birds as well, eat the honeysuckle berries. These do not seem to be a preferred food, but they have the advantage of being available when berries and seeds on lower-growing plants are buried under deep snow or coated over with ice after glaze-storms. Chemical analysis of the berries indicates that they are fairly high in available food content.

Japanese honeysuckle retains a large part of its green leaves through the winter, so that it makes acceptable browse for deer. Here again, the vine is especially valuable in times of deep snow, as an emergency ration. The leaves are also eaten by rabbits and to some extent by game birds. Chemical analysis shows a food value comparable to that of timothy hay.

Although Japanese honeysuckle is a terrible nuisance in open woodlands, especially where the trees are trying to reestablish themselves after cutting-over or fire, it cannot stand much shade, and dies out after the new forest gets its growth and establishes a closed canopy overhead.

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## ENGINEERING

**Super-Pulverizing Process For Low-Grade Anthracite**

► WITH FUELS of all kinds on the scarcity list and winter in the offing, more than ordinary interest attaches to a new apparatus for getting maximum heating value out of coal, especially low-grade anthracite with high ash content, on which U. S. patent 2,385,508 has been granted to Edgar S. Hammond of Bloomfield, N. J.

Essentially the device consists of a closed, racecourse-shaped loop of strong steel tubing. The coal, ground fine, is blown in near one end by a jet of dry, superheated steam. Additional steam jets send the particles around and around the course, jostling together and reducing each other further in size. An outlet near the other end takes off the inner part of the coal-powder stream, in which the particles have been reduced to microscopic fineness. Blown directly into the furnace firebox, this super-powdered coal burns with a thermal efficiency said to approximate that of gas.

Rights in the patent have been assigned to the Blaw-Knox Company.

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**IN SCIENCE**

## GEOGRAPHY

**New Guinea Shangri-La Identified by Photographs**

► THE NEW Guinea Shangri-La or Hidden Valley, from which three survivors of a plane crash were rescued by glider plane during the past summer, is now identified as the Grand Valley of the Balim River, discovered and explored in 1938 by a combined American and Dutch scientific expedition organized and led by Richard Archbold of the American Museum of Natural History.

The identity of the valley came about through a comparison of photographs taken by the Army just before the survivors were rescued with airplane photographs taken by the Archbold expedition. The identity is acknowledged by the Army, and particularly by Col. Ray T. Elsmore, who directed the recent rescue operations.

Early in the exploration of the Grand Valley by the Archbold expedition it was found that their flying boat could be landed near the lower end of the valley. A base camp was located there, supplies were flown in to this landing place, and from it the whole party of nearly 100 men was flown out of the valley when its work was done.

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## ELECTRONICS

**New Plant to Be Built For Electronic Research**

► A GIGANTIC plant for the development of electronic equipment will soon be under construction in Syracuse, N. Y. It will provide laboratories for scientific research in the electronic field and modern factory buildings for the construction of television apparatus, radar for safety of ships and airplanes, frequency modulation radio and wire recording for entertainment and education, and many other types of equipment that depend upon electronics for operation.

The new plant, a project of the General Electric Company, will cost approximately \$10,000,000 and will occupy 155 acres, laid out and landscaped like a college campus. The floor area involved is over a million square feet. The size of the plant is an indication of the part that electronics is expected to play in America's industrial future.

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# CE FIELDS

## WILDLIFE

### Disease from Moldy Corn Kills Wild Ducks

► WOOD DUCKS in considerable numbers were made sick, and many of them died, after breathing clouds of spores given off by a mass of moldy corn on which they were feeding, in a flooded area near Havana, Ill., it is reported in the *Journal of Wildlife Management*, (Oct.). Dissection of several of the dead birds showed their lungs and other organs in the upper parts of their bodies to be overgrown with a growth of white mold, which was identified as *Aspergillus fumigatus*—a botanical second cousin of the mold from which penicillin is extracted.

Eating the moldy corn seems not to have caused the ducks any direct injury. It seems more probable that the microscopic propagating bodies, or spores, stirred into the air as the ducks were trampling in the spoiled grain, were breathed into their lungs and germinated there, producing effects like those of pneumonia.

