

ORNITHOLOGY

**Parrots Are Southpaws,
Tests at Zoo Indicate**

See Front Cover

WHEN Pretty Polly politely picks a proffered piece of pear (or pickle) off the tips of your fingers, chances are four to one she'll reach for it with her left foot. Parrots are predominantly southpaws—or perhaps southclaws would be the better word here.

This curious fact has been studied at the National Zoological Park by Dr. Herbert Friedmann of the U. S. National Museum, in collaboration with Malcolm Davis, keeper of the Bird House.

Dr. Friedmann and Mr. Davis used twenty birds belonging to various parrot species, testing each bird twenty times. When pieces of food were offered, they almost always reached for it with left feet. When the food was placed in the middle of the cage, so that it could be reached with either foot, again it was left feet that usually went out for it. In all the tests, the left foot was used for between 75 and 80 per cent. of the pick-ups.

Only one species, a rare parrot from the East Indies, was consistently right-footed.

Mr. Davis is now watching other birds, that do not pick up food with their feet, to see if they exhibit "footedness" in other ways. For example, do storks stand more on one foot than on the other?

Science News Letter, May 21, 1938

PSYCHIATRY—PSYCHOLOGY

**Man's Aggressive "Instinct"
Is Roused by Aggression**

HOSTILITY has a way of rousing hostility while "a soft answer turneth away wrath." This wisdom familiar to the writer of the Proverbs is given new emphasis in modern treatment of the mentally ill.

In mental hospitals are many individuals whose aggressive tendencies have brought them into trouble. In days gone by, such persons were locked up, bound, or drugged. But confinement never cured the aggressiveness.

Today the restraint of mental patients is becoming obsolete. And with force ruled out, physicians have of necessity developed intelligent ways of dealing with aggressiveness in the mentally ill.

This progressive step in psychiatry has its lessons for those who have to

do with human aggressiveness in other spheres, it was pointed out by Dr. William A. White, pioneer in modern psychiatry, in a book just now posthumously published, "The Autobiography of a Purpose," (Doubleday, Doran).

"I am satisfied that the aggressive instinct, so called, of mental patients is activated by the aggressive instincts of others," he said, "And that it is allayed when others do not have that aggressive instinct toward them.

"And I am sure that with few exceptions the aggressive instinct of the majority of criminals is similarly activated or allayed and that they could be treated with something like similar consideration, although I am well aware that there are a certain few criminals who do not seem to be reachable by any means that we now possess.

"The psychiatrist is only beginning to make his contributions to social problems but he has a great number of suggestions along lines that are not usually thought of. I have already mentioned the activation of the aggressive instinct. Nothing activates it more seriously than does war. An orgy of killing lets it loose and it is a good many years before it is ever chained up again. We are having that experience, I am afraid, now."

Important in maintaining civilization is removal of what rouses man's aggression, Dr. White concluded.

Science News Letter, May 21, 1938

GENERAL SCIENCE

**New York Science Students
Stage Their Annual Fair**

THE TENTH Annual Junior Science Fair of the science students of New York's public schools demonstrated exhibits in all realms of science.

Sponsored by the American Institute, the four-day fair, May 8 to 11, was staged in the American Museum of Natural History. All exhibits were the actual creations of the students.

Among the exhibits were: Working models of deep mine and oil well interiors, volcano eruptions, astronomical observatories, rocket ships, arc furnaces, and flood control systems, all within the range of the children's ingenuity in the use of papier-mache and plaster paris. Actual experiments showed the learning behavior of rats in mazes, the action of a receding waterfall, color effects obtained by passing electricity through rarefied gases, scientific methods of crime detection, and the manufacture and use of spun glass.

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ASTRONOMY

**Pluto May Be Covered With
Layer of Liquid Air**

PLUTO, the ninth planet of the sun's family, may be larger in size than now estimated. Sir James Jeans has suggested that this distant planet is so remote and cold that it is covered with a layer of liquid air.

Acting like a mirror, this supercold liquid air would give a minute image of the sun. This is what astronomers would see when they observe the planet. The sunlight from the outer portions of the disk would not reach the earth. The apparent brightness of Pluto would give a too conservative idea of its size.

A size for Pluto larger than that of the earth, which might be possible according to this theory, would support the idea that Pluto exercises a noticeable effect on both Neptune and Uranus. This was the basis of the late Prof. W. H. Pickering's prediction of a ninth planet made before Pluto was discovered.

Dr. A. C. D. Crommelin, in discussions before the British Astronomical Association, recently called attention to the Pickering work in America as well as the orbits by Prof. Percival Lowell who founded the American observatory where Pluto was actually found in 1930.

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CHEMISTRY

**Waste Refinery Gases Make
High Efficiency Gasoline**

ON AN unprecedented scale chemistry is now turning once-wasted refinery gases into superior quality gasoline, it was reported to the American Institute of Chemical Engineers.

About 3,500 barrels of the new high efficiency polymer gasoline are now being produced at only one plant from gases formerly wasted, it was reported by S. D. Turner of the Humble Oil and Refining Company.

The polymer gasolines are created by applying heat and pressure on the gases in such a way that larger, heavier molecules are formed which have use as gasoline.

