ENTOMOLOGY

Red, White and Blue Eyes Help Trace Bees' Flight

➤ RED-, white- and blue-eyed bees are being bred at the California Agricultural Experiment Station in Davis, Calif. by artificial insemination methods. This is not a patriotic stunt, nor do the unusual eye colors have any particular value in themselves.

They are being used by Dr. H. H. Laidlaw as natural markers. Bees with qualities which he wishes to study, such as efficient flight patterns and long working lives, are having these colored eyes bred into their strains, so that they may be easily observed at work. Hitherto it has been necessary to mark individual bees with tiny spots of paint—a laborious and somewhat touchy job.

Science News Letter, July 30, 1949

ZOOLOGY

"Extinct" Elephant Seals Stage Comeback off Mexico

➤ ELEPHANT seals, once thought extinct, are staging a rapid comeback in Mexican offshore waters, and may some day reoccupy their old-time range off the southern California coast, states Dr. George A. Bartholomew of the University of California at Los Angeles.

Elephant seals are huge animals, as much as 20 feet long and attaining several tons in weight. They get their name from the peculiar proboscis-like snout.

In former times they were hunted for their oil, which is much like whale-oil. During the nineteenth century the hunt was pushed so hard that it was thought the species had become extinct.

However, a small number of survivors were discovered on the Guadalupe Islands off the coast of Lower California. This area was made a permanently closed sanctuary by the Mexican government. They have now multiplied to such an extent that a few have appeared on the Coronados islands off San Diego, and on the Channel islands farther northwest.

Science News Letter, July 30, 1949

GEOLOGY

Backward-Flowing River Forms Delta at Wrong End

➤ THE fabulous horse with its head where its tail ought to be has a counterpart in a short river in the State of Maine, which has a delta at its head instead of at its mouth. This curious phenomenon is described in the journal, SCIENCE (July 15), by Dr. C. N. Savage of Kent State University, Kent, O.

The stream, known as Dead River, normally drains water from Androscoggin Lake into the Androscoggin River. Its course, mainly northwesterly, is six or seven miles long. It is very sluggish, since the usual difference in level between lake and river is only four or five feet.

However, during the time of spring freshets, the high-water level in the Androscoggin River becomes higher than the lake, and the current in the Dead River is reversed, so that it "flows backward" into the lake. At such times, the river water is heavy with rock silt, and this burden, dropped when the current of the Dead River enters the still water of the lake, is forming the delta.

The delta is now about one and one-half miles long and a quarter of a mile wide.

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PALEONTOLOGY

Insects in Baltic Amber Held Older Than Estimated

➤ ANTS and other insects embalmed in Baltic-region amber may have their ages revised upward quite radically. Hitherto they have been considered to be of Lower Oligocene date, some 8,000,000 or 9,000,000 years old.

Now, however, at least two outstanding scientists hold them to belong to the much earlier Lower Eocene, near the beginning of the Age of Mammals, and a good 55,000,000 or 60,000,000 years old. This new dating is agreed on by Dr. Frank M. Carpenter, Harvard University entomologist and Dr. J. P. Marble, geologist of the U. S. National Museum.

Science News Letter, July 30, 1949

GENERAL SCIENCE

Science Teachers Urge Foundation Bill Passage

➤ THE Board of Directors of the National Science Teachers Association has urged passage of a bill to create a national science foundation.

A resolution adopted by the board supported the bill introduced by Rep. J. Percy Priest, D., Tenn., which is now before the Rules Committee of the House of Representatives. A similar measure passed the Senate in March.

Other resolutions adopted by the group:

Condemned "all efforts to stop medical research, including the essential use of experimental animals."

Urged that science be made a part of the "core" curriculum in schools, with a science sequence of courses in the secondary schools based on full elementary school science programs.

Asked the Association to continue its studies of new and existing equipment and supplies and new techniques for science teaching.

Called for reemphasis of the "necessity for freedom of scientific research and for freedom of interchange of scientific thought."

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IN SCIENC

CHEMISTRY

Traces of Toxic Gases Found in Cigarette Smoke

➤ TESTS made with a mechanical chain smoker have revealed that cigarette smoke contains the toxic gases, carbon monoxide and acetylene—but in amounts too small to be dangerous.

The machine smoked 10 packs of cigarettes every eight hours, and John B. Fishel and J. F. Haskins of the Ohio State University Research Foundation in Columbus, O., made a chemical study of the smoke. They did not compare different brands.

Their findings: in the 27 cubic inches of smoke given off by the average cigarette there is 3% carbon monoxide, 7.7% carbon dioxide and bare traces of acetylene and hydrogen sulfide.

The chemists have reported their work in the magazine, INDUSTRIAL AND ENGINEERING CHEMISTRY (July).

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GENETICS

Polish Biologist Straddles Soviet and Western Views

➤ BIOLOGY in iron-curtained Poland is apparently endeavoring to steer a middle course between the new "orthodoxy" of the Mitchurin-Lysenko school in Russia and the kind of life science considered valid in the rest of the world. In a recent publication, Prof. Stanislaw Skowron of the Jagellonian University, Krakow, has this to say:

"Today the science of heredity can supply direct proof of the evolutionary processes. The gene is no more regarded as an abstract entity but has become localized in the nucleus of a cell as a concrete functional unit. Modern genetics has also taken into account the influence of environment, as every trait of the organism is the result of cooperation of all genes with the environmental conditions."

All this agrees very closely with the position of geneticists and biologists generally in the West. Prof. Skowron, however, makes a bow towards the East:

"A new light has now been thrown on the controversial problems of heredity of acquired traits by the investigations of Russian scientists who have discovered new methods of dealing with this basic problem. One should expect that in the near future it will be possible to combine the principles of orthodox genetics with these new discoveries."