A search of the records for similar cases disclosed a number of isolated instances, in which gulls, owls and other bird species beside ducks were the victims. A disease called brooder pneumonia, said to be well known to breeders of chickens, ducks and ostriches, is blamed on the same kind of mold.

Investigators of the present outbreak were Frank C. Bellrose, Jr., and Harold C. Hanson of the Illinois Natural History Survey, and Dr. P. D. Beamer of the University of Illinois.

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## ELECTRONICS

### Radio-Telephone Circuits Permit 24 Conversations

► RADIO-telephone circuits permitting 24 two-way simultaneous conversations on a single radio-frequency carrier wave, have been successfully demonstrated at the headquarters building of the International Telephone and Telegraph Corporation in New York, when two groups of 24 men in separate rooms conversed at the same time, the conversation passing through relay stations at Hazlet and Nutley, N. J.

The experimental network utilizes the pulsetime modulation principle of transmission recently perfected by the Federal Telephone and Radio laboratories and other laboratories of the corporation after nine years of research. Only one transmitter and receiver are required at each location for the 24-channel simultaneous communication.

Common waveguides and antennas are used both for transmission and reception: parabolic reflectors, eight feet in diameter, serve to beam the 1,300 megacycle carrier. The reflector at the New York end is located on the roof of the 35-story International Telephone building, those at the two New Jersey relay stations are located on high towers.

The present 24-channel arrangement makes use of a combination of pulsetime modulation plus a system of electronic time selection, certain fractions of each second being allotted each channel for the transmission of its signal. In contrast to mechanical systems evolved in the past, the method of time selection used is entirely electronic in operation, and was developed especially for this purpose.

It permits 24-channel voice communication with all the fidelity of modern telephone standards, it is claimed, and is much more compact than equipment designed for frequency selection.

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## CHEMISTRY

### Wood Protected from Acids By Plastic-Impregnation

► PROTECTION of wood from acid solutions or fumes is provided by a process in which the wood is impregnated with a plastic, developed in the wood preserving division of Koppers Company, Inc. The plastic-impregnated wood will be known as Asidbar. The treatment increases the weight and hardness of the wood, and gives it resistance to abrasion, water, and chemicals. It gives a black finish that need not be painted.

The treated wood is suitable for flooring on platforms and in railroad cars and other structures subject to rough use. It will probably be suitable for greenhouse construction where untreated wood is subject to rapid decay due to moisture and other conditions.

In the treatment, the plastic material is liquefied by high temperature and the wood is immersed in the compound in a sealed retort. The plastic is forced deeply into the wood fibers by high pressure at high temperatures.

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## PUBLIC HEALTH

### Polio Foundation Gives Large Sums for Education

► LARGE SUMS for the education of new workers to help in the fight against poliomyelitis were granted by the National Foundation for Infantile Paralysis during the past year.

The American Association of Medical Social Workers was given \$101,760 for scholarships in medical social work, the foundation's annual report states.

For scholarships in health education \$60,000 was granted to the U. S. Public Health Service. Because of the acute need for more nurses specially trained to give the orthopedic care polio victims require, a grant of \$13,400 for scholarships in this field was made to the National Organization for Public Health Nursing.

Altogether the foundation allotted during the year ending May 31 the "unprecedented total of \$4,157,814.15 for research, education and the treatment of patients." Almost half of this was appropriated for training of polio fighters in various fields and for broadening public understanding of the problem.

One of the largest single grants was \$90,000 to the University of Wisconsin for study of the relation of nutrition and diet to resistance and susceptibility to infantile paralysis.

So that a new hospital at Caracas, Venezuela, built specially for treatment of infantile paralysis, might give even better service, it received a grant of \$2,500 for training a brace-maker.

Although no preventive or cure for the disease has yet been found, the foundation continued to support research on viruses which cause this and other diseases in the hope of finding means of combatting them or checking their spread.

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## GEOLOGY

### Fossils Depict Life Millions of Years Ago

► FOSSILS depicting the forms of life which existed in the Midwest more than 280,000,000 years ago have been acquired by the University of Illinois. The 200,000 items composing the private collection gathered by R. R. Rowley, who made many important contributions to paleontology, include 147 type specimens, or originals from which a new genus or species was identified. Numerous others were set aside by Mr. Rowley as new types but not described by him before his death a decade ago.

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