

MAN'S AIDED EYE EXERTING ITS MIGHT IN SEARCH OF OTHER UNIVERSES

One of the most impressive indications of modern scientific progress comes from the field of astronomy, says the Washington Post. The limits of the universe are now being reached by the strong eye of the photographing telescope. In the view of some star specialists. Enough observational basis for the belief has already been added to philosophical grounds for the conclusion that the extension of matter in void space is not infinite but finite, to create a sharp difference of opinion which is receiving the serious attention of the highest and most judiciously minded authorities.

This conclusion is counter to the conception more popular with the unknowable worshipping past. The view still held by the mass of people who



give thought to the subject at all is expressed by a German poet, who wrote in the earlier decades of the past century of a man "called into the vestibule of heaven, stripped of his robe of flesh," and guided by "a mighty angel through long reaches of planets circling on the right and left and vast Saharas of darkness" at such velocity that "the light with lesser speed came on to meet them." The dream poet voiced the conviction of his times by narrating that finally "the man sank down, crying: 'Angel, I can go no further, for end there is none!'"

"Some astronomers now state their belief that we can see through the expanse of nebulae and stars to outside vacancy," said Professor Aaron N. Skinner, who, in charge of the equatorial work at the United States Naval Observatory, is making a catalogue of 9,000 of the known stars. "But," he added, in the course of his talk with a Post reporter, "the question arises, Should it be true that we can in time penetrate even to the limits of the ether of our universe, what is there beyond, across space which light cannot traverse? Indeed, we might assume the existence of a plurality of universes, beyond any hope of cognizance by us, just as there are a plurality of suns that we can see. For myself, however, I am too busy with the more tangible work I have on hand here to indulge much in these speculative discussions."

Professor Skinner is now nearing the end of twelve years' work occupied in definitely cataloguing a strip or zone of the 500,000 stars approximately catalogued between 1850 and 1860, comprising a list known as the Bonn Durchmusterung. In later years, also under German initiative, the leading observatories of the world undertook the tremendous job of determining the exact position of these half-million suns, being those down to the ninth apparent magnitude. (Stars become invisible to the unaided eye at the sixth magnitude.) The Bonn Durchmusterung

deals only with about half of the heavens visible from the earth, owing to the lack of enough observatories, so that the stars of first to ninth magnitude number about a million. Professor Skinner stated that the stars already seen with the aid of modern instruments number several million, of these only a small fraction being definitely located, catalogued, and counted.

The task to which astronomers set themselves twelve years ago was so divided among the prominent observatories that to the Washington Institution was assigned the zone lying between 14 and 18 degrees southward from the zenith, each observer slightly overlapping or duplicating the work of his neighbor to make the strips match positively. Another year of observation and computation will complete the part assigned to the Washington Naval Observatory. The work involved accurate observation at different times of every one catalogued, including 800 zero or base stars, from which the position of the others are reckoned, so that about 20,000 observations had to be made. Further, every hour spent in observation required at least three hours of mathematical computation.

In recent years the equipment of twelve-inch telescopes with photographing attachments has greatly extended the range of human view, for while the eye, tiring, sees less in protracted watching, the photographic plate, accumulating impression with time, sees more. Professor Skinner found it especially serviceable in distinguishing the minor asteroid planets from fixed stars, and remarked that its capacity for seeing what the eye could not see through the telescope was notable in the case of the discovery of a maze of nebulae in the field of the pleiades where with the eye hardly any nebulous trace was discernible. The photographic method of cataloguing stars has been quite successfully used in Europe.

"These plates," said Professor Skinner, "give very accurate results, but the method is yet too new for us to depend entirely upon it."

The work upon which he is engaged has been done entirely by telescopic eye observation, and the Naval Observatory has not so far been equipped with an instrument for doing the same thing photographically. It would cost \$50,000.

Speaking of the financial support given scientific work, Professor Skinner remarked:

"Many private and university observatories are handicapped because the donors do not understand the full requirements of the work. Such is true of the observatory in California to which Mr. Yerkes, the late street railway magnate, gave the big telescope. Wealthy men are inclined to give liberally enough for equipment that people can see and touch, but are apt to forget that it requires several times as much money to use an instrument than it costs, in order to bring the results for which it is supposed to be designed; results, of course, which only the learned can fully appreciate."

