

THE IMPORTANCE OF DRAGONFLIES IN  
*ALHAGI PSEUDALHAGI* (M. BIEB.) DESV. EX WANGERIN  
PEST ELIMINATION

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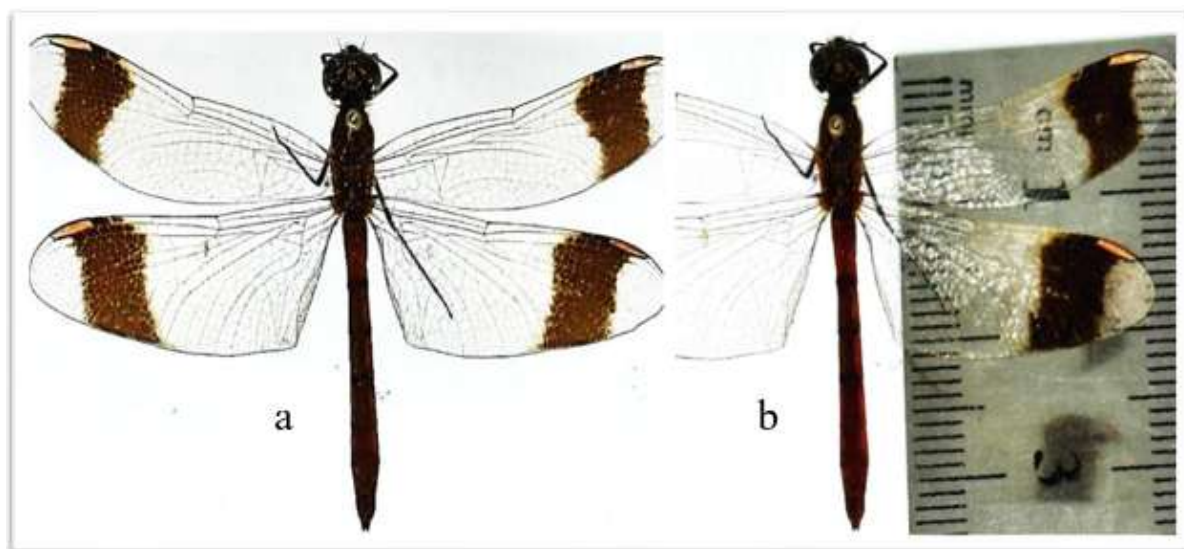
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**Annotation.** Dragonflies (Odonata), the oldest representatives of the class of insects are predatory insects and are important in biological control in natural processes. This article highlights the importance of dragonflies in the loss of plant aphids (*Aphis gossypii*).

Violation of the ecological balance leads to a decrease in the diversity of the world of plants and insects and a reduction in their range. Dragonflies considered the oldest representatives of the class of insects are predatory insects and perform a natural biological control function in keeping some medicinal plants including *Alhagi pseudalhagi*, free from pests. Studying such natural biological processes in the current rapidly expanding urbanization is one of the important urgent tasks of preserving biodiversity.

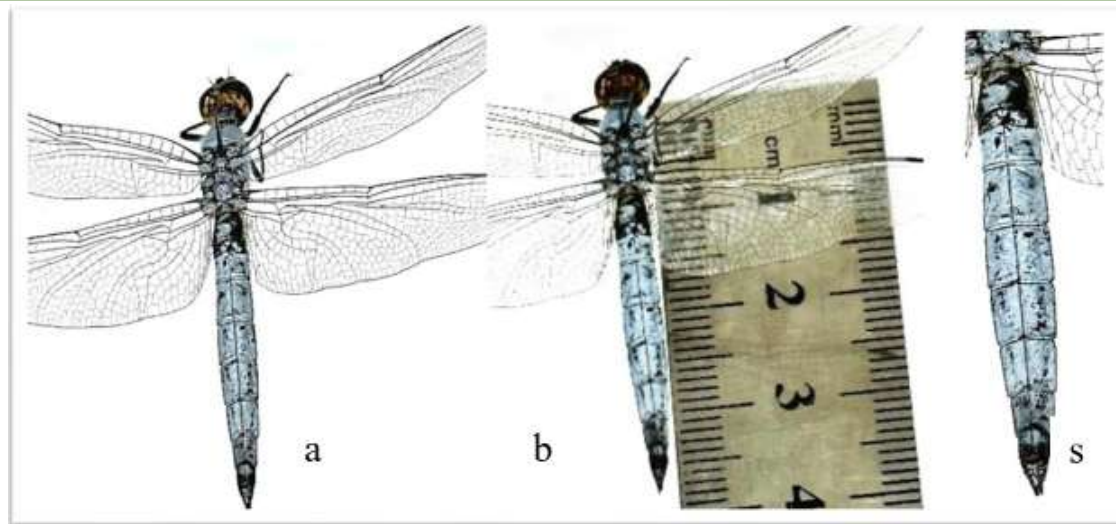
**Methods and methodology:** The number of aphids was studied on a 5-point scale, the species of dragonflies were identified using the detectors " Identification of insects of the European part of the USSR " [1] and " Identification of insects" [2].

