of visitors in France by Napoleon. Attention has been given not only to spectators, deputations, and victims, but also to those writers who sympathized with the downfall of the *ancien régime*.

— Dr. Nansen, the Arctic explorer, has made arrangements with Longmans, Green, & Co. for the publication of an account of his recent Greenland expedition. The book will be ready early next spring, and will be illustrated with maps and plates.

— Kegan Paul, Trench, & Co. will shortly publish the first number of a new serial devoted to the reproduction of selected works of the foremost photographers of the day. It is proposed to issue quarterly a portfolio of four photogravure pictures from the negatives of "Sun Artists," such as will tend to advance photography in the estimation of the art-loving public, and obtain for it the position which it now claims. The first number of "Sun Artists" will consist of four studies by Mr. J. Gale, on imperial quarto paper, with letterpress.

— Funk & Wagnalls have just issued a practical little book, entitled "Emergency Notes," in which Dr. Glentworth R. Butler tells in a clear, easily understood way what to do in the emergencies that are ever arising in this world of multiplied diseases and accidents.

— A. C. Armstrong & Son have, by arrangements with Rev. C. H. Spurgeon and his English publisher, issued the first volume of his new work entitled "The Salt Cellars," being proverbs and quaint sayings, together with homely notes thereon. It is alphabetical in arrangement, and brings the proverbs down to the letter M.

— D. Appleton & Co. will publish immediately "Christianity and Agnosticism," a controversy consisting of the papers by Henry Wace, Professor Huxley, W. H. Mallock, the Bishop of Peterborough, and Mrs. Humphry Ward, which have been appearing in different periodicals, and which many persons desiring to get at the complete discussion will be glad to have in one volume.

— George O. Seilhamer, 112 North 12th Street, Philadelphia, has nearly ready the second volume of his "History of the American Theatre," treating of the period during the Revolution and after. The last volume, which is in preparation, will treat the subject in the "Last Years of the Eighteenth Century."

— Little, Brown, & Co. have in preparation "Myth and Folk-Lore of Ireland," by Jeremiah Curtin, an original and fresh contribution to the already rich store of the folk-lore of the "Emerald Isle," extracted by the author from Gaelic sources.

— Messrs. Ginn & Co. announce for publication about Oct. 1, "History of the Roman People," by Professor W. F. Allen of the University of Wisconsin. This will replace the second part of Myers's "Outlines of Ancient History." This sketch of Roman history will place especial emphasis upon two series of events, — first, the policy and process by which the Roman Dominion was secured and organized during the republic, its re-organization under the empire, and final disruption at the time of the German migrations; second, the social and economical causes of the failure of self-government among the Romans, and the working of the same forces under the empire (in this point of view, the history of religion among the Romans will be carefully traced).

— Hereafter the *American Journal of Psychology* will be published from Clark University, Worcester, instead of from Johns Hopkins University, Baltimore. Remittances and business communications should be addressed to the clerk of Clark University, Worcester, Mass., and scientific and editorial communications to G. Stanley Hall, editor, Clark University, Worcester, Mass.

— G. P. Putnam's Sons announce among their first autumn publications, "The Industrial Progress of the Nation, Consumption Limited, Production Unlimited," by Edward Atkinson, author of "The Distribution of Products," etc.; "A Race with the Sun," a sixteen-months' trip around the world, by Hon. Carter H. Harrison of Chicago, illustrated by many full-page plates; "The Modern Chess Instructor," by W. Steinitz; "Christian Theism, its Claims and Sanctions," by D. B. Purinton, LL.D., vice-president of West Virginia University, and professor of metaphysics; "To the Lions," by Alfred Church; "A Woman's War Record, 1861–1865," by Mrs. Gen. Charles H. T. Collis; "Lectures on Russian Literature," by Ivan Panin; "The Practical Pocket Dictionary in Four Languages, — English, French, German, and Italian;" and "Tales from the Korea," collected and translated by Henry N. Allen, secretary of the Korean Legation. In the Story of the Nations Series they will publish "The Story of the Hansa Towns," by Helen Zimmern; and in the Knickerbocker Nuggets, "Sesame and Lilies," by John Ruskin; "The Autobiography of Benjamin Franklin;" "Tales by Heinrich Zschokke;" and "Great Words from Great Americans," the last comprising the Declaration of Independence, the Constitution of the United States, Washington's Inaugural Addresses, Lincoln's Inaugural Addresses, Lincoln's Gettysburg Address.

---

## LETTERS TO THE EDITOR.

***Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

*The editor will be glad to publish any queries consonant with the character of the journal.*

*Twenty copies of the number containing his communication will be furnished free to any correspondent on request.*

### A Circular Note to Working Entomologists.

MOSQUITOES and house-flies are perhaps the most numerous, widely distributed, and persistent of the creatures that attack the health and comfort of human beings. Of their attacks upon our comfort every one is aware. Scientific investigation favors the belief that tuberculosis and ophthalmia are carried from diseased persons to healthy ones by the house-fly, and German experimenters have shown that serious blood maladies may be transmitted by the mosquito.