MILITARY TACTICS IN CHINESE SCHOOLS.

An Eastern correspondent writes: "While visiting the native city I entered the courtyard of the yamen, or magistrates' official quarters, and saw a number of youngsters being drilled by an instructor in uniform. They

were to be seen. The boys were all dressed in jumpers and pants of rusty black. Their drill was watched by a mandarin, who was dressed in silk robes down to his heels. He wore also a silk tunic of dark chocolate color decorated with many trinkets and he had an embroidered pouch hanging from a girdle underneath his jacket. The drill instructor wore a white uniform."



THE MAKING OF A NEW ARMY.

went at it most energetically and carried out the simple movements in an excellent manner. My guide—who, like many Chinese, can not negotiate a word beginning with the letter y—proudly drew my attention to the fact that these boys were 'lung soldia.' It is notorious that this sort of thing is going on throughout the empire. Whether any significance can be attached to it re-

These and other signs indicate military awakening.

A Lost Subscriber.

The Kedah postoffice authorities have a somewhat blunt way of putting things. Copies of a Penang paper posted to a subscriber were the other day returned marked "Addressee hanged for Murder."—Bangkok Times.

Our Billions of Ancestors.

Has anybody ever stopped to think how many male and female ancestors it took to bring us into the world? First, of course, it was necessary to have a father and mother, and our father and mother must have had a father and mother, and so on back through fifty-six generations to the time of Christ.

A careful calculation of all these ancestors shows that there must have been 139,235,917,489,534,976 births to bring one of us into the world. And this is only from the time of Christ, and not from the beginning of the world.

According to one authority, if from a single couple for five thousand years each husband and wife had married at the age of 21, and there had been no deaths, the population of the earth would be 2,109,915, followed by 144 ciphers. To hold such a population it would take several worlds the size of ours.—Sunday Magazine.

A Similar Misfortune.

"Why is that bridge considered unsafe?"

"For the same reason that the English parliament is not thought to be giving popular legislation proper support."

"What reason is that?"

"The general weakness of its peers."—Baltimore American.

Finishes It.

"When you have written a story do you not go over it and give it a finishing touch?"

"No; the first editor I send it to usually does that."—Houston Post.

A little learning is a dangerous thing, and too much often unfits a man for making an honest living.

RENOWNED JAPANESE SOLDIER.

General Baron Nogi, who was thrown from his horse at Tokio and seriously injured, won undying fame through his capture of Port Arthur from the Russians. He is a Samurai, and is 57 years of age. He first achieved military renown in the war with China in 1894, when he also figured in the capture of Port Arthur from the Chinese, the men under his command storming successfully the famous Itashan fort. After he had wrested Port Arthur from General Stoessel, in the last war, he marched north with his troops, and materially assisted in the capture of Mukden, and the utter defeat of Kouroupatkin. Baron Nogi is noted as a strategist and organizer, and has served as Governor of Formosa. Before taking



GENERAL NOGI.

command at Port Arthur he participated in the brilliant Japanese victories at Kinchow and Nausan Hill. After the war opened he is alleged to have expressed the hope that none of his three sons would survive; and, strange to say, all fell victims to Russian bullets.

AN INDIAN MOSES.

Creek Chief Would Lead His Followers to Settle Mexico.

Chitto Harjo, better known as Crazy Snake, a full-blooded Creek Indian, is planning to become the Moses of his people. All his life he has been fighting the government in a vain endeavor to prevent the absorption of his homeland the lands of his people by the whites and now old and broken in spirit he sees the uselessness of the struggle and would flee from the long-dreaded inevitable. For five years he has been the leader of the more discontented and resentful Indians of the Five Civilized Tribes. Now he is trying to dispose of all the land in the Creek nation that is held by his followers and lead them to Mexico to colonize there. There he believes they can lead a natural primitive life undisturbed by the white man. Crazy Snake is 70 years old, so that the task before him, even if neither the United States nor Mexico interposed objection, would be an arduous one.



CRAZY SNAKE.

Protested Proverbs.

"You can't judge by appearances." Can't you, though? How else can you judge an actor but by his appearances?

