

GENERAL SCIENCE

A.A.A.S. Council Votes on Avoiding Segregation

► THE COUNCIL of the American Association for the Advancement of Science, consisting of 328 members from sections and affiliated societies, is deciding by mail ballot whether to hold A.A.A.S. annual meetings in the future in any city where there is racial segregation.

The resolution presented at the Atlanta meeting, at which the mail action was ordered, provides that annual meetings be held where all members may freely meet for scientific discussions, the exchange of ideas and the exchange of established knowledge.

This, the resolution says, they must be able to do in formal meeting and informal social gatherings. These objectives cannot be fulfilled if free association is hindered by unnatural barriers, the resolution further declares. The resolution recites that no one is barred from election "because of race or creed."

Future A.A.A.S. meetings during Christmas-New Year's week are scheduled for: 1956, New York; 1957, Indianapolis; 1958, Washington, D. C.; 1959, Denver or Cleveland; 1960, Philadelphia; 1961, Chicago or St. Louis; 1962, Boston.

Science News Letter, January 14, 1956

MEDICINE

Link Weather With Polio-Like Disease

► DISCOVERY of a link between weather conditions and a polio-like disease was announced by Holbrook Landers, instructor in meteorology at Florida State University, Tallahassee, at the meeting of the American Association for the Advancement of Science in Atlanta.

Epidemic forecasting may be helped as a result, Mr. Landers thinks. At least it might be possible to tell a week or so in advance whether cases of such diseases would rise or fall off.

The epidemic of the polio-like disease hit Tallahassee in late summer and fall (1954). The curve of the epidemic and the curve of daily temperature range, relative humidity and minimum pressure were much the same. There was, however, about a 10-day lag between the high and low points in the weather curve and the high and low points of the epidemic.

This 10-day lag corresponded to the 10-day incubation period of the disease.

The peaks in the weather curve came when the daily temperature did not vary much, the relative humidity was high at noon and the pressure was lowest.

Such times, Mr. Landers theorizes, are the times when people are most uncomfortable because of the heat and humidity and consequently have least physical resistance.

A person being exposed to the germs of the polio-like disease every day, as al-

most everyone in Tallahassee was that summer, would be most likely, in Mr. Landers' opinion, to contract the disease when his physical resistance was lowest. The disease itself would develop 10 days later.

The onset of colder fall weather may, as has often been suggested for polio, have been instrumental in ending the epidemic.

The findings, Mr. Landers also thinks, may help identify the polio-like disease which hit Tallahassee and which has not yet been positively identified. The findings also give one more bit of positive evidence that various diseases and weather conditions are closely related.

Science News Letter, January 14, 1956

PSYCHOLOGY

Seeing Mutilated Man Affects Perception

► THE EMOTIONAL shock you feel when you see a person with only one arm or leg or otherwise severely mutilated, affects the way you perceive his appearance.

This was discovered when Drs. Warren J. Wittreich and Keith B. Radcliffe Jr. had men look through distorting lenses in a study conducted at the Naval Medical Research Institute, Bethesda, Md.

The distorting lenses, known to scientists as aniseikonic lenses, make things look out of proportion and strange, somewhat as do the distorting mirrors at an amusement park.

The scientists had their subjects look through a series of distorting lenses of 14 degrees of distortion. The subjects reported at what point in the series the person looked at took on a bizarre appearance.

Sometimes the individual looked at was normal and sometimes he was made to appear mutilated by strapping one arm behind him and by pinning up one of his sleeves.

It took a much stronger lens to make the mutilated person appear distorted than was necessary to distort the appearance of the normal person.

Results of the study were reported in the *Journal of Abnormal and Social Psychology* (Nov.).

Science News Letter, January 14, 1956

PHYSICS

Rubber Head Used To Test Radiation Mask**See Front Cover**

► THE RUBBER head shown on the front cover of this week's SCIENCE NEWS LETTER was devised by the General Electric Company to test the face masks that protect workers at the Hanford plutonium plant from radioactive contamination.

