PAKISTAN BUTTERFLY SOCIETY

QUARTERLY BULLETIN

A NEWSLETTER OF

BUTTERFLIES OF PAKISTAN

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Pakistan Butterflies Society - Quarterly Bulletin (PBSQB)
Guidelines for Submissions

Pakistan Butterfly Society Quarterly Bulletin (PBSQB) is a platform dedicated to celebrating and creating awareness about the rhopalocerous diversity of Pakistan. We invite submissions from all butterfly enthusiasts, entomology students, researchers, nature lovers and writers who wish to share their insights, observations, and experiences related to butterflies and butterfly-watching in Pakistan. Here are some basic guidelines for submitting your work:

1. **Scope:** PBSQB accepts any writing related to butterflies and butterfly-watching in Pakistan.
2. **Language:** We encourage submissions in both English and Urdu to spread our message of butterfly conservation to a wider audience. One write-up in each issue in any of the provincial (or regional) languages may also be included.
3. **Format:** Email submissions to *pakbutterflysociety@gmail.com* with Submission: [Title] in the subject line. Attach your submission as a Word document and send in relevant figures and photographs separately.
4. **Review Process:** Our editorial team will review submissions for quality and adherence to guidelines.
5. **Publication:** Accepted submissions will be featured in PBSQB. Contributors will be credited.
6. **Copyright:** Contributors retain the copyright to their work but permit us to publish it.

BACKGROUND: Common Tigers *Danaus genutia* from Taxila, Punjab by Akram Awan

FRONT COVER:

Featuring a Common Acacia Blue *Surendra quercetorum,* captured by Touseef Ahmed from Bhimber (AJK).

BACK COVER:

Featuring Common *Polyura athamas* and Anomalus Nawab *P. agraria* captured by M. Ayaz Mahmood from Margalla Hills (Islamabad).

پاکستان بٹر فلائی سوسائٹی کے سہ ماہی جریدے میں

تحاریر جمع کرانے کیلئے ہدایات

پاکستان بٹر فلائی سوسائٹی کا سہ ماہی جریدہ پاکستان کی تتلیوں کے بارے میں شعور بیدار کرنے کے لئے وقف ایک پلیٹ فارم ہے۔ ہم تتلیوں سے محبت کرنے والوں، علم حشرات کے طلباء، محققین اور فطرت کے دلدادہ خواتین و حضرات سے درخواست کرتے ہیں کہ وہ پاکستانی تتلیوں سے متعلق اپنے خیالات، مشاہدات، اور تجربات پی بی ایس کے سہ ماہی جریدے کے توسط سے دنیا کے ساتھ شئیر کریں۔ اس جریدے میں تحاریر جمع کرانے کے لئے کچھ بنیادی ہدایات درج ذیل ہیں:

دائرہ کار: اس جریدے میں پاکستان کی تتلیوں سے متعلق ہر قسم کی تحاریر شامل کی جاتی ہیں۔

زبان: پاکستان کی تتلیوں کے تنوع اور تحفظ کے بارے میں شعور و آگاہی وسیع پیمانے پر پہنچانے کے لئے ہمارے جریدے میں اردو اور انگریزی دونوں زبانوں میں تحاریر شامل کی جاتی ہیں۔ ہر شمارے میں صوبائی (یا علاقائی) زبانوں میں لکھی (ایک) تحریر بھی شامل ہو سکتی ہے جو کہ مقامی لوگوں تک ہمارا پیغام پہنچانے میں معاون ثابت ہو گی۔

فارمیٹ: اپنی تحاریر کو مائیکرو سافٹ ورڈ ڈاکومنٹ میں لکھیں اور متعلقہ مواد (تصاویر وغیرہ) علیحدہ فائل کی صورت میں منسلک کر کے مندرجہ ذیل ایڈریس پر ای میل کریں (میل کے سبجیکٹ باکس میں تحریر کا عنوان ضرور لکھیں):

pakbutterflysociety@gmail.com

جائزہ کا عمل: ہماری ادارتی ٹیم موصول شدہ تحاریر کے جائزہ اور ان میں مناسب ترامیم تجویز کرنے کے بعد انکی اشاعت کا فیصلہ کرتی ہے۔

اشاعت: ادارتی ٹیم کی جانب سے قبول شدہ تحاریر سہ ماہی جریدے میں مصنفین کے ناموں کے ہمراہ شائع کی جاتی ہیں اور ان میں شامل کردہ ہر تصویر کیساتھ فوٹوگرافر کا نام بھی دیا جاتا ہے۔

حقوق اشاعت: پی بی ایس کے سہ ماہی جریدے میں شامل شدہ ہر تحریر اور تصویر کے جملہ حقوق اسکے مصنف اور فوٹوگرافر کے پاس رہتے ہیں اور ہم انکی اجازت سے انکو اس جریدے میں شائع کرتے ہیں۔

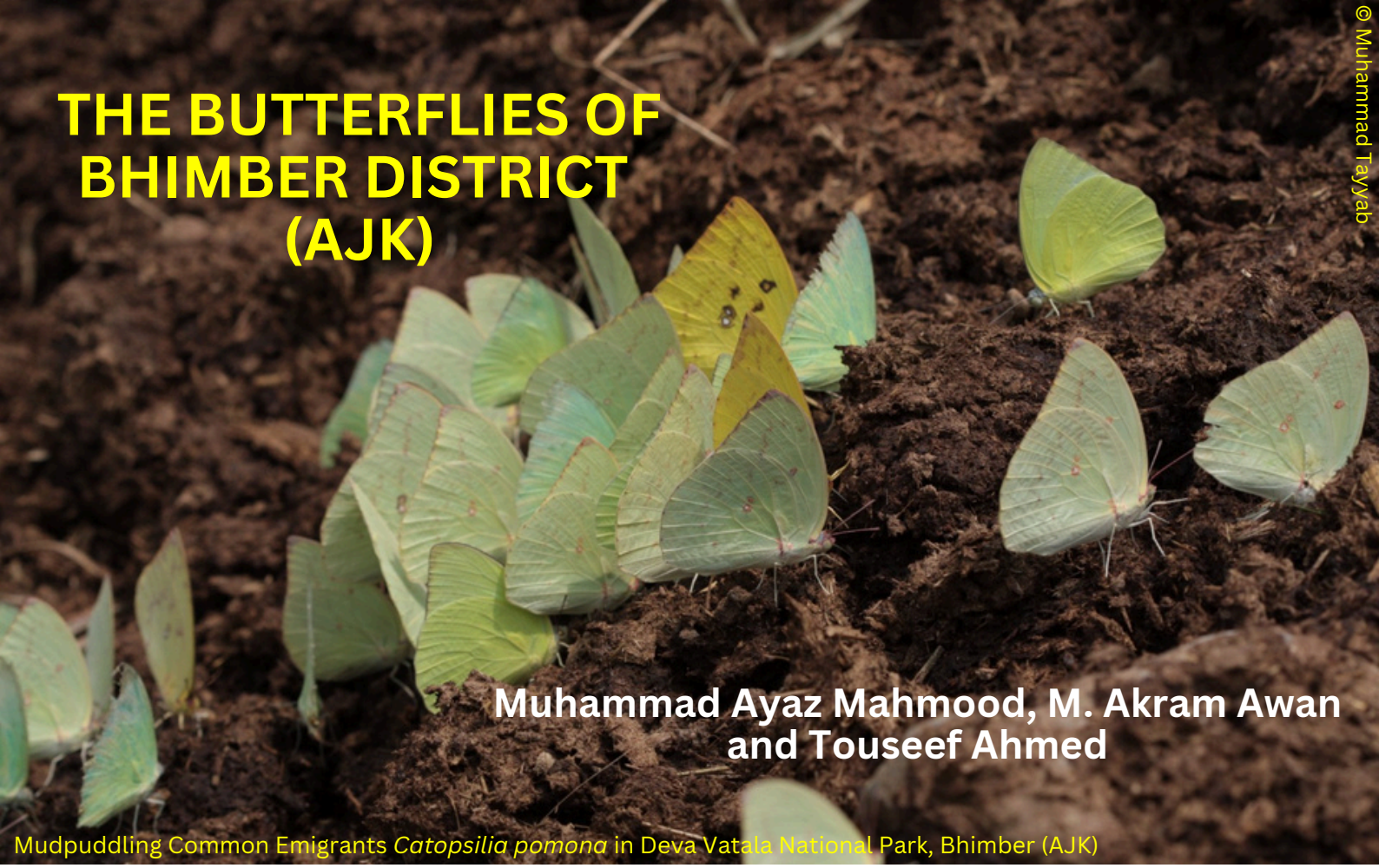
BACKGROUND: From Taxila, Punjab by Akram Awan

