

feast is again repeated. This would have continued, I presume, till all but one were killed. To prevent it I placed in their midst a young tadpole which had just died. For a short time they seemed shy of it, such a feast was surely too good, but when they closed in it was with a rush. Soon there was nothing to be seen but a wriggling mass of fierce savages tearing and biting at every available spot. As one secured a tender morsel he would rush off with it, hoping to enjoy it in peace, but only to be attacked by his neighbour. This fighting and scrambling continued until the entire tadpole was devoured. Later in the evening of the same day I gave them a dead minnow, and next morning only the bones were left. In the meantime one would occasionally succumb to the attacks of his neighbours, and my stock was slowly decreasing in numbers. On June 28 I placed a living tadpole in the aquarium, and there followed a savage attack on it. The larvæ seized it by the tail, mouth, and eyes, and every available spot where a grip could be secured was tried time and time again. It was not long before they succeeded in overcoming the tadpole, and then followed a feast mingled with occasional cannibalistic attacks. For sometime after this I continued to feed them on tadpoles, and they seemed to thrive.

On July 3rd one larva molted. This one was separated from the rest, and an attempt made to rear it. The next day most of the other larvæ died on account of the extreme heat. The one that had molted continued to thrive on tadpoles, snails or other food which I gave it. It was interesting to see how readily it would remove a snail from its shell by means of its powerful mandibles. The flattened head made it easy to get under the shell, and the mandibles did the rest. On July 24 this larva entered the soil to pupate. It had evidently molted a second time, but I had failed to find the shed skin, or else it was eaten by the larva itself. It took a little over twenty-four hours to dig out a large pupal cell under a stone in the rearing-cage. Pupation occurred on July 26, and the pupa resting in its cell is shown in figure 4. The adult emerged on the 6th. The time of development is then as follows:

June 25.—Young larvæ began emerging.

July 3.—First molt occurred.