

HOW

MOON CAME INTO BEING, AS A SCIENTIST THINKS.—The earth is the parent of the moon in more than a poetic sense, in the opinion of Dr. R. H. Rastall, lecturer in economic geology at the University of Cambridge, who recently announced a theory that our satellite is made of material that was once part of the earth's crust.

Doctor Rastall's theory, however, differs from that of Sir George Darwin and others who have previously made similar suggestions, for he thinks that a layer of the earth's crust, about 41 miles thick and covering about two-thirds of its total area, was peeled off by the attraction of the sun. This tidal action of the sun was effective while the crust was still in a plastic state, and the moon's own gravitational attraction caused it to roll up into a ball of the form that we now see in the sky. The crustal area left on the earth formed the continents.

This theory also accounts for the fact that, while, according to generally accepted ideas, masses of lighter density such as make up the earth's continents should cover the entire surface of the globe, they actually cover only about a third, the missing two-thirds consisting of the moon's density by its effect on the earth. The theory is about three and a half times as heavy as an equal volume of water. This is more dense than the average for the continental land masses, but Doctor Rastall assumes that at the time of the disruption some of the heavier underlying material was also torn away.

The new theory also fits in with the ideas recently set forth by a German geologist, Prof. Alfred Wegener, who believes the American continent was originally united with Europe and Africa, and that it floated away to its present place. This would not have been possible, so long as the entire earth was covered with such a crust, but after the moon had been torn away it was possible for the continents to separate from their long embrace.

How Patrol Service

Saves Ships From Ice

In 1914 the leading maritime nations of the world came to an agreement that a patrol service to keep a lookout for icebergs should be set up. This conference was the outcome of the sinking of the Titanic with great loss of life after striking an iceberg on the night of April 14, 1912. The United States government was asked to undertake the responsibility of the ice patrol in the North Atlantic.

For about four months each year, when the ice is breaking up into gigantic, treacherous masses, the patrol must be maintained. It begins usually in March, lasting until the end of June. The usual procedure is for the patrol cutters, upon sighting a berg, to allow themselves to drift with the white mass. For days they may have to keep this position, and the monotony is only relieved when the berg finally dissolves or is no longer dangerous. The patrol boats are each fitted with a 2,000-watt telephone and telegraph transmitter, and all the time they are with the icebergs they send out messages of warning at regular intervals.

Both the Tampa and the Medoc, the principal ships of the patrol, are driven by electricity and carry every kind of measuring instrument, so that they can discover the exact size of each berg they encounter.

How Fast Light Travels

Light travels with a speed of about 186,000 miles a second. Scientists have known this fact for years. But Dr. A. A. Michelson, president of the National Academy of Science, who is one of the greatest practical physicists in the world, is not satisfied with this figure. He thinks it is about 20 miles short of absolute accuracy.

It is Doctor Michelson's experiments are successful this error will be reduced to as low as one mile per second, a figure accurate enough for practically all scientific purposes. Although Doctor Michelson is confined to his bed in Pasadena, Cal., as the result of an operation several months ago, he is continuing his experiments with the aid of his assistant, Fred Pearson. A reflection mirror on Mt. Baldy, 22 miles from Mt. Wilson, is being used for the light experiments.—Exchange.

How Painted "Light" Helps

"Painting" buildings with light is an inexpensive and effective method invented by engineers in Fresno, Cal., says Popular Science Monthly. The walls are made of cream-tinted terracotta and pressed brick, and flood-lighted with colors such as soft magenta, ruby or emerald.

How Long Fish Live

A Swiss naturalist, Konrad Yesner, has recorded the history of a pike two hundred and sixty-seven years old. It had spent its entire existence as a prisoner in a fish pond. Carp are known to live for many years, growing two or three inches a year.

Animal to Be Enraged

Is the Hippopotamus

An unnamed explorer is quoted in the Berliner Tageblatt as speculating on the relative happiness of men and hippopotamuses. Other animals, it appears, have their troubles.

"Many a believer in the transmigration of souls might like to be a magnificent bird of paradise fluttering from twig to twig in the tropic heavens when he returns to earth," he says. "But oh, how soon he would find himself in somebody's roaster or adorning the Sunday-go-to-meeting hat of some fat provincial lady!"

"The great wild beasts, though they live in glorious freedom, suffer. Lions, leopards, tigers, elephants, eagles, have a hard life and a constant search for food, and many of them are destined for the lead of the human—or inhuman—hunter's rifle. Let us say nothing of the slavery of domestic animals, which are eaten in return for their services to men."

