

## Orange Oakleaf (*Kalima inachus*): National Butterfly of India

Ipsita Samal<sup>1</sup> and Bhupen Kumar Sahu<sup>2</sup>

<sup>1</sup>Assistant professor, Sri Sri University, Cuttack, Odisha, India

<sup>2</sup>Scientific Officer, OLM-ICRISAT Project, ICRISAT, Hyderabad, India

### SUMMARY

Understanding the aesthetic beauty and importance in pollination, three south Indian states have declared their state butterflies, while Maharashtra in 2015 declared its state butterfly, followed by Uttarakhand and three south Indian states. Butterflies play most crucial role in ecosystem stability and considered as best pollinators. Butterflies also act as ecological indicators. Recently, Union Ministry of Environment, Forests and Climate Change had conducted a citizen poll identify the national butterfly of India and Orange Oakleaf (*Kallima inachus*) was found to be the front-runner of the competition due to its extraordinary camouflaging nature and seasonal polymorphic features.

### INTRODUCTION

Union Ministry of Environment, Forests and Climate Change to had conducted a citizen poll identify the national butterfly concluded with three species i.e. Krishna Peacock (*Papilio krishna*), Indian Jezebel (*Delias eucharis*), and Orange Oakleaf (*Kallima inachus*) garnering the highest number of votes. These butterflies have unique features such as ability to camouflage as a dead leaf, exhibit iridescence to stare away predators, and aid farmers in getting rid of pests. Recently, an online campaign has been started for voting India's National Butterfly from seven species that made it are the Krishna Peacock, Common Jezebel, Orange Oakleaf, Fivebar Sword Tail, Common Nawab, Yellow Gorgon and Northern Jungle Queen.

Sr.No	Common Name	Amescientific Name
1.	<b>Krishna Peacock</b> 	<ul style="list-style-type: none"> <li>• <i>Papilio Krishna</i> or Krishna Peacock is a large swallowtail butterfly found in forests in China, north east India, Myanmar and Vietnam.</li> <li>• The IUCN Red Data Book records the status of the Krishna peacock as 'UNCOMMON'.</li> </ul>
2.	<b>Common Jezebel</b> 	<ul style="list-style-type: none"> <li>• The Common Jezebel butterfly belongs to the genus <i>Delias</i>.</li> <li>• It is endemic to particular islands in south-east Asia, or restricted to certain mountain ranges, e.g. in New Guinea.</li> <li>• The hyparete is distributed from India to China, the Philippines, peninsular Malaysia, Sumatra, Borneo, Java and Bali.</li> <li>• The eucharis is found in India, Burma and Sri Lanka.</li> <li>• It is in the category of 'NOT EVALUATED' under the IUCN category.</li> </ul>
3.	<b>Orange Oakleaf</b> 	<ul style="list-style-type: none"> <li>• <i>Kallima inachus</i>, the orange oakleaf, Indian oakleaf or dead leaf, is a nymphalid butterfly found in Tropical Asia from India to Japan.</li> <li>• The orange oakleaf is found in India, Nepal, Bhutan, Bangladesh, and Myanmar.</li> <li>• In Southeast Asia it occurs in southern China, Thailand, Laos, Taiwan, and Vietnam.</li> <li>• It is categorised as a Least Concern (LC) species under the IUCN Red List of Threatened Species</li> </ul>

