

New Planet Is in Solar System

Discovery Confirms Prediction Made by Lowell Back in 1902.

New York.—A new world, a ninth major member of the small family which makes up our known solar system, has been added to the list of heavenly bodies by the astronomers of Lowell observatory, working upon the calculations of the late Percival Lowell. Announced just 149 years to the day after Sir William Herschel's discovery of the planet Uranus, this achievement supplies only the third important addition to the solar system since the days of the ancients, says the New York Herald Tribune.

The "new" planet is estimated to be nearly 4,000,000,000 miles away; it is invisible except to powerful telescopes and its effect upon life on the earth cannot be considerable. Nevertheless, the discovery has a fascinating interest in that it suddenly enlarges our own particular corner of space, it reveals an unknown sister planet lying, in comparison with the vast depths of space into which recent astronomical discovery has penetrated, almost at our own doorstep.

Scientific Triumph Repeated.
The discovery is also startling in that it repeats so exactly one of the most famous of all the triumphs of the scientific method—the discovery of the planet Neptune after its position had been calculated from the motions of the known planets and its position in the sky accurately indicated.

Finding of the trans-Neptune planet is the culmination and reward of Doctor Lowell's effort to repeat the success in the case of Neptune. As long ago as 1902 Doctor Lowell, a writer and traveler who had turned his interest seriously to astronomy rather late in life, predicted from his study of the motions of the eight known major planets the possible existence of a ninth in the cold reaches of space beyond the orbit of Neptune.

Search Begun in 1915.
The great labor of complex calculation necessary to demonstrate the hypothesis and establish the location of the supposed body was not completed until 1914, when Doctor Lowell published his memoir, "A Trans-Neptunian Planet," and the actual work of searching for the predicted world did not begin until the year following.

Doctor Lowell died in 1916. It is only now, a decade and a half later, that his work has been finally justified. A special telescope, with delicate photographic recording apparatus, was installed last year expressly to carry on the search, but, even so, the first result did not come until January 21, when Clyde W. Tombaugh, a young

Kansas working on the staff of the observatory, actually detected the new spot of light upon a photographic film which announced the existence of a new member of the solar family, and thus became the first human being to "see" the ninth planet.

Further observation was necessary to make sure that the pin point of light actually represented a new body and to prove that it was moving against the stationary background of the stars in accordance with prediction, before the announcement could be made which, as C. O. Lampland, astronomer of the observatory, states it, "appears to mark fulfillment of a prediction" made three decades ago by the founder of the Lowell observatory.

Believed Larger Than Earth.
It will require time to fill in details concerning the planet X. Remote as it is from the sun, moving in an outer space which can receive so little solar heat that the temperature would be low enough to liquefy air, and with so long an orbit that its "year" would equal 200 to 300 terrestrial years, conditions upon it certainly can be nothing like those upon the earth.

In size it is announced to be certainly as large as the earth, and perhaps very much larger.

The question has been raised as to whether still more worlds may not remain to be conquered. There are known to be many small planets, or "asteroids," and there are probably many more in existence than have actually been recorded. Astronomical calculation seems to indicate that there may be some others of larger size, but it is unlikely that any more of major proportions are still to be discovered.

The discovery of Neptune, now repeated in the discovery of the new planet, was a dazzling triumph of the Nineteenth century, cited again and again to prove the correctness of the scientific method of deduction and undoubtedly contributing an important share to the wave of enthusiasm for science which during the Nineteenth century swept the world away from the old moorings of more traditional philosophies.

Uranus Discovered by Chance.
From the time of the ancients until 1781 the solar system had existed as a compact arrangement of six planets, Mercury, Venus, the Earth, Mars, Jupiter and Saturn. In the order of their distance from the sun, Herschel's discovery of Uranus was accidental; it appeared in his telescope as he was sweeping the heavens and he first set it down as a comet.

Observation through a few weeks established its character as a genuine planet. Interestingly enough, Herschel, though its discoverer, was by no means

the first to have seen it. It was possible to check back through the records and find that it had been observed a number of times before, but had been supposed to be a star. The small planet Ceres, with an orbit between those of Mars and Jupiter was discovered in 1801, and was the first of what later turned out to be a whole swarm of asteroids, or tiny planets, in the same region. About 1,000 of them have since been recorded.

