

SCIENCE:

A WEEKLY RECORD OF SCIENTIFIC PROGRESS.

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PUBLISHED AT
229 BROADWAY, NEW YORK.
P. O. Box 8838.

SATURDAY, JULY 24, 1880.

To Correspondents.

All communications should be addressed to the Editor—Box 3838, P. O., New York—with name and address of writer, not necessarily for publication without consent.

Scientific papers and correspondence intended for publication, should be written *legibly* on one side only of the paper. Articles thus received will be returned when found unsuitable for the Journal.

Those engaged in Scientific Research are invited to make this Journal the medium of recording their work, and facilities will be extended to those desirous of publishing original communications possessing merit.

Proceedings of Scientific Societies will be recorded, but the abstracts furnished must be signed by the Secretaries.

Both questions and answers in "Notes and Queries" should be made as brief as possible; an answer appearing to demand an elaborate reply, may be written in the form of an article.

To Subscribers.

Terms of subscription for SCIENCE will be \$4 a year, payable in advance. Six months, \$2.50. Single copies 10 cents.

Subscriptions forwarded by mail should be addressed to the Editor, Box 3838, P. O., New York, and Post-office orders made payable to "John Michels."

To Advertisers.

Terms for advertising may be obtained at the office of Journal, 229 Broadway.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

We direct the attention of our readers to the approaching meeting of the American Association for the Advancement of Science, which will be held this year at Boston, commencing at 10 o'clock on Wednesday morning, the 25th of August.

As it is generally believed that the Boston meeting will be the largest and most important hitherto held, we are completing arrangements with the Executive, by which abstracts of all papers read may be printed in "SCIENCE" contemporaneously with the meeting of the Association, together with a full report of the proceedings; we have reason to believe that such a course will be welcome to the members of the Association, and useful in many respects. In a later number we propose to give fuller particulars in regard to this

matter, and in the meantime would be glad to hear from those who will read papers at this meeting, particularly where illustrations are necessary, as by a little co-operation greater justice to the publication of such papers may be attained.

We may state for the convenience of non-members desirous of being admitted as members, that by paying the fees in advance (eight dollars), before the meeting, member's tickets will be sent, which will secure to new members and nominees the same privileges possessed by old members.

The attention of entomologists is directed to the annual meeting of the Entomological Club of the Association, which will be held at the rooms of the Boston Society of Natural History, on Tuesday, August 24th, at which all interested in entomology are invited to be present.

We notice by the prospectus that the suggestion made at Saratoga to form a sub-section devoted to Physiology and Anatomy will be carried out at Boston, and it is also probable that new sub-sections in Geology and Physical Geography will be formed.

We trust that all interested in science who can attend this meeting of the Association will not fail to be present, and that many new members will enroll themselves and take part in the proceedings.

Independent of the interest attached to the meeting of the Association several excursions have been planned, which will add greatly to the pleasure of those present, and cannot fail to make the trip to Boston one which will be long after recalled by many agreeable remembrances.

A NEW sulphate of alumina (sesquibasic sulphate of alumina) has been prepared by M. Marguerite. One method is by decomposition of alum of ammonia through heat. When the alum is heated to a red heat carefully, there remains after the operation anhydrous sulphate of alumina; if the calcination have been pushed further, there is partial decomposition. The matter held by the water gives a liquor which, concentrated, deposits crystals of the sesquibasate. Ordinary sulphate of alumina, dried and colored gently, gives the same reaction, and the new sulphate can also be got by the wet process. (See *Comptes Rendus*).

A CURIOUS geological effect has recently occurred in Sicily. On the morning of the 20th May the half of an old château at the seaside, between Catania and Acireale, fell in consequence of alteration of an enormous volcanic rock which had supported it. This rock was about 50m. high and 80m. in circumference; its form nearly cylindrical. It was placed on an older layer of lava, which forms a promontory. The rock is in such a state of disintegration, that pieces can easily be detached with the hand. The effect seems due to superoxidation of the iron, which it contains in abundance, and to the action of carbonic acid on the calcareous matter in it. The château in question is a very old one, but its walls were entire, and one might visit it in all its parts. Half an hour before the fall, a family of tourists had taken up residence in it, with a view to visiting the Cyclops islands, which rise a short way off.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

TWENTY-NINTH MEETING.

IN conformity with the vote at the last meeting, the Twenty-ninth meeting of the Association will be held at Boston, Mass., commencing at ten o'clock, A. M., on Wednesday the 25th of August, 1880. A large and efficient Local Committee has been formed and through its several subcommittees is engaged in perfecting the local arrangements for the meeting, which will be announced by special circular as early as possible. It is only necessary to state here that the members of the committee are desirous of doing everything in their power to promote the objects of the Association. As it is generally believed that the Boston meeting will be the largest and probably the most important hitherto held by the Association, every effort will be made by the officers of the Association residing in Boston and vicinity, co-operating with the Local Committee, to prepare a satisfactory general programme for the week (subject to the approval of the Standing Committee) in advance of the meeting, the substance of which will be given in the circular of the Local Committee. To this end several votes were passed at the last meeting of the Standing Committee in Saratoga, and the attention of members is particularly directed to the new clause in relation to titles of papers; also to the probable necessity of forming additional subsections.