The head "breathes" by use of multiple pumps. A filter inside the "windpipe" collects any radioactive particles that may penetrate the mask, thus testing its efficiency.

Science News Letter, January 14, 1956

IN SCIEN

LANGUAGE

Heart Journal Adopts Interlingua Summaries

► THE OFFICIAL journal of the American Heart Association, *Circulation Research*, has joined the growing list of journals that append to every original article a summary in Interlingua, the international language that is an efficient and economical tool of international communication.

In announcing this 16th publication to use Interlingua, Dr. Alexander Gode, chief of SCIENCE SERVICE's Interlingua division, pointed out that Interlingua can be read by at least 95% of those who are technically qualified to read that same text in French, Spanish, German or English.

Interlingua is a regularized language that can be considered "standard average European." Scientific journals are using it to make the essence of their contributions accessible to readers unfamiliar with the language in which they are presented.

Science News Letter, January 14, 1956

METEOROLOGY

Glaciers Advancing In Northern Rockies

► FIFTY glaciers out of 73 recently measured in the Cascade and Olympic Mountains are advancing at present, Dr. Richard C. Hubley of the University of Washington reported.

Although 23 of 73 are not slowly edging forward, they are increasing in thickness, he told the American Meteorological Society meeting held in conjunction with the American Association for the Advancement of Science in Atlanta.

The glacier growth, he said, is a "radical change" that appears to have started about 12 years ago. During the previous 20 years, glaciers in this Rocky Mountain area were "without exception shrinking rapidly."

Dr. Hubley said an analysis of the area's weather records showed a trend toward cooler, wetter climate in western Washington. Mean annual temperatures have decreased one and a half degrees Fahrenheit during the last 10 years, he pointed out, while in the same period mean annual precipitation has increased 15 inches.

The great glaciers of Pleistocene times, about a million years ago, probably rose steeply to 10,000 or 15,000 feet on their southern sides and sloped gradually on the northern sides, Dr. William F. Tanner of Florida State University told the same meeting.

The ice sheet would have acted as a barrier to air movement just as the Himalayas now do, he said.

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CE FIELDS

HERPETOLOGY

Lizard Escape Artist Wiggles Out of Skin

► FOR WIGGLING OUT of a tight spot, nothing can beat the system of a little brown lizard from the Palau Islands in the Pacific. When you grab hold of the creature, he very literally runs out of his skin, leaving you very literally holding the bag.

Frederick M. Bayer, biologist with the Smithsonian Institution who reported on the slick trick of this gecko, *Peropus mutilatus*, did not discover whether these skinless lizards were able to survive and grow a new covering, or whether escape in this way was actually a suicidal act. He was unable to obtain reliable native reports as to whether such escaped lizards were ever seen again.

Science News Letter, January 14, 1956

MINING

Rock Chimes Foretell Mine Roof Cave-in

► EARTH can talk back to the mining safety engineer who checks the chances of a rock fall in mine or quarry, warning of failure of the rock roof by sounds ranging from pattering to creaking, or even the chime of bells.

Studies with an instrument that magnifies the inaudible sounds of very slight slips constantly occurring in the earth layers above the mine show that limestone particles make a pattering sound. Shale may sound like creaking timber. Basalt reminds the hearer of the deeper notes of doorbell chimes. Bell-like tones are heard when a layer of this kind of rock breaks.

Construction of the rock-testing instrument was inspired not by a mine inspector but by the vice president of the Liberty Mutual Insurance Co. of Boston, Mass., which has a large workman's compensation insurance program. The vice president, F. J. Crandell, who is an engineer, uses a pair of piezo-electric quartz crystals as a listening device.

Slipping of the rock layers near the probe which holds the pair of crystals sets up minute electric currents which are amplified by a battery-powered circuit. The inspector using the instrument listens for a period of about 15 minutes to get the characteristic noise rate of the mine. The noises are interpreted better by a human listener than by an automatic counting device, because noises made by the rocks can be selected and extraneous sounds ignored.

