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NEW SPECIES A-FLUTTER IN INDIA

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

Nacaduba sinhala ramaswamii | Photo Credit: Ramasamy SRK

Named after: Ramamsamy SRK a farmer based out of Saptur village, located at 45 kilometres from Madurai

"I have completed recording as many as 300 butterfly species in the Western Ghats, only a few are left," declares Ramasamy SRK over phone from his farm at Saptur in Madurai. Recently, one of his discoveries, a new sub-species of a six line blue butterfly, earned him a rare honour. Named *Nacaduba sinhala ramaswamii*, the species bears the name of this naturalist and has been published in the *Journal of Threatened Taxa* in March, 2021. The common name of this butterfly is Ramasamy's six line blue.

"It feels wonderful. The discovery is a boost to citizen initiatives happening all over India," says this postgraduate, now a full-time farmer tending to his farm where he grows mangoes, and harvests paddy and sugarcane. "Some butterflies pose a challenge while identifying, especially the wing patterns. Most butterflies open wings only while basking in the sun. This new species looked different from day one and I kept at it."

Line blues are small butterflies belonging to the family *Lycaenidae*. There are various species including transparent six line blue, rounded, dark Ceylon to name a few. Their distribution ranges from India and Sri Lanka, to the whole of South-East Asia, Australia and Samoa in the Pacific.

Ramasamy along with Kalesh Sadasivan of Travancore Nature History Society researched and looked up the records of British entomologist Ormiston that is available at Bombay Natural History Society (BNHS) before confirming that it was indeed a new species. The research team also investigated the lifecycle of the species starting with various states of egg to larvae on the host plant, *Dimocarpus longon*. "The edges of wings have heart shaped or well rounded chevron shaped spots while other species have more rectangular ones. The nearest species it resembles is the pale Ceylon six line blue."

Many new species in the past were discovered by the British or Japanese researchers or in collaboration with native researchers, says Ramasamy, adding, "It is the first time that a butterfly species was discovered by an all-Indian research team from the Western Ghats. Explore your own backyard, and there is magic at every comer waiting to be discovered."

Named after: Yeshwanth HM, a researcher who works with taxonomy of bugs at the University of Agriculture Sciences, GKVK, Bengaluru

"It's a proud moment, a recognition of your contribution" says Yeshwanth about his name being associated with a large flightless insect resembling crickets in grasshopper family Stenopelmatidae. Yeshwanth also identifies insects, and collects samples for students and researchers, and works towards upkeeping of a collection at the in-house insect museum of Department of Entomology, Univeristy of Agricultural Sciences. "Researchers SR Hiremath and KD Prathapan from the Department of Agricultural Entomology in Kerala were looking for this species for their study. This specimen collected from Kallar in Kerala was loaned and they named it after me to acknowledge my contribution. The task of describing a new species is not easy. Both the researchers from Kerala had spent more than two years working on this insect,"

explains Yeshwanth. "What makes the species unique is, it is a single and rare one that has never been described so far.

Elaborating on the nomenclature of the specimen, he says, "There are species named after named after people who have made enormous contributions in the field. However, according to the International Code of Zoological Nomenclature (ICZN), there are no restrictions to taxonomic freedom of naming as long as one follows the rules that are in place. For example, a species named after a female gender ends with 'ae' while for a male name an 'i' is added."

The naming freedom is immensely helpful for taxonomists and researchers, he says. "About 40-odd insects are named after retired professor CA Viraktamath, a renowned leafhopper taxonomist in the country. So is VV Ramamurthy, who has made significant contributions towards insect taxonomy in India, especially beetles. I have named one of my insect groups work after them, who have always motivated me to work on insects."

Named after: Joshimath, a town in stretches of Uttarkhand that is highly biodiverse but disturbed by climate change and development

A certain moth fluttering amid the slopes of Uttarakhand has been found to be a new species, not only in India, but to Science as a whole. It took some time for Pritha Dey to thoroughly ascertain that a moth she had been observing, was new to Science. She first saw it in 2013 and 2015, while doing her fieldwork at the Nanda Devi Biosphere Reserve, but published a paper identifying it as a new species in 2021 after much verification. She named it *Prometopidia joshimathensis*, after Joshimath, the place where she found it.

"My PhD was split between two countries. So, though I saw the species in Uttarakhand while doing my research at the Wildlife Institute of India, I took the specimen to Germany for integrated taxonomy study," says Pritha over a phone call, "Along with my supervisor in Germany, Dr Axel Hausmann and Dr Dieter Stüning after much discussion, I identified that this particular moth might be something new to Science."

The realisation was exciting, but not all that rare. "Insects are the most biodiverse group in a terrestrial ecosystem. In tropical regions, the taxa that I study — moths — is quite unexplored. They are 10 to 12 times more diverse than their 'cousins', the butterflies, and we are yet to explore their diversity," Pritha points out.

Pritha's first step, with the *Prometopidia joshimathensis*, was realising that its description did not match any of the published literature. "What added to this finding, was access to different museum specimens of the genus *Prometopidia*, from Europe and UK. We had very kind collaborators who sent out photos and information to us," she says.

Pritha's discovery is significant in more ways than one. "It [the research] expanded to a revision of the entire genus, distributed from west to Central Himalaya and not just description of a new species," she says, adding, "So many people contributed to this finding and gave it the shape that it has now."

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