Certainly, therefore, any suggestion, however remote, of a means of decreasing the numbers of or exterminating these pests, should be followed with all possible skill and patience.

I have observed dragon-flies gathering in scores around my camp in Minnesota to feed on the mosquitoes. I recently saw a dragon-fly that had devoured over thirty house-flies still voracious for more. Entomologists have observed the larvæ of the dragon-fly swallowing undeveloped mosquitoes in large numbers.

Now, may we not have in the active, voracious, harmless "mosquito-hawk," an agency for greatly diminishing the numbers of the smaller insects?

Professor Baird's success in producing millions of healthy fish in a few laboratory boxes and jars, the propagation of silkworms by scores of millions from eggs carried half around the world to Italy, the success of the plan for breeding foreign humble-bees in Australasia to fertilize the red clover, — these and many other similar facts seem to show that scientific methods have reached a stage where it is reasonable to hope that a plan may be devised whereby whole tribes of noxious insects may be exterminated by the artificial multiplication of their innoxious enemies.

Not being an entomologist, I have consulted with several distinguished students of that science as to the best means of reaching some practical result in the direction above indicated, and they agree with me that the following preliminary step may be usefully taken: —

For the purpose of drawing the attention of entomologists to the subject mentioned, I have placed in the hands of Morris K. Jesup, Esq., president of the American Museum of Natural History, New York City, $200, to be paid by him in three prizes of $150, $30, and $20, for the three best essays, based on original observations and experiments, on the destruction of mosquitoes and flies by other insects.

The following suggestions are made as to the direction in which the investigation should be carried and the essay formulated: 1. Observations and experiments upon various insects that destroy mosquitoes and house-flies, stating the method of and capacity of destruction; 2. Observations and experiments to determine the best dragon-flies to be artificially multiplied for the two above-named objects, — probably species of *Æschna*, *Libellula*, or *Di-*

*plax;* 3. Give detailed statements of the habits and life-history of the species chosen, based on original and careful experiments and observations; 4. Suggest a plan for breeding the insects in large numbers, with a sketch of apparatus, and estimated cost of producing them per thousand; 5. Formulate a plan for using the insects in the larva, pupa, or perfect state for the destruction of mosquitoes and flies, (*a*) in houses, (*b*) in cities, (*c*) in neighborhoods.

The prizes will be awarded after careful consideration by Dr. Henry C. McCook, vice-president of the Academy of Natural Science of Philadelphia, and vice-president of the American Society of Entomologists, and Dr. J. S. Newberry, president of the New York Academy of Sciences, professor of geology of Columbia College, and late chief of the Geological Survey of Ohio.

In awarding the prizes, clearness of statement obtained by accompanying sketches, and new and purely scientific facts in the life-history of the *Libellulidæ*, of which so little is known, will be duly considered.

All the essays received may be published wholly or in part, at the discretion of the judges, and full credit will in all cases be given to each observer.

The essays should be forwarded by Dec. 1, 1889, to Mr. J. H. Winser, at the American Museum of Natural History, 77th Street and 8th Avenue, New York, to whom all communications should be addressed. ROBERT H. LAMBORN.

32 Nassau Street, New York, July 15.

### Are Beech-Trees ever struck by Lightning?

REFERRING to note on p. 7 of *Science* for July 5, and letter on p. 50, July 19, I here record some observations on the same subject. During a prolonged summer drought, about one o'clock P.M., the sun was shining brightly, but a small cloud came from the south-east; and while two other gentlemen and I were seated in my parlor, conversing, a flash was seen, and a sharp explosion heard. In a few moments a man came in, announcing that he had been thrown from the wagon, the driver knocked down, also five of the six oxen, "three of which were killed by lightning." Hastening to the spot, about two hundred feet from the parlor, we found the wagon under the branches of a large beech-tree a few feet from the trunk, the wheels in contact with roots, the fore-wheels having passed the trunk; the oxen all recovered and standing, save the farthest one from the tree. He was dead, and never moved a muscle. The messenger was seated on the hinder part of the wagon when struck and knocked down. The driver walking on the opposite side of the tree, perhaps ten feet from the trunk, but some of the spreading branches almost touching his head, was knocked down, somewhat stunned, and, although standing on our arrival, had not fully regained his wits, nor his hat.

The tree was tall, and thickly branched to the top. On careful and minute examination, we found no mark of electricity on trunk, root, or branch; but later we discovered, perhaps twelve or more feet from the top, a space about three inches wide and six or eight feet long, as we guessed, from which the bark was torn and the wood grooved. Some days later we discovered that a strip of bark extending from the rent above mentioned to the earth was dead and peeling off, and the wood grooved. Our conclusion was that the electricity mostly passed between the bark and the wood, there being most moisture at plane of contact. Not a drop of rain fell during the day, nor during many weeks before and after the above incidents.

