

In love with butterflies

In the course of his utterly delightful National Science Day lecture at NAL on 27 February 2004, Prof Madhav Gadgil made a candid confession: "my preferred way of life would be to potter around the IISc campus gazing at the multitudes of lovely and colourful butterflies".



In fact just for a brief moment you could even mistake Prof Gadgil for one of those idyllic

Wodehouse characters who loves birds, bees or pigs -- forgetting that he's one of the most accomplished scientists of our time with a wealth of contributions in the area of conservation biology, ecological history and human ecology.



Prof Gadgil talked of the splash of colour on a butterfly's wings, of the butterfly's special slow flapping and gliding flight, the scales on its wings that help to reduce drag and slip out of the predator's grasp, its splendid vision that also encompasses the ultraviolet, the butterfly's many enemies and friends ... there was even a poem lamenting the fact that the butterfly "will never master the art of flying straight".

The chief reason for the butterfly's "crooked flight" is, of course, to throw off predators. And yet, in a remarkable twist in the tale, certain butterflies like the Common Jezebel do fly very straight and actually try to be flagrantly conspicuous. Why? Because they are poisonous, and are a part of the grand design of conserving the species. Among the hazards of ingesting these poisonous butterflies is cardiac glycosides ("a kind of mild heart attack", Prof Gadgil explained).

But "evolution is opportunistic" and life seeks newer and newer ways of surviving. So there are also these brightly coloured and straight-flying butterflies who are not really poisonous -- but only pretending to be so. The way to spot the mimic from the real is to give a good chase: the mimics will panic and fly away fast and crooked!

One of the highlights of the narrative was when Prof Gadgil talked of how winged creatures thrive in the company of flowering plants ("although they are both friends and enemies"). The comparisons between bird (or animal) flight and aircraft flight were equally illuminating (God's creatures are still winners by a long mile). One also enjoyed the tribute to Charles Darwin (about how, after looking at a hawk-bee moth in Madagascar, Darwin predicted that there must exist on the island a flower with a 20 cm long tube).

I enjoyed the lecture thoroughly, and felt genuinely disappointed when Prof Gadgil's last PowerPoint slide appeared so quickly (the PowerPoint presentation itself was evocative and beautiful).

Dr R V Krishnan introduced the distinguished speaker. Dr B R Pai's address asked how one should balance the need for development with concern for the environment. "At NAL we think we have found the right mix", he said.

Srinivas Bhogle