4.	<b>Fivebar Sword Tail</b> 	<ul style="list-style-type: none"> <li>• <i>Graphium antiphates</i>, the five-bar swordtail, is a species of papilionid butterfly found in south and Southeast Asia.</li> <li>• It is categorised as a Least Concern (LC) species under the IUCN Red List of Threatened Species.</li> </ul>
5.	<b>Common Nawab</b> 	<ul style="list-style-type: none"> <li>• The Common Nawab (<i>Charaxes athamas</i>) is a species of fast-flying canopy butterfly found in tropical Asia.</li> <li>• It belongs to the Charaxinae (Rajahs and Nawabs) in the brush-footed butterfly family (Nymphalidae).</li> <li>• It occurs in the Himalayas from Kashmir to Sikkim, the hills of central India and the Eastern Ghats, the Western Ghats and southern India, Sri Lanka, Assam, Cachar, and via Myanmar, Cambodia and the Tenasserim Hills far into Indonesia.</li> </ul>
6.	<b>Yellow Gorgon</b> 	<ul style="list-style-type: none"> <li>• <i>Meandrusa payeni</i>, the yellow gorgon, is a species of swallowtail found in parts of South Asia and Southeast Asia.</li> <li>• It belongs to the hooked swallowtails genus, <i>Meandrusa</i>, of the family Papilionidae.</li> <li>• It is also called the outlet sword or the sickle.</li> <li>• It is found in India from Sikkim to Assam, north Burma and Peninsular Malaysia.</li> </ul>
7.	<b>Northern Jungle Queen</b> 	<ul style="list-style-type: none"> <li>• <i>Stichophthalma camadeva</i>, the northern jungle queen, is a butterfly found in South Asia that belongs to the Morphinae subfamily of the brush-footed butterfly's family.</li> <li>• It ranges from Sikkim, north Bengal, Assam, Manipur, and Nagaland in India.</li> <li>• It is also found in the Arakan hills and northern part of Myanmar and Thailand.</li> </ul>

The nationwide poll organised by the National Butterfly Campaign Consortium, a collective of 50 butterfly experts and enthusiasts, from September 10 to the midnight of October 8, 2020 yielded 59,754 votes. Blessed with a vibrant colour pattern, including vermilion (haldi – kumkum), the Indian Jezebel (or Common Jezebel) is known to deter its predators with its flashy wing colours. Krishna Peacock, a flagship species for biodiversity and conservation, is generally found in large numbers in the Himalayas. Possessing a peculiarly large swallowtail, its iridescent green scales diffract light to coat itself in radiance.

**Orange Oakleaf** is commonly known as ‘dead leaf’ for its ability to camouflage as a dry autumn leaf while striking a stationary pose with its wings closed. The masquerade enables the species to prevent it from being devoured by birds in the moist forests of northern Western Ghats, central, northern and northeastern parts of India where they are generally found. Besides, the Oakleaf is also known to exhibit polyphenism as it assumes specific colour and size during dry and wet seasons.

*K. inachus*, a species of nymphalid butterfly found in India and Japan, is known as the orange oakleaf or dead leaf butterfly for a very good reason – with its wings closed, this butterfly closely resembles a dried tree leaf. It's been said that the *K. inachus* butterfly mimics a dead leaf. Somehow, this tiny creature managed to raise

its camouflage to such an extreme level that its wings feature a pointed leaf apex at the front tip, and a leaf stalk on the hindside, as well as a characteristic vein pattern, multiple shades of brown and orange, and even tiny imperfections like black spots or small tears. It's a perfect camouflage butterfly.



(*Kalima inachus*: source: NCBS)



