

SCIENTIFIC AND SANITARY.

THE distance of the horizon is governed by the height of the eye above the earth or sea. On the sea, with the eye at a height of five feet, the distance would be three miles; at sixty feet in height, ten miles.—*Scientific American*.

AN ingenious amateur, Mr. A. Batut, has made at Enlaure (France) a paper kite furnished with a photographic apparatus, with which he is able to take views, remarkable for their clearness, at a height varying from 90 to 130 metres.—*Paris Revue Scientifique*.

THE Peroxide of Hydrogen is a valuable deodorant and disinfectant, but it must be used with caution about the hair, if the colour of this is a matter of importance; for, under an alias, it is the golden hair bleach of the *nymph's despare*, and a dark-haired man with a candy-coloured moustache is a striking object.—*Can. Health Journal*.

A FRENCHMAN, by means of a specially invented instrument called the photo-chronograph, has succeeded in photographing the flight of insects. So delicate is the instrument that the exposures were estimated to be only 1-25,000 of a second in duration. The insect was placed in a glass box in front of the camera, and was then encouraged to fly by concentrating the rays of the sun upon it by means of a large condenser. The objective used had great depth of focus to allow for variations in the positions of the insect.

THE *Paris Revue Scientifique*, in an article on Mr. Lippman's discovery of colour photography, concludes thus: "During three years the experiments of Mr. Lippman have been pursued patiently and rationally. Nothing has been left to chance, and this is the magnificent part of the discovery. The scientific work is as beautiful as the result. It is the triumph of pure science over practice, of calculation over chance, and this discovery serves as a brilliant confirmation of the words of Jamin: 'In natural philosophy there are two things which should never be considered, the time which is used and the trouble which is taken.'"

MR. STANLEY, in his "Darkest Africa," gives Emin Pasha as authority for the statement that the chimpanzees, which visit the plantations of Mswa station at night to steal the fruit, use torches to light the way. "Had I not witnessed this extraordinary spectacle personally," said Emin, "I should never have credited that any of the simians understood the art of making fire. One of these same chimpanzees stole a native drum from the station, and went away pounding merrily on it. They evidently delight in that drum, for I have frequently heard them rattling away at it in the silence of the night."—*Popular Science Monthly*.

"August Flower"

"I have been afflicted with biliousness, constipation, stomach pains, and first one and then another preparation was suggested to me and tried but to no purpose. At last a friend recommended August Flower. I took it according to directions and its effects were wonderful, relieving me of those disagreeable stomach pains which I had been troubled with so long. Words cannot describe the admiration in which I hold your August Flower—it has given me a new lease of life, which before was a burden. Such a medicine is a benediction to humanity, and its good qualities and wonderful merits should be made known to everyone suffering with dyspepsia or biliousness."—**Jesse Barker, Printer, Humboldt, Kansas.** G. G. GREEN, Sole Man'fr, Woodbury, N.J.

THE last bulletin of the Geographical Society of America contains an interesting paper on the curious discovery of human remains under the Tuolumne Table Mountain of California. Bones of men and grinding instruments were there found by Professor Whitney, imbedded in auriferous gravel under lava at the foot of the mountain. Remains of plants belonging to the Tertiary age, and the bones of extinct mammalia, such as the rhinoceros of the West and the American mastodon, are also met with in the same strata. Pestles, mortars and broken spear-heads are the most remarkable of the implements discovered.

MANY have heard a series of wrappings in their rooms, which imaginative people have concluded were spirit wrappings, and which scientists have attributed to reasons scarcely less remarkable. One of our readers, Mr. A. Rossignol, chemist at Paris, has sent us, in a glass tube, two little insects which were taken in the act of making their nocturnal taps. They were found in a piece of heavy wrapping paper, but at opposite sides, and about ten centimetres apart. They wrapped loudly with the head by bending it in a sort of see-saw manner about six strokes per second, and the one insect answered when the other had finished.—*Paris la Nature*.

INSECT immigration is ordinarily a thing to be dreaded, but occasionally a foreign bug worth welcoming applies for naturalization. The Australian lady bug served as an offset for the 300,000,000 scales just imported from Tahiti, and now Mr. James Shinn has succeeded in domesticating at Niles an insect that bids fair to raise fig culture in California from the rank of a harmless amusement to that of one of the great industries of the State. The little wasp that is going to do us this favour enters the flowers of the otherwise useless Capri fig, loads itself with pollen, and carries it to the Smyrna fig. Without this assistance the latter does not mature, and it is the lack of the little wasp with the big name—*Blastophaga psenes*—that has confined us hitherto to the culture of the inferior "California fig," instead of the luscious fruit of Smyrna.—*San Francisco Examiner*.