Neptune's Position Calculated.
These discoveries concentrated attention upon the planets. In working out the calculations for the new planet, Uranus, it was soon found that the observations did not agree with the calculations. The problem awakened an increasing interest, and considerable effort was expended both in checking over the observations and in seeking for a possible new explanation.

The possibility of observational error soon had to be discarded, while as early as 1834 the idea that the apparent aberrations of the planet might be due to the existence of another undiscovered one was advanced.

A number of astronomers devoted themselves to the problem and both Leverrier, in France, and Adams, in England, worked out the probable position of the supposed body in 1846. Leverrier submitted his calculations to the observatory, the telescopes were trained accordingly and the planet Neptune stood revealed. Both men had calculated so closely that either set of tables would have resulted in the discovery.

World's Confidence Won.

The same process, repeated to reveal a ninth planet, may not seem so wonderful to the public of today, long accustomed to the astounding accuracy of astronomical prediction, but in 1846 it seemed more than magical and enormously strengthened the world's awakening confidence in the powers which the intellectual tool of scientific method had put into its grasp.

With the far better instruments and more refined methods of today, it has long been realized that not everything in the observed motions of the solar system can be explained. Even if the ninth planet exhausts the list of large bodies in the system, there still will be a field for research in planetary motions, while a very large field for research in planetary physics and geography still remains open.

Accident Toll Heavy.
Madison, Wis.—Accidents have taken three times a greater toll of lives in the United States than were suffered during the World War by American troops, declared L. W. Hutchcroft, statistician of the state board of health.

Arrested in Church.
Millville, N. J.—While he was busy playing in a Sunday school orchestra here, Ansley Howell was arrested for stealing chickens. The school sang the closing song without orchestral accompaniment.

COSGRAVE IS RE-ELECTED



William T. Cosgrave.

Dublin, Irish Free State.—William T. Cosgrave was re-elected president of the executive council of the Irish Free State parliament by a vote of 80 to 65. President Cosgrave returns to power after only a five day lapse. His ministry, having held on since 1922, fell a few days ago by a vote margin on extending old age pensions. President Cosgrave opposed the extension as being too great a financial burden.

TARIFF MEASURE IS SENT TO CONFERENCE

Bill May Be Ready in Three Weeks for Final Vote.

Washington.—The Smoot-Hawley tariff bill was sent to conference as the house settled the question by a record vote of 221 to 153 and both the senate and house appointed conferees. It is estimated that the conferees may take from three to six weeks to adjust the differences in the rates and other sections of the bills passed by the two chambers.

The house members of the conference are Representatives Willis C. Hawley, of Oregon, chairman of the house ways and means committee; Allen T. Treadway, of Massachusetts and Isaac Bachrach, of New Jersey, Republicans, and John N. Garner, of Texas, and James W. Collier, of Mississippi, Democrats.

The senate conferees are Senators Reed Smoot, of Utah, chairman of the senate finance committee; James E. Watson, of Indiana, and Samuel Shortridge, of California, Republicans, and F. M. Simmons, of North Carolina and Pat Harrison, of Mississippi, Democrats.

Senator Smoot said he expected the bill to come out of conference for a final vote in about three weeks, and added that the senate conferees would come back to the senate for instructions on the flexible provisions and the debenture amendment. The house leaders have an agreement with certain western Republicans that votes will be had on cement, sugar, lumber and shingles before the house conferees are permitted to settle the difference in rates on those items. The house action in sending the bill to conference was taken on a roll call vote on the rule brought in for that purpose.

I. C. R. R. Adds \$2,000,000 in Orders for Equipment

Chicago.—Expenditures for equipment by the Illinois Central railroad for 1930 will top such appropriations for 1929 by \$2,000,000. The road spent \$8,000,000 in 1929 for new locomotives, cars and other improvements, but this year the equipment appropriations will total \$10,000,000. It was announced in a statement issued by L. A. Downs, president.

The road soon will ask for bids on 2,330 units of equipment to cost about \$9,000,000, in addition to orders totaling \$1,000,000 which already have been placed.

Included in the new equipment will be 9 electric locomotives, 1,000 auto-furniture cars, 1,000 gondola cars, 200 flat cars, 15 mail, baggage and express cars, 15 passenger cars, 20 electric suburban cars, 65 cabooses, 2 rail motor cars and 4 diners.

