

PROPOSED WALK-IN BUTTERFLY PARK IN SIKKIM

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Angus Hutton came to Sikkim in 1985 during a tour sponsored by the Government of India to propose suitable areas for setting up Butterfly Breeding Centres. He recommended a site adjoining the National Highway No.31A between Singtam and Gangtok. This place is called Middle Camp or more popularly 'Battis Number'. Here the State Forest Department has a small park (<0.5 sq. km) which is a popular picnic spot. In his own words, from his report.

....."Middle Camp on the Rangpo - Gangtok road has everything going for it. The nectar-producing plants are already there and in constant use by many 'rare' and desirable species abounding in the area, which has a huge reservoir of undisturbed forest across the river. Half the work has already been done and the Consultant found *Aristolochia tagala* growing there and collected seed and cuttings and had a dozen or so vines planted in the perimeter of the park. It is only 20 minutes drive from Gangtok where plenty of expertise exists in both Forestry, Botanical Survey and the Wildlife Section. As a tourist attraction, being close to the main highway, it is a winner all the way. Most of the environment enrichment would be from across the river away from the tourists, but the adult butterflies would frequent the park to drink". (p. 30, no.3.3.5)

In 1992-93 the Wildlife Circle of the Forest Department, Government of Sikkim started working on a project to breed endangered butterflies. 'Endangered' in this context meant species that were being collected or wild-harvested illegally by visitors from outside Sikkim or species that were commercially valuable and hence not seen as commonly as before. The first experimental larval food-plant (LFP) nursery was created at Saramsa, East Sikkim, which is another popular picnic spot about 16 km from Gangtok. Wild and cultivated species of Rutaceae, Lauraceae and Aristolochiaceae were planted in a barbed wire enclosure c. 40x20m.

In the same enclosure a breeding cage 3x4x4m was constructed for red-bodied swallowtail butterflies. *Aristolochia macroura* was planted inside. All plants survived and flowered. Then the enclosure was opened at the sides to allow free movement of wild butterflies for egg-laying. Some pupae of Common Rose *Pachliopta aristolochiae* were introduced into the enclosure from '6th Mile' to enhance its breeding in this area. Data recording on egg-laying, number of caterpillars, dates and measurements was initiated.

Soon an effort had to be made to control breeding inside the cage by closing the sides and checking if any other species of red-bodied swallowtails used the area. So far only Common Rose bred really well. At the peak time there were around 200 caterpillars in various stages of development and around 20 to 50 adult butterflies inside.

The young Rutaceae food plants outside the enclosure were unprotected. These attracted the black-bodied swallowtails which commenced egg-laying on every new leaf. They also attracted ants. When the park staff attempted manuring with artificial fertilizers, most of the wild Rutaceae saplings died. Green Magpies were seen feeding off the caterpillars and any

which made it to pupal stage were later found to be parasitised including those which were enclosed in a mesh sleeve. No detailed studies were possible on any of these interesting aspects due to various constraints. Data gathering was discontinued due to many inaccuracies in counts and measurements.

Simultaneously, field surveys were conducted in high and low altitude areas in conjunction with the Asian Waterfowl Census to look for wild *Aristolochias* and for recording occurrence of butterflies. Butterfly caterpillars were seen at Yumthang (3636m), Thangu (3939m), Giagong - Chho Lhamo (5000m) in north Sikkim and on the banks of Kupup or Bedang Tso (c.4000m) in east Sikkim. Among the high altitude butterflies seen Apollos were nowhere common. A Tawny Coaster butterfly was seen at a record altitude at Jakthang (c.4000m) on way to Green Lake area in July. Two wild *Aristolochias* were located, one in north and one in west Sikkim.

In 1993-94 a second LFP nursery was created at Middle Camp adjacent to the riverside area identified for the proposed Walk-in Butterfly Park. Along with Rutaceae and Lauraceae other food plants like *Cinnamomum* sp. and *Magnolia* sp., nectar producing plants like *Hibiscus* sp. and *Poinsettia* sp. and hedge plants like *Duranta* sp. were also planted. No *Aristolochias* planted by Angus Hutton had survived. The forest area across the Rani river mentioned by him was virtually wiped out by a power channel that cut across the mountainside. No *Aristolochia tagala* was found growing in the surrounding areas. Hence cuttings of *A. macroura* and another species brought from a Bombay nursery were planted here inside a breeding cage 5x5x5 m. The park and LFP nursery area was also fenced with barbed wire to keep out goats.

Both areas mentioned above, viz., Saramsa and Middle Camp are very rich in butterflies, especially in species like Birdwings, Batwings, Mormons, Spangles and Peacocks. Once suitable infrastructures are provided, the Walk-in Butterfly Park would be a self-sustaining enterprise. Butterflies being insects breed prolifically. Revenue generated would not only go towards maintenance of the park but later help in its improvement and expansion. There would be environment enrichment with valuable medicinal species of plants which also form larval food. Mainly, awareness would be generated regarding this important biodiversity component of Sikkim.

Signboards saying butterflies are protected by law and that the area is a proposed butterfly park have been prepared and displayed prominently at Rangpo, the entrance to Sikkim, Middle Camp and Saramsa.

It is now proposed to raise the aviary-type structure for the Walk-in Butterfly Park after due clearance from CZA. We are interested in suggestions from readers for low cost structures for an area roughly a half acre oval with a few trees and big scenic rocks alongside the river bed. This area is frequented by picnickers during the season, hence chances of vandalism have to be kept in mind.

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