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## Records of the Larvae of *Epiophlebia laidlawi* Tillyard from the Darjeeling Area (*Odonata: Anisozygoptera*)

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The sub-order Anisozygoptera has but two living representatives, the Japanese *Epiophlebia superstes*, and the Himalayan *E. laidlawi*. A single larva of *E. laidlawi* was described in 1921, but the adult remains unknown. In spite of searching



(1), the larva was not found again until Asahina obtained it in 1958. Then, in October, 1960, at the site described by Dr. Asahina, five more larvae were collected (2).

In the latter part of March and the first part of April, 1961, four days were spent in the Darjeeling area with the express object of searching as many streams as possible for specimens and if possible collecting the as yet unknown imago.

The stream where specimens had been obtained during the previous October was revisited. In the interim, however, the spot had been used as a crematorium as evidenced by the prayer flags suspended over the stream, the remains of a funeral pyre on the shore, as well as the presence of charcoal and human bone fragments among the rocks in the stream. No specimens were found in the stream below the funeral pyre perhaps because of the contamination mentioned as well as to the resulting rise in water temperature. However, above the site and above the waterfall mentioned in the previous account (2), larvae were found and collected, showing their continued presence in this stream.

On April 1, 1961, in a stream two miles above Sonada numerous larvae were found. This stream is at an elevation of approximately 6,000 feet, at marker number 440 on the Siliguri-Darjeeling Railroad, and is the stream that yielded the greatest number of larvae. The population can be roughly estimated from the fact that in one small riffle 25 larvae ranging in size from  $\frac{1}{4}$  inch up to  $1\frac{1}{2}$  inches, which is the size of the ultimate instar, were collected. In other sections of the same stream the larvae were almost as numerous, in fact it soon became monotonous to collect so many for there must have been hundreds in this stream alone.

Although larvae were found in other streams such as the one at marker 440A, and the one at marker 460, they were not as numerous as in the stream at marker 440. Larvae were also found in the stream in the immediate vicinity of Sonada but the streams around Kurseong yielded none.

A search for the imagoes as well as exuviae was also made but none was found. The season at this time of the year,



March–April, is apparently too early for the appearance of the adults of this species. No odonata of any species were seen in this area, in fact, very few insects of any kind were in evidence. The months of June–July may prove a better season for obtaining the adults of *Epiophlebia laidlawi*, which still remain unknown.

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## A Pictorial Review of the North American Chipmunk Fleas. Part II, *Monopsyllus ciliatus* (Baker) with Five Subspecies<sup>1</sup>

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It is probably the treeless Great Plains of the United States that form the natural barrier between the ranges of the western chipmunks of the genus *Eutamias* and the eastern chipmunks of the genus *Tamias*. The remainder of the fleas to be discussed in this series of papers likewise fail to cross this almost treeless area.

### CHRONOLOGY: For the Western Chipmunks

On the 7th day of June, 1900, Mr. Edward Erhorn collecting in the small county of Santa Cruz, California, south and west of San Francisco Bay, secured a chipmunk from which he removed at least two fleas, a male and a female. These were given to Carl F. Baker at Stanford University.

<sup>1</sup> This is the sixth paper by the author while working under National Science Foundation grant 14023. Any correspondence regarding it should be addressed to B. E. A. Malaria Institute, Amani, Tanga, Tanganyika, Africa, where the writer is studying the fleas of British East Africa and their hosts under the Fulbright program and N. S. F.



Svihla, Arthur. 1962. "Records of the larvae of *Epiophlebia laidlawi* Tillyard from the Darjeeling area (Odonata: Anisozygoptera)." *Entomological news* 73, 5–7.

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