

GENERAL SCIENCE

Name Scientist Judges For Science Fair Exhibits

► AN ARRAY of distinguished scientists will judge the work of high school boys and girls who have won trips to the National Science Fair to be held at Oak Ridge, Tenn., May 7, 8 and 9.

They will include leaders in the fields of biology, chemistry, physics, geology, astronomy, astrophysics, engineering, medicine, nuclear physics, biophysics and biochemistry. The fair will be held at the American Museum of Atomic Energy.

The National Science Fair is sponsored by leading newspapers from the Atlantic to the Pacific and SCIENCE SERVICE through its organization, the Science Clubs of America.

High school students achieve the right to come to the National Science Fair by winning top positions in local fairs. About 70 are expected to be on hand with exhibits of their scientific achievements. They will compete for valuable awards in several categories.

The judges are Dr. Gould A. Andrews, Dr. R. A. Charpie, Dr. Cyril L. Comar, Logan B. Emler, Dr. Alexander Hollaender, Dr. Clarence E. Larson, Dr. Russell S. Poor, Dr. Elizabeth Rona, Dr. Herman N. Roth, Morse Salisbury, Dr. Carl Seyfert, Dr. C. S. Shoup, Dr. Arthur H. Snell, Dr. John A. Swartout and Dr. Alvin M. Weinberg.

Science News Letter, April 25, 1953

PSYCHOLOGY

Mental Deficients Make Later Life Adjustments

► PEOPLE WHO have been judged mentally deficient when they were in grade school make a much better adjustment to life than is generally believed. Further, they generally give birth to children of average, rather than deficient, mental capacities.

These are the findings in the study of 151 people with an average age of 42 who had low IQ's when they were in grade school and who were placed in "opportunity rooms."

"Social achievement and/or test scores suggest that about 65% of the subjects who tested low originally now give evidence of being in the dull-normal or average range," said Don C. Charles of the psychology department, Iowa State College, who conducted the survey.

Nearly 20% of the group, however, give evidence of life-long deficiency. This group has required, or still does require, institutionalization. Another 10%, while still testing quite low, have become fairly well adjusted and self-sufficient members of society.

"The great majority of their children," Mr. Charles said, "proceed through school with little or no retardation and the mean of the children's intelligence test scores is in the average range. Very few of the

children have required opportunity room training as their parents did."

But the original group still continues to differ from the general population in various ways. A lower percentage is married and the married have slightly fewer children than the average. The death rate is somewhat greater than average, and the rate of violent death is much greater than average.

"The great variation in the present abilities and achievements of the subjects should dispel any notion that persons who give evidence of low ability in childhood develop and perform according to a rigid stereotype," Mr. Charles concluded.

Science News Letter, April 25, 1953

TECHNOLOGY

Wire Rope Developed For Drilling Oil Wells

► A WIRE rope with a plastic heart has been developed for use in drilling oil and gas wells.

Developed at Muncy, Pa., by Jones and Laughlin Steel Corporation scientists, the rope's plastic core replaces the fiber core in wire ropes now used to support the heavy drilling bit as it pounds through hard rock deep in the well.

The polyvinyl plastic core is unaffected by acids, caustics and other sub-surface substances that gnaw away fiber cores. It also can be spliced so that no strength is lost at the joint. It does not need moisture, as a fiber core does, to retain its resiliency. This, in turn, reduces chances of the steel strands rusting.

An added advantage is that the plastic can be made from materials produced in this country. Fiber for hemp cores must be imported. During wartime the supply of imported hemp might be uncertain.

Science News Letter, April 25, 1953

PUBLIC HEALTH

Korean PW Treatments Improve Dysentery Cure

► EXPERIENCE With dysentery in a United Nations prisoner-of-war camp in Korea has given the world better treatment for the disease.

The newer so-called mold remedies, terramycin, aureomycin and chloromycetin, gave strikingly good results in prisoner-patients who had dysentery that resisted sulfa drug treatment, a six-man team of Army, Navy and public health scientists report in the *Journal of the American Medical Association* (April 4).

