

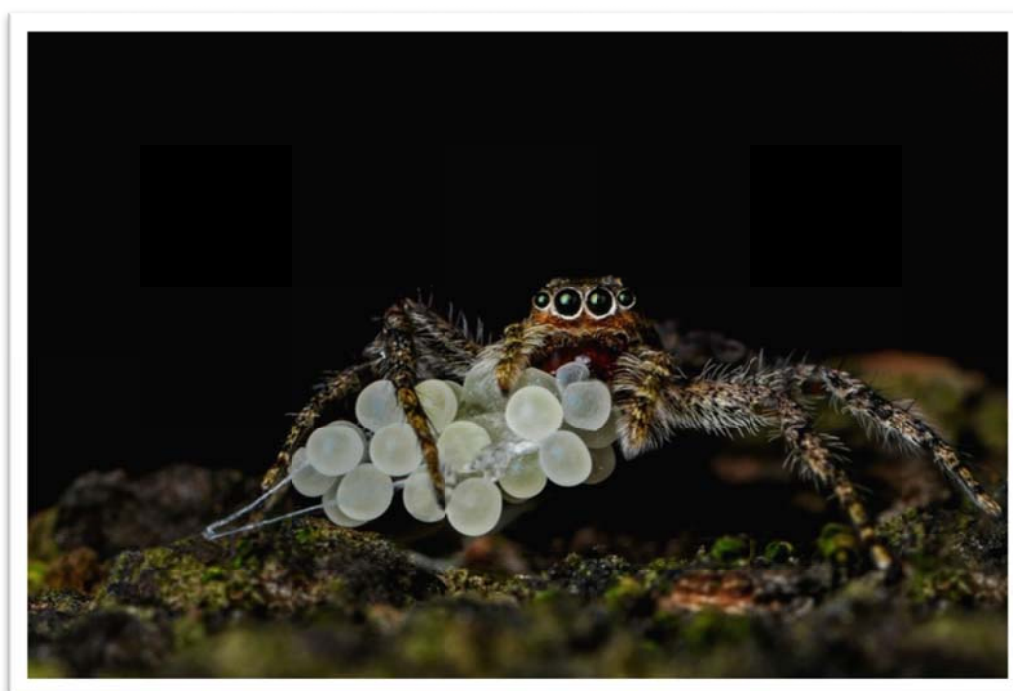
SPIDER [The Ultimate predator]

BY ARUNAVA DEY



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Spiders and their relatives are called arachnids. Scientists have grouped them together into a class called Arachnida. A spider's body is in two sections. The head and thorax, bearing the eyes, mouthparts and legs, are fused together to form the cephalothorax. This is joined by a slim waist (pedicel) to the second body section, the abdomen, on which are found the silk spinning organs (spinnerets), the reproductive openings and the breathing organs (book lungs and/or tracheae).



The number of spider species known in India have risen steadily from 1067 species (Tikader, 1987), 1442 species (Siliwal et al., 2005), 1520 species (Sebastian & Peter, 2009) to 1686 species (Keswani et al., 2012). Presently, 1907 species under 490 genera in 61 families are known as per official record.

All spiders are predators. Because of their abundance, they are the most important predators of insects. Spiders are primarily carnivores that eat smaller insects. The unbeatable fact is that spiders are beneficial to humans in multiple forms. Their presence plays an important role in the gardens and farms; they control the pests in crops and also reduce level of chemicals in food products. Spiders also have some adaptations that set them apart from other arachnids. They are also a source of food for other creatures, such as birds and wasps. Thus, the presence of spiders is an ecological indicator signaling the health of natural ecosystem.



Heavy-bodied jumper (*Hyllus semicupreus*) catch Green Crab Spider

The 43,000 plus spider species reveal an amazing diversity. Their habitats, their reproductive behaviors, their life spans and their appearances all vary significantly. So do their hunting styles. In this write up with support of photographs, I am explaining the predatory behavior of different types of spider in India. I have been capturing spider behavior just like food habit , reproductive behaviors, & hunting skills since 2019. I have used my Nikon D7500/D5300 camera with manual settings with 70-300mm Nikon lens and macro filter with Manual Flash & Homemade Flash Diffuser.

