

LISTEN TO THE SOUNDS AT NIGHT

A teacher and her student together discover one of nature's secrets – the death head hawk moth's squeak

By Geetha Iyer

Squeak! The sound was unusual and loud! It stopped me from opening the door to my house. I waited and then, picking up courage (it was 10 pm), once more lifted my hand to the door knob, only to be greeted by a louder squeak. The next squeak was so loud that it had both me and the student who had joined me, jump an inch or two. I switched on the light. Excited, we began searching for the culprit, trying to locate the source of the sound. The search led us to something dark – the size of a large cockroach sitting on one of the wooden frames of the roof – and squeaking! It took me and my wildlife-loving student a minute or two to realise that



we were looking at a moth. "That's a Death Head Hawk moth," announced the young naturalist. "Do moths make a sound?" Night sounds are generally that of insects, predominantly crickets and frogs soon after the monsoon. Some cicadas chirp loudly during twilight, but moths? This was new to us. I'll never forget that night when a little boy and I together, discovered for ourselves, one of nature's secrets – that moths too contribute to the night sounds!

Three species

There are three species of Death Head Hawk moth; two are found in South-east Asia, the third in Europe. *Acherontia styx* and *Acherontia lachesis* are commonly seen all over India. The stream-lined body, with pointed wings and bulging eyes, are characteristic of hawk moths. The prominent skull-shaped markings on the thorax gives them the name 'Death head'. The reason for such a design is yet to be discovered. The skull-like markings on the thorax, the cloak-like wings, covering a body with banded



Acherontia styx.

patterns and the mouse-like squeak, have all contributed to several sinister and supernatural myths.

Acherontia styx

In Greek mythology, Styx is the River of the Dead. *Acherontia* comes from the word Acheron which is also a river in Greece – a branch of River Styx. *Lachesis* is one of the three Moira

from Greek mythology who could cut the thread of life. These moths have featured in several crime-related stories and films, a prominent one being the 'Silence of the Lambs'.

However these moths do not deserve such a reputation. The only living species that has to fear them would be the honeybees. These hawk moths are beehive raiders, and love to

gorge on honey. Research by scientists shows that they can mimic the odours of the bees to avoid detection. A comparison of surface hydrocarbons from the bodies of both moths and bees reveals that the four fatty acids in bees are found in the moths too. So the odour-dependent bees are fooled by these moths who are 'invisible' to them. A strong and hardy



Acherontia lachesis. Photos: Author.

proboscis helps to suck honey directly from the comb.

Honey effect

It is said that the squeaky noise is used to pacify the bees. The sound is produced by expelling air from the proboscis. There's a small internal flap called the epipharynx at the base of the proboscis, whose rhythmic movements help open and

close the mouth to draw and expel air. But the proboscis is also required to extract honey from the combs. Scientists have found that soon after drinking the honey, the moths are unable to squeak for at least five hours. A well-fed moth may at best produce only a clicking sound. If the moth fails to escape after feeding it can be mauled by the bees. There are

instances of beekeepers having found dead moths in their hives.

Thinner antennae

The moth generally rests with its wings folded, covering the abdomen completely. When disturbed it raises its body from the surface, partially opening and raising the wings and emitting a squealing note. (*Acherontia lachesis* can be distinguished from *Acherontia styx* by the red scales which look like a band under the skull mark.) Generally, their bodies are not as streamlined as the other hawk moths. The females especially are stouter, with broader and rounded wings, and thinner antennae.

The eggs of the moth are green or grayish blue in colour, laid singly under old leaves of plants of Solanaceae, Verbenaceae, Oleaceae and Bignoniaceae. The larvae moult at least five times, are stout, about 120–130 millimeter, after the final moult. The caterpillar has a prominent tail horn, is green, brown, and yellow. When threatened it makes a crackling noise by clicking its mandibles and, sometimes, may even bite. It pupates in a small chamber underground. The entire life cycle takes about 52 days. Look out for them between May and September.

(This series is coordinated by Kalpavriksh.)