The report is signed by Lieut. Bernard T. Garfinkel, (MC), U. S. Army (Reserve), Lieut. Gerald M. Martin (MC), U.S.N. (deceased), Dr. James Watt, Bethesda, Md., Capt. Fred J. Payne (MC), U. S. Army (Reserve), Col. Richard P. Mason (MC), U. S. Army, and Dr. Albert V. Hardy, Jacksonville, Fla.

Science News Letter, April 25, 1953



METEOROLOGY

Winter-Coat Weather Still Likely in North

► BETTER KEEP the winter coat out of storage for a while longer if you live in the northern half of the country. The U. S. Weather Bureau's outlook for the period to mid-May calls for temperatures lower than normal for the season both in the North and over much of the Southwest.

Snowstorms such as that which killed at least two persons in New England April 14 are not considered likely, though the northern tip of Maine and the northern Great Lakes region may still get a little snow.

The south Atlantic and Gulf states will be warmer than normal at this season with the rest of the nation enjoying near normal temperatures.

More than normal amounts of rain, if not snow, are expected over the northern half of the country but subnormal rainfall is indicated over the Southwest. Elsewhere about normal rainfall is predicted.

Science News Letter, April 25, 1953

INVENTION

Method for Avoiding Twilight in the Arctic

► A TWILIGHT computer for use in planning flights over the Arctic has been patented.

When flying in the Arctic, navigation by stars or the sun is much more important because of the scarcity of radionavigation aids and the unreliability of the magnetic compass. Therefore pilots like to avoid flying in the frequent, greatly-extended periods of twilight.

The inventors, who assigned their patent to the Canadian national defense department, point out that, on westward flights in the Arctic, it is entirely possible to keep up with the speed of the sun and thus possible to remain in a permanent state of twilight. In some cases the plane can go faster than the sun, in which case the sun could rise in the west rather than the east.

To avoid these confusing phenomena, the twilight computer was invented by James W. Cox, Manor Park, Ontario, and Keith R. Greenaway, Ottawa. The device is designed to facilitate the calculations of the relative positions of the twilight band and a proposed aircraft route. It will also indicate what stellar bodies may be observed.

The computer is in the shape of a chart of the Arctic regions as if seen from outer space. The line of demarcation between light and darkness moves across the face of the chart. Patent number is 2,633,295.

Science News Letter, April 25, 1953

CE FIELDS

ASTRONOMY

First Comet of Year Discovered in Pegasus

► The FIRST comet of 1953 has been discovered in the constellation of Pegasus, the winged horse, visible from the United States in the northeast during the early morning hours.

Of ninth magnitude, the diffuse stellar object is too faint to be seen with the naked eye. The comet will be known as Comet Mrkos after its discoverer, Antonin Mrkos of the Astrophysical Observatory at Skalnaté Pleso, Czechoslovakia. This is the fourth comet spotted by the astronomer. The other three, all of the tenth magnitude, were found in December and May, 1952, and in January, 1948.

Report of the April 12 discovery was cabled by Dr. Guth and Miss J. M. Vinter-Hansen of Copenhagen University Observatory to Harvard College Observatory, clearing house for astronomical information in the Western Hemisphere.

When spotted in the sky, the comet's position was: right ascension, 21 hours, 11.2 minutes; its declination, plus 16 degrees, 14 minutes. Its daily motion is plus 1 minute, 26 seconds in right ascension and plus zero degrees, 58 seconds in declination.

Science News Letter, April 25, 1953

PUBLIC HEALTH

Sniffles in Spring May Be Hay Fever

► MOST PERSONS think of hay fever as a midsummer or late summer affliction. So it is for the many who suffer because of ragweed pollen.

A good many who are sniffing and sneezing in the spring, however, are victims of early hay fever, or rose fever as it used to be called, from pollens that are blown on spring breezes. Others, of course, have a common cold which is also a prevalent spring ailment. If the spring sniffles last more than a few days, it would be well to see the doctor to learn the cause and get suitable treatment.

This is the time, too, for ragweed hay feverites to start treatment to ward off their late summer misery.

The treatment is a process of de-sensitizing the sufferer. First, the physician makes careful tests to determine just which pollen or pollens cause the trouble. Then the patient is given a tiny dose of the offending substance and at regular intervals thereafter increasingly large doses until he is able to tolerate large amounts of pollen. Details of the treatment, of course, must be planned

by the physician who will also give advice on general health measures and will prescribe drops for nose and eyes if necessary.

