

Claire G. Vilandre, 18, Notre Dame High School, Central Falls, R. I., for her exhibit "Chromatography and Uses of Natural Flowers."

Jasper Ivan Rhode, 18, Jefferson High School, Lafayette, Ind., for his exhibit "Diffraction and Interference of Light."

Martial Leon Thiebaut, Jr., 16, Whittier (Calif.) High School for his exhibit of a Newtonian telescope.

Douglass Gray Saunders, 15, Oak Ridge (Tenn.) High School, for his photographic studies of radioactive substances in animal tissues.

Dr. Clarence E. Larson, Director of Oak Ridge National Laboratory and Chairman of the Board of Judges, said:

"All of the judges were surprised to see the high degree of scientific maturity which the exhibits expressed. Not only did the exhibitors manifest a command of the fundamentals but exhibited unusual ingenuity in the construction of their projects.

"The exhibits were of such high caliber that the selection of the winners was extremely difficult. After five hours of deliberation, the judges were still unable to break the tie for second awards so additional prizes were made available.

"These were made available by Union Carbide and Carbon Corporation which is serving as co-sponsor for the Fourth National Science Fair."

Other sponsors included Science Clubs of America, administered by SCIENCE SERVICE, local newspapers, technical societies, educational institutions, industries and the Oak Ridge Institute of Nuclear Studies.

Details on next year's fair, to be held at Purdue University, May 13-15, can be obtained from SCA, 1719 N St., N.W., Washington 6, D. C.

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ELECTRONICS

Small Gobs Disrupt TV in Fringe Areas

► TELEVISION PICTURES in fringe areas are disrupted by small gobs, or air eddies, in the atmosphere. These eddies, about a thousand feet in diameter, scatter the wavelengths used in TV.

The air clumps differ from surrounding air in temperature and amount of moisture. Dr. H. E. Bussey and George Birnbaum of the National Bureau of Standards and R. E. Katz of the Naval Research Laboratory report they have measured such air gobs at heights up to 10,000 feet.

The clumps are spotted by measuring at the same time the moisture, wind speed, temperature and refractive index of air. Although the air seems to be pretty much the same throughout, these invisible "dielectric eddies" actually change the way in which short wavelengths are transmitted. Normal radio waves are apparently not affected by these clumps because they are much too long.

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ENTOMOLOGY

Protection From Insects

Onset of insect season suggests use of insect repellents. Care should be taken in applying them to the body and to clothes, however, the U. S. Department of Agriculture warns.

► CHIGGERS, GNATS, mosquitoes and ticks will soon be making life miserable for the gardener, picnicker and camper. But you can protect yourself against this discomfort by using a good insect repellent.

Do not confuse repellents with insecticides. Repellents are applied to your skin or clothing to keep insects off; insecticides are used in the garden or elsewhere to kill insects, explains the U.S. Department of Agriculture.

Repellent preparations, usually in liquid, lotion or "cream" form, sell at drug, hardware or even grocery stores under different trade names. Among the most satisfactory chemicals as repellents are dimethyl carbate, dimethyl phthalate, ethyl-hexanediol and indalone. (The container usually lists the names of the chemicals in the repellent preparation.) Unlike some of the older repellents, the substances listed above have little or no odor and give protection from insects for several hours.

Repellents for mosquitoes, flies and gnats work best when they are applied directly to the skin and uniformly rubbed on the exposed areas. They should be renewed after two or three hours. They are safe for

use on the skin except where there are skin abrasions or where the skin is particularly tender, such as the eyelids.

Do not apply repellents too liberally to your forehead, as they cause a temporary, but rather severe, stinging if they get into your eyes. Repellents are oily materials and will feel somewhat sticky on your skin for a few minutes after application.

For protection from chiggers and ticks apply repellent to your clothing but not to your "Sunday-best." The chemicals are likely to spot or stain clothing and may damage synthetic fibers such as rayon or nylon. Likewise, plastics, paints, varnishes and fingernail polish can be damaged by repellents.

A few drops of repellent daubed around the top of your shoes and on your socks will give considerable protection. And applying the repellent to all the openings of clothing—waistbands, cuffs, collars—is very effective.

Cotton or wool clothing if it contains no synthetic fibers, can be sprayed or dipped in emulsions of the repellent and will effectively prevent chigger attack between washings.

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ZOOLOGY

Reappearing Animals

► ALL THE man-shy creatures of the earth, like the retiring coelacanth—discovered in 1939 after 50,000,000 years of hiding, then rediscovered last December—do not have to skulk on the sea bottom to avoid man's curious eyes.

In fact, says the International Union for the Protection of Nature, there is a long list of good-sized animals prowling about on earth that seem to appear and disappear in a most perplexing manner.

The massive gorilla makes a good example. The ancient Greeks and Romans probably knew about gorillas, because their stories describe them. But then gorillas seemed to have dropped from the sight of civilized man, and were not rediscovered until 1847.

The golden hamster, reported in Syria in 1839, was not seen there again until 1930. A case nearer home is the rodent, *Plagiodontia aedium*, of San Domingo. It was recorded on the island in 1836 and did not turn up again until 1948.

The Schomburghk's deer of northern Siam and Yunnan, standing about 41 inches

tall, has never been seen in the wilds by Europeans. It would probably still be unknown to science if the natives, prizing the antlers for their "medicinal powers," had not sold them on the Siamese markets where scientists saw them. Only one complete mounted specimen of this deer has been obtained.

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INVENTION

Patent Device to Hold Baby's Nursing Bottle

► A FRAME, with triangular-shaped supports and a bar between, holds a baby's nursing bottle in an invention recently patented. A clip which holds the bottle in the correct position is attached to the bar. The frame is placed across the baby so the bottle dangles into his mouth. Wingate Battle, Atlantic Beach, Fla., received patent 2,638,296. He assigned 20% to John E. Veith, Arlington, Va., and 20% to Norman R. Bronie, St. Petersburg, Fla.

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