

An Ancient Birdland.

For ages before its occupation by man New Zealand swarmed with great wingless birds, which found here no carnivorous enemies, but an abundance of vegetable food. The moas not only existed in vast numbers and for thousands of years, but had such diversity of form as to embrace no less than seven genera, containing twenty-five species—a remarkable fact which is unparalleled in any other part of the world. The commonest kinds in the North Island were only from two and one-half to four feet high. Those of the South Island were mostly from four to six feet tall, while the giant forms, reaching twelve and thirteen feet, were always rare. Immense deposits of moa bones have been found in localities to which they appear to have been washed from the hills in tertiary times. Skeletons on the surface of the ground, with skin and ligaments still attached, have given the impression that these birds have been exterminated in very recent years, but other facts point to a different conclusion. Tradition seems to show, according to Mr. F. W. Hutton, that the moa became extinct in the North Island soon after the arrival of the Maoris in New Zealand—that is, not less than 400 to 500 years ago—and in the South Island about a hundred years later. The fresh-appearing skin and ligaments are supposed to have been preserved by unusually favorable conditions.

THE GREAT-HEADED TURTLE.

The great-headed turtle (*Platysternum megacephalum*) is an inhabitant of the rivers of Tenasserim, Siam and Burma, but is very rare even there. Its shell is remarkably broad and flat. The entire length of the turtle, when stretched out to its fullest extent, is about 15 inches, one-third of this length covering the head and neck, while the tail is about 7 inches long. The size of the head, compared with that of the body, is very remarkable, there being only a few birds and fishes in which such a lack of proportion is found. Our illustration is from Brehm's "Thierleben."

A Postal Nickel-in-the-slot Enterprise.

The United States Postage Stamp Delivery Company, of Boston, has placed upon the market a nickel-in-the-slot system of selling postage stamps which has many novel features. It consists of a machine provided with two apertures near the top to receive the nickel. The one on the left is for two cent stamps, while the one at the right is for one cent stamps. When a nickel is dropped in the slot the mechanism releases one of the drawers, which contains a cartouch, or small cylindrical box, inside of which, snugly rolled up, are four cents' worth of stamps, either two twos or four ones, depending upon which side received the nickel. In addition to the four cents in stamps, there is a "coupon draft," which will be received as one cent in ten of the purchase money of any of the articles mentioned in the thirty-two advertisements on the draft, so that if any of the articles named are purchased, the stamps will be furnished without charge.

As an advertising medium, the new system will be very valuable, as the advertiser can judge each day by the number of coupons received whether or not the boxes are a good advertising medium. It may be remarked that only staple articles, or articles which allow a good margin of profit, are expected to be advertised. The boxes are to be placed in a certain district, and the advertiser pays a small sum each month for each box containing his advertisement. It is intended to be largely used by wholesalers, manufacturers, etc., who will receive the drafts from the retailers who sell the goods which they advertise. The whole system appears to be very carefully worked out, and is under the control of an able management, the president being Hon. Carroll D. Wright, United States Commissioner of Labor, and the vice-president Hon. Smith A. Whitfield, First Assistant Postmaster-General.