Here I discuss some identified common spiders species and their predatory instinct.

Crab Spiders [Thomisidae]: The Thomisidae are a family of spiders, including about 170 genera and over 2,100 species. Crab spiders don't use webs, but they are Great ambush predators. They hunt just like Leopard wait and wait and attack . They sit and wait for prey. The crab spider will stay put in its hunting spot for days or even weeks, sometimes changing color with its surroundings (camouflaged). One fine morning, I saw a bee sitting on a flower for a long time without any movement of any activity. This inactivity on the part of the bee was very intriguing. When I got close, I saw the bee had become a victim of a beautifully camouflaged crab spider. But when I saw the spider I realized that the crab was also busy in mating. This was my first encounter with a crab spider since then I started the documentation of spider behavior.

1. Thomisus spider- White Flower crab spiders



2. Oxytate spider- commonly known as grass crab spiders



Wolf Spiders [Lycosidae]: wolf spider, also called ground spider or hunting spider, any member of the spider family Lycosidae (order Araneida), a large and widespread group of spider in India. Wolf spiders are extremely common both indoors and outdoors. They are often seen under rocks and pieces of wood. These spiders run quickly over the ground in search of prey. Most wolf spiders are gray, black, or brown, and are somewhat hairy. After laying her eggs, female wolf spiders of many species will carry their egg sacs until the eggs hatch. Upon hatching, the spiderlings will then "ride" on the mother's back until they are ready to hunt on their own.



Lynx Spider: Lynx spiders are great hunters commonly associated with the shrubby and grassy small woods. They are also found in gardens, or watery grassland of rural India. They are very aggressive hunters sometimes cannibal. They position themselves in top or stalk of the leaf, in areas likely to attract insects. They have good eyesight and, when potential prey comes within range, they spring out and chase them down. Lynx spiders are exceptionally acrobatic when they have to be, leaping from branch to leaf in the chase.

i. Green lynx spider [*Peucetia viridians*]



