

Corixids. The former feed in their first three stages largely upon the small crustacea—Ostracods, cyclops and Daphnians, etc.,¹ adding to this diet such other forms as they are able to master, including corixids, mosquito larvæ and their own weaker brothers, while the source of the food supply of the boatmen² is found in the brown, sedimentary material on the bottom of the pool. This they scoop up with the flat rakes of their fore-legs. These rakes are the somewhat spoonshaped terminal segments or *palæ*, which are most admirably equipped for their work. An examination of the contents of the digestive tract reveals much of disorganized unicellular plant matter, diatoms, oscillatoria, euglenæ, chlamydomonas, and occasionally the shell of an arcella, or the remains of other lowly animal forms.

Thus, it may be noted that the Corixids can be looked upon as members of the producing class in the waters where they are found. Gathering their food from the slimy ooze at the bottom of the pool, they in turn make forage for the many predatory animals that lurk in the shadowy places or dart in pursuit of their prey. We have witnessed their capture by Notonectids, Naucorids and nymphal Belostomas, by the larvæ of Dyticids and Gyrinids, and are forced to believe that they take their place with the Entomostraca in furnishing food supply. Their alertness and agility, however, permit them to maintain themselves even in waters swarming with carnivorous forms, while in proper waters, with an absence of a dominating predatory population, they thrive in astonishing numbers.

More might be said concerning the rôle played by the aquatic Hemiptera in the society of water forms, but this will suffice to indicate that they have a part not heretofore recorded—an intimate relation to certain of the

Entomostraca, and even to the unicellular life of our ponds and pools. H. B. HUNGERFORD
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THE DOCTRINE OF EVOLUTION AND THE CHURCH

TO THE EDITOR OF SCIENCE: In the minds of those who are beginning to be classed among the older men, there still lingers the memory of the time when the pulpit hurled its denunciations against those men of science who had the temerity to accept the doctrines of evolution as advanced by Darwin and Huxley.

An interesting instance of the entire change of opinion that has come over the clergy is shown by an experience that occurred at the exercises connected with the celebration of the one hundredth anniversary of the consecration of St. John's Church in Washington City on January 14, 1917.

A former rector of St. John's, the Rev. Dr. George William Douglas, now a canon of the Cathedral of St. John the Divine in New York City, in a sermon in which he reviewed the history of the church, spoke of a century as being a very short time in comparison with the time during which man had inhabited our earth, quoting Henry Fairfield Osborn's recent work on "Men of the Old Stone Age" as his authority, for the number of years.

It is a far cry to the Oxford meeting of the British Association in 1860 when the learned Bishop Wilberforce attempted so unsuccessfully to controvert Huxley, the youthful advocate of science, then well nigh unknown outside the narrow circle of scientific workers.

On Huxley's tomb are these words:

And if there be no meeting past the grave,
If all is darkness, silence, yet 'tis rest.
Be not afraid, ye waiting hearts that weep,
For God "still giveth his beloved sleep,"
And if an endless sleep he will—so well.

Sir Michael Foster once said:

Future visitors to the burial place [of Huxley] on the northern heights of London, seeing on his tomb the above lines, will recognize that the agnostic man had much in common with the man of faith.

It is interesting to note the fact that Osborn was a pupil of Huxley's and by chance was in

¹ We have reared *N. undulata* to end of fourth instar in a small Petri dish, its only food being ostracods supplied to it daily by means of a pipette.

² We have carried a species of boatmen through its entire cycle as many as twelve individuals in a single Petri dish upon such fare.

the congregation when Dr. Douglas preached his sermon.

MARCUS BENJAMIN

THE MANUFACTURE OF APPARATUS AND CHEMICALS

TO THE EDITOR OF SCIENCE: It has often occurred to me that it would be beneficial to science if some of the large universities of this country would cooperate to build a factory where chemicals and apparatus would be manufactured and sold to the various scientific institutions at a correct margin of profit. Perhaps the Rockefeller or Carnegie Foundation could be interested in such a project. The majority of fellow investigators and university professors would welcome such an arrangement, for it would make material accessible which is difficult to obtain otherwise and might be an important source of instruction to industrial chemists and physicists.

LOUIS BAUMANN

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LORD LISTER ON THE VALUE OF VIVISECTION

TO THE EDITOR OF SCIENCE: In reference to the letter from Lord Lister to myself published in SCIENCE of March 30, 1917, I beg leave to make this explanation. Recently the original copy of this letter has been found. It is dated 12 Park Crescent, Portland Place, London, West, 4th of April, 1898, and addressed to myself. Just after its receipt I handed it to a friend to use in connection with the hearing before the United States Senate on the Gallinger Bill relating to animal experimentation in the District of Columbia. My friend presented it at the hearing and it is published in the pamphlet relating to that hearing.

When Sir Rickman Godlee sent me a copy of the "rough draft" of this letter not long ago, saying if it had been received he would like to publish it in his "Life of Lord Lister," I went with great care over all of my letters and could not find the original. As it was almost a score of years since it had been received I had quite forgotten it and came to the conclusion that either it had gone astray in the mails or had never been sent. It has been returned to me and I have placed it in the

Library of the College of Physicians of Philadelphia.

W. W. KEEN

PHILADELPHIA, PA.,

March 31, 1917

QUOTATIONS

THE AMERICAN ASSOCIATION AND WORK IN AGRICULTURE

THE annual meeting of the American Association for the Advancement of Science is one of the great scientific events of the year. It is a vast clearinghouse for ideas and results in science, and for the testing and molding of views. It presents the largest forum in this country for healthy, tempered but searching criticism in science, without which science becomes self-complacent, lax and unexacting in its requirements.

Beyond this, such a meeting of men associated with the various branches of science has a remarkably broadening influence. One gets new insight, suggestion and inspiration from such a contact of minds, such a presentation of evidence, such a weighing and testing of results and of views. The individual finds anew that his branch of science or his specialty has relations beyond the narrow limits in which he has been considering it, and that there is not only an interest in following this broader relation, but a danger unless he does that he may specialize too closely in his thinking and view his subject out of focus.

Hence it seems worth while for the man of science to foregather from time to time with his colleagues in the annual convocation, worth the time and worth the money outlay. This is not so much to listen to papers which might be read or to present a report which might be published, but to keep his mind from narrowing, to maintain a contact with science which is well nigh impossible otherwise, and an association which contributes so much to the zeal and the satisfaction of a scientific career. It brings him definitely into membership in that great fraternity of workers in the broad field of science—some for its own sake, some for its relations to human welfare, all having the common purpose to advance knowledge and understanding. It was the belief in such advantages that led thousands of men and women to jour-