

SCIENCE NEWS-LETTER



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Edited by Watson Davis

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SEARCH BRYAN'S OWN STATE FOR LINK BETWEEN MAN AND APE

New York, A search for the fossil skeleton of an animal that may solve the mystery of early human life on this continent is being begun by the American Museum of Natural History in Nebraska, the home state of the principal opponent of the facts of evolution, William Jennings Bryan.

One fossil tooth, only a half-inch across, found in layers of earth known to be a half million years or more old, has started this expedition and startled the leading scientists of America. Prof. Henry Fairfield Osborn, one of America's leading anthropologists, announced the finding of this single piece of evidence of a pre-historic and unknown species of anthropoid, intermediate between the ape and earliest man, at the National Academy of Sciences meeting at Washington.

Worn by chewing when its owner was alive, and worn by water in the centuries since, this tooth matches no tooth ever found before in the jaw of ape or man, modern or extinct. It is very different from the tooth of the gorilla, the gibbon or the orang. It is nearest like that of the chimpanzee but the resemblance is still remote. Nor does it resemble very closely any human molar although it is nearer to the human than the ape type of tooth.

Consequently Dr. Osborn classifies it as a new species and genus and names it *Hesperopithecus haroldcookii*, which being translated back from the biologist's Latin means "the anthropoid from the West discovered by Harold Cook".

The discoverer, Harold J. Cook, is a geologist of Agate, Nebraska, who found the fossil in the upper layers of the Snake River beds. It is associated with remains of the rhinoceros, camel, Asiatic antelope and an early form of the horse, now extinct, which classes it as belonging to the geologic time known as the Middle Pliocene.

The expedition that Dr. Osborn has organized will consist of four scientists from the American Museum of Natural History under the leadership of Albert Thompson and will be in the field at least three months. They are leaving New York as soon as possible.

In 1908 the American Museum of Natural History received a similar tooth but it was so water-worn that it could not be safely identified. But the new specimen looks so much like the other that it may belong to the same species and gives hope that other parts may be found in this field.

The remarkable feature of the find of this old tooth lies in that fact that hitherto no specimens of anthropoid primates, ancient or modern, have been discovered in America although they are common in the Old World. It is possible that this Nebraska tooth will open a new chapter in geological history which may throw light on the vexed question of the origin of man.

"The animal is certainly a new genus of anthropoid, probably an animal which wandered over here from Asia with the large South Asiatic element which has recently been discovered in our fauna by Drs. Merriam, Gidley and others," Dr. Osborn says.

"It is one of the greatest surprises in the history of American palaeontology."

Although repeated instances of seemingly ancient man have ^{been} brought to light here in America, as yet no fully authenticated cases have occurred. Indirect evidence of human antiquity has however been reported from two high sources, one case being when charcoal and pottery were found below the bones of a mastodon and the other being where an arrow-head was found beneath the remains of a herd of extinct bison. The tooth found in Nebraska, although not part of a pre-historic man, may indicate early primate life on this continent.

Washington, After announcement by Dr. Henry Fairfield Osborn that the "first" American anthropoid primate had been found, Dr. J. W. Gidley of the U. S. National Museum declared that as the result of several years work he had concluded that one branch of the early extinct animal remains that had previously been considered by other scientists those of the lemur, a small mammal related to the monkeys, are in fact those of anthropoid primates. If his conclusions are correct, this would mean only that the Nebraska tooth is not the initial find of anthropoid primates on this continent, but Dr. Gidley's prior claim does not affect the importance and interest of the Nebraska tooth.

(This is the first of a series of weekly articles of editorial tone by Dr. Edwin E. Slosson, editor of Science Service. He was formerly literary editor of the Independent and he is the author of "Creative Chemistry" and many other books.)

THE FAITH OF THE SCIENTIST

By Edwin E. Slosson

The things we are surest about we do not talk about. We do not have to. There are certain things that all sensible men take for granted and there is no use trying to convince those who are not sensible. But once in a while it is well to dig down to the very foundations of our faith to see what they are.

There is one principle that underlies all of the sciences as it does all ordinary life and yet is not often specifically pointed out.

This is the invariance of nature or the constancy of cause and effect. That under the same circumstances the same thing will happen always anywhere. This is a bit vague for of course the circumstances are never twice the same all through the universe. And nobody can prove it or tell why it must be so.

For instance, who knows if the law of gravitation will hold true tomorrow? Why should not all particles of matter repel one another instead of attracting one another?

