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MORPHOLOGICAL REVISION ON NYMPHAL *EPHEMEROPSIS TRISETALIS* FROM EARLY CRETACEOUS JEHOL BIOTA

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Ephemeropsis trisetalis, one of the three representatives in famous Jehol fauna (E-E-L fauna) that widely distributed in the Lower Cretaceous of North Asia. This mayfly always represented by its large nymphs that reported in various localities of North China even Central and South China. These fossil localities include Inner Mongolia, Beijing, and Liaoning, Jilin, Hebei, Shandong, Henan, Zhejiang and Fujian Provinces. *E. trisetalis* have been also described from the Transbaikalia and East Mongolia. However, most of these fossil records are only briefly mentioned without morphological details. Here, we described the nymph of *E. trisetalis* in details on the basis of a few tens of new well-preserved material from Huangbanjigou, Beipiao City, West Liaoning (Lower Cretaceous, ca. 125 Ma).

The general morphology of nymphal *E. trisetalis* is in follows: relatively large aquatic insect (mature instars more than 5 cm in length); head oval shape, antenna thin and rather short, lateral compound eyes large, labrum semicircle in outline, mandible developed with pointed inner teeth, maxillary palp developed with three segments, the last one long and pointed, labial palp bear three segments; prothorax small, mesothorax and metathorax nearly equal in length, legs similar each other, single tarsal claw very long, thin and sharp, fore-wing sheaths large; 10 abdominal segments visible, first one mostly overlapped by metathorax, 2-8th with close length, each of 1-7th abdomeres armed with a pair of single gills, the posterior angles of the 8th and 9th abdomeres developed, 10th abdomere small; three circus long with close length, lateral circus armed with inner hairs and the middle one with lateral hairs.

The widely distributed *E. trisetalis* from the Early Cretaceous of China, however, their comparison, morphological variation have so far never been carefully studied even the exactly systematic positions of those reported material are unclear. Thus, the study of detailed morphology of nymphal *E. trisetalis* aimed at erecting a comparable model for these common aquatic insects. The significant of this work may provide valuable stratigraphic information by using the morphological comparison of this representative insect.