Federal Tax Collection Shows Marked Increase

Washington.—Total federal tax collections for the current fiscal year, which began last July 1, to April 1, reached \$1,812,137,800, an increase of \$126,000,000 over the same period a year ago, according to treasury figures. Income tax collections for March, however, total \$359,503,700, a decrease of \$42,000,000.

Coolidge Buys \$40,000 Estate.
Northampton, Mass.—Former President Calvin Coolidge has purchased an estate known as "The Beeches," valued at \$40,000, in a well secluded section of this city and will occupy it within a few weeks.

German Cabinet Takes Oath.
Berlin.—Chancellor Otto Bruening and his coalition cabinet took the oath of office recently, which was administered by President von Hindenburg at his residence.

CENSUS WILL BRING HOUSE ROLL CHANGE

23 States May Be Affected in Representation.

Washington.—Important changes in the membership of the house will automatically follow the fifteenth decennial census, the taking of which is now in progress.

A reapportionment of representation in conformity with the growth and shifting of the nation's population will be made for the first time in 20 years and will become effective with the congress elected in 1932.

Under the terms of the reapportionment bill, passed last year, the census bureau estimates that 17 widely scattered states will lose an aggregate of 23 members of the house and that 11 states will gain by the same number.

It is expected that the representation of the larger cities will be increased, and, since these are usually regarded as opposed to prohibition, a careful watch is being kept for the effect of the reapportionment upon the liquor issue.

In the bitter contest that preceded the passage of the reapportionment bill by the house, members from metropolitan areas charged that representatives of rural districts were attempting to defeat the measure in an effort to prevent an increase in the size of the house wet bloc. The wets hailed the passage of the bill as a victory.

Although the Constitution provides for reapportionment every ten years, the last took place in 1911 on the basis of the 1910 census. The law passed last year provides that in the future a reapportionment be made by every fifth congress, with congress retaining, to meet emergencies, the prerogative of changing representation at any time.

The census bureau estimates that the states to gain in representation are Arizona, Connecticut, Florida, North Carolina, Oklahoma and Washington, one each; California, six; Michigan, four; Ohio, three, and New Jersey and Texas, two each.

The states which probably will lose representation are: Alabama, Kansas, Louisiana, Maine, Massachusetts, Nebraska, New York, North Dakota, Pennsylvania, Tennessee, Vermont, and Virginia, one each; Missouri, three; Indiana, Iowa, Kentucky and Mississippi, two each.

Senate to Act on Bills to Reduce Unemployment

Washington.—Legislative remedies for unemployment, including a stabilization agency with authorization for a \$150,000,000 federal appropriation, are slated for final discussion on Tuesday, April 15.

The senate agreed to take up the measures by Senator Wagner (Dem., N. Y.) after its commerce committee had approved them.

The committee action followed intensive investigation of present conditions by a subcommittee that heard William Green, president of the American Federation of Labor, and others identified with labor paint dismal pictures of the existing situation.

Witnesses unanimously endorsed the three Wagner measures. These would expand government machinery for collecting unemployment information. Provision would be made that on the basis of this information a federal stabilization board could accelerate or retard public construction to meet changing conditions.

Lindy and Wife to Fly at Loftiest Altitudes

Burbank, Calif.—Col. Charles A. Lindbergh is watching the construction in an airplane factory of a new speed wing for his private air speedster. The wing was designed with recesses to receive the landing wheels while the plane is in flight.

The snug shape of the plane with the wheels drawn into the wing is expected to add twenty miles an hour to its top speed. When the colonel and his wife fly East at the conclusion of their winter visit here, they will wear newly designed electrically heated flying suits. Their Pacific and Atlantic sea coast flight is to be made at the loftiest altitudes ever used for such a trip.

Coast Artillery School Planned for Ft. Monroe

Washington.—The most complete coast artillery establishment in the service will be soon assigned to Fort Monroe, guarding the entrance to Chesapeake bay, it was announced by the War department. Anti-aircraft guns, machine guns, searchlights, railway and tractor-drawn artillery and fixed harbor defense guns are being concentrated at the post and will be used in practical demonstration and instruction of coast artillery school students.

To Give Dogs Trial in Court

Frankfort, Ky.—Any dog in Kentucky accused of sheep killing or other crimes will be entitled to a trial in court, under the provisions of a bill passed by the general assembly which is now law.