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E FIELDS

ENTOMOLOGY

Sixty Miles An Hour Greatest Speed of Insects

A MILE a minute is the fastest an insect has ever been observed to fly over a measured course. This was done by an Australian dragonfly, whose speed over a distance of between 80 and 90 yards was clocked at three seconds, by the well-known New Zealand entomologist, Dr. R. J. Tillyard. Other scientists, using various methods, have determined the speeds of flying insects belonging to various orders at from 18 to 33 miles an hour.

A review of these authentically measured insect speeds is given in *Science* (May 6) by Dr. H. E. Ewing, U. S. National Museum entomologist, in commenting on the claimed speed of over 800 miles an hour by a Mexican deer botfly, which was recently exploded in the same journal by an engineer, Dr. Irving Langmuir, of the General Electric Company's research laboratories.

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PHYSICS

Polarized Light Bringing New Industrial Revolution

A NEW industrial revolution is in the making and it will be created out of light. Practical applications on a large scale are foreseen now that man can create and control the kind of light that vibrates in one plane only. This kind of light is called "polarized light."

What the vacuum tube, familiar in our radios, did for applied electricity, a cheap and convenient means of polarizing light promises to do for optics.

For many years the polarization of light has been understood and used in a limited way. Expensive Nicol prisms, made from suitable crystals of Iceland spar, have long been used in microscopes and other optical instruments. The effects of polarized light have long been demonstrated in classroom physics experiments.

It is startling to have light blotted out by a mere twist of a disc that had been perfectly transparent. This happens when the prisms are "crossed" or ar-

ranged so that their "one-way streets for polarized light" block each other.

The new development in polarized light is the commercial production of large sheets of polarizing material, called Polaroid. Millions of small, needle-shaped crystals of the chemical, sulphate of iodo-quinine, are laid down in a film, which may be a yard or more wide and continuous in length. This synthetic sheet polarizes perfectly.

Some of the practical applications are: A desk lamp that eliminates glare from papers on the desk.

Sunglasses that rub out sunlight reflections on pavements, sea, ice and snow.

Elimination of auto headlight glare by use of 45 degree polarizing screens on headlights and windshields of all cars.

Photographic filters for surface reflection elimination.

Colored illumination and advertising displays.

And the most promising of all, perhaps, stereoscopic or three-dimensional motion pictures in color.

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ASTRONOMY

Gale's Comet, Missing Since 1927, Rediscovered

GALE's comet, missing from the region of the sun and earth for eleven years, has just been rediscovered by astronomer L. E. Cunningham of Harvard College Observatory. This comet, too faint to be seen with the unaided eye, was first found on June 7, 1927, by Walter F. Gale, a justice of the peace in Sydney, Australia, who observes stars in his spare time. The probable return of Gale's comet this spring was forecast last January by Science Service (*SNL*, Jan. 1).

As seen from the United States the Gale comet is low in the southeast sky about 10 degrees above the horizon. It is near the constellation of Ophiuchus, the serpent bearer. A neighboring constellation, perhaps more easily located, is Scorpius containing the brilliant star Antares.

As now reported the comet is a diffuse object, without tail, of the tenth magnitude. It was first sighted at Harvard on the night of May 1. Its position was then: right ascension, 17 hours, 23 minutes, 22 seconds; and its declination, minus 13 degrees, 4 minutes. While low in the sky in northern latitudes it is high overhead in Australia, where astronomers will have a good chance to observe it.

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ASTRONOMY

Planet Beyond Pluto Not Found after Extensive Search

"NEW Planet Discovered!" "Discoverer of Pluto Finds Sun's Tenth Planet!"

These are the headlines that might have been, but probably never will be. Ever since that day in February, 1930, when Pluto was picked up by young Clyde Tombaugh, boy astronomer not long off the farm, there has been hope of finding another, a tenth planet, even farther from the sun. As a consequence at Lowell Observatory, Flagstaff, Ariz., the world's most extensive "missing planet" search has been in progress.

Some 70,000,000 star images on exceptionally high quality photographs, sweeping the heavens in a broad band, have been studied and patiently compared in hope of spotting the hypothetical heavenly body. The work has been done largely by Tombaugh, Pluto's discoverer, working under the Brothers Slipher, V. M. and Earl C., and C. O. Lampland, who follow in the planet sky tracks of Percival Lowell, protagonist of canals on Mars and founder of the observatory.

Several times in the search there was high excitement when what seemed to be a second trans-Neptunian planet was found. But always these proved to be spurious specks on the photographic plates.

Why should astronomers hope for still another planet? Pluto was found after years of hopeful searching of Lowell's prediction. Pluto is relatively small and a still fainter planet should be findable. Jupiter's satellite system is, by the addition of Pluto, now paralleled by the sun's family of planets, and the existence of the tiny outer bodies of Jupiter bolstered the hope that beyond Pluto the sun's system might well have other small planets.

By-products of the search: Charting of 3,000 minor planets or asteroids, many of them new, exploration of the great Perseus-Andromeda stratum of nebulae, charting of distribution of thousands of nebulae over the sky, and the finding of variable stars, and an occasional comet. And finally there remains a large library of excellent plates of the sky which afford an excellent record for future reference in other searches of the heavens.

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