ii. Oxyopes spider



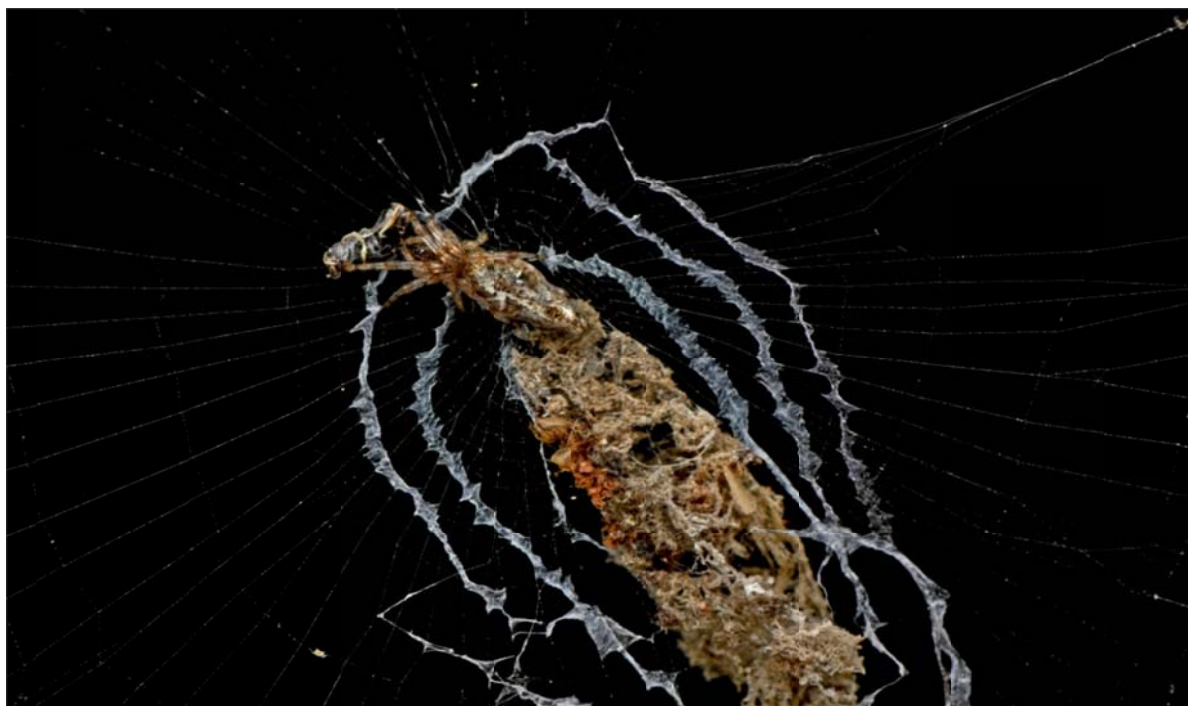
Cannibalism of Lynx spider

iii. Tapponia spider



Big Orb Spider [Araneidae]: They are always recognized by their big Orb and their great creation. They are the most common group of builders of spiral wheel-shaped webs often found in gardens, fields, and forests all over India.

a. Cyclosa spider



b. Neoscona punctigera [Ghost Spider]



Argiope sp. The Signature Spider (Argiope Anasuja) is also known as the Writing Spider and the Garden Spider. It is commonly found in India often in one's garden or backyard. Recently someone visiting my house mentioned that I had a signature spider at my front door. I went to look and was so interested by the zigzag pattern on its web which gives it the name **"Signature Spider"**



Jumping spiders [Salticidae] : Members of the largest spider family (more than 5,000 species), jumping spiders, are diurnal and love to hunt in the sunshine. Unusually pretty for arachnids, they come in often brightly

colored, strikingly patterned & sizes. They range in size from 2 to 22 mm (0.08 to 0.87 inch), although most are small to medium-sized. They are very common in India.



Phaeacius lancearius. **Family:** Salticidae (jumping spiders) BARK JUMPING SPIDER