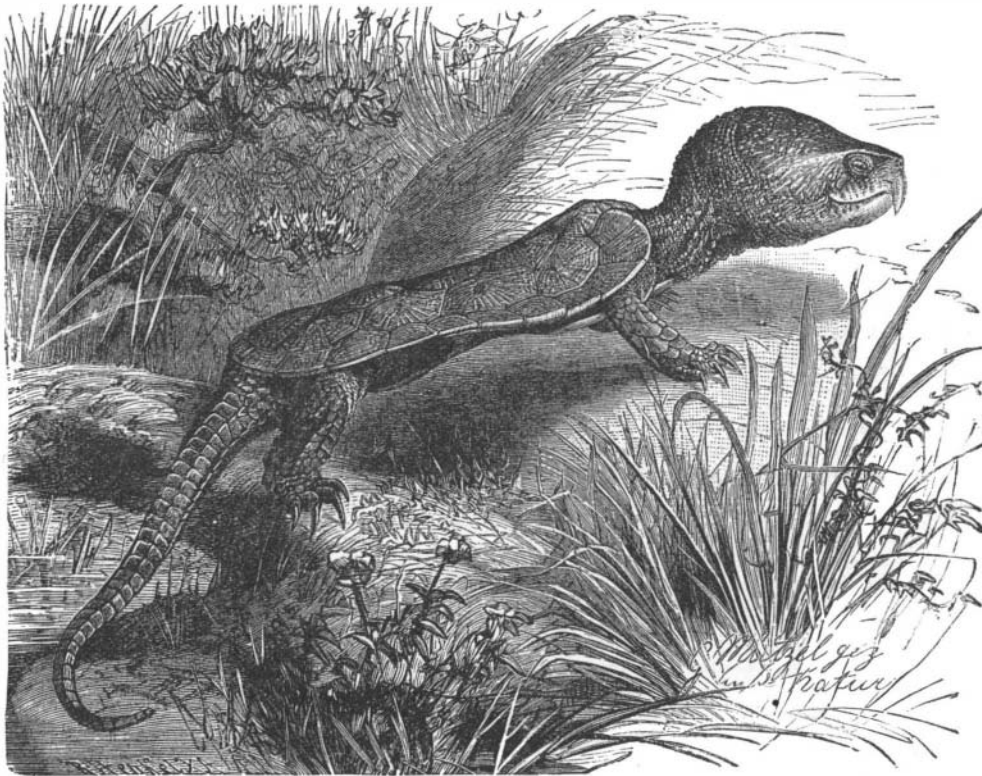
The St. Gervais Disaster.

The geologists who have investigated the cause of the great disaster which overwhelmed a part of St. Gervais, Switzerland, with ice and water from the lower part of the Bionassy glacier, have solved the mystery. Up the side of the mountain, at the foot of the steep glacial wall whose lower part broke away, the explorers found in the ice an oval cavern about 130 feet in width and 75 feet in height. In the interior of the cavern was a corridor covered with blocks of ice and leading into a gigantic basin with perpendicular

walls of ice. It was 45 feet long, 200 feet wide, and 140 feet high. In this great cavity there had been an intra-glacial lake, of whose existence no one had been aware. The condition of the walls proved that the cavity had been full of water recently.

The existence of this great reservoir of unfrozen water, inclosed on all sides, explains the nature of the immense avalanche that overwhelmed the valley below. The excessive heat for days before the disaster had probably increased the quantity of water in the natural reservoir, and the greater pressure broke the front wall, cracking away the lower part of the glacier, and permitting the immense volume of water to pour down the mountain into the valley below, carrying with it the broken foot of the glacier. The water and ice fell a distance of 2,000 feet down an inclined plane two miles long, and a part of St. Gervais had been overwhelmed almost before any one heard the roar of the approaching deluge.

This is the only accident due to such a remarkable cause ever known in the Alps. It has been followed, however, by a somewhat similar accident at the Misaun glacier, near Pontresina. A considerable part of this short, steep glacier fell, and, although there was no loss of life, the accident draws attention to the fact that all over the Alps climbers have recently noticed a swelling of the upper snows which feed the glaciers. They report that not a few of the glaciers have been impassable without great risk this season, and that the upper edges of the great crevasses have overhung in a remarkable manner. These facts point to an expansion of the upper snow field by great heat, and before the



GREAT-HEADED TURTLE (*Platysternum megacephalum*).—(One-half natural size.)

past season was more than half over climbers were warned of this fact, which was doubtless the cause of many avalanches.

A fall of ice from one of the glaciers in the Valley of Visp partly destroyed the village of Tasch, near Zermatt. It carried away nearly a quarter of a mile of the highway. The waters of the Viege torrent, swollen by melting snow from the mountains, attacked the stone bed of the Viege-Zermatt Railroad and destroyed a large section of the line. For a number of days tourists going to Zermatt were transported on mules around the break.

Bread and Yeast.

Put a bushel of flour into a bread trough, make a bay or hole in the center of it, and put in one pint and a half of patent yeast, and the same quantity of lukewarm water; mix this with a portion of the flour to the consistence of rich cream; dust flour over it, cover with a cloth, and allow the sponge to rise. When well risen and light, add two tablespoonfuls of fine salt, and mix all together with sufficient lukewarm water to form a rather stiff dough; cover it again and let it rest for half an hour, then knead it well, and let it stand for another hour, after which make it out into suitable loaves and place them in pans, and bake them on the bottom of a quick oven.