A BOTANICAL club has been organized called the Botanical Club of Canada. The object of the club is to adopt means by concerted local efforts and otherwise, to promote the exploration of the flora of every portion of British America, to publish complete lists of the same in local papers as the work goes on, and to have lists collected and carefully examined in order to arrive at a correct knowledge of the precise character of the flora and its geographical distribution. The following is a list of the officers for 1891-92: President, Professor George Lawson, Halifax; secretary and treasurer, A. H. Mackay, Halifax; secretaries for the Provinces: Ontario, Professor John Macoun, Ottawa; Quebec, Professor D. P. Penhalow, Montreal; New Brunswick, George U. Hay, St. John; Nova Scotia, E. J. Lay, Esq., Amherst; Prince Edward Island, Francis Bain, Esq., North River; Newfoundland, Rev. A. C. Waghorne, New Harbour; Manitoba, Mr. Burman, Esq., Winnipeg; Alberta, W. H. Galbraith, Esq., Lethbridge; British Columbia, Dr. Newcombe, Victoria.

THE British Consul at Hankow, in a recent report, mentions that the varnish exported from that port is the gum of the *Rhus vernicifera*. On this tree, before daylight, incisions are made; the gum that runs out is collected in the dark, and strained through a cotton-cloth bag, leaving behind a large amount of dirt and refuse. This operation can only be performed in the dark, as light spoils the gum and causes it to cake with all the dirt in it. It cannot be strained in wet weather, as moisture causes it to solidify. When the Chinese use the varnish they rub it on with a sort of mop made of soft waste silk. It should also be used in wet weather, as, if the atmosphere is dry when it is rubbed on, it will always be sticky. As used by the Chinese it takes about a month to dry. During the time it is drying it is poisonous to the eyes. It is possible that the celebrated Cremona varnish may have had in it some of this gum as one of its ingredients. It might be worth the while of our musical instrument makers to make experiments with this gum with the view to producing a varnish that would give a mellow instead of a "glassy" sound.—*Industries*.

A GERMAN inventor has devised an ingenious camera for taking photographs of the internal organs of human beings or animals. An india rubber tube contains a small cylindrical camera inclosed in a cylindrical case provided with two hemispherical shutters. In front of the lens are two very small incandescent lamps. The wires to these and a short pipe from the camera are carried in the outside incasing tube. A battery for the lamps and a pneumatic ball to operate the camera complete the outfit. The camera is provided with a sensitive plate, and when the apparatus is in use simple pressure on the pneumatic ball drives the camera forward in the incasing cylinder, and at the same instant makes the contact for the electric lamps, opening the shutters at the same time. By removing the pressure upon the ball the camera returns to its place, the lamps go out and the shutters close. In a number of cases in which this curious instrument has been employed, it is said to have been quite satisfactory.

MR. CARUS-WILSON writes to the editor of the *Chemical News* from Bournemouth as follows: "I have now succeeded in producing musical notes from sand that was never before musical, and am also able to produce similar results from those mute, or 'killed,' musical sands which have been temporarily deprived of their musical properties. Full details will shortly be made public, but, in the meantime, some may be interested to know that all my experiments have been conducted on the principles involved in the theory which I propounded in 1888, to account for the emission of musical sounds from such sands, and that the results obtained appear to demonstrate indisputably the applicability of this theory." The following note is appended in the *Chemical News*: "A short time ago I had the pleasure of witnessing Mr. Carus-Wilson's experiments with musical sands—sands originally musical, musical sands which had been killed and then revived, and sands originally mute, which had had the gift of music conferred on them. Mr. Wilson hopes soon to be prepared to publish his experiments and the explanation of the phenomenon in detail.—W. C."

M. EMILE BLANCHARD read a paper the other day before the French Academy of Sciences on the existence of a terrestrial connection between Europe and America during the present geological age of the earth. M. Blanchard began by pointing out that a line from the north of Scotland through Orkney, the Faroe Islands, Iceland, Greenland, and Labrador, by way of Davis Straits, passes from one island to another across comparatively shallow seas. Another evidence of land connection exists in the prevalence of European species of animals and plants in the eastern parts of America, especially in Greenland, where the flora of the west coast is American and that of the east coast is European. Anemones from Northern Europe are found in the Southern States; violets, too, grow there, as well as wild roses; and the astragale of the Alps flourishes in Canada. Among other plants common to the two hemispheres may be mentioned rhododendrons, saxifrages, gentians and so on. Willows, ivies, and brooms exist in both regions. Grasses may be omitted, because their seeds could be transported for great distances by water; but orchids and lilies of Northern Europe are common in North America. Three or four hundred species of beetles, an insect incapable of long flight, are denizens of both continents. The Carabides especially, which live under stones, and spread slowly, can be traced from Europe through Iceland to Greenland, Labrador and Canada. The Argymies of Lapland and Iceland are also found in Labrador, and it would be easy to give other instances of the kind. Spiders of the Alps and the North of Europe have been observed in Greenland; beavers are found in Europe and America; the reindeer is plentiful in the Hudson Bay Territories, and so is the Norwegian lemming. Several species of fish are characteristic of both regions; for example, the river perch, which never quits fresh water. These proofs of a belt of land connecting Europe with Labrador open up some interesting questions; for instance, the physical basis of the old traditions of a lost continent of Atlantis, which would seem to be America, and the origin of the American Indian race, which may have had congeners in the aboriginal tribes of Europe.—*The Colonies and India*.

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"Chelsea, Vt., June 16th, 1891.

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