The Headquarters of the Association will be at the Massachusetts Institute of Technology, where members will register as soon as possible after arrival. The Hotel Vendôme, corner of Commonwealth Ave. and Dartmouth St., has been selected for Hotel Headquarters.

The offices of the Local Committee and of the Permanent Secretary will be at the Institute of Technology. The General Sessions will be held in Huntington Hall in the same building. The several Sections, Subsections and Committees will have their places of meeting designated on the programme for Wednesday.

The circular which will soon be issued by the Local Committee will contain full information in relation to Hotels and Boarding houses in Boston and vicinity with which special arrangements have been made.

The *Permanent Subsection of Chemistry* will be continued at Boston under the chairmanship of Professor John M. Ordway, of Boston.

The *Permanent Subsection of Microscopy* will be presided over by Prof. S. A. Lattimore, of Rochester, and the active co-operation of microscopists is requested. Arrangements have been made for the proper care of instruments, etc.

The *Permanent Subsection of Anthropology* will be under the chairmanship of Prof. J. W. Powell, of Washington. For special circular and information in relation to this subsection, address Judge J. G. Henderson, *Secretary*, Winchester, Ill.

The attention of entomologists is directed to the annual meeting of the Entomological Club of the Associa-

tion, which will be held at the rooms of the Boston Society of Natural History at two o'clock, on Tuesday August 24, at which all interested are invited to be present. Mr. S. H. Scudder, of Cambridge, President; Mr. B. P. Mann, of Cambridge, Secretary of the Club. (A special circular concerning this meeting will be sent to all requesting it.)

At the Saratoga meeting the desirability of forming a new subsection in the Association, which should be devoted to *Physiology* and *Anatomy*, was discussed with the special object of inducing members interested in Human Physiology to bring their papers before the Association and also of obtaining the active co-operation of Physicians and Surgeons in the work of the Association. The interest taken in the proposition at Saratoga was such that a permanent organization of the new subsection is expected at the Boston meeting. It will also, probably, be found necessary to form a subsection of Geology and Physical Geography at the Boston meeting.

Several excursions will be arranged for by the Local Committee. Among others, one is planned for Salem and another down the Harbor. On Thursday, the Association will probably hold a morning session in Cambridge, after which visits will be made to the various departments and Museums of the University, followed by a reception at the Botanic Garden and the Observatory in the evening.

All communications relating to the local arrangements for the Boston meeting must be made to the *Local Secretaries* at Boston, while all matters relating to membership and to the presentation of papers will be attended to by the *Permanent Secretary*.

Attention is specially requested to the following articles of the Constitution of the Association.

ART. 3. Any person may become a Member of the Association upon recommendation in writing by two members or fellows, nomination by the Standing Committee, and election by a majority of the members and fellows present in general session.

(Blank forms for recommendation to membership will be furnished on application to the Permanent and Local Secretaries, and, until the day of the meeting, they will receive the recommendations for the General Secretary; after the meeting has begun, recommendations must be given to the General Secretary.)

ART. 4. Fellows shall be nominated by the Standing Committee from such of the members as are professionally engaged in science, or have by their labors aided in advancing science. The election of fellows shall be by ballot and a majority vote of the members and fellows present in general session.

ART. 5. Any person paying to the Association the sum of one thousand dollars shall be classed as a Patron, and shall be entitled to all the privileges of a member and to all its publications.

ART. 7. The name of any member or fellow two years in arrears for annual dues shall be erased from the list of the Association, provided that two notices of indebtedness at an interval of at least three months, shall have been given; and no such person shall be restored until he has paid his arrearages or has been reelected.

ART. 33. The admission fee for members shall be five dollars in addition to the annual assessment. On the election of any member as a fellow an additional fee of two dollars shall be paid.

ART. 34. The annual assessment for members and fellows shall be three dollars.

ART. 35. Any member or fellow who shall pay the sum of fifty dollars to the Association, at any one time, shall become a Life Member, and as such shall be exempt from all further assessments, and shall be entitled to the Proceedings of the Association. All money thus received shall be invested as a permanent fund, the income of which shall be used only to assist in original research unless otherwise directed by unanimous vote of the Standing Committee.

ART. 36. All admission fees and assessments must be paid to the Permanent Secretary, who shall give proper receipts for the same.

ART. 27. All members and fellows must forward to the Permanent Secretary, as early as possible, and when practicable before the convening of the Association, full titles of all the papers which they propose to present during the meeting, with a statement of the time that each will occupy in delivery, and also such abstracts of their contents as will give a general idea of their nature; and no title shall be referred by the Standing Committee to the Sectional Committee until an abstract of the paper or the paper itself has been received.

(Blank forms for giving the titles and abstracts of papers will be furnished by the Permanent Secretary on application. The Standing Committee particularly request, in order to facilitate the arrangement of the programme, that the titles and abstracts should be forwarded so as to reach the Permanent Secretary before August ninth. At the Saratoga meeting the Permanent Secretary was instructed *not to enter*, on the list of papers to be presented, any titles of papers until an abstract of the paper, or the paper itself, was received.)

