

THE BIRD-POO CRAB SPIDER

WHAT A CRAPPY CAMOUFLAGE!

A TINY SPIDER MIMICS TO PERFECTION
A FRESH BIRD DROPPING
TO ATTRACT ITS UNSUSPECTING PREY

— This is how a Bird-poo Crab spider *Phrynarachne* sp. from Assam, North-eastern India, looks like at first sight. The illusion is faultless - and the evolutionary aspect is nothing short of magnificent.





At a lower angle the spider's actual identity becomes clearer - at least to a human observer. An approaching insect would however be easily fooled.

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Despite its almost ridiculously small size (2,098.62 hectares, equivalent to 20,99 km² or 8.1 sq miles), the remote Hoollongapar Gibbon Sanctuary - an island-like patch of forest surviving intact among the rolling tea plantations of Assam, in North-eastern India - remains one of the most amazingly biodiverse and species-rich tropical environments we have ever visited. We have already documented in detail the stunning Jumping spider-mimic or Metalmark moth *Brenthia* sp. we have observed in its undergrowth (you will find the original article [here](#)) and in

our next issue we'll be actually publishing a long, heavily illustrated trip report about our expedition there, so to finally do full justice to its extraordinary richness. Before that, however, we want to offer another tantalizing morsel about the striking and strange species one can observe while exploring its pristine woodland. As with most macro subjects found among heavy foliage, it is pure chance, spirit of observation or peripheral vision which most often reveals a new, interesting subject - and so it happened with our first encounter with the Bird-poo Crab spider

Phrynarachne sp., a tiny species which literally left us without words. Alternatively known as Bird-dropping, Bird-poop or Bird-dung Crab spider, this unidentified species (of 29 known) belongs to a well-known genus which, as the common name not too subtly implies, looks and smells exactly as a fresh bird dropping deposited on a broad leaf of the undergrowth. The mimicry is matchless and of stupefying perfection - one wonders how many times we had passed by and cursorily glanced at one of these white-brown wet-looking blobs taking them for a freshly

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The efficiency of Phrynachne's disguise can be judged by this image of an individual preying on a large Reduviidae Assassin bug. Notice - in the other images - how cleverly the tangled threads of the web mimic the splatters of a wet bird dropping.



deposited bird excrement before realizing - one again wonders how - that in fact the little glob consisted of a marvellously camouflaged Crab spider, squatting motionlessly among a ragged, tangled web which increased the similitude in appearance to what the crab was mimicking - a fresh bird dropping. The reasons for this stunning example of adaptative evolution are twofold: by choosing to camouflage itself as a bit of unappetizing excrement, the Crab spider avoids predation by its principal enemies, the small insect- and arthropod-eating birds of the forest's understory; and by mimicking a bird's dropping, the small sit-and-wait ambush predator increases its chances to attract some insect prey to such a tantalizing treat. Both functions work very well - all Bird-dropping spiders we observed were sitting quite in the open and in very exposed positions (testimony to the success of their passive defense measures) while most also featured scattered remains of prey - wings, chitinous shells and various other bits - which bore mute witness to the success of their ruse. In fact, we even observed one of them preying on a much larger (and more dangerous) Assassin bug (family *Reduviidae*) it had just tricked, and it may very well have been the iridescent sheen of a discarded, leftover hymenopteran wing which unexpectedly betrayed the real nature of the Bird-poo spider to us in the first place. ●



Bird-dropping ■
 Crab spiders can occasionally be noticed in the field when the scattered remains of their insect prey are noted close to the sit-and-wait ambush predator.