For large bakings, the following is the best method: The usual way is to put the flour into a trough or tub sufficiently large to permit its swelling to three times its original size or bulk; make a deep hole in the middle of the flour; for each half bushel of flour allow a pint of thick, fresh yeast, that is, yeast not frothy; mix it with about a pint of soft, lukewarm water, then gently mix with the yeast and water as much flour as will bring it to the consistence of thick batter; pour this mixture into the hole in the flour and cover it by

sprinkling it over with flour; lay over it a flannel cloth, and, in cold weather, place it near the fire. This is called setting the sponge. When the sponge, or this mixture of water, yeast, and flour, has risen enough to crack the dry flour, by which it was covered, sprinkle over the top a quarter of a pound of fine salt, more or less, to suit the taste. After the salt is sprinkled over the sponge, work it with the rest of the flour, and add, from time to time, tepid water till the whole is sufficiently moistened. The degree of moistness, however, which the mixture ought to possess can only be learned by experience. When the water is mixed with the composition then work it well by pushing your fists into it, then rolling it out with your hands, folding it up again, kneading it again with your fists till it is completely mixed and formed into a stiff, tough, smooth substance, which is called dough. Great care must be taken that your dough be not too moist on the one hand, and on the other hand that every particle of flour be thoroughly incorporated. Form your dough into a lump, cover it up again, and keep it warm to rise or ferment. After it has been standing for about twenty or thirty minutes, make the dough into loaves, first having dusted the board or table with flour to prevent sticking. The loaves may be made up in tin moulds, or they may be baked without the use of moulds. The bread will take from an hour and a half to two hours to bake properly.

PATENT YEAST.

Take half a pound of hops and two pailfuls of water; mix and boil these till the liquid is reduced one-half; strain this decoction into a tub, and, when lukewarm, add half a peck of malt to it. In the meantime put the strained-off hops again into two pailfuls of water and boil as before till reduced one-half; strain the liquid while hot into the tub. The heat will not injuriously affect malt previously mixed with tepid water. When the liquor has cooled down to about blood heat, strain off the malt and add to the liquor two quarts of patent yeast set apart from the previous making.—*Confectioners' Journal*.

The Alternating Current Telephone.

In a patent lately issued to Prof. Elihu Thomson, this well known inventor describes a system of telephone in which alternating currents are employed in the primary of the induction coils to which the transmitter is connected instead of continuous currents, as now generally employed. In applying the alternating current for this purpose, Prof. Thomson employs such a low rate of alternation as not seriously to interfere with speech.

The alternations, generated by an alternator, are induced into the subscribers' lines and form the means for transmission from the subscribers' lines to other subscribers' lines, to which they may for the time being be connected through the exchange. The rate of alternations is as low as 32 vibrations per second, and even those below sixteen vibrations per second are available. These rates of vibration or alternation are so low that although the instruments are subjected to them they do not seriously interfere with speech, as the tone they produce is almost inaudible, on account of the small volume of air set in motion by the diaphragms of the instrument.

By means of this system, all local batteries at the subscriber's end of the line are dispensed with, and the system is, as it were, a closed circuit system possessing great flexibility. The system also permits the working of the annunciators at the exchange by the subscriber momentarily opening the line by a switch, or, better, by the simple act of lifting the telephone from the hook, while the replacing of the telephone on the hook again signals the exchange that the use of the line is discontinued. The system also provides circuits, so that there shall not be any circuits actually grounded, as connections to earth through condensers may be made instead of returning through a continuous conductor or a metallic circuit connected to earth, such as is ordinarily employed.

French Exposition of 1900.

The French *Journal Officiel* has published a decree ordering a universal exposition of arts and manufactures, to be opened in Paris May 5, 1900. It would seem from this announcement that France has decided to have a universal exposition every eleven years, for there was one in 1867, 1878, and 1889. The decree states that the exposition of 1900 will be fully representative of the art and philosophy of the nineteenth century.