DOI: 10.55278/WGDF6587

Outbreak of common banded awl butterfly, *Hasora chromus* (Cramer) (Hesperiidae: Lepidoptera) in Bangalore

Suresh R. Jambagi*, Bhargava C. N[1]., Vinoda[1] and Vighnesh[2]
[1]Department of Entomology, UAS GKVK Bangalore, Karnataka, India-560065
[2]Department of Agronomy, UAS GKVK Bangalore, Karnataka, India-560065
****Corresponding author: jambagisuru@gmail.com***

Introduction

Butterflies, the flying jewels, serve human society economically and environmentally because of their undeniable beauty and ability to pollinate, a fundamental ecological process in natural sustainability around the world. Butterflies are important pollinators and are an important part of the life support system (Suryanarayana *et al*., 2015). Besides acting as pollinators, few butterfly species have economic importance as pests of several crops. Lepidopteran families like Hesperiidae, Papilionidae and Nymphalidae have major role as defoliators of several agricultural and forest crops, causing intensive damage. *Millettia (=Pongamia) pinnata*, often known as karanja, is a leguminous oil-producing multifunctional tree that can withstand a variety of environments. The tree is famed for its insecticidal properties, but it is also attacked by a variety of insect pests, reducing its overall vigor and oil yielding ability.

The common banded awl, *Hasora chromus*, is one of the principal defoliator pests, causing severe leaf losses and in extreme situations, total defoliation. This pest has recently been noticed fluttering in large numbers in the University of Agricultural Sciences, Gandhi Krishi Vigyana Kendra (UAS-GKVK) Campus (13°04'30.4"N, 77°34'46.4"E) (Figs. 1&2). During the pest occurrence, entire tree looked dried without leaves. All the karanja trees in the campus were almost infested heavily by *H. chromus* with 90 - 100% defoliation. Occurrence of the skipper was characterized by presence of numerous larvae on leaves, pupae in folded leaves and activity of adults were also noticed in and around the karanja planted area. Outbreak of *H. chromus* was also recorded earlier in HSR layout and NBAIR Yelahanka campus (Anonymous, 2016b).

Occurrence, Habit and Habitat

The Indian subcontinent, Southeast Asia (including the Malay Peninsula and the Indonesian archipelago), South China, Okinawa, Japan, Papua New Guinea, and Australia are all home to the common banded awl. It extends up to 7,000 feet in the plains and slopes (2,100 m). It can be found in both the forest and open land, in both light and heavy rainfall locations. The common banded awl, or Coeliadinae subfamily of skippers, is

the most abundant in India. It has a whirring, fast flight that may be heard at close range. It is less sun-sensitive than other awls, and it is frequently seen soaring among shrubs in full sunlight. It can be spotted early in the day visiting flowers and basking on leaves, frequently with its wings slightly separated. It closes its wings and rests.

Life cycle

Eggs: It lays single eggs both above and below on young shoots or fresh leaves. When the egg is laid, it is pinkish white, dome-shaped with a flattened top and minute longitudinal ridges. These have delicate transverse striations and are bead patterned. As the egg matures, it turns a dirty white color.

Figure 1: Completely defoliated Pongamia/ Karanja tree at UAS GKVK campus due to *Hasora chromus* (Image by: Suresh R. Jambagi)

Figure 2: Severity of banded awl skipper, *Hasora chromus* on *Millettia pinnata* (Image by: Suresh R. Jambagi)

Larva: The caterpillar is cylindrical in shape, with a constricted second segment that resembles a neck with a black collar. The head is lobed, spherical, and the colour is yellowish red. The caterpillar is yellowish black in colour with brown sides ranging from light to dark brown. The markings are really varied. The caterpillar's underside is yellow-tinged greenish white. The green, coupled with the dark patterns, can sometimes cover the entire body. When the caterpillar is first hatched, it eats the eggshelf in bits and scurries off to a leaf, where it quickly constructs a cell for itself. It is active when young but becomes inactive as it matures. Only when the light is very low and at night does the caterpillar venture out to feed.

Figure 3: Pupation of *H. chromus* on different vegetation adjacent to karanja trees (Image by: Suresh R. Jambagi)

Pupa: The pupa is robust, pale brown, and has a conspicuous projection on the head between bulbous eyes, as well as a white belly. It will pupate in the folded fresh leaves and show shelter building behavior. During the intense infestation, it is observed that the larva can pupate in the vegetation (weed plants) present in around the main host (Fig. 3).

Adult: The wings of adult butterfly are entirely covered with scales and are brownish black in color. Male butterfly wings are unmarked, whereas female butterfly wings feature two spots on both sides of the fore wings and a horizontal white band on the lower side of the hind wings in both sexes. Adult butterflies are quite active. The antenna is long and progressively grows larger towards the tip, having a hook-like projection on the terminal segment.