Suppose some erratic oak tree, in a desire to be original, should begin to bear watermelons instead of acorns? Who is entitled to tell it that it cannot?

Suppose the earth should get tired of always turning the same way and take a notion to turn from east to west for a change? How do you know it won't? You don't know. Yet you are sure it won't.

The only reason you can give is that this never has happened but that is merely the prejudice of the conservative, the negation of all progress.

Yet this principle, that like causes always produce like effects, has to be assumed by pure faith before we can undertake our next day's work. It is also a necess-

any assumption in all scientific calculations. Let us consider, for instance, the astronomer for he indulges in longer term prophecies with greater assurance and success than any other scientist. The point is best put by a French poet, Sully-Prudhomme, in a beautiful sonnet that may be translated as follows:

The Rendezvous

By Sully-Prudhomme

'Tis late; the astronomer his vigil stern
On lofty tower prolongs. In silent space
He seeks his golden isles, nor turns his face
Till starry host grows pale with morn's return.

Bright worlds, as grain the winnowing flail doth spurn,
Fly past thick-clustering nebulae a-light;
His eager gaze one streaming orb pursues in flight,
He calls: "This hour, ten centuries hence, return."

Return it shall. Nor time nor space abates,
The Everlasting Fact it never can assail.
Men pass from view; Eternal Science waits.

An though Humanity itself should fail,
Fair Truth will stand, alone, upon the tower
To keep that tryst at the appointed hour.

(Translated by F.P.H.)

Now if I fancy that Sully-Prudhomme with poetic license has exaggerated a bit the marvellous power of prescience possessed by the astronomer. To fix the exact hour for a comet's return a thousand years in advance is rather closer figuring than we can do with certainty. There is always the possibility that the comet may be wrecked in a collision or sidetracked by some star.

But Sully-Prudhomme does not exaggerate the confidence of the scientist in his fundamental principle of the constancy of natural law. The astronomer is willing to stake his life, or what he values more, his scientific reputation, that if none of these accidents happen and if he has rightly weighed all the factors involved, the result will be exactly as he says. He is so sure of it that if a comet does not return on an expected date he will be confident that some unforeseen force has intervened and he will set about to find it. If he does not find out what is wrong, other astronomers will take up the task and devote their lives to finding the cause of the discrepancy. They may keep at the problem for a thousand years and never think of saying: "Well, perhaps there isn't any reason. Comets are queer things anyway."

And if an oak tree should take to bearing watermelons - things almost as unexpected have happened - the botanists would be absolutely positive there was something new inside or outside the tree that set it to acting so. They would start to experimenting and probably find out what it was in the course of time. "There's a reason" is the faith of the scientist and so far he has never been belied.

SCIENCE OF GROWING THINGSAgricultural News of the WeekUSE ELECTRIC FURNACES
TO MAKE FERTILIZERS

Anniston, Ala., Rocks on a farmer's field are usually a nuisance, but phosphate rock when properly treated in the electric furnace promises to give him very high grade fertilizer. According to new methods developed here, it is now possible to prepare from the phosphate rock of Florida, Tennessee, and other southern states, phosphoric acid and phosphates, one of the essential plant foods for use in fertilizers. And the product can now be made cheaply available in more concentrated form than was ever before possible.

Previously the phosphate rock has been treated with sulphuric acid in order that the phosphoric acid could be converted from the crude rock and made available in useful form. The new procedure is to mix the phosphate rock with sand, coke, and iron borings and treat it in an electric furnace at very high temperature. The phosphorous is freed from the rock, Part of it is combined with the iron to form a valuable metal alloy, ferro-phosphorous, used in the metallurgical industry and the rest passes off from the furnace as vapor. The phosphorous vapor when it mixes with air at the outlet of the furnace burns, just as the phosphorous in a match does. The product, a very fine white fume, is then absorbed in water to form the phosphoric acid which is desired.

From phosphoric acid it is possible to make medicinal products or fine chemicals for use in sugar refining, water softening, and other industrial processes. But one of the most important uses will be to form concentrated fertilizer material which can then be mixed with nitrogen and potash compounds in the right proportion for use in fertilizing any type of crop.

The Department of Agriculture is testing a similar method but is using oil for heating instead of an electric furnace. They, too, plan to make strong phosphoric acid from which chemicals and fertilizer can be prepared and have succeeded in doing this on a small scale. But nowhere except in Anniston is there a large commercial plant operating to produce these products.

