James Ridings in 1864 (Proc. Ent. Soc. Phil. 4, 201). The female is larger than the male and much more inscribed on under side. This species does not seem to be seasonably dimorphic, as are *Camillus* and *Tharos*, but the early and late examples are of the same pattern of marking.

ON THE COURTSHIP OF THE SEXES IN *ÆDIPODA* *CAROLINA*.

BY C. H. T. TOWNSEND, CONSTANTINE, MICH.

For several seasons past, along in the latter part of summer (August and September) I have noticed certain peculiar actions on the part of the large flying locust, *Ædipoda carolina* Linn. I have always suspected that these actions have something to do with the union of the sexes. In the warm parts of the days at this time of the year individuals of this species may frequently be seen rising from the ground, and, hovering several feet in the air, rapidly vibrating their wings and making a peculiar flapping or beating sound, the while keeping nearly the same relative position in space. Although my notes on this subject are rather imperfect, I think they may be of use. I can not find that the subject has ever been touched upon before; such may be the case, but I have not been able to discover record of it in any reports, periodicals or works on insects. Still these actions must have been noticed by observers, as they are of common occurrence.

On the 14th of August last, in the afternoon, I saw one of this species fly up from the dry parched grass, and remain nearly stationary about two feet in the air for some time, by means of a rapid beating of the wings. Presently it flew back to the ground. In a few minutes another one, which had witnessed the performance at a short distance, flew quickly over and alighted by the side of the performer. They ran by each other several times, occasionally touching each other, but did not make any further manifestations, and finally the last one flew away, leaving the other motionless in the withered grass. Though it is probable that the females are attracted by these performances of the males, and that the males vie with each other in their exhibitions, still I think that the two just spoken of were both males and were disposed to fight from a feeling of rivalry, the one that flew off having been beaten. On the 24th of the month I noticed

the same thing over again. An individual performed three times in succession, and then another alighted on the ground by its side; they ran by each other several times, apparently clasping, probably in conflict, for I am quite sure they were both males. At last one of them flew away, and the other soon after renewed the performing. I regret to say that I did not capture specimens to ascertain the sex; but, judging from size, I do not think I have ever seen any but the males taking active part in these aerial exhibitions. In going through with the performance they rise at first generally about three or four feet, making a light purring or beating sound, and then, rising higher, change the motion of the wings, when a curious, sharp, see-sawing sound is produced. Some rise even higher than six feet in the last act; others rise only one or two feet. Of course some excel others in the beauty and ease with which they accomplish the feat; many do not remain in just the same place while hovering, but vary, falling or jerking about while endeavoring to keep the same point in the air. I am of the opinion that the females are sensitive to the grace with which this is performed.

THE CROTON BUG IN QUEBEC PROVINCE.

BY REV. THOMAS W. FYLES, SOUTH QUEBEC.

One morning last November I went to the Chaudiere Curve, to meet the train from Halifax, which had been delayed for some hours. I found two men in the waiting-room who had spent the night there. They complained that swarms of black beetles had troubled them all night so that they could not sleep. Upon my questioning the correctness of the statement, they said, "Well, here they are in all the cracks," and they forthwith commenced to poke the creatures out. The insects were numerous enough, but they were not beetles, nor were they black. They were specimens of the German Cockroach, *Ectobia Germanica*. I afterwards enquired of one of the railway employes as to the time of the first appearance of the insects. The man told me that he first noticed them in 1882. I asked if they had appeared anywhere else in the neighborhood. "Yes," he answered, "in my own house last winter; but," he added, "I am not there in the day time, so I left the windows open and froze them out."

The enquiry is interesting, How did *Ectobia Germanica* get to the Chaudiere? At that place, which is nine miles from Point Levi,