

ASTRONOMY

Runaway Object Breaks Celestial Speed Limits

A RUNAWAY of the skies, which may be a new comet but is more probably a small asteroid, has been detected speeding far faster than celestial bodies have any real business to go, by a well-known German comet hunter, K. Reinmuth of Heidelberg, and reported to the international clearing house for astronomical discoveries in Copenhagen.

The object, whatever it is, was moving at a velocity of 64 minutes of arc a day when last observed. This is an indication that it is fairly close to the earth and is moving very fast. Its appearance through the telescope is reported as star-like. This lends support to the theory that it is an asteroid. Comets are usually rather diffuse and "fuzzy."

When discovered, the object was near the constellation Pisces. At first of the tenth magnitude, it later brightened to the eighth.

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BIOLOGY

Brilliant Popular Science Book Based on Lowly Worm

POPULAR imagination is perhaps a bit prone to picture natural history or biology as concerned with butterflies, bees, birds, blossoms, and other poetically pretty things. That such need not be the case, if the expositor has both knowledge of his subject and a flexible imagination, is given lively demonstration in a new book: *Ascaris, the Biologist's Story of Life*, by Prof. Richard Goldschmidt, formerly of the University of Munich but now of the University of California (Prentice-Hall).

He deliberately starts out with a creature which he describes as "a worm, and even worse, a parasitic worm inhabiting the intestines of man and animals." But by proper laboratory and literary manipulation he makes this degraded and even repulsive creature tell the basic story of all biology.

Prof. Goldschmidt's method is to take note about some part or property of his worm, make an excursion into other parts of the animal kingdom, and then return to the same humble starting-point for a new departure.

Thus, *Ascaris* has a skin; so have other animals, including ourselves. Of what use is a skin? To hold together what is inside it. Yes; but that is only part of the job. The skin also keeps out bad bacteria. The skin can renew or regen-

erate itself; this opens up the whole discussion of regeneration in lower organisms, that can grow not only new skin but new legs and even new heads.

Again, we animals all have nervous systems, with sense organs to supply stimuli. *Ascaris* furnishes a simple type, with all the fundamental necessities though without some of the "gadgets" that more highly evolved creatures can boast. And there is a fundamental likeness underlying all differences in blood system, digestive tract. In the end, poor despised *Ascaris* even introduces us into the mysteries of Mendelian genetics.

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MEDICINE

Tattoo Cornea of Eye With Gold and Platinum

A METHOD of tattooing the cornea of the eye with gold and platinum to improve vision was described by Dr. Ramon Castroviejo of Columbia Presbyterian Medical Center at the meeting of the American College of Surgeons.

This procedure, he said, is one of the few recent additions to surgery of the cornea which have proved valuable.

Tattooing the cornea actually dates back to the second century A. D. when Galen used a hot iron rod, powdered pomegranate bark and copper salts to make indelible coverings for opaque spots on the cornea. This part of the eye is the transparent layer that forms the outer layer of the eyeball. When superficial opaque spots develop on the cornea, especially near the pupil, they greatly interfere with vision, Dr. Castroviejo explained, by dispersing the light that passes through the translucent area. Tattooing is used to close up the spaces between the opaque spots and allow light to pass through a concentrated area.

Tattooing also has been used to improve the appearance of the eye in certain conditions, such as albinism of the iris, in which the eyes would be white instead of blue or brown or some in-between color.

India ink and many other substances were tried in corneal tattooing, Dr. Castroviejo said in his summary of corneal surgery. Gold was first used in 1911 and platinum in 1928. The metals, in the form of chlorides, are used in a solution which, after preliminary preparation of the eye, is placed on the opaque spot for two or three minutes. Then adrenalin chloride is added and the gold changes chemically so that a dark brown, almost black, coloring is produced.

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IN SCIEN

AERONAUTICS

Water Tank To Be Used As Airship Wind Tunnel

AIDED by the Navy Bureau of Aeronautics, Dr. Arnold M. Kuethe and his associates of the Guggenheim Airship Institute are building a water tank which will serve as a wind tunnel for airships.

The tank, which will measure five feet by eight feet when completed and will be equipped with apparatus to simulate wind gusts by means of a water jet, will be used to test the behavior of airship models in gusts of wind, Dr. Kuethe reported, speaking at the ninth annual meeting of the Society of Rheology in Akron, Ohio.

A water tank and a submersible model of an airship must be used in the tests, he explained, because the model and the medium in which it is moving must have nearly the same density. A tiny "lighter-than-air" model would be too difficult to construct and handle.

The experiments may serve to throw new light on why many big airships of the past have been defenseless against storms.

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CHEMISTRY

New Process Sterilizes Wool Without Damage

AWAY to sterilize wool fabrics without injury to fibers is expected to become commercially applicable shortly because of research by three U. S. Department of Agriculture workers, Ruth Elmquist, James Kettering and Harry Humfeld.

The new process consists of heating the wool material either in the organic liquid xylene or Stoddard solvent and tetrachlorethylene. Any process previously used to kill microorganisms in wool also damaged the material itself.

