

**CERCION YUNNANENSIS SPEC. NOV.,
A NEW DAMSELFLY FROM YUNNAN, CHINA
(ZYGOPTERA: COENAGRIONIDAE)**

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Both sexes are described, illustrated and the new sp. is compared with *Coenagrion impar* Needham. Holotype ♂, allotype ♀: China, Yunnan prov., Zong-dian, 29-VII-1998, deposited at Shanxi University; paratypes of both sexes from same locality and date, deposited at Dali Teachers Training School, Dali, Yunnan, China. This is the eighth member of the genus known from China. The transfer of *Coenagrion impar* Needham to *Cercion* is suggested.

INTRODUCTION

Cercion Navas is an Euroasiatic genus; there are 9 species listed by DAVIES & TOBIN (1984). *C. barbatum* (Needham), (syn. *v-nigrum*), *calamorum* (Ris), *hieroglyphicum* (Brauer), *plagiosum* (Needham), *sauteri* (Ris), *sexlineatum* (Selys) and *v-nigrum* (Needham) (= *barbatum*) occur in China.

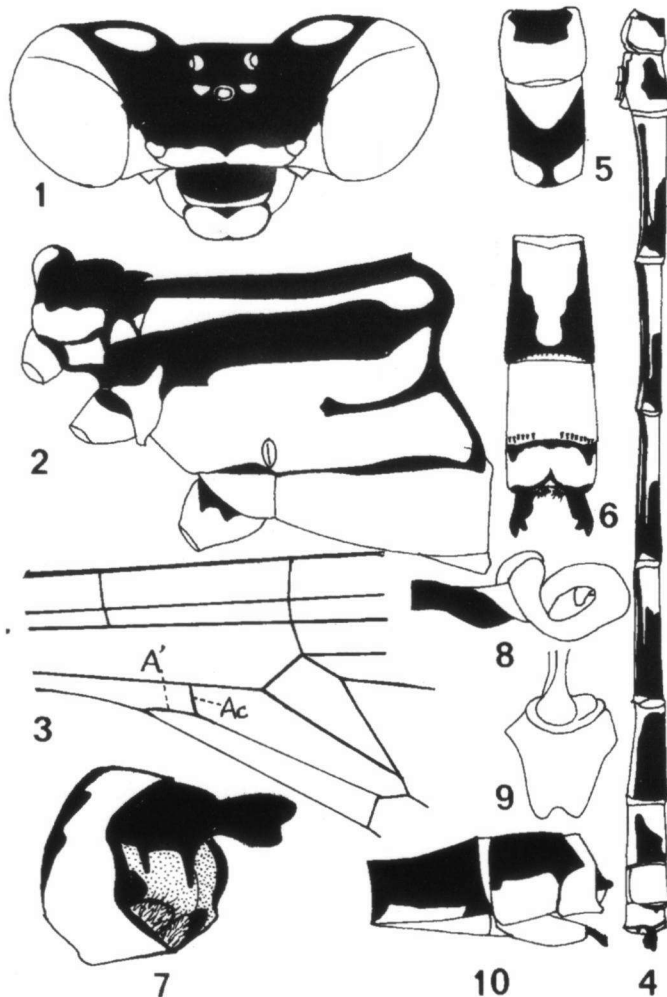
I assume that *Coenagrion impar* Needham is also referable to *Cercion*, since it possesses the generic characters of the latter (cf. HAMADA & INOUE, 1985), viz. Ac is shorter than A' (Fig. 3), and the superior anal appendages are longer than half of abdominal segment 10.

CERCION YUNNANENSIS SP. NOV.

Figures 1-10

Material. — Holotype ♂, allotype ♀: China, Yunnan prov., Zhong-dian, 29-VII-1998, Ben-yong Mao leg.; deposited at Shanxi University; — Paratypes: 4 ♂, 1 ♀ (broken), same locality and date; deposited at Dali Teachers Training School, Dali, China.

MALE. — H e a d (Fig. 1). — Antennae black, with yellowish on tip of segment 2; labium and labrum yellow, the latero-basal and lateral corner with black; surface of mandible, anteclypeus, gena and the front border of frons blue, prolonged along the eye margin to the base of the antennal second segment; top of head black, with a pair of small yellow spots outside the ocellus; the large long oval postocular spots blue.



Figs 1-10. *Cercion yunnanensis* sp. n., Yunnan, Figs 1-9 ♂, Fig. 10 ♀: (1) head; — (2) thorax, lateral view; — (3) base of hind wing, showing 1st anal crossvein (Ac) and 2nd anal crossvein (A'); — (4) abdomen, lateral view; — (5) abdominal segments 1-2, dorsal view; — (6) abdominal segments 8-10, dorsal view; — (7) abdominal segment 10 anal appendages, lateral view; — (8) penis, lateral view; — (9) same, ventral view. — (10) ♀, abdominal segments 8-10, lateral view.

T h o r a x (Fig. 2). — Prothorax with the anterior part of the first lobe, lateral part of mid-lobe and edge of post-lobe, yellow. Pterothorax black dorsum, the pale antehumeral stripes broader at each end; 2nd lateral stripes incomplete below and complete only for third lateral stripe. Wings hyaline, 14 postnodals in fore wing, and 13 in hind wing, A' longer than Ac, as in Figure 3 (see also HAMADA & INOUE, 1985). Legs black, only the basal dorsum of coxae yellowish.

A b d o m e n (Fig. 4). — Black, slightly shining metallic blue on basal segments, lateral two segments blue, segment 1 with a baso-dorsal black spot, an irregular large urn-shaped black spot on segment 2 (Fig. 5); each of the segments 3 to 6 marked with blue on the baso-dorsal half and with black on the distal-dorsal half, both invaded each other on the sides, the black stripes edged with yellow on the lower sides, and a pair of pale apical annules on these segments; segment 7 with dorsum broadly black and marked with a yellow basal ring, laterally yellow; segment 8 yellow, dorsum with an irregular large urn-shaped black spot, laterally blue; segment 9 wholly yellow; segment 10 yellow, with a narrow dorsal irregular black ring on each end (Fig. 6). Ventrally black.

Annal appendages (Fig. 7). — Black, the superior nearly as long as segment 10, bilobed at tip, the outers slightly longer than the inners, and armed with a long baso-downward directed inner tooth. Segment 3 of the penis pale yellow, shaped as shown in Figures 8 and 9.

M e a s u r e m e n t s (in mm). — Abdomen (incl. app.) 29; hind wing 22.

FEMALE (Fig. 10). — Similar to the male, however, the abdomen has a black dorsum, and only segment 10 is pale, and the dorsum is blue and edged on its hind margin with yellow and marked with a pair of triangular large basal-subdorsal spots. Anal appendages black, shortly conical. Vulvar scale yellow, robust, the distal style black, not extending beyond end of abdomen.

M e a s u r e m e n t s (in mm). — Abdomen 28; hind wing 24.

AFFINITIES. — The new species is similar to *C. impar*, from which it is differentiated as follows:

yunnanensis sp. n.

- thorax with 2nd lateral stripes, incomplete below (Fig. 2);
- 14 postnodals in fore wing;
- legs black;
- abdominal segments 3-6 with blue on baso-dorsal half and with black on the other half;
- superior anal appendages armed with a long baso-downward directed inner tooth (Fig. 7);

impar

- thorax without 2nd lateral stripes;
- 11 postnodals in fore wing;
- legs pale, darker on the outer side of femora and along the edges of tibiae;
- abdominal segments 3-6 black above except for a very narrow basal pale ring;
- superior anal appendages armed with a large baso-outward directed tooth (NEEDHAM, 1930).

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