© Akram Awan

Greenish Mountain Blue *Agriades jaloka* from Deosai, Astor, Gilgit-Baltistan

THE BUTTERFLIES OF BHIMBER DISTRICT (AJK)

Muhammad Ayaz Mahmood, M. Akram Awan and Touseef Ahmed



Mudpuddling Common Emigrants *Catopsilia pomona* in Deva Vatala National Park, Bhimber (AJK)

TRIP REPORT

Barnala and Deva Vatala National Park

Bhimber is southern-most district of Pakistan-administered (Azad Jammu and) Kashmir (AJK) and zoologically a very interesting region. The district includes three tehsils (Bhimber, Samahni and Barnala) and is bordered by the districts of Mirpur, Kotli (AJK, Pakistan), Gujrat, Sailkot (Pakistani Punjab), Rajouri and Jammu (Indian Union Territory of Jammu and Kashmir). Deva Vatala National Park (DVNP) is also situated in the district. Bhimber is the place where some rare, interesting and unique butterflies can be expected, including those which are yet unrecorded from Pakistan or at least from AJK.

Rewilding Indus (RI) and Pakistan Butterfly Society (PBS) conducted a survey of DVNP in the beginning of November 2024, to study the diversity and distribution of butterflies in Bhimber. The team, consisting of 2 members (M. Ayaz Mahmood and M. Akram Awan) surveyed DVNP and its vicinity, within Barnala tehsil. The abundance of *Lantana camara* plants in our study area created an inviting nectar haven for butterflies at the height of their seasonal activity in the region.

2nd November 2024 (Madina Town, Barnala): We set off from Islamabad at 0900 hours and reached Barnala city around 1300 hours. We started surveying the fields in the vicinity of Madina Town (Barnala) and recorded Ceylon Swift *Parnara bada*, Common *Catopsilia pomona*, and Mottled Emigrants *Catopsilia pyranthe*, Pioneer White *Belenois aurota*,

Silverstreak Blue *Iraota timoleon*

© Akram Awan

Common Bushbrown *Mycalesis perseus*, Lesser Three-ring *Ypthima inica,* Plain Tiger *Danaus chrysippus*, Pale Grass Blue *Pseudozizeeria maha*, Indian Red Flash *Rapala iarbus,* etc. We also explored some agricultural farms filled with Mango *Mangifera indica* and Lychee *Litchi chinensis* trees, both of which are larval host plants of Onyx butterflies *Horaga*. Although we did not encounter any Onyx during our visit, two species of the genus (both AJK firsts) were later photographed by Touseef Ahmed in Kundpur village, Barnala.

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Indian Grizzled Skipper *Spialia galba*

© M. Ayaz Mahmood

Western Striped Albatross *Appias libythea*

© M. Ayaz Mahmood

Common Guava Blue *Virachola isocrates*

© M. Ayaz Mahmood

Common Gull *Cepora nerissa*

Deva Vatala National Park with *Lantana camara* bushes seen in the foreground

3rd November 2024 (DVNP): The following morning, we began our exploration of Deva Vatala National park and its vicinity. As Deva Vatala lies close to the Line of Control (LoC) between India and Pakistan, we intentionally avoided working too close to it, but we did explore forest as well as open habitats.

Common Banded Awl *Hasora chromus*, Lime Butterfly *Papilio demoleus*, Cornelian *Deudorix epijarbas*, Silverstreak Blue *Iraota timoleon,* Common Lineblue *Prosotas nora*, Dark Grass Blue *Zizeeria karsandra,* Gram Blue *Euchrysops cnejus*, Pea Blue *Lampides boeticus,* Common Bushbrown *Mycalesis perseus*, Jewel Fivering *Ypthima avanta,* Common Crow *Euploea core,* Common Castor *Ariadne merione*, Common Leopard *Phalanta phalantha,* Yellow Pansy *Junonia hierta*, Chocolate Pansy *Junonia iphita*, Pallas`s Sailer *Neptis sappho*, Creamy Sailer *Neptis soma butleri* etc. were documented in DVNP and its immediate neighbouhood.

Thanks to the abundance of *Mangifera indica* (Mango) trees, the Common Baron *Euthalia aconthea* was the most frequently encountered butterfly in our survey. During our two days of fieldwork, totaling 6 hours, we managed to record 6 butterflies previously unreported from AJK, i.e. Indian Grizzled Skipper *Spialia galba*, Western Striped Albatross *Appias libythea*, Common Gull *Cepora nerissa*, Indian Cupid *Everes lacturnus,* Lesser Grass Blue *Zizina otis* and Common Guava Blue *Virachola isocrates.*


© Akram Awan

Indian Cupid *Everes lacturnus*


© M. Ayaz Mahmood

Lesser Grass Blue *Zizina otis*

Common Acacia Blue *Surendra quercetorum* added to Pakistan's Butterfly Fauna

Common Acacia Blue *Surendra quercetorum* is an oriental butterfly found in the Indian Subcontinent (including Himalayas), Southern Yunnan (China), Myanmar and Vietnam. This dark-brown 'strong blue' has a wing-span of 30 to 40 mm and black and silver markings on underside. Males possess single tail and have a purple-blue central patch on brown upperside forewing, while females have a paler-brown central patch and is two-tailed. Common Acacia blue, as its name suggests, uses Acacia plants as its larval food plant. It lives in lower hilly areas and prefers forest habitats.

Previously known up to Himachal Pradesh (Shimla Hills), the Common Acacia Blue was first recorded in Jammu and Kashmir (Rajouri and Jammu districts) on 22nd October 2017, by Sharma and Sharma (2018). Shadmeena Khanum (pers. comm.) sighted this species in Margalla Hills National Park, Islamabad, prior to the records from Rajouri and Jammu. However, the observation lacked a photograph and the exact date remains unknown. Marium Majeed Dar (pers. comm.) observed some females, almost certainly of this species in Haveli district (AJK) between August and October 2024, capturing a few photographs, though of modest quality.


© Rajesh Kumar

Underside View of Common Acacia Blue *Surendra quercetorum* from Himachal Pradesh, India

On 30th November 2024, Touseef Ahmed photographed a male Acacia Blue (featured on front cover of the current issue) from Kundpur village of tehsil Barnala, Bhimber district (AJK) on a *Lantana camara* plant with its wings fully opened and showing distinctive wing shape and purple-blue patch on forewing and very little blue on hindwings. With the above records, especially the one from Bhimber, the Common Acacia Blue has officially been added to Pakistan's butterfly list. This species occurs in India at altitudes of up to 1,200 meters, while its potential range in Pakistan with similar elevation includes the hilly areas of Rawalpindi, Islamabad, Mirpur, Kotli districts and surrounding regions.

Area Checklist

A Preliminary Checklist of the Butterflies of District Bhimber (AJK)

Despite its rich potential, butterflies of Bhimber district (AJK) are understudied. Its location, however, makes it a valuable area for butterfly enthusiasts. The only published account is by Khan et al. (2007), who listed 19 species. This study was minimally incorporated into our report due to several clear identification mistakes. For instance, they reported the Himalayan Grey-veined White *Pieris ajaka* from about 350 m in Barnala, even though this species does not occur below 1500 m. The record likely refers to the Indian Cabbage White *Pieris canidia*. Similarly, their report of a *Satyrus* species—likely a misidentified *Mycalesis* or *Ypthima*—is biologically implausible for this region.

© Akram Awan

A habitat view from tehsil Samahni, Bhimber

This report is based on fieldwork carried out by different people, from October 2021 to December 2024, in several parts of the district i.e. Samahni and Deva Vatala National Park (DVNP) on 15-16 October 2021 (by Akram Awan, Ali Hasaan, Tahir Manzoor Aatir), DVNP in July 2023 (by Abdul Hadi and Muhammad Tayyab), Jandi Chountra in August 2023 and April 2024 (by Muhammad Ali), Barnala and DVNP on 2-3 November 2024 (by Akram Awan and M. Ayaz Mahmood) and 3 villages (Kundpur, Sahalianwala and Baila) of union council Ambriyala, Tehsil Barnala in November-December 2024 (by Touseef Ahmed).

