

## REPORT ON A COLLECTION OF DRAGONFLIES FROM THE LAO COUNTRY.

BY

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With a Plate.

[The dragonflies here listed were obtained by a native collector during a recent expedition to the north of Siam and adjacent portion of Indo-China, in the region drained by the upper reaches of the Mekong river. The party was badly handicapped for want of a capable and trained man in charge, and this explains the poor results obtained. The following localities are referred to in this paper.

UTARADIT, in central Siam.

NONG NAM PI, NA KRAM, BAN SIEW, PAK TAH, CHET TON, on the caravan route between Utaradit and Pak Lai. The road crosses a range of hills, the highest point of which is reached near Chet Ton, about 1800 feet altitude. Pak Lai or Pak Lay is in French Laos, on the Mekong river (Lat 18° 15' N.).

BAN PAK TUNG on the Mekong, N. of Pak Lai.

BAN MANAO, on the Mekong, N. of Saniaburi (Lat. 17° 50' N.).

BAN NUA, BAN NA AN, BAN NA SAO, to the E. of Saniabouri. From Hin Boon, to the south of this town, a caravan road runs N. E. to Vinh on the gulf of Tonkin. The route crosses a range of hills, and at its highest point is about 1,000 feet above sea level. The country there is described as "high mountains, no jungle, but rocks and tall grass." Eds.]

The collection consists of 165 specimens and is only poorly representative of the rich Odonate fauna of the region visited. As proof of this, I need only mention that there is not a single species present of the large subfamily *Gomphinae*, and there are only 6 representatives of the whole of the suborder *Zygoptera* which form fully 50 per cent of the Odonate fauna of the region. It is obvious that the native collector passed over the smaller species as unworthy of collecting (there are only 2 specimens of *Coenagrioninae*), and for the rest he took those most calculated to attract his attention by reason of their striking colours or size. The *Corduliinae*,

*Aeshninae*, *Gomphinae*, *Libellaginae* (except for a specimen of *Micromerus lineatus*) are all unrepresented.

1. POTOMARCHA OBSCURA Ramb.

A female from Na Kram, which is brightly coloured as in the wet season forms.

2. ORTHETRUM SABINA Drury.

2 males and a female from Ban Siew.

3. ORTHETRUM PRUINOSUM Burm.

1 female from Bang Pak Tung, and 2 males from Na Kram.

4. CROCORTHETRUM SMITHI, sp. nov.

A single male from Chet Ton, Jan. 1, 1920.

Length of hindwing 34 mm. Abdomen 28 mm.

Head comparatively small; eyes moderately contiguous; occipital plate large; frons flattened in front and shaped as two horse-shoe shaped areas separated by the suture which is deep. The eyes are blood red, paler below, the face dark ochreous and blood red on the frons and above, as is also the vesicle. Occiput dark reddish brown.

Prothorax with a very large posterior lobe which is fringed with long hairs. Reddish brown.

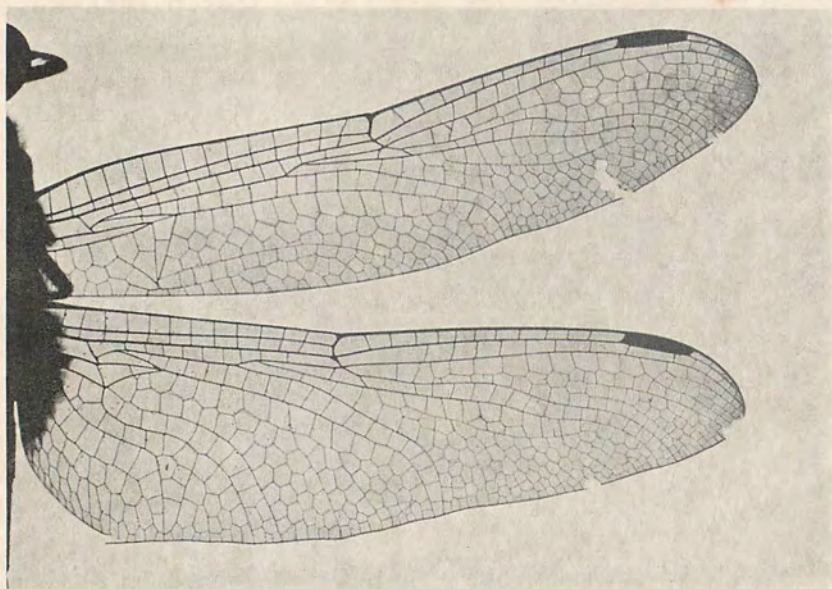
Thorax moderately robust, almost naked save on the front of dorsum, colour a golden, reddish brown.

Legs reddish, distal ends of femora and tibiae black; hind femora with a row of short, robust, moderately closely set and gradually lengthening spines; mid femora with fewer but longer spines. Tarsal claws robust, situated nearest the apex.

