

Colorado Insect of Interest

Western Dobsonfly

Scientific Name: *Corydalus texanus*
Banks

Order: Megaloptera (Fishflies and Dobsonflies)

Family: Corydalidae (Dobsonflies)



Figure 1. A male western dobsonfly *Corydalus texanus*, collected from Mesa County.

Identification and Descriptive Features: Dobsonflies are impressively large (7-11 cm) flying insects with gray, highly veined membranous wings that fold over their back. Adults also possess prominent jaws, which are greatly enlarged in the males. Immature stages (hellgrammites), found in water, similarly have prominent jaws and an elongate body form with fleshy projection along the sides of the abdomen (Fig. 4).



Figure 2. Adult male (left) and female (right) of the western dobsonfly, collected in Mesa County.

Distribution in Colorado: This species is associated with larger rivers. In Colorado, dobsonflies are most commonly noted in Mesa County near the Colorado River. However, they also occur in parts of all the major western Colorado river systems (Dolores, Green, White, San Miguel, Gunnison) and are also found in the Purgatoire River as it runs through Las Animas and Otero counties.

Life History and Habits: Adult dobsonflies emerge beginning in early June and are present through midsummer, with peak numbers usually found in July. The sexes are easily determined because of substantial differences in the mouthparts. Those of the females are shorter but with curved cutting edges and they are capable of producing a painful pinch. Jaws of the males are substantially elongated and thinner, projecting forward from the head. These are apparently used in stylized mating behaviors and during fights for defense of territory, when the jaws are used to scoop or flip rival males. However, despite their fearsome appearance the jaws cannot be used for feeding nor are they strongly muscled. Both sexes



Figure 3. Dobsonfly egg mass laid on a leaf overhanging a river.

may be attracted to outdoor lights at night. Males tend to disperse longer distances from the riverways.

Eggs are laid in white masses (Fig. 3), about the size of a quarter, usually on vegetation hanging over the streams. The under surfaces of bridges are also particularly good spots to find egg masses. Larvae hatching from the eggs drop into the water and begin their development.

The immature form of a dobsonfly develops in water and is known as a *hellgrammite*. These are top predators, feeding on larvae of caddisflies, black flies and other aquatic insects. (They are also prized as a fish bait.) After a year of development - or perhaps two years - the larva leaves the river and builds a pupation chamber under rocks or logs near stream margins. Adults hatch after a few weeks and have a short life span.



Figure 4. Hellgrammite, the larva of a dobsonfly. This one was collected from the Dolores River, near Gateway.