Presented here is a list of all butterfly species recorded from Bhimber district up to the year 2024. The months and locations of observation for each species are also included. An asterisk (*) next to a species' common (English) name denotes those found exclusively in Bhimber, with no records from other districts of AJK, as of December 2024.

Table 1. Checklist of Butterfly species recorded from Deva Vetala National Park

No.	English Name	Scientific Name	Locations and Months of Observation
1	Common Banded Awl	*Hasora chromus*	DVNP, Ambriyala (November-December)
2	Indian Grizzled Skipper*	*Spialia galba*	DVNP (November)
3	Indian Palm Bob	*Suastus gremius*	Samahni (October)
4	Potanthus Dart	*Potanthus sp.*	DVNP, Ambriyala (July, December)
5	Dingy Swift*	*Gegenes nostrodamus*	Ambriyala (December)
6	Ceylon Swift	*Parnara bada*	Barnala (November)
7	Rice Swift*	*Borbo cinnara*	Ambriyala (December)
8	Bevan`s Swift	*Pseudoborbo bevani*	Samahni (October)
9	Branded Swift	*Pelopidas* sp.	Barnala (November-December)
10	White-fringed Swift	*Polytremis discreta*	Samahni (October)
11	Lime Butterfly	*Papilio demoleus*	Widespread (Khan et al. 2007), commonest Pakistani Papilionid, flies year-round
12	Common Yellow Swallowtail	*Papilio machaon*	Samahni (October)
13	Common Mormon	*Papilio polytes*	Widespread (Khan et al. 2007); Samahni (October)
14	Common Mime	*Chilasa clytia*	DVNP (July)
15	Indian Cabbage White	*Pieris canidia*	Samahni, Ambriyala (October-November)
16	Himalayan Bath White	*Pontia endusa moorei*	Various localities (Khan et al. 2007)
17	Pioneer White	*Belenois aurota*	Widespread (November-December)
18	Common Gull*	*Cepora nerissa*	DVNP (November)
19	Common Jezebel	*Delias eucharis*	DVNP, Ambriyala (October-December)
20	Western Striped Albatross*	*Appias libythea*	DVNP (November)
21	White Orange-tip*	*Ixias marianne*	DVNP (October)
22	Yellow Orange-tip*	*Ixias pyrene*	DVNP (October)
23	Small Grass Yellow	*Eurema brigitta*	DVNP, Ambriyala (October-November)

No.	English Name	Scientific Name	Locations and Months of Observation
24	Spotless Grass Yellow*	*Eurema laeta*	Samahni, Ambriyala (October-November)
25	Common Grass Yellow	*Eurema hecabe*	Widespread (Khan et al. 2007); Ambriyala (November-December)
26	Common Emigrant	*Catopsilia pomona*	DVNP, Samahni (July-December)
27	Mottled Emigrant	*Catopsilia pyranthe*	Widespread (October-December)
28	Dark Clouded Yellow	*Colias fieldii*	Ambriyala (November)
29	Common Lineblue	*Prosotas nora*	DVNP, Samahni, Ambriyala (October-December)
30	Forget-me-not*	*Catochrysops strabo*	DVNP, Ambriyala (October-December)
31	Pea Blue	*Lampides boeticus*	DVNP (November)
32	Zebra Blue	*Leptotes plinius*	Ambriyala (November)
33	Striped Pierrot*	*Tarucus nara*	Samahni (October)
34	Veined Pierrot	*Tarucus venosus*	DVNP (July)
35	Dark Grass Blue	*Zizeeria karsandra*	DVNP, Ambriyala (November)
36	Pale Grass Blue	*Pseudozizeeria maha*	Jandi Chountra, Samahni, Barnala (August, October-November)
37	Lesser Grass Blue*	*Zizina otis*	DVNP (November)
38	Bright Babul Blue*	*Azanus ubaldus*	Ambriyala (November)
39	Dull Babul Blue*	*Azanus uranus*	Ambriyala (December)
40	Common Hedge Blue	*Acytolepis puspa*	DVNP (July)
41	Indian Cupid*	*Everes lacturnus*	DVNP (November)
42	Gram Blue	*Euchrysops cnejus*	Samahni, DVNP (October-November)
43	Small Grass Jewel*	*Freyeria putli*	DVNP (October)
44	Common Silverline*	*Spindasis vulcanus*	Jandi Chountra, Samahni (August, October)
45	Common Acacia Blue*	*Surendra quercetorum*	Ambriyala (November)
46	Silverstreak Blue*	*Iraota timoleon*	Samahni, DVNP, Ambriyala (October-December)
47	Common Onyx*	*Horaga onyx*	Ambriyala (November)
48	Brown Onyx*	*Horaga albimacula viola*	Ambriyala (November)
49	Peacock Royal*	*Tajuria cippus*	Jandi Chountra, Ambriyala (April, November)

No.	English Name	Scientific Name	Locations and Months of Observation
50	Cornelian	*Deudorix epijarbas*	DVNP, Barnala (July, November)
51	Common Guava Blue*	*Virachola isocrates*	DVNP, Ambriyala (November)
52	Indian Red Flash	*Rapala iarbus*	DVNP, Samahni, Ambriyala (October-December)
53	Slate Flash*	*Rapala manea*	DVNP, Ambriyala (October-December)
54	Plain Tiger	*Danaus chrysippus*	Samahni, Ambriyala, Barnala (October-November). One of the commonest butterflies of Pakistan
55	Common Tiger	*Danaus genutia*	Multiple localities (Khan et al. 2007)
56	Blue Tiger	*Tirumala limniace*	Widespread (Khan et al. 2007)
57	Common Crow*	*Euploea core*	DVNP (November)
58	Common Treebrown	*Lethe rohria*	DVNP (July)
59	Banded Treebrown	*Lethe confusa*	Ambriyala (December)
60	Common Bush-brown	*Mycalesis perseus*	DVNP, Ambriyala (July-December)
61	Lesser Three-ring	*Ypthima inica*	Barnala (November)
62	Jewel Five-ring	*Ypthima avanta*	Jandi Chountra, DVNP, Ambriyala (August, November)
63	White-edged Rockbrown	*Hipparchia parisatis*	Samahni (October)
64	Common Castor	*Ariadne merione*	Barnala city, Ambriyala (November)
65	Common Leopard	*Phalanta phalantha*	Samahni, Ambriyala (October-December)
66	Painted Lady	*Vanessa cardui*	Ambriyala (February, November-December)
67	Blue Pansy	*Junonia orithya*	DVNP, Samahni, Ambriyala (July, October-November)
68	Yellow Pansy	*Junonia hierta*	Jandi Chountra, Samahni, Ambriyala (August, October-November)
69	Lemon Pansy	*Junonia lemonias*	DVNP, Ambriyala (July, October-November)
70	Peacock Pansy	*Junonia almana*	Samahni (October)
71	Chocolate Pansy	*Junonia iphita*	Samahni, DVNP, Ambriyala (October-November)
72	Grey Pansy*	*Junonia atlites*	Ambriyala (December)

No.	English Name	Scientific Name	Locations and Months of Observation
73	Pallas`s Sailer	*Neptis sappho*	Samahni, DVNP, Ambriyala (October-November)
74	Creamy Sailer	*Neptis soma butleri*	DVNP, Ambriyala (November)
75	Common Sergeant	*Athyma perius*	Samahni, Ambriyala (October-November)
76	Common Baron	*Euthalia aconthea*	DVNP, Samahni, Ambriyala (October-December)
77	Tropical Fritillary	*Argynnis hyperbius*	DVNP, Ambriyala (October-November)
78	Anomalous Nawab*	*Polyura agraria*	Ambriyala (December)
79	Black Rajah*	*Charaxes solon*	DVNP (July)
80	Club Beak	*Libythea myrrha*	DVNP, Ambriyala (November-December)

Common Jezebel *Delias eucharis*

White Orange-tip *Ixias marianne*

Dull Babul Blue *Azanus uranus*

Grey Pansy *Junonia atlites*

Conclusion:

With 80 species documented, this checklist is a significant contribution to our understanding of the butterfly diversity of Bhimber. However, much remains to be discovered. As more enthusiasts and researchers explore varied landscapes of the district, new records are inevitable. Some of these may include species currently unreported from Pakistan but observed (Sheikh et al. 2021) across the Line of Control (LoC) in places like Rajouri and Jammu, e.g. Grass Demon *Udaspes folus*, Indigo Flash *Rapala varuna*, Commander *Moduza procris* etc.