Prediction of the chance of the roof falling is possible if the observer knows the sounds usually made by the mine and the

rate at which rock slipping subsides to normal after a blast has been set off. Observations with the new instrument after the blast can be converted into a rate of failure curve from which the danger of cave-in can be determined.

Description of the new instrument is featured in the *Engineering and Mining Journal* (Dec. 1955).

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TOXICOLOGY

Men Eat DDT for Year Without Ill Effects

► FOR A FULL YEAR, 14 men voluntarily ate DDT, famous insecticide, to test its safety. Some of them ate every day 200 times the amount an average person gets from his diet through the residue left on fruits and vegetables sprayed with the insect killer.

The DDT came through this safety test with flying colors. During the entire test none of the volunteers complained of any symptoms or showed any sign of illness which did not have an easily recognized cause clearly unrelated to exposure to DDT.

The study was reported by Drs. Wayland J. Hayes Jr. and William F. Durham and Cipriano Cueto Jr. of the U. S. Public Health Service, Savannah, at the meeting of the American Association for the Advancement of Science in Atlanta.

DDT, as has been known for years, is stored in the body fat. The maximum storage is achieved in about one year apparently. After that no more is stored in spite of continued intake.

The scientists concluded that "there is a large safety factor associated with DDT as it now occurs in the general diet."

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HORTICULTURE

Mushroom Raising a \$20,000,000 Industry

► THE LOWLY mushroom provides the nation a \$15,000,000 to \$20,000,000 industry per year, furnishing some 80,000 people with a livelihood in growing, processing and marketing the fungus, the U. S. Department of Agriculture reports.

While some 60,000,000 to 70,000,000 pounds of mushrooms are grown each year in this country, use of a simple technique developed by Drs. T. T. Ayers and E. B. Lambert, scientists with the USDA, promises to increase yields and improve appearance of the crop.

The scientists have found that the addition of 100 parts of chlorine to 1,000,000 parts of the water used for spray irrigation of mushrooms effectively controls four common diseases that reduce yields and cause blotching and spotting of the crop. The chlorine does not discolor the mushrooms, imparts no flavor and leaves no toxic residue on the crop or in the soil, the researchers report.

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METALLURGY

Metal Failure Studies Speeded by Radiations

► CRACKING and failure of metal structures can be guarded against as the result of studies on imperfections in metal crystals reported to the American Association for the Advancement of Science by Dr. James H. Crawford Jr. of the Oak Ridge National Laboratory.

Using radiations from atomic reactors to bombard metallic crystals, Dr. Crawford has found the metal hardened, and the rate of changes taking place in the metal speeded up. Atoms knocked out of place during such bombardment also change the electrical properties of the transistor elements germanium and silicon. From these studies many fundamental properties of metals and other structural materials can be better understood and their term of useful life can be predicted with greater accuracy.

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GEOPHYSICS

Sensitive Instruments Observe Faint Airglow

► SPECIAL instruments that detect the upper atmosphere's very faint airglow even in full moonlight will scan the sky from at least four stations during the International Geophysical Year, an Air Force scientist said.

Dr. E. R. Manring of the Air Force Cambridge Research Center, Sunspot, New Mexico, said the studies were aimed at discovering what causes the peculiar glow, so faint it can be spotted only with special instruments.

Airglow is the word used to describe the self-luminescence of upper atmospheric gases. It is present every night everywhere on earth, but is of such low intensity it cannot be seen by the naked eye as auroras can.

A new device, first operated in 1955, should allow tracing one of the elements responsible for airglow even during daylight hours, Dr. Manring told a symposium on the International Geophysical Year.

The symposium was second of three held in Atlanta by the American Association for the Advancement of Science outlining plans for U. S. participation in IGY, a world-wide study of the earth, its seas and air scheduled for 1957-58.

Before the new instrument was developed, starlight and scattered sunlight interfered with the records scientists wanted to get. Now they can map the entire sky in less than four minutes, recording separately the light emitted by three of the elements thought to cause the airglow phenomenon.

The device is sufficiently sensitive to cut out all light except that from these three at night, but can catch light from only one element during day.

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