

## DRYOPIDAE:

### 1. Check list and bibliography of the Dryopidae of China (Coleoptera)

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#### Abstract

All species of Dryopidae hitherto recorded from China are listed alphabetically. The genera *Helichus* ERICHSON, *Elmomorphus* SHARP and *Sostea* PASCOE are recorded for the first time from China. A bibliography including all relevant papers on the Dryopidae of China and neighbouring countries is added.

**Key words:** Coleoptera, Dryopidae, China, check list

#### Introduction

To date, about 240 species and 24 genera of Dryopidae are recorded in the world fauna. According to BROWN (1981) the family is most diverse in the Oriental and Neotropical Realms.

Dryopids are ecologically and morphologically very diverse. They live in many types of aquatic, semiaquatic and terrestrial habitats.

All aquatic dryopids display obvious adaptational modifications. Those groups confined to running water evolved microplastron respiratory structures and long legs with large claws. The distribution of most of the running water species can be correlated with the zonation along streams, with the presence of plant debris, and with particular types of substratum and temperature.

Stagnant water species and riparian species possess macroplastron structures. Generally, they are more widely distributed and not so strictly adapted to microhabitats.

The entirely terrestrial groups lack plastron structures and are found in forest leaf litter, flood debris, and in arboreal habitats.

However, the biology of dryopids still is understood very poorly. The morphology of their mouth parts indicates that they feed on periphyton and plant debris.

Dryopids usually undertake dispersal flights that are restricted to a short period of time after emergence from pupation.

The larvae of *Helichus* and *Dryops* occur in moist soil near the aquatic habitat of the adults.

#### Check list

##### 1. *Dryops auriculatus* GEOFFROY, 1785

Distribution: Euro-Sibirian; "Northeast China" (LAFER 1980).

##### 2. *Dryops fiorii* OLMI, 1986

Distribution: Xinjiang (OLMI 1986: 589).

**3. *Dryops lutulentus* (ERICHSON, 1847)**

Distribution: Mediterranean, Central Asia; Xinjiang (OLMI 1986: 592).

**4. *Helichus haraldi* KODADA & JÄCH, 1995**

Distribution: Yünnan (KODADA & JÄCH 1995: 232).

**5. *Helichus lareynioides* CHAMPION, 1924**

Distribution: India (Uttar Pradesh) (CHAMPION 1924: 236); Yünnan (KODADA & JÄCH 1995: 230).

**6. *Helichus crenulatus* KODADA & JÄCH, 1995**

Distribution: Yünnan (KODADA & JÄCH 1995: 233).

**7. *Helichus ussuriensis* LAFER, 1980**

Distribution: Russia (Primorye) (LAFER 1980: 47); Japan (SATÔ 1985a: 54, 1985b: 434); Liaoning (KODADA & JÄCH 1995: 233); ? North America.

**8. *Pachyparnus dicksoni* (WATERHOUSE, 1878)**

Distribution: Taiwan (WATERHOUSE 1878: 492, BOLLOW 1940b: 54).

**9. *Pachyparnus formosanus* BOLLOW, 1940**

Distribution: Taiwan (BOLLOW 1940b: 56).

**10. *Pachyparnus gressitti* (HINTON, 1936)**

Distribution: Taiwan (HINTON 1936: 165).

**11. *Pachyparnus indicus* (WATERHOUSE, 1876)**

Distribution: "India" (WATERHOUSE 1876: 20); Taiwan (BOLLOW 1940b: 48) - doubtful record.

**12. *Pachyparnus konoï* BOLLOW, 1940**

Distribution: Taiwan (BOLLOW 1940b: 54).

**13. *Pachyparnus whiteheadi* (WATERHOUSE, 1900)**

Distribution: Hainan (WATERHOUSE 1900: 310, WU 1933: 338, 1937: 498).

**14. *Praehelichus longus* (SOLSKY, 1876)**

Distribution: Caucasus to Central Asia (BOLLOW 1940b: 40); Xinjiang (BOLLOW 1940b: 40).

**15. *Praehelichus sericatus* (WATERHOUSE, 1881)**

Distribution: Beijing (WATERHOUSE 1881: 411, WU 1933: 338, 1937: 498, BOLLOW 1940b: 44), Xinjiang (BOLLOW 1940b: 44), Sichuan (BOLLOW 1940b: 44).

**16. *Praehelichus sinensis* (FAIRMAIRE, 1888)**

Distribution: Beijing (FAIRMAIRE 1888a: 116, WU 1933: 338, BOLLOW 1940b: 42); Sichuan (BOLLOW 1940b: 42), Tianjin (BOLLOW 1940b: 42).

Note: This species was misspelled ("*Helichus chinensis* FAIRMAIRE" [sic !]) by ZAITZEV (1910) and WU (1933, 1937).

**17. *Malaiseanus tuberculatus* BOLLOW, 1940**

Distribution: Yünnan-Burma border (BOLLOW 1940a: 9).

## Discussion

The generic assignment used herein follows NELSON (1989, 1990). However, none of the Chinese dryopid genera listed above has ever been revised thoroughly, and it can be expected that additional synonymies will be established.

Numerous new species, especially in the genus *Elmomorphus* SHARP, await description. Several hundred specimens were collected by the China Water Beetle Survey in the years 1992 - 1994. The material contains numerous *Elmomorphus*, four species of *Helichus* ERICHSON, a few *Sostea* PASCOE and one species of *Praehelichus* BOLLOW.

Several species which are not listed in this paper were recorded from neighbouring countries: Japan (SHARP 1888, NOMURA 1959, SATÔ 1985a, 1985b), Vietnam (DELEVE 1968, 1974, FAIRMAIRE

1888b), Burma (BOLLOW 1940a, 1940b, GROUVELLE 1892), North India (CHAMPION 1924, GROUVELLE 1912, 1913, OLMÍ 1978), Bhutan (SATO 1977), Nepal (OLMÍ 1986, SATO 1981), Afghanistan (DELEVE 1967, OLMÍ 1975), Russia (LAFER 1980, 1989).

In addition to the genera listed herein, YANG (1994) recorded the Neotropical *Elmoparnus* SHARP from China. This record is obviously due to a confusion with *Elmomorphus*.

The lucanid *Cladophyllus oberthuri* HOULBERT was listed erroneously as a dryopid by WU (1933, 1937).

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