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E FIELDS

AERONAUTICS

Supersonic Air Jet Used in Airflow Studies

➤ A "WIND TUNNEL" that is not a tunnel is in use at the airplane division plant of the Curtiss-Wright Corporation, Columbus, O., for basic research in air flow phenomena. Its most important unit is a three-inch nozzle from which a 1,200-mile gale can be delivered.

Another unit is a calibration stand to measure the velocity of the air coming from the nozzle. Models of planes and missiles are attached to this stand and data relative to the effects of the air passing over them are obtained. The investigations made with this setup are similar to those made elsewhere with enclosed wind tunnels.

To obtain the highest speed of the supersonic jet, air is forced through the nozzle at 6,500 cubic feet a minute. The resulting blast will knock a man over if he gets in its path. Shock waves created by the terrific force of the air are clearly visible when the jet is operating, Curtiss-Wright officials state.

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RADIO

Wider Use of Television In Movies Foreseen

➤ WIDER use of theater television service is foreseen and the Federal Communications Commission has recently sent a letter to several organizations interested, inviting suggestions relative to the minimum frequency required, specific frequency bands desirable, and other information for use in issuing authorizations.

The Commission first opened the door for experimentation with radio relays for the development of theater television in 1945 in a general allocation hearing conducted near the end of the war. The Commission made available on a shared basis with other services the 475 to 920 megacycle band, as well as certain frequency bands in the 1,000 to 13,000 megacycle portion of the radio spectrum, and the bands 16,000 to 18,000 and 26,000 to 30,000 megacycles.

The first authorizations issued by the Commission for experimentation with radio relays for theater television purposes were granted on Nov. 18, 1947, to what is now Paramount Television Productions, Inc. This permission authorized on a temporary basis experimentation on frequency bands in the 2,000 to 7,000 megacycle regions in the area of New York City. Authorization was granted to Twentieth Century-Fox Film Corporation late in 1948 for experimentation in the 2,000, the 7,000 and the 13,000 megacycle regions.

Two methods of television programs inside motion picture theaters are in use. In one the television program is projected directly to the theater screen. In the other, the television pictures are photographed on regular 35-millimeter film, and this film is used to throw pictures on the screen with the use of the regular motion picture projector.

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ARCHAEOLOGY

Indian Relics from D. C. Given to Smithsonian

➤ LONG before Washington was built on the banks of the Potomac, an Indian town of some 300 families occupied part of what is now the District of Columbia. Capt. John Smith visited this settlement in 1608, but subsequent history shows little of this particular tribe. The red men seem to have just faded away before the oncoming of the whites.

A large collection of arrowheads and other things used by inhabitants of this lost Indian town has just been presented to the Smithsonian Institution by Georgetown University. The artifacts were collected about 50 years ago by Dr. Louis A. Kengla, who picked most of them up in open fields that are now covered by city blocks.

Good stone for arrow-head purposes seems to have been lacking, the collection indicates. Local materials consisted mainly of brown quartzite and white quartz, which are hard and difficult to flake properly. The lost tribe therefore imported a softer stone, known as rhyolite, from what is now Pennsylvania.

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AERONAUTICS

Flashing Lights Suggested For Private Planes

➤ FLASHING position lights for all night-flying private airplanes, similar to those now required on transports, were recommended by the U. S. Civil Aeronautics Administration, but no immediate steps are proposed to make their installation compulsory.

Inexpensive versions of the blinking lights are now available, costing from $4 to $20, and weighing from three to 20 ounces. They require very little electric power. Transport planes long have used flashing position lights because they are distinctive in the air. Steady lights can easily be mistaken for stars, CAA officials state. With lights flashing from 72 to 120 times a minute, there is little possibility of such a mistake.

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TOPOGRAPHY

Aerial Photos Aid in Making Navigational Charts

See Front Cover

➤ ACCURATE maps for basic defense and for charts used in navigation are now being made by the U. S. Coast and Geodetic Survey from aerial photographs made from a U. S. Coast Guard airplane, as shown on this week's cover of the SCIENCE NEWS LETTER. The Coast Guard airplane, with special photographing equipment, is devoting some nine months each year to this work.

The plane used is a converted B-17, Flying Fortress of World War II fame. The camera is clamped to a special permanent mount installed in the plane. It is a nine-lens camera, said to be the only one of its kind in the world. The photographs are taken at a height of approximately 13,750 feet. Each photograph is 35 inches square and records a ground area of about 120 square miles.

The plane requires a crew of eight. The photographs are taken by two representatives of the Coast and Geodetic Survey. Included in areas to be covered are parts of Alaska and the Aleutian islands. Work in these areas must be done in a few weeks in summer because photos of snow-covered terrain are worthless in map-making.

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ICHTHYOLOGY

Anchovies and Death Found In South American Lake

➤ FOOD and death both lurk for humans in the strange waters of Venezuela's Lake Maracaibo, a scientist at the Smithsonian Institution reported.

Dr. Leonard P. Schultz, curator of fishes at the institution, studied the fish life in the lake which has both fresh and salt water. Northern end of Lake Maracaibo meets the Caribbean Sea, while the southern portion is fed by fresh-water rivers.

Anchovies, a herring-like fish best known from European waters, are in the lake in great quantities, Dr. Schultz found, apparently unexploited and virtually unknown to fishermen.

Worst menace of the lake's water is not the fairly large sharks found there but a relative of the sharks, large sting rays.

Sting rays are flat and plate-shaped, with a long, sharp spine sticking out of the tail. The tail is so powerful that the spine of even a small ray can be driven completely through a person's foot. The spine is probably poisonous.

When wading in tropical waters, push your feet along the bottom instead of taking steps, Dr. Schultz advises. This way you won't step on a ray.

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