"There is only one free and fortunate beast, whom man leaves in peace because his skin is useless, his flesh repulsive, and hunting him dangerous. That is the hippo. He can spend his life in philosophic calm, live it out to the end, and grow to be a couple of centuries old—so at least learned men say.—Living Age.

Electricity the Cause

of Auroral Displays

Aurora Borealis, Northern Lights or Streamers, Aurora Polaris and Australis, and Polar Light are the different names given to an electrical meteor, appearing most frequently in high latitudes in the form of luminous clouds, arches, and rays, the latter sometimes meeting at a point near the zenith, forming what is called a "corona crown." The generally accepted theory is that the aurora is due to the ascent of positive electricity from the intertropical water surfaces, which flow toward the poles. In the polar regions it descends toward the earth and comes in contact with the terrestrial negative electricity, which results in luminous discharges of great brilliancy. Intimate relations exist between sun spots, magnetic storms and auroras, the appearance of a large spot on the solar disk being almost invariably accompanied by a magnetic storm in all parts of the globe. During magnetic storms auroral displays usually take place, but not all auroras are coincident with magnetic disturbances.

A Family of Z's

Some persons have a queer, not to say a perverse, humor in names, and when they happen to be parents they often inflict on their offspring names that are a lifelong embarrassment. A writer in the Boston Herald recalls the case of a man named Zuriel Cook, who, having been cursed with an outlandish name, determined that all his children should suffer with him. Zuriel Cook married Polly Lombard at Henderson, N. Y., early in the Nineteenth century. His large family of children were named as follows: Zuriel, Zeressa, Zerema, Zetuna, Zephropha, Zerodia, Zedina, Zegotus, Zelora, Zethaniel, Zernth, Zelobus, Zedella and last of all James.

It is fair to presume that James was a posthumous child. If Mr. Cook had lived the boy would probably have been named Zephaniah or Zerubbabel.

Tobacco Once Banned

It was recently announced that the government of Tibet had placed a ban on the introduction of tobacco into that country. But regulation and prohibition of the use of the narcotic weed by the law of the land is by no means new, says the Dearborn Independent.

The following is taken from the court book of Methold, Norfolk, England, dated October 4, 1895: "We agree that any person that is taken smoking tobacco in the street shall forfeit one shilling every time so taken and it shall be lawful for the petty constables to distrain for the same to be put to the uses of the town."

A few pages farther there is the record of the first arrest under the tobacco prohibition law. "We present Nicholas Barber for smoking in the street and do amerce him off shilling."

Uninviting "Lunch"

A Columbus business woman, who also is a housekeeper, occasionally takes to her office a lunch prepared at home. One morning recently, following a chicken dinner the evening before, she took from the refrigerator what was left of the roast, with which she prepared an appetizing lunch. Bones, peelings and other debris were placed in a neat package, to be taken to the garbage box, and the lunch also was carefully wrapped. When she opened her lunch package at noon, however, she found she had brought with her the package intended for the garbage can, and had tossed her lunch into the receptacle.—Indianapolis News.

Indians and Game Laws

Indians cannot as a rule kill game out of season except as specified in a special treaty governing the particular tribe to which an individual belongs. There are between 20 and 30 of these treaties drawn up for the various tribes in this country. Under no circumstances, however, is an Indian permitted to violate the federal migratory bird treaty, and any provision made in a special treaty is revoked by the federal act. Indians, however, are allowed the privilege of taking.

Lace Trimming on New Velvet Gowns

Decoration Is Popular for Evening Dresses, Paris Writer Says

With the advent of winter and the velvet dress has once more stepped into its perennial popularity. This year, observes a Paris fashion correspondent in the New York Times, it is high-necked and long-sleeved and the most popular shades are violet and claret, with bottle green and dark honey as close seconds. One and all are trimmed with fine old lace, creamy and soft. The most popular model has something akin to a loose polonaise, top with a flared skirt scalloped on, or sewn on, in triangular points. It takes much cutting and tailoring.

Black velvet evening dresses also trimmed with the fine old lace—rose point or the most exquisite Valenciennes of the shade of old ivory—are also extremely popular.

Some people, of the very "chicest" too, are even daring a return to fine woolen stockings. Plentiful supplies of these in all the fashionable shades of gray and beige adorn every hostess's window, though it is not expected that the mode will make a wide appeal. Most Parisiennes prefer to freeze in "maillie 44" stockings that have little more body than a cobweb.