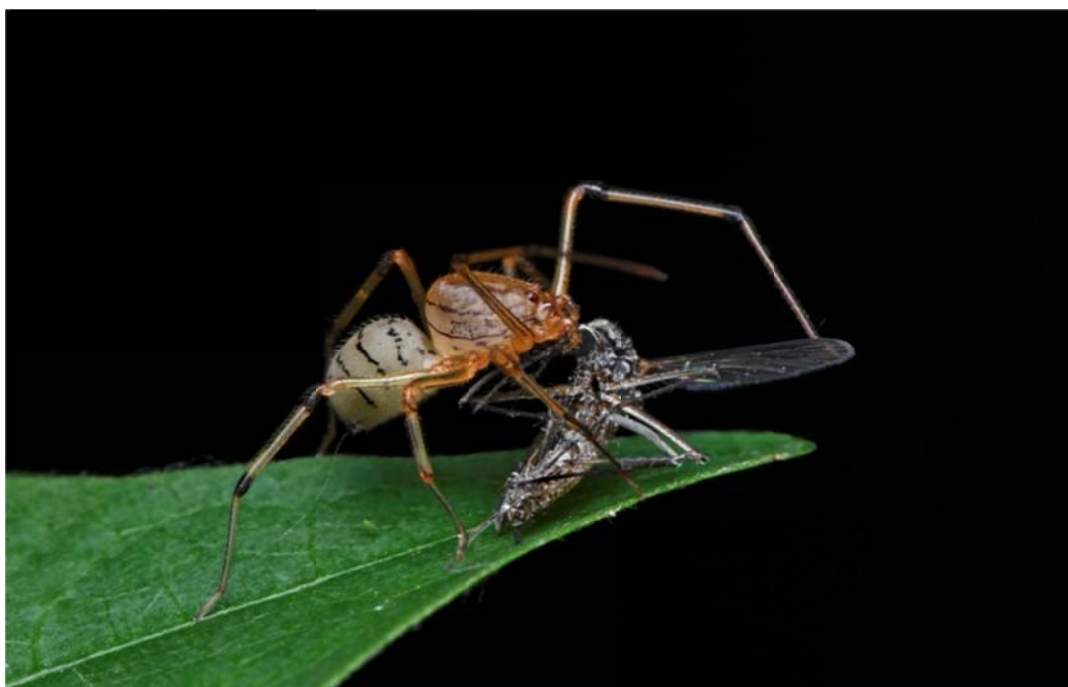


Epeus indicus (F) **Family:** Salticidae (jumping spiders)



Telamonia dimidiata (F) **two-striped** jumper spider

Spitting spiders (Scytodidae) : A common in the time of rainy season in the local woods of West Bengal. I am unable to understand why they are invisible other time. In rainy season they are found in the top of the rounded leaves with their eggsack.



Ant-mimicking jumping spider [Myrmarachne] : They act like an ant, that's why they are called antmimicking spiders. Most species are daytime hunters and live together with ants, mimicking their behavior and sometimes even possessing their chemical traits.



Corinnid sac spiders [Corinnidae] :

The Corinnidae formerly belonged to the Clubionidae, but are now considered a separate family. The spiders are very fast and small to medium in size with long thin legs. They occur on leaves or bark of trees and hunt in the open and on tree trunks. A number of species are ant mimics and move as such.



Tetragnathidae: Commonly called “Long-jawed Orb-weavers” these, as the name partly suggests, build an orb-shaped web, yet, these are not the original Orb-weavers. They go by their name, though, since they have longer pedipalps and chelicerae, “long-jaws” that build orb-webs. However, the orb webs built by these are usually at an angle, or horizontal.

Long-Jawed Orb Weaver – Tetragnatha spider



Tree trunk spiders [Hersiliidae]: “Two-tailed Spider” is a common spider, found on tree trunks and sometimes on wet walls. It is called so because of its two extra-long spinnerets that appear like tails. This spider is not large, but has considerably long feet, and stays motionless on the tree trunk, awaiting the approaching prey.



Two-tailed spiders

Huntsman spiders [Sparrasidae]: In my study, huntsmans spider are the largest spiders in India by leg span and can be as big as a plate. The Huntsman spiders, belonging to the family Sparrasidae, are large spiders, and are rather commonly seen in homes and suburbs, than in forests. They are normally nocturnal in behavior and also a great hunter. The female spider carry their big size eggsack and its fang is too big. But Green Huntsman spiders are very beautiful in Green colour. The bite of Huntsman spiders are very painful. I was bitten two times by the huntsman spider in the year 2020.



Giant huntsman spider (*Heteropoda maxima*)



Micrommata virescens, common name green huntsman spider

In nature a twist will always be so the hunter will also be hunted by the other predator. The name of that predator is Spider wasp. They attack spider then paralyze them with their venom that's why they call "SPIDER WASP". Spider wasp stings and paralyzes the spider, and then drags or flies it back to the burrow. Then they lay egg on the spider's body, and seal it in a chamber or cell at the end of the burrow. The larva hatches and feeds on the body of the spider before pupating in a thin silky cocoon in the cell.



NEWS

Wildlife Photography Association of India (WPAI) has participated in 2022 PSA Website Contest & Newsletter Contest in which WPAI has won Honorable Mention in Newsletter.

Would like to thanks all our Authors without their contribution in this, would have not been possible to achieve Honorable Mention for WPAI Newsletter. WPAI would like to Thanks to all the Authors for their valuable support.