The product of such plants can be used in making fertilizer which has five times the amount of plant food ordinarily contained in such material. The use of such concentrated fertilizer will, of course, be very advantageous, especially where shipment for long distances is necessary. In such case the saving of freight will be considerable.

INSECTS PROSTRATED
BY THE HEAT

Wooster, Ohio. The way to get rid of disease producing, loss-causing insects is to subject them to a super-hot wave more intense than that felt by humans at a 4th of July picnic, according to W. H. Goodwin, formerly connected with the Ohio Experiment Station here, after an investigation of heating plants in 30 grain mills in Ohio and Pennsylvania.

"Many of our common insect pests," he says, "succumb readily to a temperature of 120 degrees to 130 degrees F. with practically no injury to the substances on which they feed. Some growing plants can be exposed to 120 degrees F. for 10 to 15 minutes with little or no injury. Insects affecting various nuts and dried fruits are amenable to heat treatment."

The age of the insect and the amount of moisture in the air have a great deal to do with the degree of temperature required to kill. Newly laid insect eggs are destroyed with less heat than is necessary for eggs nearly ready to hatch, while young larvae are much more hardy in the hot air than their grown brothers. The drier the air the higher is the temperature required to reach the killing point.

"In practical experiments in flour mills, seed storage rooms, and when heating weevil infested beans in a small drying room, the heat method has been found to be safe, simple, permanently effective and not expensive, when first cost is distributed over the many years the equipment can be used," Mr. Goodwin says. "Most flour mills if equipped with normally good steam heating system, will require only a small amount of additional radiation to equip them for summer use against all destructive mill insects."

TACOMA'S ELECTRIC
HEAT MINIMIZES STRIKE

Tacoma, Wash. People in 2,100 residences in this city are not worried about the coal strike. Their houses are satisfactorily heated by electricity from the municipal water power plant in one of the largest experiments of domestic heating by electricity in the country. The city finds the arrangement profitable as the domestic use in the morning and evening hours supplements the industrial demand which is largest from 8 A.M. to 4. P.M. and saves power.

BROADCASTSRadio News of the WeekCONFERENCE PROVIDES MORE SHORT
WAVE BANDS FOR BROADCASTING

Washington. More short wave bands for broadcasting, nominal fees for licenses, and provision for permits before erection of transmitting stations are among the changes incorporated in its final report by the governmental conference on radio telephony. All that is needed now to place the recommendations of the conference into effect is Congressional action to give the necessary authority to Secretary of Commerce Hoover. A bill is about to be introduced in Congress to revise the radio communication laws.

More liberal provisions for broadcasting on short wave lengths are provided in the report which gives broadcasting by the federal and state governments and public institutions exclusive rights to the wave lengths from 485 to 495 meters. This is essentially the same wave used for government weather, crop and market reports now. Those who live away from the seacoast will have a larger variety of radio waves to utilize under the recommendations. The band from 285 to 485 meters is assigned to private and toll broadcasting, but the zones from 285 to 315 and from 425 to 475 meters will not be used in regions near the coast because of the chance of interference with marine radio communication. For similar reasons the experts have limited government and public broadcasting on 650 to 700 meters to 400 or more miles from the seacoast, and similar broadcasting on 700 to 750 meters must not be done nearer to the coast than 200 miles.

By the establishment of a new band of wave lengths from 100 to 150 meters for the exclusive use of private and toll broadcasting, the experts foresee the establishment of short range broadcasting. It is expected that this will be a development of the future and that due to the fact that few radio receiving sets as they are now made can receive radio waves shorter in length than 200 meters, it will be possible to establish radio entertainment service on the basis of renting receiving sets adjusted to a particular wave length. The use of shorter wave lengths will introduce new problems into radio apparatus manufacturing and will also allow the establishment of a large number of low-power, short wave length transmitting stations in a small area. Each city will be able to have its own transmitting station of this character.

Reasonable fees that will help to pay the increased cost of radio regulation

are proposed to Congress, and the conferees also recommended that the regulation provide permits before a transmitting station is erected rather than after it is erected and before it begins to operate as is now the case.

An advisory committee of twelve experts, half from outside the government, to be appointed by the President is recommended as an aid to the Secretary of Commerce in the administration of the new radio regulations.

RADIO RECORDER PERFECTED
TO COPY MESSAGES AND OPERATE MECHANISM

Washington, A radio relay recorder that will receive and copy messages without the use of a trained radio operator, operate mechanism automatically in accordance with a signal received, and act as an automatic call system has been perfected by F. W. Dunmore of the radio laboratory of the Bureau of Standards.