Paris has taken up the polo sweater with enthusiasm, and devised a variation two-piece dress on the same theme, with frankly garconne lines, that is proving a great success for morning wear. This is a skirt and jumper of fine kasha cloth or cashmere (which is reappearing this year) with a high collar which buttons in the back. Paris has also taken up the English winter fashion for underclothes, worn over the lingerie ones, of loosely knitted thin Shetland wool. They are incredibly warm in spite of their flimsiness. It almost looks as though the great and frivolous dress center was becoming sensible again.

No Russian boots have yet made their appearance in the streets or the shoe shop windows. The fashion appears to be really dead at last—a pity, for it was both smart and warm. The trouble was that the Frenchwoman would not wear her Russian boot with the strictly moderate (or even flat) heel that belongs to it. With a high Louis heel its vulgarity relegated it to musical comedy, behind the footlights. Winter gloves in the long-sleeved vogue are all short. There are no startling novelties. Most are in leather, a trifle thicker than hitherto, or in buckskin, and they are trimmed chiefly with "gold" and "silver" studs hammered in. Colored embroidery and painted patterns are less of a novelty.

Dress of Canton Silk Filled Cotton Crepe



Showing a winsome evening gown constructed from canton silk filled crepe, which is available in plain colors and prints.

Information of Value for Home Dressmakers

When pinning together two pieces of material preparatory to basting or sewing, put the pins in at right angles to the edge instead of parallel. In latter case they take up the fabric more on one side than the other and the two lengths may not come even at the ends.

Do not waste time trying to thread the machine needle. Get one of those small devices that are speedily attached and will enable you to thread the needle no matter how defective your sight may be.

For daytime dresses the higher neck is preferred. The Peter Pan type of round collar, either single or double, is greatly in evidence. Then there is a collarless neckline that encircles the base of the throat. This is new but already popular and then, for those who like it, there is the high crush collar which is considered smart. All three are equally fashionable.

Very Youthful Model

An unusual dinner frock for a young girl has a bodice of square-meshed lace joined to a skirt of blue tulle with French flowers in pastel shades marking the low waistline.

Afternoon Frock to Be Worn at Winter Resorts



This tailored afternoon frock of white cord represents the latest creation for southern winter and spring wear, newly offered in Paris, and by many establishments in this country. It is made entirely with the exception of fur trimming and embroidery of superfine quality heavy cotton rayon cord.

Color Combination Is Important This Season

Color is of imperative importance this season, for its combination with metal threads gives warmth and softness to the silver and gold cloth that has been found harsh and trying in the all-metal brocades. The makers of these splendid fabrics have succeeded in presenting finer quality than we have ever had, and some of the loveliest evening gowns, wedding gowns and wraps are being done in line of the "sheerest" wares and loveliest shades. In cloth of silver brocade with rose, with the new enamel blue, red or green giving an effect that is simply enchanting. In some quite impressive models the newest and richest plain chini, named "lame bouillie," is shown. It has a foundation of metal tissue on which the brocade is of raised design in color. One of these is from Bechoff, a classic creation in red and blue on a background of cloth of gold.

Something sumptuous and out of the ordinary is a formal dinner gown designed for a bride who is preparing for her second wedding. It is built of black, gold and silver brocade, the upper part of the dress having a suggestion of the empire waistline, the lower part flaring at the bottom. This is open at the front, disclosing a clinging slip of gold lame, and has a narrow scarf train of the gold.

With many of these gowns of metal cloth and brocade, which are, of course, for evening wear, wraps are shown to match, making in reality an ensemble. Some are of velvet, luxurious both in texture and color, with a lining of metal brocade. One entrancing model is all of silver lame and coral velvet, the gown of lame embroidered at the edges with bright silver encrusted with coral-colored beads. The wrap of lame in the latest model shirred into close-fitting lines about the shoulders falls in voluminous folds and is lined with coral velvet. This is one of the ensembles in which is evident the emphasis of material and color without the aid of fur.

Sure Paths to Beauty Women Should Follow

Every woman should be interested in an appearance which is attractive and pleasing to others. Why should we presume to be a blot on a landscape of so much natural beauty? It is a personal satisfaction to know that we are making the most of ourselves.

To radiate a truly beautiful spirit and to be sure of a sincere manner and charm of presence, one must be kindly in thoughts as well as words. No one can be beautiful or interesting who does not get sleep enough. Scientists have proved that the brain cells possess a vital element which is exhausted during our waking hours and renewed during sleep.