Notice of errors in the printed list of Members of the Association, of change of address, and information respecting the decease of Members, should be sent to the Permanent Secretary in order that due notice may be taken of the same in the next volume of "Proceedings." It is particularly requested that the Permanent Secretary be notified at once of any errors in the names and addresses that will be given in the list in the Saratoga volume, as a revised edition of the list will be printed for circulation at the Boston meeting.

The Saratoga volume (vol. 28) will soon be distributed by mail to every member who has paid the assessment for the Saratoga meeting.

The volumes of the Proceedings of the Association (28 in number) can be obtained from the Permanent Secretary, at the price of \$1.50 a volume; or any member wishing for ten or more volumes, in order to complete a set, may obtain them at \$1.00 a volume. The volumes may be had bound in cloth for the extra price of fifty cents each, or in one-half Turkey morocco for the extra price of \$1.00 each. Uniform cloth covers for the volumes will be furnished by mail at thirty cents each, or, by express or at the meetings for twenty-five cents each. Copies of Volumes 2 and 26 will be received in exchange for other volumes or will be purchased at \$1.00 each.

The Memoir on Fossil Butterflies, by Mr. S. H. Scudder, published by the donation of Mrs. Elizabeth Thompson, 4to, 1875, will be furnished at \$2.00 a copy. The Transactions of the Association of Geologists and Naturalists, 1 vol. 8vo, 1843, bound in cloth, can be obtained at \$3.00 a copy.

It will save much time and confusion at the meeting if members will send their assessments *in advance* to the Permanent Secretary, in return for which a Member's ticket, bearing a receipt for the Boston meeting will be forwarded. Members not intending to be present at Boston, are particularly requested to send their assessment in advance, and to those who specially request the same a copy of the Boston Daily Programme will be mailed.

The address of the PERMANENT SECRETARY, F. W. Putnam, Esq., will be *Salem, Mass., until August 1st*; after that time, and until the meeting has adjourned, his office will be at the MASSACHUSETTS INSTITUTE OF TECHNOLOGY, *Boston, Mass.*

ON "LIMNOCODIUM VICTORIA," A HYDROID MEDUSA OF FRESH WATER.

A short time since I received from Mr. Sowerby, Secretary of the Royal Botanical Society, a letter informing me of the occurrence of certain Medusoid organizations in the warm-water tank devoted to the cultivation of the *Victoria regia* in the Gardens of the Society. The letter contained a request that I should examine the animals with a view to their determination; Mr. Sowerby accompanied it with rough sketches, and offered to place specimens at my disposal.

The discovery of true freshwater Medusæ was so startling a fact that I lost no time in calling on Mr. Sowerby, with whom I visited the tank, and carried away such specimens as were needed for examination.

The water in the tank had then a temperature of 86° F., and was literally swarming with little Medusæ, the largest of which measured nearly half an inch in transverse diameter. They were very energetic in their movements, swimming with the characteristic systole and diastole of their umbrella, and apparently in the very conditions which contribute most completely to their well being.

As it now became evident that the Medusa belonged to a generic form hitherto undescribed, I prepared for the Linnean Society a paper containing the results of my examination, and assigning to the new Medusa the name of *Limnocoedium victoria* (*λίμνη*, a pond, and *κώδων*, a bell). This was received and recorded by the secretaries on June 14, and read at the next meeting, on the 17th.¹

The umbrella varies much in form with its state of contraction, passing from a somewhat conical shape with depressed summit through figures more or less hemispherical to that of a shallow cup or even of a nearly flat disk. Its outer surface is covered by an epithelium composed of flattened hexagonal cells with distinct and brilliant nucleus. The manubrium is large; it commences with a quadrate base, and when extended projects beyond the margin of the umbrella. The mouth is destitute of tentacles, but is divided into four lips, which are everted and plicated. The endoderm of the manubrium is thrown into four strongly-marked longitudinal plicated ridges.

The radial canals are four in number, they originate each in an angle of the quadrate base of the manubrium, and open distally into a wide circular canal. Each radial canal is accompanied by longitudinal muscular fibres, which spread out on each side at the junction of the radial with the circular canal.

The velum is of moderate width, and the extreme margin of the umbrella is thickened and festooned, and loaded with brownish-yellow pigment cells.

The attachment of the tentacles is peculiar. Instead of being free continuations of the umbrella margin, they are given off from the outer surface of the umbrella at points a little above the margin. From each of these points, however, a ridge may be traced centrifugally as far as the thickened umbrella margin; this is caused by the proximate portion of the tentacle being here adnate to the outer surface of the umbrella. It holds exactly the position of the "mantelspangen" or *peronia*, so well developed in the whole of the Narcomedusæ of Haeckel, and occurring also in some genera of his Trachomedusæ. Its structure, however, differs from that of the true *peronia*, which are merely lines of thread cells marking the path travelled over by the tentacle as the insertion of this moved in the course of metamorphosis from the margin of the umbrella to a point at

¹ Some facts in addition to those contained in my original paper are included in the present communication.