"Never say die." Nice, prosperous undertaker you'd make with that motto, wouldn't you?

"Give the devil his due." What's the use of bothering, he's sure to get it.

"Seeing is believing." Not always. Your wife sees you when you come home late from "sitting up with a sick friend," but she doesn't believe you.

"Faint heart never won fair lady." Well, what of it? Ours is a brunette.—Boston Transcript.

Christmas Adam.

Mamma—You have addressed your letter "Mr. Santa Claus Adam." Why did you put the Adam there, dear? That isn't Santa Claus' name.

Ebbie—Well, who is the Christmas Adam, then?

"What Christmas Adam? I never heard of one."

"There's a Christmas Eve, and there ought to be a Christmas Adam, I should think."—Kansas City Journal.

First Prayer in Congress.

The first prayer in Congress was made in 1777 by the Rev. Jacob Duché, rector of Christ church and a man of considerable learning. He afterward turned traitor to the cause of independence.—The Sunday Magazine.

The Hideous Dress Coat.

Conscience, which makes cowards of us all, is being abolished, but the dress coat, which makes walters of us all, persists.—Puck.

Many a rich man is unable to offer anything better than a poor excuse.

For that Dandruff

There is one thing that will cure it—Ayer's Hair Vigor. It is a regular scalp-medicine. It quickly destroys the germs which cause this disease. The unhealthy scalp becomes healthy. The dandruff disappears, had to disappear. A healthy scalp means a great deal to you—healthy hair, no dandruff, no pimples, no eruptions.

The best kind of a testimonial—
"Sold for over sixty years."

Made by J. C. Ayer & Co., Lowell, Mass.
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Ayer's
SARSAPARILLA,
PILLS,
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More than Likely.

John Kendrick Bangs was discussing in a New York club a case of plagiarism, says the New York Tribune.

"The man admitted that plagiarism was suspected of him," said Mr. Bangs smiling. "He almost admitted it was proved. He reminded me of a Yonkers boy I used to know."

"This boy said to his chum one morning:

"I hid under the parlor sofa last night to hear what young Softleigh would say to my sister."

"Well, what did he say? the other boy asked."

"He only talked religion and politics, and he kicked me about thirty times on the head."

"He knew you were there, I guess," said the second boy.

"I'm afraid he suspected it!"

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Quite a Difference.

"What!" exclaimed the angry modiste. "You mean to say that Mrs. De Flasher used all the samples we sent up to make a fancy quilt? Why, she is an old crank."

"But Mrs. De Flasher is worth a hundred thousand."

"Really? Well, in that case I suppose she is eccentric."

"And she will inherit half a million by the first of the year."

"Half a million? Why, write the lady a note at once and tell her she can have another bundle of samples and compliment her on being so delightfully bizarre."

TO CURE A COLD IN ONE DAY

Take LAXATIVE BROMO QUININE Tablets. Druggists refund money if it fails to cure. E. W. GROVE'S signature is on each box. 25c.

The Imperial Board of Health in Germany has issued a statement that "total abstinence from strong drink is not injurious to health."

How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

E. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm. WAGER & TRUAX, Wholesale Druggists, Toledo, O. WALKER, KIRKMAN & MARVIN, Wholesale Druggists, Toledo, O. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free. Hall's Family Pills are the best.

The leopard is the most cowardly of animals.

Only Test.

"Is there any known test for true love?" asked the very young man.

"Nothing except marriage," answered the home-grown philosopher. "If that doesn't evaporate it you have got the real thing."

TERRIBLE TO RECALL.

Five Weeks in Bed With Intensely Painful Kidney Trouble.

Mrs. Mary Wagner, of 1367 Kossuth Ave., Bridgeport, Conn., says: "I was

so weakened and generally run down with kidney disease that for a long time I could not do my work and was five weeks in bed. There was continual bearing down pain, terrible backaches, headaches and at times dizzy spells when everything was a blur before me. The passages of the kidney secretions were irregular and painful, and there was considerable sediment and odor. I don't know what I would have done but for Doan's Kidney Pills. I could see an improvement from the first box, and five boxes brought a final cure."

Sold by all dealers. 50 cents a box. Foster-Milburn Co., Buffalo, N. Y.