The brain cells of an individual killed, or who dies after suffering great fatigue or strain, are so lacking in this vital element that they cannot be stained different colors readily by laboratory work; whereas the brain cells of a rested and alert individual will take on a bright stain or tint readily. Students and other workers who fail to get sleep enough are short-sighted and stupid. They are trying to make bricks without straw or clay, and it cannot be done.

The individual who is decidedly over-weight or under-weight has unbalanced symmetry and beauty. Health is not at par, and efficiency and enjoyment of life are both lowered. The person of determination and strong will will keep watch of his or her weight and will use safe and logical means to keep it at normal.

Malcolm's Rubbers and Umbrella

By JANE OSBORN

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A S. A. boy Malcolm Greaser had been the youngest one in his set to be allowed a latch key. Moreover the day he was sixteen he was given a small runabout of his own and permission to get a license to drive. In his suite of two rooms on the third floor of his aunt's house in Gifford he was permitted always to dispense his definite hospitality to any of the boys he chose. It seemed to most of the grown-ups in the neighborhood as if his maiden aunts would ruin their charge with their indulgence. When Malcolm, having arrived at man's estate, showed no signs of having been ruined and turned out to be an ambitious, industrious, steady-going sort of fellow the neighbors agreed that he was the sort who never could have been ruined anyway. Malcolm, on leaving college, had put some of his patrimony in a certain well-established contracting concern in Gifford, and was, as the neighbors said, "getting on splendidly."

Just Malcolm suffered and always had suffered a deep and incessant irritation. He appreciated his aunt's kindnesses; he regarded them with real affection, but on rainy mornings or when even a single cloud appeared in the sky Aunt Susan would say "Malcolm dear, remember your rubbers." This while he was eating breakfast and lest he might slip away without them Aunt Clara would be standing in the hall, ready with Malcolm's rubbers and umbrella—raincoat, too, if the sky dripped or was really overcast.

Malcolm bore it because really they were nothing else to do.

It was during an extremely wet April that Malcolm came to the conclusion that he'd go to live by himself in Gifford. He'd give up his aunt's house, but really in his heart he knew that he was going to that he could go robberies and burglaries less when he chose. His aunt knew to the occasion better than he had even hoped. They said they had been expecting for some time that he would make some such proposition and they would be glad to close up their house and spend a year in travel.

So Malcolm Greaser set himself up in bachelor apartments in Gifford. In time he grew lonely. He could not even go to spend holidays with his aunt, who were now idling their time in Italy or southern France. Having always been used to the comfortable home atmosphere and the society of two women who were almost all respects so agreeable, Malcolm felt his loneliness keenly. Then along came Dora Hilton, whom Malcolm met at a dance in Gifford and all at once it flashed through Malcolm's mind that this starry-eyed young lady—and she alone—could fill the void in a lonely heart produced by his aunt's absence.

It was in April and Malcolm and Dora were sitting in a sequestered spot on the veranda of Gifford's new Country club house.

Malcolm made the usual pretentious about having something that was very hard to say yet something that to him was very important, and the starry-eyed girl made the usual but not quite truthful remarks about not having an idea what it could be. Then Malcolm proposed and Dora sat looking passive and very pretty for fully two minutes so that it might appear that she was considering a proposition that had never entered her head before and then she pointed her little—a kiss-provoking point it was—and said she thought she'd accept.

That night Malcolm wrote to his aunt and told them the glad news, giving Dora's address so that they might write to her and say the polite little things that good form demanded under the circumstances. The next morning the air was filled with a damp mist that threatened rain. But Malcolm was too joyous even to notice the weather. Martha, his old colored housekeeper, had breakfast ready for him as usual at eight and at half-past he would leave for the office. Just five minutes after eight the telephone rang. Malcolm seized the receiver and recognized Dora's voice. For a terrifying second or so he was afraid that she wanted to tell him that she had reconsidered what she had said the night before and that after all he had better not get the ring he had spoken about. But then, came the voice—

"Malcolm dear, I know it isn't very conventional to call you at your apartment so early in the morning, but Malcolm dear, it looks like rain—and I wanted to remind you to wear your rubbers. You know now that that were engaged, I'm going to take such good care of you."

"You darling," breathed Malcolm over the telephone.

Then he sat down to breakfast and laughed to himself as he ate the good things Martha had cooked for him. A month later the letter from Malcolm's aunt reached Dora. It was such a lovely letter, Dora told him as she sat beside him in the little roadster that he told Dora he had bought for himself an engagement present, and those darling aunt asked me for their father to be sure and see that you carried your umbrellas when it rained, and that you wore your rubbers even when it didn't rain if the ground was damp. And I was so pleased because I was going to take good care of you."

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