By continuing to explore and document, we not only expand this list but also contribute to broader ecological and conservation knowledge. PBS encourages naturalists and researchers to actively participate in uncovering the district's hidden treasures.

Acknowledgments:

The authors extend their heartfelt thanks to Rewilding Indus (RI) and Pakistan Butterfly Society (PBS) for the support, Khalid Mahmood, Mudasar Javaid and Bilal Nisar (Game-watchers, Deva Vatala National Park) for their hospitality and facilitation in the survey (2024), Tahir Manzoor Aatir and Syed Ali Hassan for participation and help in 2021 field trip, and Abdul Hadi, Muhammad Tayyab and Muhammad Ali for providing summer records for this report.

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CAMOUFLAGE AND MIMICRY IN BUTTERFLIES

Taimur Khan

Introduction:

Butterflies are large, colorful and showy insects, which is why, of course we love them, but that also makes them very visible to predators. Interestingly, they evolved certain techniques to hide and protect themselves, which are camouflage and mimicry.

Camouflage in Butterflies:

Butterflies employ various strategies for camouflage, including disruptive coloration, active camouflage, and concealing coloration. These adaptations allows them to blend seamlessly with their surroundings using specific colors, patterns, and textures. Many species camouflage themselves against leaves, soil, rocks, or tree trunks, making it exceptionally difficult for predators to detect them. For example, the Orange Oakleaf Butterfly *Kallima inachus* perfectly mimics a dried leaf at rest, creating a stunning illusion that fools even the sharpest-eyed predators. Beaks *Libythea* sp. demonstrate a similar strategy, perfectly camouflaging themselves like dried leaves.

Camouflage is derived from the French word '*camoufler*', which originally means disguise. Butterflies and moths use camouflage, also known as "cryptic coloration" to conceal their appearance and blend it with its surroundings for defense purpose. This adaptation prevents butterflies from being detected or recognized by other animals.

Dry leaves provide the perfect cover for the stealthy Club Beak butterfly *Libythea myrrha*

Mimicry in Butterflies:

Mimicry is the superficial resemblance between two or more organisms or the resemblance of one species with one or more different species. Different types of mimicry are discussed below.

1. Batesian Mimicry: Batesian mimicry is that in which an edible species is protected by its resemblance to the species avoided by predators. In other words, a palatable butterfly (mimic) that resembles an unpalatable or toxic one (model), leading to its survival. The mimic gains protection and thus the predator does not pursue it as a prey item.

In 1862 the English naturalist Henry W. Bates published an explanation for unexpected similarities in appearance between Brazilian forest butterflies of two distinct families. Members of one family are unpalatable to birds and are conspicuously colored, members of the other family are edible to predators. Bates concluded that the conspicuous coloration of the inedible species must serve as a warning for predators that had learned of their inedibility through experience. The deceptively similar color patterns of the edible species would provide protection from the same predators. This form of mimicry, in which a defenseless organism bears a close resemblance to a noxious and conspicuous one, is called Batesian Mimicry, in honor of its discoverer.

Example of Batesian Mimicry

2. Mullerian Mimicry: This form of mimicry originates from a strategy in which all members of one particular species copy nearly the same colorations or patterns of another species — both unpalatable. In other words, two or more harmful or unpalatable butterflies develop similar appearances as a shared protective strategy. In 1879, Fritz Muller, a Germen naturalist, realized that there were also many cases where both the mimic and the model were unpalatable. When a bird catches any one of these butterflies, either model or mimic, and realizes it is unpalatable or toxic, it quickly learns to keep away from all similarly patterned species. This type of mimicry is a very common phenomenon among Crows *Euploea* and Tigers *Tirumala, Parantica* etc.

Glassy Tiger *Parantica aglea* (Mullerian Mimicry)

Blue Tiger *Tirumala limniace (Mullerian Mimicry)*

Different Survival Strategies:

Speed: by flying suddenly and faster helps butterfly escape many attacks.

Mimicry rings: Defensive markings which have the effect of startling or frightening the potential predators are known as “diematic pattern”. Common marking is an ocellus or eyespot on wings. These ocelli may resemble eye of certain animals and their appearance can frighten away a predator or at least surprise it long enough for the butterfly to make its escape. Certain butterflies have rings or eye spots on their wings to make them look like a predator, and they open wings suddenly to make the predator scare away.

Wings of Kashmir Four-ring *Ypthima kasmira* with 4 ocelli (false eyes/rings) look like head of a larger animal to confuse predators

Eyespots on vivid orange wings of Peacock Pansy *Junonia almana* mimic a predator's gaze

Decoy or False Target: Lots of butterflies have spots and patterns on non-vital parts of the body. These patterns, at first glance, appear to have no purpose, but they draw attention for the predator to strike at them and save the rest of the body. For instance, an attacking bird will naturally predict where its victim will flee, so it will aim to attack just in front of the head. The presence of a decoy target such as the false eye (ocelli) diverts the attack away from the butterfly body toward the wing borders and confuses its predator. The bird is tricked by the phoney (fake) head into attacking behind the butterfly instead. The butterfly then escapes by fluttering off in the opposite direction with parts of the wing missing and can live another day.

© Akram Awan

Thanks to its tornal false head, the Cornelian *Deudorix epijarbas* ensures predator strikes hit the wrong target

© Noor Alam

Bright red abdeomen with a toxic body make the Common Rose *Pachliopta aristolochiae* a no-go for predators

Warning coloration (Aposematism): Colors and patterns that act as a warning to predators that a potential prey species is unpalatable, toxic, or dangerous. Bright colors and certain patterns on the wings of a butterfly act as a warning to the predator that this prey is unpalatable, toxic, or dangerous. Birds can remember the colors and patterns of butterflies, and associate those with pleasurable or unpleasant experiences, if a bird eats toxic butterfly, it finds the taste very unpleasant and is likely to suffer consequences including vomiting, nausea, and visual disturbance, so the bird may memorize these patterns and learn to avoid preying on such species with similar patterns in the future. Butterflies become distasteful due to chemicals derived from the plants that their larvae feed on. These butterflies fly slowly, often gliding and displaying their bright colors. Mimics take advantage of the same coloration and behavior even though they are not toxic.

Survival in Early Life Stages:

Mimicry and camouflage are not just limited to fully-grown butterflies. Many tasty caterpillars imitate unappealing species. After moulting, caterpillars frequently change their look on a regular basis. It is possible for a caterpillar to mimic different models at different stages. Interestingly, the adult butterfly that develops from that caterpillar could look just like a different species.

Eggs: To increase the chances of survival, butterflies lay eggs in large numbers and below the leaf surface to avoid detection. Some eggs are laid in ant nests directly to mimic their eggs or larvae.

The Common Baron *Euthalia aconthea* caterpillar disappears into the green of mango leaves

Larva Defenses: Larvae use various defense mechanisms for survival from predators like birds and lizards. Mostly larvae feed at night to avoid predation. Many Swallowtail *Papilio* sp. larvae have a pair of false eye spots on the thoracic region. When alarmed, the larvae puff up the thoracic segments, causing the eyespots to expand, with the larva mimicking the head of a snake. Some larvae camouflage with the surroundings to escape detection. Some Swallowtail *Papilio* sp. larvae mimic a bird dropping to remain unseen on contrasting green backgrounds. The larvae of Common Mime *Chilasa clytia*, use bright colors and patterns to warn enemies that they are poisonous or distasteful. Some are equipped with multi-branched spikes and horns, which is enough to deter attacking birds, wasps, and other predators.

Pupa Defenses: Pupae are immobile and are largely defenseless. Camouflage is a common feature reducing the chances of detection by predators, so pupae of some species show variation in color depending on the surface of the anchoring, such as green pupa on fresh leaves and brownish pupa on tree trunk.
Pupae of Common Mime *Chilasa clytia* mimic dead leaf or dead plant twig; Common Jezebel *Delias eucharis* pupae are brightly coloured, indicating that they are poisonous. Painted Lady *Vanessa cardui* pupae produce hissing sound to deter predator.