It is sensitive enough to accurately convert feeble radio signals into records, but still will operate in a vibrating airplane, without attention.

"The practical operation of relays actuated by received radio signals is a comparatively recent development, and has been made possible by the development of the electron tube amplifier," says Mr. Dunmore. "The relay recorder is designed to operate from the output terminals of a radio receiving set and may also be operated by any other source of audio-frequency signal. By the use of special electron tube circuits the audio-frequency signal is caused to operate an ordinary telegraph relay. In order to avoid the necessity for using a very sensitive relay, designed to operate on currents of a milliampere or less, which would have delicate adjustments and light contacts and spring tension, advantage was taken of an electron tube amplifier, which has now become a reliable radio instrument, to increase the input voltage to the relay circuit thus making possible the use of a simple ordinary high-resistance telegraph relay. The relay device has therefore been developed to operate from the output circuit of any suitable amplifier in place of the ordinary telephone receivers.

"The operation of the relay may serve to work a sounder, buzzer, tape register or any mechanism for remote control by radio. By the use of two of these relay recorders connected in series across the output terminals of a single radio receiving set, two messages sent on practically the same wave length but of different audio-frequencies, have been accurately received simultaneously."

NEWS OF THE STARSHow to Watch for Sky-Wanderers.

By Isabel M. Lewis,
of the U. S. Naval Observatory.

Anyone can engage in astronomical research and do his part in accomplishing valuable scientific work by the careful observing and recording of the flights of meteors, meteorites and fire-balls.

Professional astronomers would welcome the aid of the amateur in this particular field of research which requires no telescopes. For this work only star charts are needed. Since telescopes are not needed for the work this field of endeavor is open to all. A knowledge of the principal constellations and their brightest stars, which is easily obtained from a study of the star charts, is required for an accurate estimate of the brightness of the meteors and the direction of their flight through the heavens.

More meteors are seen in the early morning hours preceding dawn than at any other time. We are then on the forward side of the earth and so are more likely to meet meteors moving in the usual west to east direction. Meteors that are encountered during the night are moving in the retrograde or east to west direction or else are overtaking the earth in its orbit, which happens more rarely. For this reason meteor observing is particularly suited to those who are abroad just before dawn, though meteors may be seen at all hours of the night.

The connection between meteors, meteorites and fire-balls is not definitely known but it is a significant fact that the most meteorites are seen during the months of May, June and July when meteor swarms and showers are least prevalent. Analyses show that meteorites come from regions that are deficient in oxygen and where hydrogen, chlorine, phosphatic and sulphurous gases are abundant. They do not contain substances that are found in abundance in the earth's crust. To determine the nature and origin of the meteorites as distinguished from meteors which are consumed entirely by friction in the earth's atmosphere is one of the objects of systematic observations of these objects.

The solution of many problems of meteoric astronomy,--such as the height of the earth's atmosphere, the direction of air currents at high altitudes and the relation of comets to swarms of meteors, - depends upon careful observations of the flights of meteors, by amateurs.

Here are some of the most essential points to be recorded by the observer:

The time, - day, hour and minute - of the appearance of the meteor. Its course across the heavens with reference to the fixed stars. Its brightness and size compared to one of the brighter stars or planets. Its color, whether reddish, yellow, white or bluish-white. The form of the trail, if observable. Does it flash across the heavens, emit sparks, separate into two or more parts or burst? An estimate of the duration of the flight is very important and can best be made by counting seconds while observing the flight. It should also be noticed whether the velocity varies in different parts of its course. The observer should note whether the meteor leaves a trail of smoke and if so how long it remains visible, - sometimes several hours - and what form it takes. The color of the smoke should also be noted.

If the meteor is accompanied by a sound how many minutes pass from the first appearance of light to the first sound, often five minutes, and how long does the sound last? The sound should be described - whether, for instance, it is like thunder or the sharp report of a pistol, or has a hissing, humming, or crackling sound.

Though these suggestions for the observations of meteors are by no means exhaustive they will give the observer some idea of the kind of information that will be of value to the astronomer.

YEARLY INCOME
TO MME. CURIE

Washington, Mme. Curie, discoverer of radium, will receive a yearly income of \$2500 as the gift of American women. A gram of the element that she and her husband first isolated was recently presented to her on her visit to America. At that time a fund was subscribed by the women of America, and although the small amount of radium cost about \$110,000, a final accounting shows that there is about \$50,000 of the fund still left. This money has been invested in tax-free securities and during her life Mme. Curie will receive the equivalent of about \$650 in francs quarterly. Mrs. William B. Meloney, chairman of the Curie Radium Fund Committee, has announced.