Abdomen dilated dorso-ventrally at the base, triquetral, tapering from base to apex, bright crimson without markings.

Anal appendages reddish, the superior as long as the 9th abdominal segment, inferior shorter, excavate above at the base and with two minute points at the end, the rudiments of a fissure.

Genital organs; lamina depressed, fringed with stiff, short, golden hairs. Its outer surface furnished with two long tufts of hair the ends of which are a little recurved; internal hamules blunt, strongly curved, converging hooks; external hamules small, flattened and not over lapping the lobe; lobe subquadrate, small.



F. W. CAMPION PHOTO.

*Crocorthetrum smithi.*



Wings hyaline, the extreme apical margin a little enfumed, the bases saffronated deeply in the forewing for about halfway to the 1st antenodal nervure, and in the hindwing to the 1st antenodal nervure and line of midrib of loop, extending back nearly to the anal angle.

Stigma dark reddish brown, over about 2 cells, equal in both wings, 3 mm; membrane dark grey; arc between the 2nd and 3rd antenodal nervures; trigone in the hindwing a little proximal to the arc; both trigones traversed once; costal side of trigone in forewing shorter than half the proximal; subtrigone 3 cells; discoidal field with 3 rows of cells as far as the node, widely dilated at the termen; *Cui* strongly convex; 1 cubital nervure in the forewing, 2 in the hind; all hypertrigones except that of the right hindwing traversed once; 2 rows of cells between *Rs* and *Rspl*; no supplements to the bridge; sectors of arc shortly fused in the forewing, a longer fusion in the hindwing; 15 antenodal nervures in the forewing, 10 post-nodals; loop well developed, long and narrow, extending 3 cells beyond the outer angle of trigone.

*Crocorthetrum smithi* resembles a *Crocothemis* superficially, but the large size of the posterior lobe of the prothorax and the position of the arc place it in very near relation to *Orthetrum*. The 2 cubital nervures in the hindwing will serve to distinguish it at once from any species of the latter genus. (I overlooked it at first examination, having mistaken it for *Crocothemis servilia* which it much resembles).

Type specimen deposited in the British Museum.

5. PALPOPLEURA SEXMACULATA Fabr.

2 females from Na Kram. These do not differ from type.

6. DIPLACODES TRIVIALIS Ramb.

3 males and 2 females from Na Kram. 2 females from Nong Nam Pi and Ban Siew respectively.

7. NEUROTHEMIS TULLIA TULLIA Drury.

A single female from Na Kram.

8. NEUROTHEMIS FULVIA Drury.

1 pair from Na Kram, 1 male from Ban Siew, and 1 male from Ban Nua.

9. *NEUROTHEMIS INTERMEDIA INTERMEDIA* Ramb.

8 males and 4 females from Ban Manao, Ban Nua, Ban Na An and Ban Na Sao.

10. *CROCOTHEMIS SERVILIA SERVILIA* Drury.

1 male from Na Kram and another from Ban Siew.

11. *TRITHEMIS AURORA AURORA* Burm.

Several of both sexes from Utaradit, Nong Nam Pi, Na Kram and Pak Tah.

12. *TRITHEMIS FESTIVA* Ramb.

1 male from Na Kram.

13. *BRACHYTHEMIS CONTAMINATA* Fabr.

2 males from Na Kram.

14. *THOLYMIS TILLARGA* Fabr.

Several of both sexes from Na Kram and 1 male from Nong Nam Pi.

15. *NEUROBASIS CHINENSIS* Linn.

4 males and 2 females from Na Kram.

16. *VESTALIS GRACILIS* Ramb.

Several males and females from Ban Manao, and Ban Na Sao. These do not bear any trace of a dark, apical fascia as in *apicalis*, but I am inclined to consider the former as a teneral variety of the latter.

17. *PSEUDOPHAEA MASONI* Selys.

1 male from Na Kram and 2 males from Pak Tah. These do not differ from type. The female of this species is apparently rarely seen, which accords with my experience of other members of the genus.

18. *MICROMERUS LINEATUS* Burm.

The markings on the first 6 abdominal segments vary widely but I regard this as merely an evidence of age, as some compare closely with specimens from Ceylon, whilst others are exactly similar to specimens from Dehra Dun, N. India. The specimens, males and 1 female were all taken at Pak Tah. All the males have a well developed, apical, black marking.

19. *COPERA MARGINIPES*.

1 male from Nong Nam Pi and a female from Na Kram.

## 20. COELICCIA MEMBRANIPES Ramb.

1 male from Na Kram.

It will be seen from the above that dragonflies were only collected from 11 out of the many camps at which the collector stayed, which explains the paucity of the collection.

Examples of all have been deposited in the British Museum.