Pupa of Common Mime *Chilasa clytia* resembles a lifeless twig to deter predators

Conclusion:

Butterflies aren't just beautiful to look at; they are masters of disguise and incredible survivors, using camouflage and mimicry to outsmart predators in fascinating ways. Whether it is blending perfectly into their surroundings or tricking predators by looking like something they are not, these strategies show how clever and adaptable nature can be. Butterflies are more than just examples of survival; they are a reminder of how delicate and connected our ecosystems are. Protecting them means protecting the environment we all share. The astonishing world of butterflies continues to inspire, urging us to look deeper into the secrets of nature and to cherish the biodiversity that surrounds us. The more we learn about their world, the more we realise just how much there is to appreciate and how much we have to lose if we do not take care of it.

THE VAGABOND BUTTERFLIES

Kanwal Batool Awan

Butterflies may seem like fleeting travelers, leaving no trace of their path, but for those who observe closely, they hold secrets that unveil the deeper truths. It's a well-established fact that many species of butterflies migrate, some over incredibly vast distances, to find the optimum habitat, food sources, and the right temperatures. However, I've been wondering: Could butterflies also be migrating upwards, not just across the latitude margins, but to higher altitudes to adjust to shifting climatic conditions, such as globally rising temperatures?

As it turns out, the answer is a resounding yes! A 2021 study by Rödder et al. confirmed what I had long suspected—many butterflies, particularly those in mountain regions, are indeed shifting upward to cooler, higher altitudes as a response to global warming and climate change. The study followed 37 butterfly species and found that over time, these butterflies have shifted their ranges to higher elevations. In fact, 27 out of the 37 species studied showed the highest altitudinal observations in more recent years. This means that butterflies are actively seeking higher ground to maintain their ideal environmental conditions (Rödder et al., 2021). As the climate warms, these delicate creatures are shifting their habitats, a shift that could provide insight into the broader effects of climate change on wildlife and ecological composition.

In Muzaffarabad, Kashmir, I've observed this fascinating phenomenon, where butterfly species showed a trend of altitudinal habitat shift. From 2016 to 2019, I was fortunate to observe a surge in butterfly diversity in the region. Species I had never seen before appeared at higher elevations, including the striking Common Windmill, which I spotted at an altitude of 2900 meters in the area around Ganga Choti peak. This discovery left me pondering: Why were these butterflies suddenly appearing in the northern areas? It was clear that something was at play beyond mere seasonal migration.

Upon closer inspection, I realized that the butterflies I had been observing weren't simply migrating from other regions of Kashmir (a latitudinal shift)—they were likely moving in from the lesser Himalayan region of KPK and plains of Punjab, Pakistan (an altitudinal shift). They were responding to the rising temperatures in the lowlands by migrating towards cooler, higher-altitude habitats in the hills of Muzaffarabad. This was my educated guess, supported by the patterns I observed in both the scientific literature and my own experiences, though it remains a hypothesis in need of further investigation.
Migration is a harsh process, particularly for delicate creatures like butterflies. They are incredibly sensitive to environmental changes, and climate change is impacting their migratory patterns in more ways than one. In their study, Chowdhury et al. (2021) pointed out that changing temperatures and moisture levels could disrupt the cues that butterflies rely on to trigger migration. As a result, butterflies could face declines in populations if they are unable to find suitable conditions or if the habitat they rely on becomes too hot or inhospitable.

Wilson et al. (2007) argue that species living in the low elevations face threats due to the specificity of their niche, which prevents them from migrating to higher elevations because the elevations do not meet their needs. They suggest that the changes in butterfly diversity in the lower mountains occur because some mountain-dwelling species are disappearing from mid-level elevations, and species from warmer, lower elevations are not moving up to replace them, leading to a decline in diversity within specific niches. While this perspective is compelling, I disagree. Butterflies are highly adaptive creatures, and their ability to exploit microhabitats within complex terrains like the Himalayas may be underestimated. Despite these challenges, I believe butterflies are not just passive victims of climate change—they are actively adapting. Rather than solely focusing on niche limitations, it's worth considering that some species might already be adjusting their range incrementally or finding ways to persist in fragmented habitats. A more nuanced study of microclimatic refugia and adaptive strategies could reveal resilience rather than an outright decline.


© Saghir Hassan Khan

Common Yellow Swallowtail *Papilio machaon*


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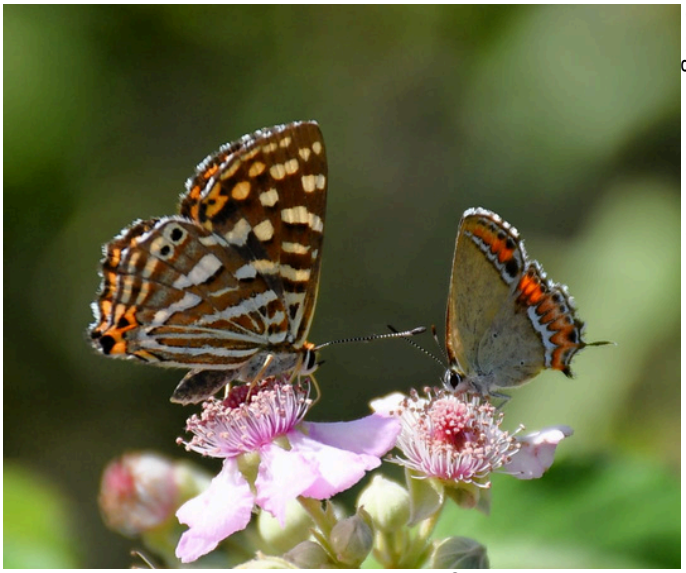
Common Shot *Silverline Spindasis*


© Akram Awan

Yellow Pansy *Junonia hierta*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Common Punch *Dodona durga* (Left) and Sorrel Sapphire *Nesa sena* (Right)

Over time, they are likely evolving phenotypically to survive in new conditions. These butterflies were not just moving—they were changing, evolving, and adjusting to the dramatic shifts in their environment.

The summers and springs of 2016 to 2019 remain some of the most cherished memories of my youth. As a young zoology student, I took it upon myself to learn more about these magical creatures, without any formal guidance—just a camera, a notebook, and an unyielding curiosity. It was during this time that I began compiling albums of butterfly photographs (some of which you can access on Instagram). In 2019, my observations led me to an online group of insect enthusiasts, where I met Akram Awan, who became my mentor. We were able to identify and catalog all the butterflies I had collected, and together, we began to piece together the puzzle of Muzaffarabad's butterfly diversity surge.

After years, I find it necessary to share my data. I'm excited to put forward the freshest checklist of butterflies in Muzaffarabad. These are species I've personally observed, many of which have never appeared in any published regional checklist before. Their appearance in the area marks a new chapter in our understanding of how butterflies are responding to the changing climate. See **Table 1** for the complete list.

For validation purposes, I'm also including a list of species that have already been documented by Muhammad Naeem Awan and colleagues from Salkhala Game Reserve in 2018 **(Table 2)**.

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Table 1. Checklist of butterflies of Muzaffarabad, AJK (2016-2019)

Family Hesperidae (Skippers)

No.	English Name	Scientific Name
1	Indian Palm Bob	*Suastus gremius*
2	Common Grasss Dart	*Taractrocera maevius*
3	Dart species	*Potanthus* sp.
4	Straight Swift species	*Parnara* sp.

Family Papilionidae (Swallowtails)

No.	English Name	Scientific Name
1	Common Peacock	*Papilio polyctor*
2	Common Mormon	*Papilio polytes*
3	Lime Butterfly	*Papilio demoleus*
4	Common Yellow Swallowtail	*Papilio machaon*

Family Pieridae (Whites and Yellows)

No.	English Name	Scientific Name
1	Indian Cabbage White	*Pieris canidia*
2	Himalayan Bath White	*Pontia endusa moorei*
3	Himalayan Brimstone	*Gonepteryx nepalensis*
4	Dark Clouded Yellow	*Colias fieldii*
5	Common Grass Yellow	*Eurema hecabe*

Family Lycaenidae (Blues, Coppers, Silverlines etc.)

