

Rotifers Commensal with Caddis-worms.

IT may be of interest to record the fact that, like *Gammarus pulex* and *Asellus aquaticus*, the larva of *Phryganea grandis* is a host for the commensal rotifer, *Callidina parasitica*. On one specimen, taken near Potter Heigham Bridge, I found between fifty and sixty of these commensals. As is the case with the commensals of *Gammarus* and *Asellus*, those of the caddis-worm gradually disappear when the hosts are kept in an aquarium. *Rotifer tardus* was also found among the materials of the larval case.

HENRY SCHERREN.

The Lost Books of Euclid.

WILL you or any of your numerous readers kindly let me know, through the medium of your journal, if the lost books of Euclid (Books vii., viii., ix. and x.) have been found and published in English; if so, the name of the editor and that of the publishing house.

I may say, in reference to this inquiry, that an Indian Prince, who is at present in this country for the Jubilee celebration, possesses a complete copy of Euclid in Sanskrit—no book or books missing.

A. K. GHOSE.

6 Forest Road, Kew, June 8.

[WE are indebted to Mr. H. M. Taylor for the following information:—

The first English translation of the Elements, published at London in 1570, had the title (16 Books):—

“The Elements of Geometrie of the most ancient Philosopher Euclide of Megara, Faithfully (now first) translated into the English tongue by H. Billingsley, City of London. Whereunto are annexed certain Scholias, Annotations and Inventions of the best Mathematicians both of time past and in this our age.”

The English edition of the first printed Greek text, published at Basel, contained all the extant works attributed to Euclid. This was published in 1703, at Oxford, by Dr. David Gregory, and was entitled “*Εὐκλείδου τὰ σωζόμενα*.”

See Encl. Brit., ninth edition, for further information.—EDITOR.]

ARCHAIC MAYA INSCRIPTIONS.

THERE can be no surer sign of the smallness of the number of persons in this country who take an interest in the progress of our knowledge of American archaeology, than the fact that not many years ago the editor of this journal asked me to review my own work on the subject, a request which, as far as courtesy would allow, I succeeded in avoiding by effecting a compromise which resulted in the publication of a few general notes on the ancient civilisation of Central America (NATURE, April 28, 1892). The far more grateful task has now been entrusted to me of calling the attention of the readers of this journal to an essay on the Archaic Maya Inscriptions, by Mr. J. T. Goodman, of California, which has been published as an appendix to the archæological section of the “*Biologia Centrali Americana*.”

It is to the liberality and sympathetic kindness of Mr. F. du Cane Godman and Mr. Osbert Salvin that my work on Central American antiquities is being published in its present sumptuous form. Their names, indeed, figure on the title-page as editors; but the old-fashioned and much abused title of patrons would be more appropriate in expressing an ideal relationship in which they have confined their editorial duties to giving the kindest and most valuable advice, whilst leaving me an absolutely free hand in the selection of material, and relieving me of all expense of printing and publication, and the reproduction of photographs, plans and drawings, which already extend over 175 double quarto plates.

It is again to this same liberality that my friend Mr. Goodman's interesting essay owes its publication; and were he here I know how heartily he would join me, and I think I may add so would every other student of American archæology, in a grateful acknowledgment of the deep debt of gratitude we owe to the editors of the

NO. 1445, VOL. 56]

“*Biologia*.” To Mr. Goodman, as to myself, has been accorded an unrestricted freedom in the expression of his views; and after fully acknowledging the assistance he has received on this side of the water, there are passages in the preface to his essay which may be taken to express a natural disappointment that the value of his work was not recognised, and its publication ensured in the land which he loves so well.

Such attempts as have previously been made to interpret American hieroglyphic inscriptions have been mainly directed towards the interpretation of the three or four Maya manuscripts or codices which alone have escaped destruction. Although Mr. Goodman has not failed to devote the most careful attention to that branch of the subject, giving years of study to the codices as well as to the Yucatec and Cachiqual Calendar systems, it is to the interpretation of what he terms the “Archaic system,” that is to say, the system of notation employed in the carved inscriptions found amongst the ruins of Palenque, Copan, Quirigua, Menché and Tikal—an almost untrodden field of research—that the present essay is devoted.

It will doubtless be disappointing to the general reader to learn that the greater part of the carved Maya inscriptions deal only with dates and the computation of intervals of time; but this is a fact which has gradually been forcing itself on the minds of students.

As Mr. Goodman says:—

“It may appear absurd, at first thought, that temples, monuments and altars should be covered with elaborately carved inscriptions that record nothing but dates and other forms of time reckoning. But a little reflection should convince one that such inscriptions, under certain conditions, would not be preposterous, but the wisest and most useful of records. A calendar is an indispensable requisite of civilisation. The very attempt to construct one is the first step towards evolution from savagery, and a completed calendar of any kind is proof that the transition has been accomplished.”

The work of constructing a satisfactory calendar system from the chaotic fragments of information which have come down to us, has been a work necessitating the most extraordinary patience and insight. Not only must such a system stand the test of application to the inscriptions which are already known, but it must be prepared to stand the further tests to which it will be continually submitted as hitherto undiscovered inscriptions are brought to light.

Of the methods employed by Mr. Goodman in the preparation of his calendar a slight sketch is given us, and he tells us how it was to the writings of Diego di Landa (A.D. 1566), the Bishop of Yucatan and arch-destroyer of Maya records, that he had finally to return as his only trustworthy guide.

It is impossible in a short notice even to touch on the numerous points which had to be considered in the preparation of the calendar tables which accompany Mr. Goodman's essay. The main factor is the concurrent use of two systems based, one on a year of 360 days, and the other on a year of 365 days.

The Chronological Calendar deals with the former system, the divisions of time being

20 days	...	...	...	...	1 Chuen.
18 Chuens	...	...	...	...	1 Ahau (360 days).
20 Ahaus	...	...	...	...	1 Katun.
20 Katuns	...	...	...	...	1 Cycle.
13 Cycles = 1 Great Cycle.					

It is somewhat unfortunate that the Ahau, or period of 360 days, bears the same name as one of the twenty days of the Maya month, and in the same manner that the Chuen, or twenty-day period, is made to bear the name of another day of the month.

The Annual Calendar is divided into eighteen named