Plants butterflies depend on

Team lists 834 plants that caterpillars feed on

Before they become colourful nectar-feeding butterflies, caterpillars are voracious leaf-eaters. Scientists have compiled a list of 834 such plants that most butterfly caterpillars of the Western Ghats feed on, hoping this will aid ecological studies and butterfly conservation.

The Western Ghats is home to 336 butterfly species. Their ‘larval host plants’ — plants that butterfly larvae or caterpillars feed on — range from common plants like the Indian curry leaf tree to rarer ones like the curled Aerides orchid found only in the southwestern tracts of the Ghats.

Though many of these host plants have been documented since the 1800s, the records are scattered and hard to find, says Ravikanthachari Nitin of the National Centre for Biological Sciences (NCBS), Bengaluru.

“The taxonomies of the plants [as well as the] butterflies are also archaic and outdated,” he says. Curating existing literature and recent unpublished records, Nitin and his colleagues (including naturalists from the Travancore Natural History Society) assembled a complete list of butterflies and their larval host plants for the biodiversity hotspot. Updating their scientific names based on latest taxonomy, the team’s paper — published as a monograph in the *Journal of Threatened Taxa* — lists a total of 834 larval host plants used by 320 butterfly species in the mountain range.

Their list reveals that the larval host plants of 16 butterflies are still unknown (including those of the Nilgiri tit and the Kodagu brush flitter which are found only in specific localities in the Ghats).

Specific families

The team’s compilations also show that 81 butterfly species depend on plants belonging to the pea or legume family (Fabaceae). Another 71 of these winged insects such as the aces, scrub hoppers, demons and bobs lay their eggs on grasses and bamboos (belonging to the plant family Poaceae). On the other hand, some plants are used by just a single butterfly species. Only the larvae of the moth-like Indian dusky partwing, for instance, live on wild arrowroot leaves (Marantaceae).

Dependence

The authors hope their list will highlight the diversity of plants on which butterfly species of the Western Ghats depend; 48 species of butterflies are found nowhere else in the world. The plants are also important because their decline can signal a decrease in butterfly diversity too, says Nitin.

“Endemic butterflies like the Malabar banded peacock, Kodagu forest hopper and Shiva sunbeam which feed only on a single plant species would be more at risk,” he adds.