

**Doon Watch Nature Series for Dehradun Live Hindustan Times
by Sanjay Sondhi**

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The Tricks of the Lemon Pansy

A few weeks ago, I was out searching for butterflies on a bright, sunny Sunday morning. As I walked, I observed a flash of pink through the corner of my eye. I turned, I could not see anything. I took a few steps forward, and a pink butterfly flew from my feet. I was excited-I had no idea what the pink butterfly could be. As luck would have it, the butterfly settled only a few feet from me, and I could observe it closely. Though it sat with its wings closed over its body, its general shape and size lead me to believe that it was a familiar butterfly. I photographed the underside of the butterfly and waited for it to open its wings. Come on-reveal yourself, I muttered to the butterfly. A few minutes of patience, and standing still paid off, as the butterfly slowly opened its wings to reveal its true identity.



As the wings spread, I recognized the butterfly immediately-a Lemon Pansy (*Junonia lemonias*). Butterflies, like many other creatures, adopt different strategies for survival. One of the strategies adopted by butterflies is varying seasonal forms. The upperside of the Lemon Pansy is brown with lemon-yellow markings on its forewing. Blue-centered, orange eye-spots decorate the upperside of both wings of the butterfly. These upperside markings remain unchanged in the butterfly through all seasons. The underside of the butterfly's wings are a different story. During the wet season, the underside of the Lemon Pansy has eye-like markings on its wings. During the dry

season, the eye-like markings disappear, and a plain brown colour remains. The reason I had been fooled by the butterfly was that the Lemon Pansy was in an unusual dry season form, wherein it was coloured pink on the underside, instead of brown.

The adoption of seasonal forms by butterflies are not well understood. During the wetter months, the butterfly brood that emerges is normally the wet season form. The brood that emerges during the drier months, post-monsoon, are normally the dry season form. The Lemon Pansy's eye-like markings are meant to deter predators. The eye-like markings compel predators to attack the wings, and hence protect the butterfly's more vulnerable part-its soft body. On the other hand, in the dry season, the butterfly's need for fooling predators competes with its need to be cryptic and well camouflaged. Hence, it sacrifices its "predator fooling" strategies to adopt camouflage as a strategy. It also helps that during the dry season, dry, brown leaves assist the butterfly's camouflage strategy, while in the wet season, when the foliage is green, camouflage does not work so well! Aren't the butterfly's tricks and trade-offs amazing!

Feedback on this column is welcome at sanjay.sondhi1@gmail.com

Making a difference: I hope you have adopted personal green resolutions for the New Year! If you have, don't just stop at yourself-encourage your family and friends to get involved, too. If you haven't, it's still not too late for New Year resolutions! Mother Earth needs all the help she can get!

Photograph caption: The Lemon Pansy underside

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