**Result and Discussions.** Pest attack is a huge disaster for medicinal plants. The object of our research is false sedum (*Alhagi pseudalhagi*) - a perennial herb, 50-110 (130) cm tall. The lower spines of the plant are hard, 18-25 (30) mm long, 0.5-1 mm thick. It blooms in May-August, fruits and seeds in September-October. During the period of intensive growth of the plant, we found a lot of aphids on its branches. The highest amount of plant sap was observed during the budding and flowering periods of false berry. During the period of rapid growth of the plant, the level of encounter of aphids on the branches and leaves corresponded to the II-III point scale, on average about 950-1000 plant aphids were encountered in 10 plants. As the number of aphids on the plant increased, it was noted that dragonflies flew in search of their prey. It was noted that *Sympetrum pedemontanum* (Müller, 1766), *Orthetrum brunneum* (Fonscolombe, 1837) settled on plant branches [3, 4, 5]. We carried out observations on plants. *Sympetrum pedemontanum* is a European species in the Libellulidae family. Males and females of this species have a red belly, and the difference is the presence of a wide black stripe on the outer part of each wing. They usually fly low over vegetation and are camouflaged by their colorful, spotted wings. Imagali hay grows in sparse and flooded meadows, near water. (picture.1)



Picture.1 *Sympetrum pedemontanum* (Müller in Allioni, 1766): a-general appearance; b-the length of the insect.

*Orthetrum brunneum* this species mainly prefers small streams, canals and ditches with shallow, rapidly warming water. Adults are 40-45 mm long. Usually their sizes are larger than the average *Orthetrum coerulescens*. The abdomen and chest of males are light blue, females are yellowish-brown or gray-brown. The abdomen is relatively flat, with a thin median black line and distinct dots on each segment. The wings are hyaline, yellow or light brown, 66-70 mm wide. (picture.2)



Picture.2 *Orthetrum brunneum* (Fonscolombe, 1837): a-general appearance; b- body length; s- tail.

We met 2-3 dragonflies on one plant. During the generation period, female dragonflies become very greedy. Therefore, during this period, it was observed that they fly to the orchards in the first half of the day and fly away in the afternoon. In a week, we found almost no aphids on the false apple plant. In orchards where dragonflies were not recorded, it was noted that the stems and leaves were covered with a lot of sap even during the fruiting period. During the flowering period of the plant, it was noted that due to the activity of dragonflies, it had a positive effect on their pollination.

At the stage when quality changes occurred in the plants in the study area, a small amount of sap was recorded. Because we did not meet dragonflies in the research areas during this period.

Conclusion: The results of a practical study on the importance of dragonflies in the elimination of aphids (*Aphis gossypii*) on the *Alhagi pseudalhagi* showed that the false sycamore plant is one of the breeding stations for aphids, which are food for dragonflies. Due to their natural food chain, dragonflies are one of the most effective entomophages in killing aphids (*Aphis gossypii*) on *Alhagi pseudalhagi*. Dragonflies can be used to control pests in other medicinal plants.

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