Warned to Cut Tobacco Acreage

Washington.—The federal farm board has sent a telegram to the state agricultural extension directors of Kentucky warning farmers against increasing tobacco acreage for 1930.



SOUR MILK COSTS FARMERS DOLLARS

Usually Result of Carelessness, Says Expert.

Sour milk costs producers thousands of dollars a year, and usually is caused by using unclean utensils or failing to cool the milk properly, says Prof. L. H. Burgwald of the department of dairy technology of the Ohio State university. "A little care on the part of the farmer would avoid this loss," says Professor Burgwald.

"Milk is an ideal medium for the growth of bacteria. All that the bacteria require when introduced into the milk, is the proper temperature, and they will multiply very rapidly. In growing they break down the milk sugar in the milk and convert it into lactic acid which in turn sours the milk. But the bacteria will grow very slowly, if at all, at a temperature below 50 degrees Fahrenheit."

"Milk coming from the normally healthy cow is practically free from bacteria, so when large numbers of bacteria are found it means either that they have been introduced after milking, through the use of unclean utensils, or that the milk has not been promptly and properly cooled, and the bacteria have multiplied very rapidly."

"The public judges the quality of the milk by the length of time which it will keep sweet. The milk plant has to use some test which will determine in advance how long the milk will keep sweet. This test takes the form of a bacteria count under a compound microscope, an alcohol test, or a methylene blue test. The blue color of the milk caused by the addition of methylene blue dye, disappears more or less quickly, according to the number of bacteria present. The microscopic test, however, an actual count of the bacteria present, is the one most commonly used."

Feeding Calves Three Times a Day Is Favored

Best results can be obtained by feeding calves three times a day, with the periods between feedings as nearly equal as possible. When calves are fed but twice a day the feedings should be 12 hours apart. A calf weighing 50 pounds at birth should be given eight pounds of whole milk a day, while a 100-pound calf should have about twelve pounds. The amount of milk should be gradually increased until at the end of the second week the calf should get from 14 to 16 pounds per day. At the beginning of the third week either skim or separated milk may be given for whole milk, at the rate of one pound per day, and the daily ration increased from two to four pounds, depending on the vigor of the calf. If the calf does not drink eagerly when milk is offered, the quantity should be cut down. At the end of the third week the ration should approximate one-half skim milk. At the end of the fourth week only separated milk is fed, unless the calf is very delicate. The quantity fed can be increased gradually to 18 or 20 pounds per day. Six months is a good average age at which to wean calves from the milk. When good pasturage is available, the calf can be weaned earlier. If skim or separated milk is available, however, calves, especially if they are available, may be fed on it with profit until they are eight or ten months old.

Dairy Notes

A cheap bull is about the most expensive investment a live stock man can make.

Sanitation in the management and blood testing are the methods of controlling abortion.

Immediate and adequate cooling of milk is necessary to prevent souring. A temperature of less than 50° F. is unfavorable to the growth and reproduction of the injurious bacteria.

With feeding of dairy cows, the question of minerals in the ration receives additional prominence. A cow may produce milk for some time without having sufficient minerals in her ration by drawing on her reserves.

Cleanliness is important in preparing milk for exhibition just the same as in producing milk for sale. Clean cows, clean milkers, and clean utensils and containers keep down bacterial content and prevent spoiling.

Provide now for a better milk-producing inheritance in your future herd. Get a sire from a line of breeding better than your own.

The calves will begin to eat grain after they are a few weeks old, and it is usually profitable to provide a creep where grain can be supplied.

During the cold months the question of water for the producing herd is one that is often given little attention. A cow milking heavily requires from 70 to 150 pounds of water daily.



A Sour Stomach

In the same time it takes a dose of soda to bring a little temporary relief of gas and sour stomach, Phillips Milk of Magnesia has acidity completely checked, and the digestive organs all tranquilized. Once you have tried this form of relief you will cease to worry about your diet and experience a new freedom in eating.

This pleasant preparation is just as good for children, too. Use it whenever coated tongue or fetid breath signals need of a sweetener. Physicians will tell you that every spoonful of Phillips Milk of Magnesia neutralizes many times its volume in acid. Get the genuine, the name Phillips is important. Imitations do not act the same!