BATTLE FOR AIR CONTROL IN PROGRESS

Washington, The Army's battle for the control over the air goes on. "Due to the fact that nearly all officers in the last airship class at Langley Field, Va., were wiped out as a result of the Roma tragedy, the next class is being pushed forward, and it is now expected that it will commence operations on April 24," says an official statement. "This class will be composed of ten officers. Every effort is being made to supply the present deficiency of airship pilots so that the tactical development of airships may be proceeded with."

TENTH OF ARMY EXAMINED
HAD "GERM OF LAZINESS"

Washington, May 3.- A tenth of a large number of army recruits examined in camps during the war were infected with hookworm, Prof. Charles A. Kofoid, of the University of California, told the American Society of Tropical Medicine here this morning when he discussed how widely the "germ of laziness" had been detected in this country.

Judging by tests of 507,000 soldiers, this infection was most widespread and heaviest in the southern states where it amounted to 17 per cent. Especially this was true in Alabama with 29 per cent., Florida with 32 per cent., Georgia with 33 per cent., Louisiana with 27 per cent., North Carolina with 27 per cent., South Carolina with 23 per cent., Tennessee with 13 per cent., and Texas with 12 per cent. Dr. Kofoid declared that recruits from northern states exposed to infection by southern residence and of southern birth enlisted from northern states, provide an infected element in other parts of the United States. In the northeastern group of states the infection in this group of the population is 1 per cent, in the middle west, 2 per cent, on the Pacific slope 2.5 per cent. "Hookworm infection increases the incidence and severity of diseases, generally by lowering the resistance, and increases the death rate from pneumonia, as was shown by a statistical study of the 36th division at Camp Bowie, Texas," he said. "It also lowers the intellectual efficiency of its victims. Studies of 15,000 men examined by the Psychologic Board showed that their mental rating was lowered nearly 25 per cent in case of hookworm infection. Interests of military and industrial efficiency of men and of economy and progress of education of children in the period of schooling demand the sanitary control and extermination of this human infection."

TROPICAL DISEASES AFFLICT
RICHEST PART OF UNITED STATES

Washington, May 2.- A very large part of what should be the richest and most productive part of the country is the seat of several important tropical diseases, Prof. George Dock, of the University of Washington, St. Louis, said in his presidential address before the American Society of Tropical Medicine here today. "There still seems to be a tacit belief on the part of the citizens and many members of the medical profession who are not personally engaged in tropical disease work that tropical disease problems are something foreign and distant," he said in declaring that how to remedy conditions and distribute scientific knowledge is worthy of serious and active study.

DO YOU KNOW THAT -

It has been demonstrated that tomato seed from high producing plants may produce yields as much as 600% greater than seed from low producing plants and 300% greater than from average plants.

The 10,000 tons of wood waste and sawdust destroyed each day in British Columbia are capable of supplying from 40 million to 50 million gallons of power alcohol.

Among the 180 different kinds of bacteria and other organisms taken from the bodies of house flies by different investigators are infantile diarrhea, typhoid fever, anthrax, food poisoning, amoebic dysentery, abscesses, leprosy, tape worms, hook worms, bubonic plague, conjunctivitis, summer complaint, tuberculosis, gonorrhoea, green pus, enteritis, trachoma, erysipelas, gas gangrene, stomach worms, pin worms, ophthalmia.

The increased Niagara Falls power development of 200,000 horsepower requires the drilling of a 32 foot tunnel a distance of 4,500 feet.

DO YOU KNOW THAT -

British coal is usually sold under regular trade-marks which are known to represent a fixed standard of quality, while American coal is so little known that a certain guaranteed analysis is frequently required.

Accidental infection of a young woman bacteriologist of the New York State Health Department from a rat which she was examining in search of the germ of epidemic jaundice has furnished the first direct evidence that microbes harbored by these rodents can induce that disease in human beings.

The white pine, at one time America's premier lumber tree, combines the faculty of being ornamental as well as useful.

It is estimated that in Chicago alone preventable expenses and losses due to the bad arrangement and location of the South Water Street Market amount to \$5,000,000 annually.

DO YOU KNOW THAT -

Investigators at the University of Washington, College of Fisheries are searching for a cheap substitute for liver as food for trout and salmon.