This is by no means the only instance in which I have known the beech-tree struck by lightning, nor the only one in which the electricity seemed, at least, to pass between bark and wood of beech, oak, tulip-tree, black gum, *Magnolia grandiflora*, etc.

Why was neither man killed in this instance, and only the ox farthest from the stricken tree? The explanation is simple enough. Here was a ridge gently sloping to the east, west, and south. The stricken tree was perhaps twenty feet from the lowest western level. One ox had placed one foot on the lowest spot of ground which it is presumed was near moisture beneath (the rest of the land being dried, and on the crest of the ridge to such a depth as to cause the death of several trees): the circle from moist earth through the ox, the chains, and iron of the wagon, was completed to the tree. One of the two oxen nearest the tree did not fall. All the phenomena caused me to think that the discharge was *from* the earth.

Having had many extraordinary, very undesirable, and extremely dangerous opportunities of witnessing phenomena of natural electricity, other facts may possibly be given later. D. L. PHARES.

Madison Station, Miss., July 24.

### Breathing.

MY attention has recently been called to your editorial comments on my observations made on the chest-movements of some eighty Indian females about two years ago, from which I felt justified in concluding that the abdominal was the original type of respiration in woman, and that the costal type has been acquired through the influence of abdominal constriction. Now, although this observation and conclusion was confirmed more recently by the experiments of Dr. Kellogg, who measured the chest-movements of a number of Chinese women in the Far West whose abdomens were never constricted by artificial appliances, you incline to the belief that "the question of what is the natural type of respiration may still be regarded as *sub judice*, unless (which perhaps may be the truth) both types are natural under varying conditions independent of dress," because "other observers, notably Hutchinson in his examination of twenty-four girls whose waists had never been constricted by corsets or other appliances, found the costal type present."

With the highest regard for your opinion, I beg to say that such a deduction is scarcely allowable from the premises of my researches. These show, in all probability, that Dr. Hutchinson's girls were not entirely free from the influence of abdominal constriction, even though they never wore corsets: for in the Indian the abdominal type obtains the highest form of development in the full-blooded girl, whose body, as well as the bodies of her ancestors, has never been subjected to the influence of abdominal constriction; and this type seems to disappear from the Indian girl in the proportion of the admixture of white blood in her veins. It is very probable, therefore, that heredity is an important factor in the maintenance of women's breathing; and any experiment or deduction which fails to give this due consideration will naturally lead to final disappointment.

So far as I know, Dr. Kellogg's and my own experiments are the only efforts which have been made to solve this problem by studying the respiratory movements in their most primitive condition in woman, and, until they are disproved by experiments based on identical conditions, I think they must be taken as conclusive. THOS. J. MAYS.

Philadelphia, July 29.

## Exchanges.

[Exchanges are inserted for subscribers free of charge. Address N. D. C. Hodges, 47 Lafayette Place, New York.]

Lead, zinc, mundic, and calcite. — Lulu Hay, secretary Chapter 350, Carthage, Mo.

I will sell to chapters or individual members of the Agassiz Association, 25 fine specimens of fossil plants from the Dakota group (cretaceous), correctly named, for $2.50. Send post-office order to Charles H. Sternberg (author "Young Fossil-Hunters"), 1033 Kentucky Street, Lawrence, Kan.

One mounted single achromatic photographic lens for making 4 × 5 pictures, in excellent condition; also one "new model" double dry-plate holder (4" × 5"), for fine geological or mineralogical specimens, properly classified. — Charles E. Frick, 1019 West Lehigh Avenue, Philadelphia, Penn.

Drawings from nature — animals, birds, insects, and plants — to exchange for insects for cabinet; or I will send them in sets of ten each for ten cents in stamps. My drawings in botany are in detail, showing plant, leaves, flowers, seed, stamens, pistils, etc. — Alda M. Sharp, Gladbrook, Io.

The undersigned wishes to make arrangements for the exchange of *Lepidoptera* of eastern Pennsylvania for those from other localities. All my specimens are named and in good condition. — Charles S. Westcott, 613 North 17th Street, Philadelphia, Penn.

California onyx, for minerals and coins not in my collection. — W. C. Thompson, 612 East 141st Street, New York, N.Y.

Will such members of the Agassiz Association as botanize this summer, and can afford time, please observe for me any case of doubling in any flower and in any locality, stating name of flower (Gray), the abnormal change, the time and place found, and whether monstrosity is abundant or otherwise? Please address communications to Will G. Cole, 3643 Prairie Avenue, Chicago, Ill.

Any one who has a botanical box in good condition will please write. I will offer about [illegible] specimens in exchange. — C. B. Haskell, Box 826, Keeseburg, Ill.

A few first-class mounted birds, for first-class birds' eggs of any kind in sets. — J. P. Babbitt, secretary Chapter 755, 10 Hodges Avenue, Taunton, Mass.