Host range: Larva of *H. chromus* recorded on many host plants but its intense defoliation is noticed in castor, Indian beech (karanja/ pongemia), orange climber, *Derris scandens* and *Heynea trijuga.*

Management

Even though the trees were heavily damaged/defoliated by skipper, soon they rejuvenated after receiving early monsoon showers during May and larval population was also reduced drastically. Meanwhile, the activity of many insectivorous birds feeding on caterpillars was noticed. As per the earlier report, *Crinibracon chromusae* Gupta and van Achterberg (Hymenoptera: Braconidae) act as a pupal parasitoid of *H. chromus* (Anonymous, 2016a; Anonymous, 2017; Rani *et al*., 2020). Hence, there is no need to use any insecticides.

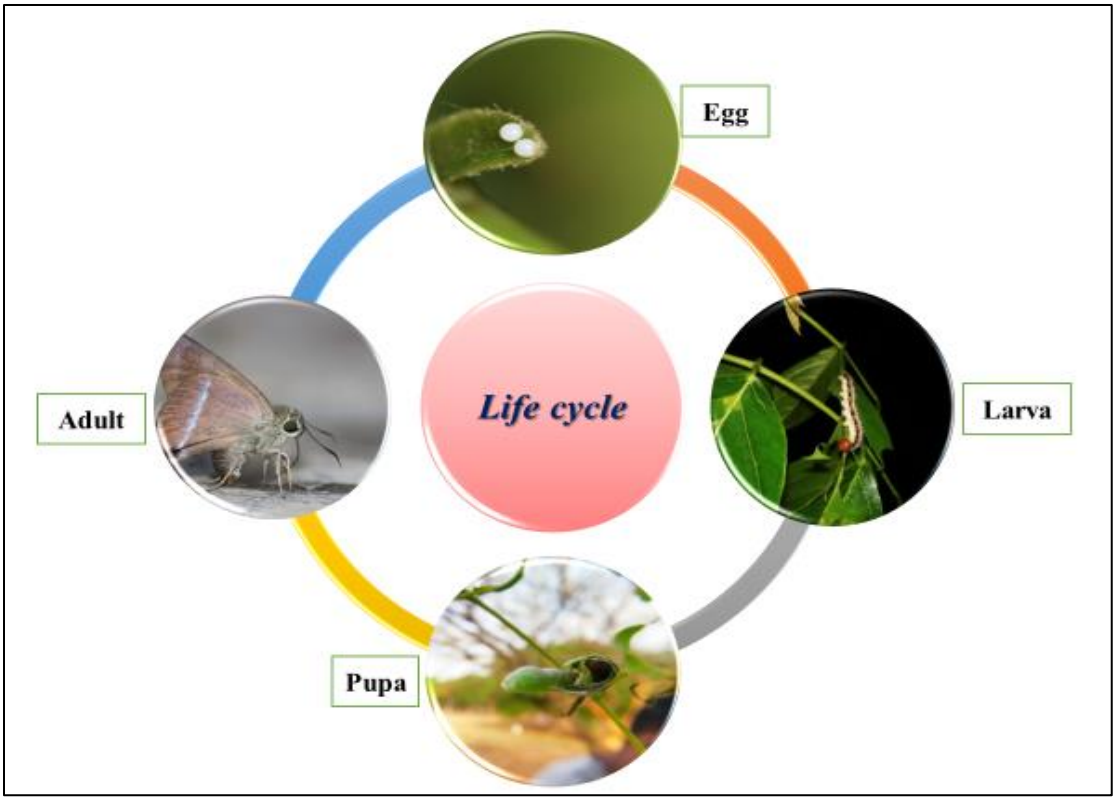

Figure 4: Different life stages of common banded awl skipper, *Hasora chromus* (Image by: Suresh R. Jambagi)

References

Anonymous, 2016a. High incidence of the skipper *Hasora chromus* in Bengaluru. *NBAIR News Letter*, **8**(1):2. https://www.nbair.res.in/sites/default/files/201812/NBAIR%20Newsletter%20%28March%202016%29.pdf

Anonymous, 2016b. Skipper- *Hasora chromus* (Cramer) in transient stage fluttering in and around Bangalore. https://www.nbair.res.in/sites/default/files/201901/Skipper%20outbreak_0.pdf

Anonymous, 2017. All India Co-ordinated Research Project on Biological Control of Crop Pests: Project Coordinator's Report. *XXVI AICRP Workshop on Biological Control of Crop Pests 16-17 March, 2017*, pp. 4. https://www.nbair.res.in/sites/default/files/2020-05/Report%202017.pdf

Devika Rani, D., Jagadesh, K. S. and Jemla Naik, D., 2020. Biology of the common banded awl, *Hasora chromus* Cramer (Lepidoptera: Hesperiidae) on *Pongamia pinnata* at Bengaluru. *Journal of Pharmacognosy and Phytochemistry* **9**(1): 2086-2089.

Suryanarayana, K., Harinath, P., Meerabai, P., Venkata Reddy, M. and Venkata Ramana, S. P., 2015. Life cycle of the common banded awl *Hasora chromus* (Cramer) (Lepidoptera: Rhopalocera: Hesperiidae) from Southern Andhra Pradesh. *Cibtech J Zoo* **4**(1): 45-51.

MS Received 30 April 2022
MS Accepted 12May 2022