## The Canadian Entomologist.

## VOL. XXI. LONDON, DECEMBER, 1889. No. 12.

## PREPARATORY STAGES OF LEPTARCTIA CALIFORNIÆ WALKER, WITH NOTES ON THE GENUS.

BY G. H. FRENCH, CARFONDALE, ILL. Continued from page 213.

The first to express this belief and put it in a tangible shape before the public was Mr. A. G. Butler, who published a paper in the Ann. Mag. Nat. Hist., based upon a collection of moths made by Lord Walsingham in Oregon. He states he does not hesitate to say that he believes that the different forms do not represent several distinct species, but different forms or varieties of one extremely variable species. The four names that had been used he retains as names of the four forms they were originally intended to represent, and gives in addition four new names. According to Mr. Butler's idea they would stand as follows :

## LEPTARCTIA CALIFORNIÆ.

- Var. 1, Stretchii, Butler.
  - " 2, Boisduvalii, Butler.
  - " 3, Dimidiata, Stretch.
  - " 4, Latifasciata, Butler.
  - " 5, Fulvofasciata, Butler.
  - " 6, Californiæ, Walker (type).
  - " 7, Decia, Boisduval.
  - " 8, Lena, Boisduval.

He does not describe these in full, but bases his description on the work of Stretch, Ills., Zyg. and Bomb., using the figures on plate 5.

I have before me representations of all but one of Mr. Butler's varieties in my own collection, and those ioaned me by my friend, Mr. W. G. Wright, of San Bernardino, California, and three forms that are not referable to any of his. The second variety, *Boisduvalii*, I have not seen : but it is figured by Stretch. From the series I have, I deduce the following brief descriptions, and from them have had made the wood engravings illustrating the different varieties.