Desensitization treatment can be given during the hay fever season, but is said to be more comfortable and about 20% more efficient if given before the season starts.

The antihistamine drugs bring relief to many hay fever victims, but physicians usually advise desensitization treatments in addition. Some authorities believe the best results are obtained when the antihistamines are used with the desensitization measures to prevent reactions from these.

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TECHNOLOGY

Pump and Motor Beats Line and Net Fishing

► MAYBE THIS is the answer to a frustrated fisherman's dream: a baitless, hookless, netless and pretty sure-fire method of catching fish—with a pump. It could be the next best thing to bailing out a lake and picking the fish off the dry bottom.

All you need is a four-inch impeller pump, a five horsepower electric motor and a powerful underwater lamp. Switch on the lamp and turn on the pump. As the fish are attracted to the light, the suction pulls them through the intake pipes and dumps them on deck.

That is the theory, anyway.

Dr. J. G. Ellson of the U.S. Fish and Wildlife Service, Seattle, said that test runs of such pump equipment "netted" catches of small fish on seven out of eight occasions. The fish were mostly smelt one to two inches long, and herring up to about nine inches. Other species were taken only in small numbers.

In terms of efficiency, the fish pump seems still a long way from the fisherman's dream. But if perfected and used in connection with fishing gear like the electrical attraction devices being developed, fish pumps could play a major part in a new fisheries era.

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TECHNOLOGY

Stalled Diesels Treated Just Like Balky Mules

► ARMY INGENUITY has licked a problem that was stalling diesel railroad operations in Alaska this winter.

Cold, 60-degree-below-zero weather was causing diesel oil to thicken so that it could not be pumped into the engine. The Army took steps comparable to lighting a fire under a balky mule: it "lit a fire" under the sluggish oil.

This was accomplished in a heat exchanger by circulating hot water from the engine through coils running close to the oil lines feeding the engine. The heat given off by the hot water warmed the oil and permitted it to be pumped into the engine's burner.

Science News Letter, April 25, 1953

MEDICINE

Stomach Cancer Oftener With Type A Blood

► A RELATION between cancer of the stomach and blood type has been discovered by Drs. Ian Aird and H. H. Bentall of the University of London and the Postgraduate Medical School of London.

Blood group A is found oftener in stomach cancer patients than in the general population of the locality in which the patients live. Blood group O is found less often in the stomach cancer patients than in the general population. The doctors announce this discovery in the *British Medical Journal* (April 11).

This relation, found in patients in a number of hospitals in England and Scotland, is also found in patients in Basle, Switzerland. Whether it occurs elsewhere the London doctors have not yet learned.

The findings show that there is an inherited element in the susceptibility or protection against cancer of the stomach.

For the first time, it appears, the blood groups may have some selective value, even if slight, for survival. Persons having blood of group A may have slightly less chance of living out a normal life-span because of their genetic susceptibility to stomach cancer.

The doctors plan to study further this relation between blood groups and cancer, to see whether it holds good for patients with cancer of other parts of the body.

Science News Letter, April 25, 1953

MEDICINE

Whiskey Relieves Angina Pains by Sedative Action

► A SHOT of Scotch or rye whiskey can relieve the pain in the heart disease, angina pectoris. But it does this entirely through its sedative action, not by dilating blood vessels.

This finding, which may settle the disagreement among doctors on the place of alcohol in treating heart disease, was reported by Drs. Henry I. Russek, Alexander A. Doerner and Burton L. Zohman of Staten Island, N. Y., at the meeting of the American Heart Association in Atlantic City, N. J.

Narrowing of one of the arteries supplying the heart muscle is the trouble in angina pectoris. Consequently the aims of treatment, both to relieve pain and keep the heart working, is to dilate the arteries.

Most effective for this purpose are nitroglycerine, which has been used for some time, and peritrate, a more recent modification of nitroglycerine, Dr. Russek and associates reported.

They based their statements on electrocardiograph recordings of the heart action of the patient during a standard exercise test. They observed the effect on these records of treatment with nine drugs besides nitroglycerine, peritrate and the whiskeys.

Science News Letter, April 25, 1953