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To Miss Traver with  
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Larry.

Excerpt from The Canadian Entomologist, December, 1941.

*IRON FRAUDATOR* TRAVER VS. *IRON PLEURALIS* BANKS

(EPHEMERIDA) \*

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McDunnough (1938, pp. 32-33) has raised the question of the validity of *Iron fraudator* Trav. A specimen sent to him by Dr. Traver as the true *pleuralis* was treated with caustic potash and mounted in balsam. This "proved .....identical with a genitalic slide made from a male paratype of *fraudator*, Trav.....Other slides of similarly distorted material.....gave similar results."

Spieth (1938, pp. 7-11) has also questioned the validity of *I. fraudator*, giving additional evidence that this species is, in reality, a stage of *I. pleuralis* in which the penes have become expanded.

In the series of *Iron* in the author's possession, there are two interesting specimens in which, in the dried condition, one side of the penes is apparently that of *I. fraudator* Trav., while the other side is that of *I. pleuralis* Banks. One of these specimens was taken at the Dolly Copp Camp in the White Mountains, New Hampshire, on June 6, 1940, by Mr. John F. Hanson. The other was taken at Sunderland, Massachusetts, April 23, 1938, by the writer. Figures 1A-1C show the condition of the penes from the White Mountain specimen before and after soaking overnight in potash and after mounting in balsam. From a study of these figures it is evident that the normal, or relaxed, condition of the titillators is retracted, and further that, as McDunnough suggests, the shape and position of the titillators depends on the amount of tilting of the penes when mounted in balsam.

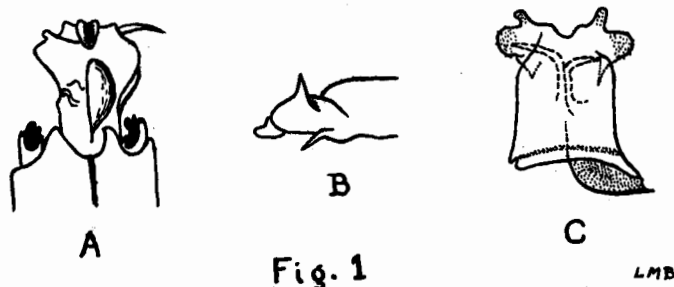


Fig. 1. Male genitalia of *Iron*.

A. Ventral view; dried specimen.

B. Lateral view; after soaking overnight in potash.

C. Dorsal view; mounted in balsam.

The following observation will also substantiate the view that the position of the titillators (i. e., whether drawn in as in *I. fraudator* or thrust out as in *I. pleuralis*) is not a valid character for specific identification. On May 6, 1941, the writer took a single male specimen of an *Iron* at Amherst, Massachusetts. This specimen was placed in a small cyanide bottle, and its actions watched with the aid of a 14x hand lens. One of the titillators was seen to be thrust in and out rather rapidly and convulsively. The other titillator was out of focus and its actions could not be observed. After the specimen had been brought back to the building it was identified as a typical *I. fraudator* Trav. From this observation it is evident that a specimen might die in the cyanide bottle in a condition in which the titillators are extended, whereas another similar specimen might, at the moment of complete paralysis, have its titillators drawn in. These observations, together with those of McDunnough and Spieth, present sufficient evidence for the author to advocate reduction of *Iron fraudator* Traver to synonymy with *Iron pleuralis* Banks.

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 Spieth, H. T. 1938. (In) Taxonomic studies on Ephemera I: description of new North American species. *Am. Mus. Novit.*, No. 1002, pp. 1-11, fgs. 1-8.