Wool blankets and clothing need to be made germ free both to prevent spread of disease and to prevent damage to the wool itself by mildew. Hospitals, the Army and other organizations are expected to use the new process.

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CE FIELDS

ENGINEERING

"Safety Headlight" Tilts When Auto Climbs Hill

A SAFETY automobile headlight, that automatically tilts so as always to shine on the road regardless of whether the automobile is climbing or descending or traveling along a level highway, has been patented by Paul Astorg, a Berkeley resident.

It is designed, its inventor states in the papers on which patent No. 2,096,777 was issued by the U. S. Patent Office in Washington, particularly to avert the situation of which all motorists have complained in the past. When an automobile equipped with standard lamps approaches the summit of a hill, its lights shine straight past the summit instead of on the road. The new type lamp, by pointing downward when the car is climbing, avoids this difficulty.

A standard headlamp is fitted into a special cylindrical mounting which allows it to swing to achieve the desired effect. The patent covers the mounting.

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PSYCHIATRY

Study Mental Effects Of Sex Crime Attacks

THE problem of sex crime is one which is receiving anxious attention in many localities, particularly in the large cities where it seems to be increasing. The deliberations of those groups of citizens, crime commissions, and law enforcement officials who have been considering the problem have been focused on the individuals committing such offenses.

In all the discussions, little has been said about the victims in the cases. Yet, in the case of little children, parents and teachers must have wondered just what would be the psychological effect of such an experience. Would it leave a lasting scar? Would the child be terrorized so that a permanent nervous ailment might result?

Partial reassurance is offered by a study recently made by Drs. Lauretta Bender and Abram Blau of Bellevue Hospital and the New York University

Medical College of the mental condition of a group of eleven little girls and five boys who had been sent to Bellevue for treatment.

These children were not nearly so frightened or shocked as might be expected, the physicians report to the American Journal of Orthopsychiatry. Some were retarded in their personality development, some reverted to such babyish habits as thumb-sucking, but for the most part they did not seem seriously injured and responded well to treatment.

An interesting observation about these children is that nearly all are particularly charming, attractive youngsters as judged by adult standards. Most of them showed an abnormal craving for adult attention, due sometimes to deprivation of the normal satisfaction of tender parental love. It may not always be the "offender" who first seeks the acquaintance in cases of sex attack, but rather the child who is anxious to be friendly to the strange adult.

Parents, it seems, can help in the protection of their children by furnishing them with normal homes, affection, and suitable child companions.

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PARASITOLOGY

Diet For Turkeys Protects Against Disease

THE THANKSGIVING turkey or other holiday bird may in future be protected from a very serious disease by a slight alteration in his diet. While this may mean smaller fowl for holiday feasts, it will probably insure a more plentiful supply and certainly will be of immense saving to the poultry industry.

These seem to be the conclusions of a report, appearing just before the holiday season, of research by Dr. Elery R. Becker, of Iowa State College. (*Science*, Oct. 29)

Blackhead of turkeys, the most destructive and dreaded of all turkey diseases, which also afflicts other fowl, can be controlled by diet, although it is caused by a germ, Dr. Becker has found. The extreme severity of the disease, he reports, is due not only to infection with the germ of the disease but to the incorporation in the bird's diet of certain foods, notably powdered skim-milk, buttermilk and wheat middlings. These are used to stimulate the growth of the bird. A small amount of these may safely be fed the birds, but the amount in the usual commercial ration is too high.

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GEOLOGY

Dinosaur Didn't Lay Recently Found "Eggs"

DINOSAUR eggs recently reported found in a road excavation near Waterton Park, Alberta, were never laid by a dinosaur, and wouldn't hatch into anything, no matter how long incubated. Herbert Knight, superintendent of Waterton Lakes National Park, reports that the alleged dinosaur eggs are folded masses of sandy limestone.

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MEDICINE

Can't Blame Cancer On Civilization

CANCER is often said to be a disease of civilization and civilized man's way of life and especially the foods he eats are blamed for the increasing prevalence of cancer. Chief evidence for this line of argument consists of observations showing or seeming to show that cancer does not occur as often among primitive peoples as among the more highly civilized.

Doubt is now cast on this very point by the accidental discovery of considerable cancer in Haitians who died of heart disease. The people of Haiti, to be sure, are not primitive in the strict sense of the term, but their technical, economic and cultural levels are highly primitive when compared to those of the United States. Yet the gross incidence of cancer is much like our own.

Autopsy records indicating this have been reported to the American Journal of Cancer by Dr. Carl V. Weller of the University of Michigan. Dr. Weller was not looking for cancer. He was looking for signs of heart disease due to syphilis or yaws. He found cancer in 11 out of 174 cases. Since these patients had died of heart disease, they were less likely to have cancer than the general population of the same age. Yet a large percentage of them did.

A significant point is that the average age of the cases with cancer was 62 years. Not many Haitians or other primitive peoples live to the age at which cancer appears. When they do, they evidently are just as apt to have cancer as civilized peoples.

If cancer is a disease of civilized life, it is not because civilized life causes changes in the body that favor the development of cancer. It is, apparently, because civilized life enables the average man to live much longer than a primitive way of life does.

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