No.	English Name	Scientific Name
1	Pea Blue	*Lampides boeticus*
2	Pale Grass Blue	*Pseudozizeeria maha*
3	Dark Grass Blue	*Zizeeria karsandra*
4	Veined Pierrot	*Tarucus venosus*
5	Dusky-Blue Cupid	*Everes huegelii*
6	Common Hedge Blue	*Acytolepis puspa*
7	Gram Blue	*Euchrysops cnejus*
8	Orange-bordered Argus	*Aricia agestis nazira*
9	Plains Cupid	*Luthrodes pandava*
10	Common Copper	*Lycaena phlaeas*

Family Lycaenidae (Blues, Coppers, Silverlines etc.)

No.	English Name	Scientific Name
11	Sorrel Sapphire	*Nesa sena*
12	Common Shot Silverline	*Spindasis ictis*
13	Cornelian	*Deudorix epijarbas*

Family Riodinidae (Punches)

No.	English Name	Scientific Name
1	Common Punch	*Dodona durga*

Family Nymphalidae (Brush-footed Butterflies)

No.	English Name	Scientific Name
1	Plain Tiger	*Danaus chrysippus*
2	Common Tiger	*Danaus genutia*
3	Common Treebrown	*Lethe rohria*
4	Common Wall Brown	*Lasiommata schakra*
5	Kashmir Four-ring	*Ypthima kasmira*
6	Jewel Five-ring	*Ypthima avanta*
7	Common Satyr	*Aulocera swaha*
8	Great Satyr	*Aulocera padma*
9	Tropical Fritillary	*Argynnis hyperbius*
10	Himalayan Queen Fritillary	*Issoria issaea*
11	Common Leopard	*Phalanta phalantha*
12	Indian Tortoiseshell	*Aglais cashmerienses*
13	Painted Lady	*Vanessa cardui*
14	Indian Red Admiral	*Vanessa indica*
15	Blue Pansy	*Junonia orithya*
16	Peacock Pansy	*Junonia almana*
17	Pallas`s Sailer	*Neptis sappho*
18	Hill Sergeant	*Athyma opalina*
19	Common Sergeant	*Athyma perius*
20	Common Baron	*Euthalia aconthea*
21	Tabby	*Pseudergolis wedah*
22	Common Beak	*Libythea lepita*

Cornelian *Deudorix epijarbas*

Table 2. Already validated to be present in the Neelum valley district, AJK (Batool et al, 2018)

No.	English Name	Scientific Name
1	Indian Cabbage White	*Pieris canidia*
2	Dark Clouded Yellow	*Colias fieldii*
3	Common Grass Yellow	*Eurema hecabe*
4	Veined Pierrot	*Tarucus venosus*
5	Cornelian	*Deudorix epijarbas*
6	Common Punch	*Dodona durga*
7	Common Satyr	*Aulocera swaha*
8	Plain Tiger	*Danaus chrysippus*
9	Common Tiger	*Danaus genutia*
10	Indian Red Admiral	*Vanessa indica*
11	Blue Pansy	*Junonia orithya*
12	Peacock Pansy	*Junonia almana*
13	Common Beak	*Libythea lepita*

First Sighting of Brown Onyx *Horaga albimacula viola* in Pakistan

Muhammad Ayaz Mahmood

In the hustle and bustle of modern life, it's easy to overlook the beauty of the small things around us. But since last year, I discovered an unexpected passion that has brought wonder and tranquility into my life—my love for butterflies. The more I learned about these delicate creatures, the more I realized how much they could teach us about nature, resilience, and transformation. In many societies, butterflies symbolize the soul and represent life's journey, showing how beauty can emerge from struggle. Their metamorphosis is a powerful metaphor for personal growth and the ability to embrace change.

My interest sparked when I found the Chitral Purple Emperor *Mimathyma chitralensis* in Taobat, Neelum Valley (AJK), a first photographic record for Pakistan. What began as fleeting curiosity turned into a passionate pursuit. A significant highlight was documenting the Brown Onyx *Horaga albimacula viola* in Margalla Hills, Islamabad—the first record of this species in Pakistan. I also recorded the Common Onyx *Horaga onyx* in the same area, the first sighting in Islamabad since its discovery in Pakistan from Wah Cantt last year.

Underside of Brown Onyx *Horaga albimacula viola* from Margalla Hills, Islamabad

Upperside wings of Brown Onyx *Horaga albimacula viola* from Kundpur, Bhimber (AJK)

In late October 2024, my friend Akram Awan, known as the Butterfly Man of Pakistan, visited me. Together, we explored the Margalla Hills, searching for butterflies. Initially, we found common species, but we hoped for something rare. While hiking, we ventured onto a side track where butterflies often gathered on *Lantana camara* plants. There, we spotted a small butterfly with a unique flying pattern. It landed briefly, allowing us a quick glimpse before it flew away. Akram identified it as something unusual, and I later confirmed it as the Common Onyx. Excited by the find, I returned to the site in the following days and managed to photograph it. On my third visit, I even spotted two individuals.

A few days later, while hiking on 30th October 2024, I encountered another butterfly. Initially, I thought it was a female Common Onyx, but upon showing it to Akram, he identified it as the Brown Onyx. This discovery marked the first recorded sighting of the Brown Onyx in Pakistan, a rare species in South Asia. Its range typically includes India, Nepal, Bhutan, Bangladesh, and Myanmar, with the westernmost locality previously documented in Jammu, India. My record extended its known range and added a significant entry to Pakistan's butterfly fauna.

The Brown Onyx, with its earthy brown hues and striking patterns resembling ‘onyx’ gemstone, is a visual marvel. Males and females differ slightly, with males sporting darker tones and females displaying lighter hues and more pronounced markings. Its wings, with deep browns and faint white lines, resemble fallen leaves, offering natural camouflage. It is distinguishable from the Common Onyx by its narrower underside hindwing band and white fore-leg tibia.

Margalla Hills National Park, known for its rich biodiversity, provides a haven for researchers and enthusiasts. Home to over 150 butterfly species, it continues to reveal new discoveries like the Brown Onyx. Such findings highlight potential shifts in butterfly distribution due to climate change, migration, or ecological factors.

This journey has deepened my appreciation for nature's delicate balance. Butterflies like the Brown Onyx face threats from habitat loss, climate change, and pollution. Protecting natural habitats and promoting sustainable environmental practices is crucial to preserving these wonders.

The discovery of new species underscores nature's infinite mysteries. Each sighting enriches our understanding of biodiversity and its interconnectedness. What began as a casual interest in butterflies has blossomed into a profound connection with nature. Discovery of the Brown Onyx was not just a personal triumph but a reminder of the untold stories waiting to be uncovered in every corner of the Earth.

I hope this story inspires others to explore nature's wonders, whether through butterfly watching, birdwatching, or other wildlife pursuits. Nature has a way of surprising us when we least expect it, offering endless opportunities for discovery and connection.

Addendum: Touseef Ahmed recorded Brown Onyx from Bhimber on 14th November 2024 and S. Kazmi recorded it from Wah Cantt between 20th and 30th November 2024. Interestingly, the Brown Onyx has been recorded in all the locations where the Common Onyx is found. While both species coexist across much of their range, the Brown Onyx is comparatively scarcer.

Trip Report

BUTTERFLY-WATCHING IN MASTUNG (BALOCHISTAN)

Salman Baloch

Mastung district lies in central Balochistan, approximately 50 kilometers south of the provincial capital, Quetta. It is known for its rugged terrain, unique geography, and semi-arid climate, contributing to its distinctive ecological characteristics. Mastung has an arid to semi-arid climate, with hot summers and cold winters and rainfall is sparse and mainly occurs during winter and monsoon seasons. Mastung is very popular for its fruit's cultivation such as Apple, Apricot, Plum, Mulberry, Grape and others. Also popular for its natural grass, shrub during spring and early summer, which includes dozens of flowering species.

Evans (1932) published a paper on butterfly fauna of Balochistan covering mostly Quetta, Killa Abdullah and Ziarat districts but there had been no mention of 'Mastung' in his work or any other historical or recent literature. I visited 3 localities (Dasht, Marov and Kad Kocha) in Mastung on 19th – 21st June 2024 and despite very limited butterfly-watching time, recorded following butterfly species (Table 1), which is first attempt of documenting some of the district`s butterflies.