If the house is situated near a dusty road, cheesecloth screens will help to keep out some of the dust.

Modern American made machinery is used in bull fights in the City of Chihuahua, Mexico. Instead of having a team of horses or mules drag the carcass of the dead bull out of the arena, as has been the custom from time immemorial, an American made tractor was employed.

A competitive exhibition of photographs of mammals, either in the wild state or in captivity, is being held by the American Museum of Natural History of New York City.

DO YOU KNOW THAT -

In many parts of continental Europe the idea has prevailed since the Middle Ages that the days dedicated to Saints Mamertus, Pancras and Servatius - May 11, 12 and 13 - or, according to another version, to Saints Pancras, Servatius and Boniface - May 12, 13 and 14 - generally bring destructive frosts. On account of this belief, which has been the subject of much scientific discussion, both the saints in question and their days in the calendar are popularly known as the "ice saints."

Every year forest fires in the United States destroy or damage sufficient timber to build houses for the entire population of a city the size of Washington, D. C.; New Orleans, La.; Denver, Colo.; or San Francisco, Calif.

On January 1, 1922, there were approximately 1,400 passenger cars, 160 trucks, and 62 motor cycles registered in the Dominican Republic, says Vice Consul Makinson, Santo Domingo, in a report to the Department of Commerce. All these vehicles are of American manufacture and are equipped with American tires and tubes.

Regular daily air service between a New York hotel and Atlantic City is planned, and eventually the regular service may be extended to Washington, Philadelphia and other cities.

DO YOU KNOW THAT -

The Academy of Science and Arts of Trieste, Italy, will issue an encyclopedia of science and arts which will contain twice as many articles as the Encyclopaedia Britannica.

A new natural gas field has been discovered in Northern Louisiana which is estimated to hold about five trillion cubic feet, making it the greatest natural gas supply yet discovered.

It is estimated that 43.1 per cent of the family budget is spent for food, 17.7 per cent for shelter, 13.2 per cent for clothing, 5.6 per cent for fuel and light, and 20.4 per cent for sundries.

In a recent auto truck test by the Argentine Army over dirt roads, with trucks loaded to capacity, the one American entry was the only truck to finish the entire course and complete the trials in a satisfactory manner.

DO YOU KNOW THAT -

The family whose income is 54.7 per cent greater now than then is neither better nor worse off than in 1914. Those whose incomes have increased more than 54.7 per cent are better off, while those whose incomes have not increased by so much as that figure are worse off. This affords a convenient way of measuring one's own status compared with 1914.

A liquid potato yeast can be made which will keep well even in a fairly warm place, if it is prepared and constantly renewed.

The 300 applications for the development of water power now before the Federal Power Commission involve an estimated primary development of 12,400,000 horsepower, net, and an estimated installed capacity of 19,060,000 horsepower.

At least ten aviation companies are operating lines in Germany

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FRAGMENTS OF SCIENCE

The Stone Axe

I fully believe the first stone axe was ridiculed and criticised by the cave dwellers; probably because it required two blows with it to finish an adversary; and some years from now when the flying machine from London to New York shall be ten minutes late on a forty-eight hour run, people will be found petitioning the International supervisors of Flying Machines to compel the owners to put on another propellor or another pair of wings and two tails so that the service may be prompt; at least I hope they will, for dissatisfaction is the first step in progress. - Dexter S. Kinball, president of the American Society of Mechanical Engineers.

Turbulence

Big whirls have lesser whirls that prey on their velocity;
They again have smaller whirls, and so on to viscosity.

-L. F. Richardson.

High Cost of Living

If our women folks would plan ahead and place their orders regularly, so that distribution could be made in one, or at most two deliveries each day, that would make possible a tremendous reduction in distributing cost. The practice of calling up the store and asking for immediate delivery of a small purchase makes it necessary for the storekeeper to maintain a very expensive delivery equipment. The practice also of encouraging small stores in residence communities tends to increase retail costs. - Henry C. Wallace, Secretary of Agriculture.

Survival of Feeble-Minded

There is in the United States a very large feeble-minded population, estimated at 200,000, nine-tenths of whom are at large, free to reproduce their kind, and very prone to interbreed, because the feeble-minded are seldom sought as legitimate mates by persons of normal mentality. The number of feeble-minded is apparently increasing much more rapidly than the general population. - By Elliot R. Downing.

The old Polynesian is passing the last milestone of his career. - Dr. Clark Wissler of the American Museum of Natural History.