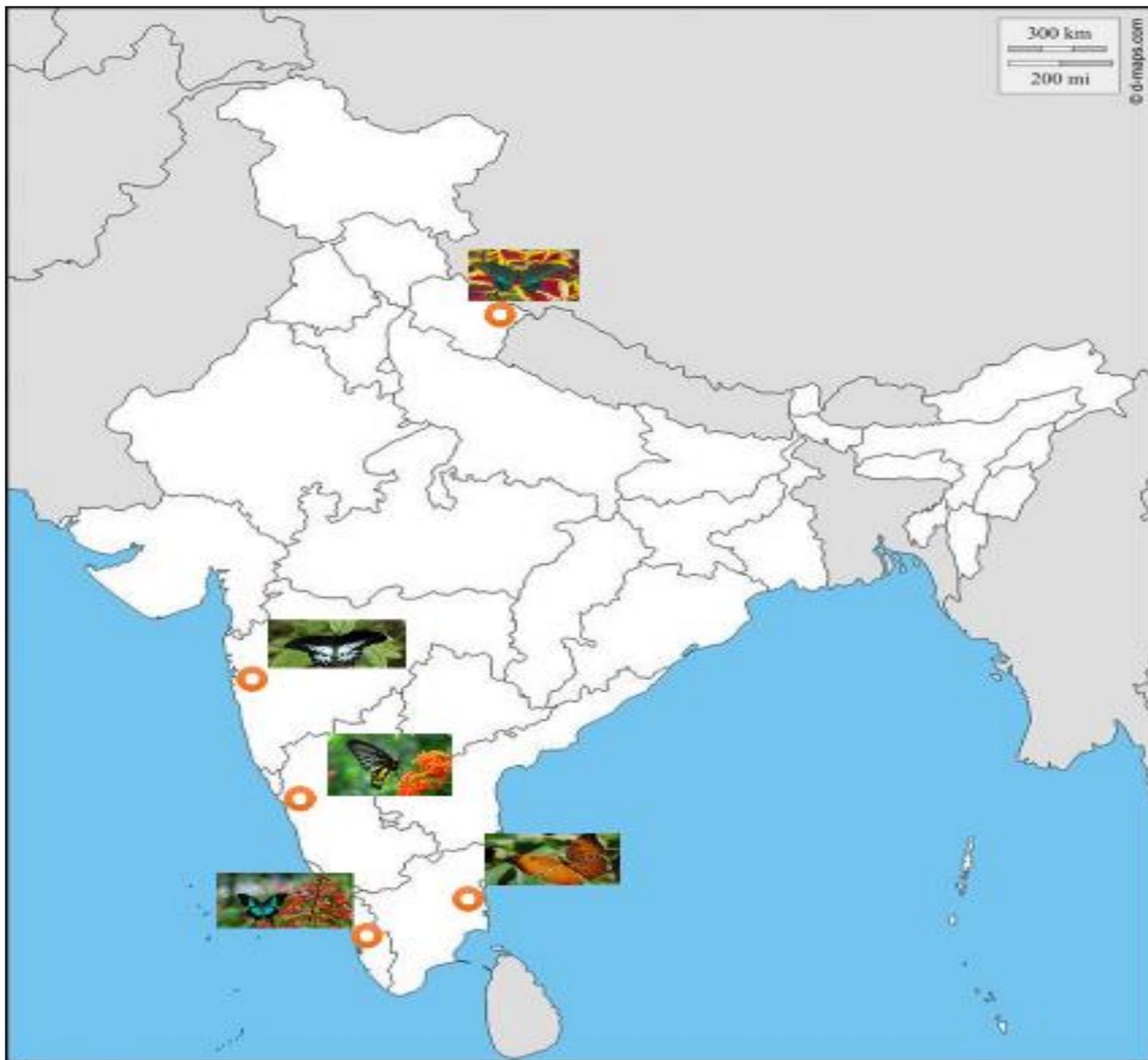
Photo: Noumenon/Wikimedia Commons (CC BY-SA 3.0)

Apart from putting the mimicking skills of other dead leaf imitating butterflies, *K. inachus* also amazes with its two distinct forms, depending on the season. During the dry season, when tropical butterflies tend to be less active, its outer wing patterns are almost perfectly uniform, which offers it plenty of protection from predators, as long as it remains perfectly still.



Photo: peelliden/Wikimedia Commons (CC BY-SA 3.0) Photo: Robert Lawton/Wikimedia Commons (CC BY-SA 2.5)

Seasonal polymorphism is also observed in *K. inachus*. However, during the wet season, the orange oakleaf butterfly ups its game to a whole new level, mimicking an oak leaf virtually to perfection. This allows it to fool birds, spiders and other predators even when it is moving.



## CONCLUSION

Insects, from the time immemorial, has been used as the symbol of ethnic beauty among the creatures of mother Earth that play a vital role in the survival of mankind by the act of pollination of plants. Butterflies are the group of insects that attract everyone's attention by its contrasting colours and beautiful shape. In the recent scenario, attempts made by the Union Cabinet ministry of Environment, Forest and Climate Change to acknowledge the National Butterfly of India is a welcome step towards the sustainable survivability of insect guild and keeping alive the interest of mankind towards other living creatures in the world. In other words, the importance of pollinating agents is being made known to the generations to come. In this way, the phrase "Live and let live" is making some impactful sense among the future generations by understanding the importance of other living organisms on earth.

## REFERENCES

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