© Salman Baloch

Balochi Grizzled Skipper *Spialia geron*

© Salman Baloch

Eastern Bath White *Pontia endusa*

Habitat view of Kad Kocha, Mastung

© Sajjad Ali Baloch

Table 1.

No.	English Name	Scientific Name
1	Balochi Grizzled Skipper	*Spialia geron*
2	Pygmy Swift	*Gegenes pumilio*
3	Large Cabbage White	*Pieris brassicae*
4	Eastern Bath White	*Pontia endusa*
5	Eastern Pale Clouded Yellow	*Colias erate*
6	Common Grass Yellow	*Eurema hecabe*
7	Pea Blue	*Lampides boeticus*
8	Dark Grass Blue	*Zizeeria karsandra*
9	African Grass Jewel	*Freyeria trochylus*
10	Small Jewel Blue	*Plebejus christophi*
11	White-edged Rockbrown	*Hipparchia parisatis*
12	Plain Tiger	*Danaus chrysippus*
13	Painted lady	*Vanessa cardui*
14	Blue Pansy	*Junonia orithya*

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Small Jewel Blue *Plebejus christophi*

White-edged Rockbrown *Hipparchia parisatis*

Our Natural Heritage

PAKISTANI WALL BROWN

Lasiommata pakistana

M. Akram Awan

Newly known to science, the endemic 'Pakistani Wall Brown' was discovered from a series of specimens collected between 1982-2008 and described in the Butterflies of Pakistan (Vadim Tshikolovets and Jerome Pages, 2016). Subsequently, there had only been two photographic records in June 2022 (by Aqeel Abbas) and July 2024 (by Zafeer A. Shaikh, Azan Karam and Akram Awan). This 'Wall Brown' is rare but spread over a wide range in Northern Pakistan and has so far been documented from the following 4 regions:

Gilgit region: Naltar, Bagrote, Kargah (Chaprot).
Chitral region: Chitral Gol NP, Bumburet (Kalash valley), Lowari pass.
Swat region: Mahodand lake.
Kaghan region: Naran.

Pakistan Wall Brown *Lasiommata pakistana* and its habitat, captured at Bagrote valley, Gilgit (GB)

It is estimated that this species is known from less than 15 collected/photographed specimens. This butterfly flies from late June to August from 2000-3400 m altitude and possibly occurs in more valleys than mentioned above. It favors rocky clearings, steppes, scree, and cliffs, just like other wall browns of genus *Lasiommata*.

Male Pakistani Wall Browns have a sex-mark or brand on upper fore-wing, which is poorly defined compared to that on fore-wings of Common *L. schakra* and Dark *L. menava* Wall Browns. When it closes its wings, its underside hind-wing has very irregular, zigzag post-discal line. Under fore-wing has two bars in cell, unlike (3 cell-bars) all other wall browns of Pakistan.

Reference:

- Vadim Tshikolovets, & Jerome Pages (2016). The Butterflies of Palaearctic Asia. XII. The Butterflies of Pakistan. Vadim Tshikolovets publisher, Pardubice (Czechia).

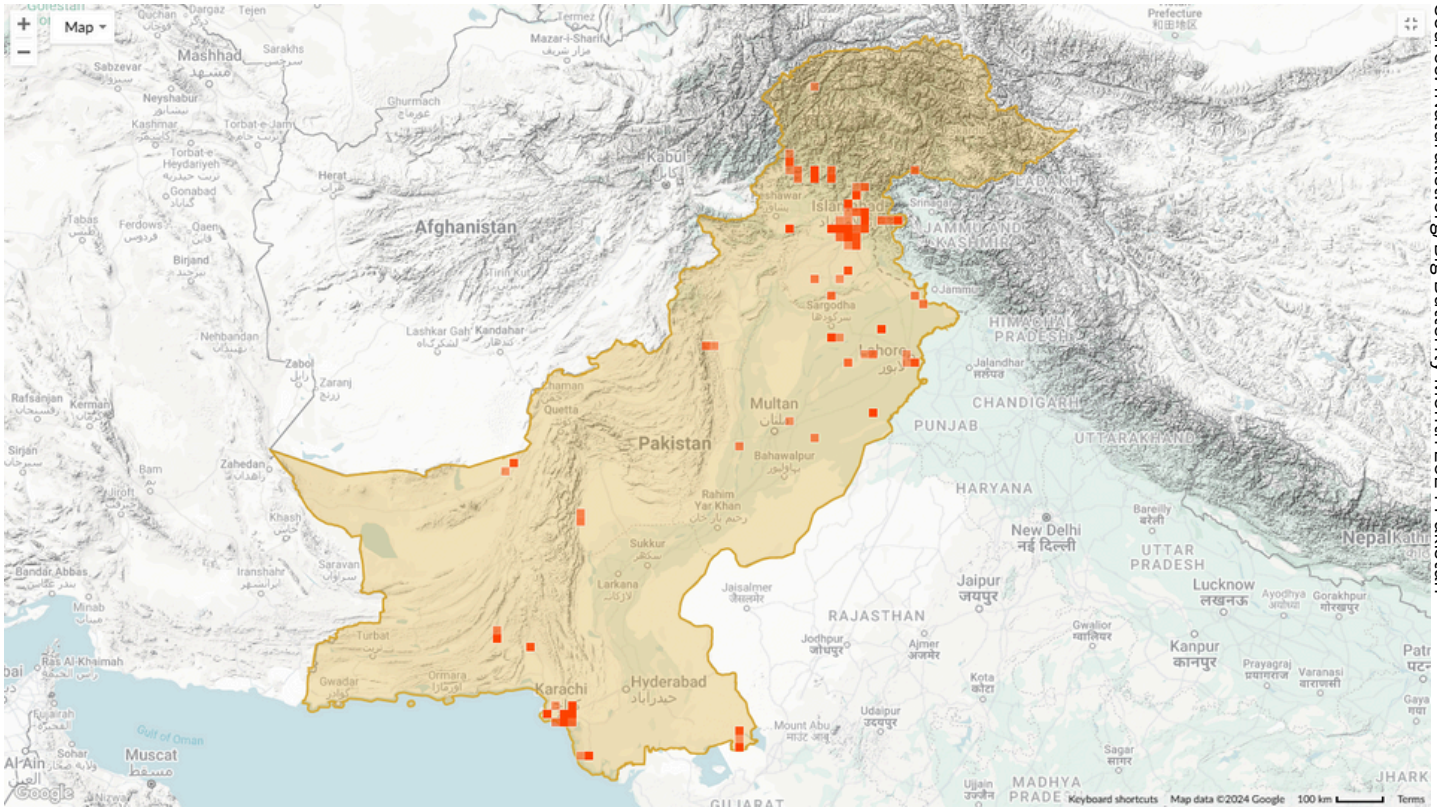
Indian Red Flashes
Rapala iarbus
on *Acacia nilotica*
(Taxila, Rawalpindi)

Event

HIGHLIGHTS OF BIG BUTTERFLY MONTH 2024 - PAKISTAN

Azan Karam

The term "citizen science" refers to the active participation of the general population in scientific research endeavors, utilizing their equipment, resources, local knowledge, or intellectual skills. Through citizen science, researchers receive experimental data from participants, who in turn pose new questions and help shape a progressive scientific culture. One prominent example is the recent Big Butterfly Month (BBM), an annual project held throughout September in predominantly South Asian countries. During this event, nature enthusiasts of all ages and backgrounds come together to celebrate the vibrant beauty of butterflies while contributing meaningfully to scientific research.



Source: iNaturalist.org/Big Butterfly Month 2024 Pakistan

Figure 1. A map showing observation sites from around Pakistan in Big Butterfly Month 2024.

This citizen-science initiative was officially launched by India in recent years and has since expanded to seven Asian countries: India, Pakistan, Bangladesh, Nepal, Bhutan, Myanmar, and Sri Lanka. The Pakistan Butterfly Society (PBS) became an official partner of BBM in 2023, with the event continuing for its second consecutive year in September 2024 (see Fig.1). The primary aim of this initiative is to bridge the gap between people and nature through an eco-friendly, interactive, and enriching activity —observing and documenting butterflies. This not only fosters a deeper appreciation for these delicate ecological indicators but also aids scientists in better understanding this fascinating group of insects.

