

Prof. Riley read an interesting letter from our fellow-member, Mr. Ashmead, relating to various entomological matters, and describing his [Ashmead's] experiences and work at Berlin, and particularly his first impressions of the enormous extent of the insect collections of the Royal Museum. Prof. Riley remarked that he was particularly pleased at the statement that "The large collections here have had a depressing effect upon me, and I cannot conceive how one little brain can take in all in one order," because it showed that Mr. Ashmead realized the necessity of concentration in order to do the best work.

Prof. Riley also read a letter from an old correspondent, Mr. S. S. Rathvon, of Lancaster, Pa., relating to certain undetermined *Phytonomus* larvæ which occurred on the campus at Lancaster, as well as other matters, and called attention to the clear chirography and diction and the unflagging interest in and knowledge of the entomology of to-day somewhat remarkable in a man over eighty years old, and suffering from various severe bodily ailments.

Prof. Riley then presented the following paper :

A VIVIPAROUS COCKROACH.

BY C. V. RILEY.

I present to the Society alcoholic specimens of a female cockroach with her young, received recently from Dr. Carl F. Gissler, of Brooklyn, who found it a little more than a year ago in Brooklyn on a cabbage, and informed me, in communicating it, that it had given birth to the young viviparously. I also present enlarged drawings of the female and of the young. The species is *Panchlora viridis*, common in South America, and peculiar as compared with our own cockroaches in being of a light green color. The specimens interested me greatly, because, so far as I have been able to ascertain, there is no record of a viviparous Blattid, and after a careful examination, involving dissection of the abdomen of the specimen, I see no reason whatever to doubt the accuracy of Dr. Gissler's statement. Several of the young had already been born, as stated by him, but still others were in the abdomen ready to

emerge, with no trace of either eggs or egg-case. The significance of this exceptional fact is that the extrusion of the eggs in a compact oötheca is supposed to be one of the distinguishing features of the family *Blattidæ*, and such cases serve to show how difficult it is to lay down any rule in reference to the characteristics of any group that may not involve exceptions. So far as other family characteristics are concerned there is nothing peculiar in this species of *Panchlora*. It is a rather soft-bodied species, with ample wings. I would call attention, however, to the fact that the young have either lost or never had the green color of the parent. They are pale brownish, and are further peculiar in that the body broadens posteriorly, the abdominal joints being strongly contracted and telescoped into each other—the eighth and ninth so strongly drawn into the seventh as to give the abdomen an unnatural, foreshortened, truncated appearance. Whether this feature is due to the alcohol, or is normal, it is impossible to say; but there is no evidence of any other portion of the body having shrunken or contracted on account of the preservative liquid.

Prof. Riley gave an account also of his additional study of *Platyphylus*. He said that since his former communication he had been particularly anxious to secure other specimens of the ultimate larvæ and also specimens of the pupa of this insect, and had had two or three persons at work in different places with this end in view. In all some twenty Beavers had been examined, and additional larvæ and adults had been secured, but no pupæ. He had, however, been able to add quite a list of insects, etc., which are associated with the Beaver, either accidentally or as parasites or guests. These are: a Mallophagan of peculiar form (*Trichodectes* near *crassus* Drury); four genera of mites; seventeen species of Coleoptera (*Staphylinidæ*, *Histeridæ*, *Silphidæ* and *Elateridæ*), none of which are supposed to be at all parasitic; a *Julus* and a *Geophilus*; *Bibionid* and *Culicid* larvæ; a Cricket; a *Tettix*; three spiders; a *Trombidium* and a small roach.

Mr. Schwarz asked how the insects associated with the Beaver had been found, many of the forms mentioned being such as would occur in masses of rubbish, dry leaves, etc.