

7. *Hetærina titia*. (Tab. III. figg. 2-15.)

Libellula titia, Drury, Ill. Exot. Ins. ii. p. 83 and index, t. 45. fig. 5 (entire insect) (1773) ¹.

Agrion titia, Drury, Westwood's edit. ii. p. 94, t. 45. fig. 5 (1837) ².

Calopteryx titia, Burm. Handb. d. Ent. ii. p. 826 (1839) ³; Rambur, Névr. p. 227 (1842) ⁴.

Hetærina titia, Selys, Syn. Calopt. p. 43 (1853) ⁵; Monogr. Calopt. p. 138 (1854) ⁶; Bull. Acad. Belg. (2) xxxvi. p. 613 (1873) ⁷; Walker, List Neur. Ins. Brit. Mus. iv. p. 630 (1853) ⁸; Hagen, Syn. Neur. N. Am. p. 61 (1861) ⁹; Proc. Bost. Soc. Nat. Hist. xviii. p. 24 (1875) ¹⁰; Kirby, Cat. Odon. p. 106 (1890) ¹¹.

Hetærina titia, race? *bipartita*, Selys, Bull. Acad. Belg. (2) xxxv. p. 481 (1873) ¹².

Hetærina bipartita, Hagen, Proc. Bost. Soc. Nat. Hist. xviii. p. 24 (1875) ¹³; Kirby, Cat. Odon. p. 107 (1890) ¹⁴; Carpenter, Journ. Inst. Jamaica, ii. p. 261 (1896) ¹⁵.

Hab. UNITED STATES, Florida, on the Caloosahatchie River between Fort Thompson and Fort Daneau (*Johnson, coll. P. P. C.*: 1 ♂), Texas, probably near the Nueces River (*colls. A. N. S. & P. P. C.*: 9 ♂, 4 ♀), Waco ¹⁰ and San Antonio ¹³ (*fide Hagen*). —MEXICO ⁵, Nuevo Laredo in Tamaulipas (*Barrett, coll. P. P. C.*: 6 ♂, 2 ♀), Atoyac (*Schumann*: 5 ♀; *H. H. Smith*: 3 ♀), San Lorenzo, Cordova (*Trujillo*: 2 ♀), Teapa in Tabasco (*H. H. Smith*: 6 ♀); BRITISH HONDURAS (*Blancaneaux*: 6 ♂, 3 ♀), Rio Sarstoon (*Blancaneaux*: 2 ♂); GUATEMALA, Cahabon [1 ♂], Telemán [19 ♂, 2 ♀, one pair of these *in copulâ*], and Chacoj [7 ♂, 3 ♀], all in Vera Paz (*Champion*); HONDURAS (*coll. McLachlan*: 1 ♂, 1 ♀), Bay of Honduras ¹; NICARAGUA, Chontales ¹² (*coll. McLachlan*, types of *H. bipartita*: 2 ♂). —WEST INDIES, Jamaica ¹⁵.

H. bipartita was doubtfully regarded as a race of *H. titia* by de Selys ¹², and as a distinct species by Hagen ¹³ and Kirby ¹⁴. Its differences (♂) from the latter were thought to be: the smaller pterostigma, hardly surmounting one cell, and the much less extension of the dark brown coloration, especially on the hind wings. These supposed peculiarities are negated by the following facts:—

The present series contains individuals of typical *H. bipartita* in which the pterostigma surmounts two cells and is therefore as large as in typical *H. titia*; also individuals of *H. titia* in which the pterostigma is of varying size, from two cells, to $1\frac{1}{2}$, 1, or $\frac{1}{2}$ a cell, or entirely absent (in 3 ♂ from Chacoj and 1 ♂ from Rio Sarstoon). A complete and gradual transition exists in the amount of brown on the wings from the condition in the *H. bipartita*-type to a condition even still more extended than that of the *H. titia*-type. No structural difference has been found between the two forms, and *H. bipartita* is, therefore, merely a synonym of *H. titia*.

The above facts with regard to the pterostigma amply confirm the suggestion of de Selys ⁷: “On peut présumer d'après cela et jusqu'à ce qu'on ait pu examiner un nombre suffisant d'exemplaires en bon état, que la pterostigma varie chez cette espèce comme chez l'*occisa* et ses races ou variétés.”

The occurrence of *H. bipartita*-type, of *H. titia*-type, or of any of the intermediate forms which completely connect them, is not correlated with geographical isolation,