Thoracic and metathoracic wings, a pair of prothoracic wings, bearing much the same relation to the others as the mesothoracic tegmina of tropical Phasmidae bear to their metathoracic wings. They are short subtriangular lobes having a well-defined basis which is narrower, sometimes much narrower, than the parts beyond, and from which course three or four radiating nervules. Although on these individuals these parts spread laterally like the wings behind them, and are sometimes so broad at base as to appear at first sight rather as lateral lobes of the prothorax (especially in an English carboniferous insect described by Woodward, which Brongniart also places here) M. Brongniart believes that they were movable and could be extended backward along the body, so as to cover the base of the mesothoracic wings. As to the question which naturally arises, whether these members are to be regarded as atrophied organs and therefore presuppose a progenitor equipped with three pairs of fully developed and similar thoracic wings, M. Brongniart prefers to wait for further paleontological facts. One recalls in this connection the discussion between Haase and Cholodkovsky in the Zoologischer anzeiger, Nos. 235, 239 and 244.

A Hint from Embryology.—Mr. Wm. M. Wheeler has enriched entomology by a very interesting and suggestive paper on the appendages of the first abdominal segment in insect embryos (Trans. Wisc. acad. sci., v. 3, pp. 87-140, pl. 1-3). Besides his own observations on Phyllodromia, Periplaneta, Mantis, Xiphidium, Cicada, Zaitha and Sialis, he gives a résumé of the observations of others and discusses the probable original function of these appendages among the ancestral insects when they must have extended to postembryonal life. Showing that in view of their origin from the ectoderm they must have been either respiratory organs, sense organs, or glands, he reviews the arguments for each hypothesis pro and con and concludes in favor of the last; he is further inclined to regard them as having probably been odoriferous glands and his ingenious arguments in favor of this view will be found of interest to all entomologists. He proposes for these organs, which he notes to have been found only in the Heterometabola, the name of Adenopodia, a name which demands the acceptance of the glandular hypothesis. Considering the variety that he shows has already been found in the nature of the adenopodia, a fruitful field of investigation is opened, in which there is plenty of room for many workers.

KOLBE'S INTRODUCTION to the study of insects is slow in publication. Begun early in 1889, it was to be completed in six or seven small monthly parts. The fifth part has just appeared and the second of the twelve divisions of the book is not half finished, so much more extensive is our author's performance than his promise. The present part (pp. 225-272) deals with the mouth-parts of the sucking insects and the structure of the wings. In the former, under the bibliography of the Lepidoptera, we miss reference of any kind to either of Edward Burgess's papers, the most important ever published. In the latter there is no reference to Saussure's paper on the folding of the wings of cockroaches, but there will be found a good account of Adol's views. There are 23 wood-cuts in the text of this part, mostly original.

DR. ANTON FRITSCH of Prag, has recently described in Vesmir, a popular Bohemian journal of natural history, the case of a caddis fly from the permian formation, and it may be regarded as the oldest indication of the Phryganidae yet brought to light.

EGGS OF LYCAENIDAE—Doherty of Cincinnati has carried the study of the eggs of eastern Lycaeninae so far as to propose, in the Journal of the Asiatic Society of Bengal for 1889, four divisions to the Theclini, based principally upon characteristics drawn from
the egg, though he points out several accompanying features in the adult. They are as follows:

- Egg large, tubercular, indentations obscurely hexagonal ........... *Aphnaeus* group.
- Egg similar, not tubercular. *Loxura* group.
- Egg small, tubercular, indentations sharply cut, usually trigonal .... *Thecla* group.
- Egg small, spiny, indentations sharply cut tetragonal ........... *Arhopala* group.

**PROCEDINGS OF SOCIETIES.**

**CAMBRIDGE ENTOMOLOGICAL CLUB.**

10 February, 1888.—The 135th meeting was held at 61 Sacramento St. Mr. S. Henshaw was chosen to preside, and Mr. G. Dimmock chosen secretary pro tem.

Mr. Roland Thaxter of Cambridge, Mass., was elected to active membership.

Mr. J. H. Emerton read his address as retiring president, having been unable to be present at the January meeting. The address was entitled "The study of species and the study of cells" (see Psyche, v. 5, p. 77-78).

Mr. C. W. Woodworth exhibited his collection of North American Cicadidae, which contains all the described species. Numerous notes were given upon the distribution and other peculiarities of each species.

Mr. J. H. Emerton showed mites taken from a lizard and made some remarks upon their peculiarities.

Mr. Emerton also showed drawings of the cribellum and calamistrum of various species of Ciniiflonidae. These organs are used by these spiders for curling their web to make it sticky. He also showed drawings of the feet of certain species of spiders.

Mr. S. Henshaw showed a fine specimen of a vegetable parasite (Sphaeria) from a New Zealand species of Cossus or Hepialus.

Dr. H. A. Hagen spoke of the early stages of the Odonata and especially of a pupa skin of a large Libellula from China that he had lately examined. In this species the palpi did not meet, but each had five or six teeth comparable to a comb. Otherwise the insect belongs near Macromia, and this peculiarity of an earlier stage furnished the text for a discussion of how far position in classification should be governed by the earlier stages of animals and how far by adult characters only. The discussion was participated in by several members.

9 March, 1888.—The 136th meeting of the Club was held at 61 Sacramento St. Mr. J. H. Emerton was chosen chairman.

Mr. S. H. Scudder invited the Club to hold its meetings hereafter at his laboratory, and offered shelf room for its library; both offers were accepted with thanks.

Mr. J. H. Emerton spoke of Mr. McCook's observations on the habits of *Mygale heitzii* while kept in confinement (see Psyche, v. 5, p. 55).

Dr. H. A. Hagen said that a specimen of *Ixodes* in his possession, taken from the ear of a man in July, 1887, was still living, though it had been without food for a period of nearly eight months.

Mr. S. H. Scudder showed a series of maps giving the distribution of New England butterflies, and called attention to some curious points in the range of several species.

Mr. C. W. Woodworth described retractile processes on the abdominal segments of the larva of *Craesus latitarsus*, and suggested that they were probably defensive in function. Discussion on similar organs followed.

Dr. H. A. Hagen spoke of the larva of *Glyptus sulcatus* found in the nests of white ants in south Africa.

13 April, 1888.—The 137th meeting of the Club was held at 156 Brattle St. Mr. S. H. Scudder was chosen chairman.