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WHITE SOUP, Mince or Complete Soups for real profit. We publish Morticians' notes at our own expense. Don't send manuscripts until you inform us what you write; real chance for genuine ability. Enclose return postage quick attention. Kenda Mince Corp., 145 W. 43rd, New York, (Dept. 432).

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Contains 3 3/4% Pure Sulphur. Skin eruptions, excessive perspiration, insect bites, relieved at once by this refreshing, beautifying toilet and bath soap. Best for Soft, Clear Skin.

Bohland's Styptic Cotton, 25c

March of Science

First Cook—What do you do with yourself now that the iceman is out of a job?

Second Ditto—Well, the man who collects installations on the electric refrigerator ain't such a bad sort.—Life.

ACHES

There's scarcely an ache or pain that Bayer Aspirin won't relieve promptly. It can't remove the cause, but it will relieve the pain! Headaches, Backaches, Neuritis and neuralgia. Yes, and rheumatism. Read proven directions for many important uses. Genuine Aspirin can't depress the heart. Look for the Bayer cross:



Bars Husband From Kitchen

The shah of Persia in the course of a recent public speech ridiculed the "husband in the kitchen." The man who takes pride in his cooking is a nuisance, he stated, and advised the Persian women not to respect the man who is always too willing to help them around the house.



Don't Risk Neglect!

Kidney Disorders Are Too Serious to Ignore.

WATCH your kidneys! Sluggish kidneys fail to rid the blood of impurities and permit slow poisoning of the whole system. If troubled with backache, bladder irritations and getting up at night, don't take chances! Use Doan's Pills at the first sign of disorder. Used for more than 50 years. Praised the world over.

50,000 Users Endorse Doan's: Mrs. O. A. Winter, 1145 N. Topoka St., Wichita, Kan., says: "I had such severe backaches I could hardly do my housework. Headaches were frequent and my kidneys were irregular. Doan's Pills strengthened my back and regulated my kidneys."

DOAN'S PILLS

Officers of the Best American Cavalry Unit



Left to right: Capt. J. M. Shatton of New Orleans, La.; Lieut. George B. Hudson of Columbus, Ohio, and Lieut. Donald D. Sawtelle of New York city, officers of Troop E, third cavalry, of Fort Myer. The troop was adjudged the best in the United States and awarded the Goodrich trophy, symbol of the highest rating in the cavalry.

"LONE SAILOR" TO SETTLE DOWN ON SOUTH SEA ISLE

Alain Gerbault Tires of Western Life; Seeks Uninhabited Island.

Paris, France.—When Alain Gerbault, lone sailor of the Atlantic, hauls in anchor again next September and starts off on another cruise with a new yacht it will be a cruise without a homecoming, for Gerbault intends to cut himself off from the western world and settle down for life on a South sea island.

Gerbault is simply fed up with western society, European customs and clothing. He yearns for the South seas, with the scanty clothing that the climate allows. Since his return to France Gerbault has had a succession of bronchitis and other ills and blames the necessity of wearing clothes.

Gerbault is building a new yacht near Paris to replace the Firecrest,

which is still seaworthy but not comfortable for solo yachting. The new boat, fitted with a false bottom, is slightly smaller than the Firecrest but much more comfortable.

"When I sail away in September, I shall never bring my boat back to France," Gerbault said.

"The South Sea Islands will be my home, for that is the garden spot of the universe today and men are happier there than they are in Paris, New York or any of the capitals of the world."

So the unkempt hermit of the seas will set forth in his cockleshell again to go half way around the world.

He dreams of buying an island for himself to make sure of having no neighbors. He will choose a few natives as fellow inhabitants and will lay out a plantation, growing just enough for the needs of his colony. Gerbault almost owned one island

in the Pacific, offered to him as a gift by the chief on his last voyage. The only condition was that the Frenchman marry the chief's black daughter. Gerbault sailed away single.

Toothbrush Good Gift; He Gets 22 of Them

Helena, Mont.—A shy young girl, member of a Y. W. C. A. gym class, solicited the advice of Morris Sanford, physical director.

"What?" queried the girl, "would you consider a suitable birthday present?"

Sanford pondered a moment. "Why, in my judgment," he answered, "the best birthday present one could receive would be a tooth brush."

The next evening 27 members of the girls' gym class formed a line and filed past their director. Each handed him a package. When the embarrassed instructor had unwrapped them all he found he was the owner of 22 assorted tooth brushes and a wide variety of tooth pastes.