Alma in the Santa Cruz Mountains also writes, "Feeds on quince, prune, alder, madrone and hazel-bush." Last winter I found the cocoons abundantly in the prune orchards of this valley. The encina oak (*Quercus lobata*), a deciduous tree, is another food-plant of *polyphemus*.

### Noctuidae.

*Feralia jocosa* Gn.— I took several specimens of this handsome species at Alta, in Placer County, California (elevation about 4000 ft.), in early April. Smith in his Catalogue of the Noctuidae gives New Hampshire, New York and New Jersey as the habitat of *feralia*. Dyar (Bull. 52, U. S. Nat. Mus.) also gives the Atlantic States. Dr. John B. Smith, to whom I am indebted for the identification of this species, writes me, "It is possible that with more material it may be distinguishable from the eastern species; but except for a somewhat greater size I am unable to differentiate it from my series of *jocosa*."

## NOTES ON THE FEEDING HABITS OF *CIMEX LECTULARIUS* LINNAEUS.

BY A. ARSÈNE GIRAULT, URBANA, ILL.

There are so few specific records of the habits of this insect in the literature of entomology, that I do not hesitate to present for publication the following account of a recent personal experience with it.

On the night of October 29th, 1907, I arrived at Cincinnati, Ohio, near midnight and obtained a room at what is considered one of the largest and best hotels there. This room was on the second floor, and proved to be a rather small one, about 18 feet long and about 12 feet wide. It was elegantly and neatly furnished, with the walls painted a dark gray and ornamented with mural paintings of flowers; the floor was well carpeted. The bed was of iron, painted black, and the whole room, including the rest of the furniture, presented the usual neat, cleanly, and attractive appearance found in hotels of this class. The room was lighted with two 16-candle power electric globes on a chandelier suspended from the middle of the ceiling, and about six and a half feet above the floor. Also these lights were just

about four feet above the bottom third of the iron bedstead; the bed was therefore in full glare of the light. A neat, bronzed steam radiator supplied heat.

Upon entering the room a little before midnight, I had turned on the lights and they were burning fully one-half hour before I prepared to retire; it was then about 12:30 A. M. I then approached the bed and happening to glance over it, observed a single nymph of *lectularius*, in about instar III, resting on the spread; this nymph was pale. I killed it. After this, I looked the bed over, and finally decided not to get into it, but to lie across it after disrobing, leave the lights on and obtain such sleep as possible under the circumstances. In carrying this out, I did not disturb the bed linen. After lying stretched out across the bed in this manner for about half an hour, I awoke, and upon looking around me, observed specimens of *lectularius* rapidly crawling away over the bedspread, all of them swollen with blood and having the appearance of being very recently fed. Most of these, fully a dozen, were caught and killed; they were in instars II, III, and IV. The time was about 1:20 A. M. Between this hour and 3:30 A. M., I dozed off from time to time, lying in the same place, but distinctly remember waking at 2 A. M. and 3:20 A. M. and discovering numerous specimens hurrying away over the coverlid. Each time I arose and killed all of the bugs in sight, and also those, which having been glutted from the host, had left it, crawled 2 or 3 feet away, and were hiding in the bed linen; these latter were discovered after a brief search, and were evidently hiding temporarily. At both of these times, the majority of the insects were in instars III and IV, but two were found in V, and one in I, the latter discovered coolly feeding from my fingers, and from its color, evidently obtaining its first meal. At 2 o'clock, I also killed one or two rather pale nymphs of about instar III, crawling toward the host. No adults were observed.

At about 3:30 A. M. I decided to leave the bed, and passed the rest of the morning dozing away in a rocking chair. I must have slept all of this time, until about 6 o'clock, and did not notice any more of the insects.

The attack of these insects lasted several hours, and they did not mind exposure to the light in going to the host; from such evidence as I was able to gather, mostly concerning their color, they appeared to have been hungry; as many of them were pale and flat, and the desire for food probably overcame their negative reaction to light. Each individual after engorgement, left the host and went into hiding, tending to show that, their natural desire for food having been satisfied, the negative reaction to light became dominant again. This fact could as well indicate that they leave the host after engorgement naturally through instinct, whether in darkness or in the light.

Later, at 9 o'clock, I examined the bed and the room, but found no more living insects. The mattress was of hair, covered as usual; the springs, however, were massive, and covered like the mattress; I was unable to get to the under side of them. In a crevice of the mattress was found an exuvia of about the fourth ecdysis. No crevices existed in the walls, excepting one between the molding and the baseboard at the head of the bed; this could have harbored many of the insects, but none were found there, nor any evidence of their presence. I believe the insects had been hiding in the covering of the springs. No eggs were found in the accessible portion of the bed. The temperature of the room was about 75° Fahrenheit. I learned through the kindness of the hotel management that the room had been occupied on Oct. 28th by two persons, but in spite of that fact, the bedbugs which I encountered did not seem to have been recently fed. Unfortunately, I could not ascertain whether the bed had been utilized, or whether they spent the night there.