Big Butterfly Month is about more than identifying species; it is a powerful tool for raising awareness about the critical role butterflies play in maintaining ecological balance. Butterflies are not just aesthetic marvels but vital indicators of environmental health. By observing these creatures, participants contribute data that allows researchers to monitor butterfly populations, detect changes in their behavior, distribution, and migratory patterns, and assess the impacts of climate change and habitat loss. This event blends science with storytelling, with every participant's observations contributing to a broader narrative about the state of our planet.

One of the most remarkable aspects of Big Butterfly Month is its accessibility. Anyone with curiosity and a love for the outdoors can participate—no scientific background or specialized equipment is required. Armed with smartphones or notebooks, participants document sightings using user-friendly platforms like iNaturalist.org or iNaturalist Mobile App, adding invaluable data to national and regional butterfly databases. For families and educators, this initiative offers an engaging way to introduce children to biodiversity, transforming a walk in the park into an interactive science lesson.

Pakistan has made notable contributions to this initiative since 2023, with the collected data providing critical insights into the country's butterfly fauna. Although the data set remains small due to limited participation, the event has shown promising growth in 2024, with increases in observer numbers, species documented, and total observations (see Fig. 2). This year also brought exciting discoveries, including new species records, range extensions, and rediscoveries of species previously thought lost.

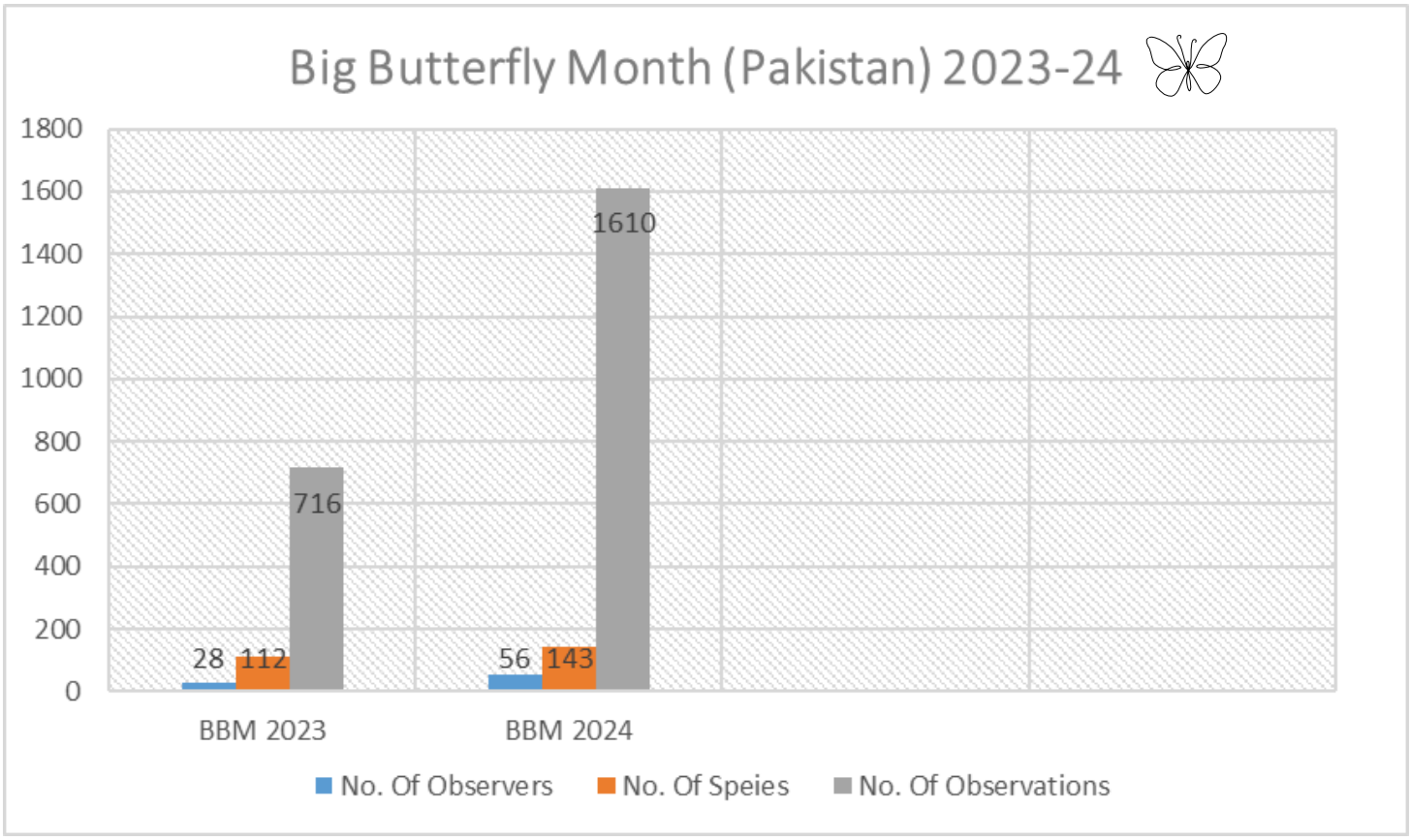


Figure 2. Bar graphs showing comparative analysis of Big Butterfly Month 2023-24 - Pakistan.

For instance, on the first day of the event, a new species for Pakistan, the Crimson Rose *Pachliopta hector*, was recorded at Sonehri Beach, Karachi (Salman Baloch and Zafeer Ahmed Shaikh). Similarly, four participants from Balochistan (compared to just one in 2023) contributed sightings, including the rediscovery of the Desert Orangetip *Colotis liagore* in Awaran after 90 years (Shabir Rakhshani). In Khyber Pakhtunkhwa, a Hill Jezebel *Delias belladonna* was reported in Nathia Gali by Saghir Hassan Khan—marking the species' second national record and the first photographic documentation. In Swat Valley's Marghuzar region, a Veined Scrub Hopper *Aeromachus stigmatus* was reported, extending the species' known global range westward by several kilometers (Azan Karam and Abdur Rehman).


© Saghir Hassan Khan

Hill Jezebel *Delias belladonna*


© Salman Baloch

Crimson Rose *Pachliopta hector*


© Azan Karam

Veined Scrub Hopper *Aeromachus stigmatus*


© Shabir Rakhshani

Desert Orangetip *Colotis liagore*

In total, citizen scientists documented 143 butterfly species during the event, with all records validated by experts. To further engage the younger generation, PBS hosted interactive sessions and practical field activities at Dar-e-Arqam School in Mingora, Swat, and The Ivy School in Karachi. These contributions highlight the value of initiatives like Big Butterfly Month, which enable us to explore and understand our rich butterfly diversity in ways that were previously unimaginable.

Rarity Notes

Significant butterfly sightings in Pakistan from 15th September to 15th December 2024

Editorial Team

Common Onyx *Horaga onyx* from Margalla Hills National Park (Islamabad)

Common Onyx *Horaga onyx*, previously reported only from Wah Cantt, has been documented for the first time from Taxila (by Akram Awan on 11th October 2024), Margalla hills, Islamabad (by M. Ayaz Mahmood on 26th October 2024) and Azad Kashmir (by Touseef Ahmed on 13th November 2024).

Muhammad Ayaz Mahmood photographed the first Brown Onyx *Horaga albimacula viola* of Pakistan from Margalla hills, Islamabad on 30th October 2024. Later, this species was also recorded from from Bhimber on 14th November 2024 by Touseef Ahmed and from Wah Cantt between 20th and 30th November 2024 by S. Kazmi.

Many species were added to recorded butterfly fauna of Azad Kashmir (AJK) in the last quarter, all from Bhimber district: Akram Awan and M. Ayaz Mahmood documented 'first' Indian Grizzled Skipper *Spialia galba*, Common Gull *Cepora nerissa*, Western Striped Albatross *Appias libythea*, Lesser Grass Blue *Zizina otis*, Indian Cupid *Everes lacturnus*, Common Guava Blue *Virachola Isocrates* and Common Crow *Euploea core* of AJK. Touseef Ahmed Touseef Ahmed added to this by documenting species like Dingy Swift *Gegenes nostrodamus*, Rice Swift *Borbo cinnara*, Bright Babul Blue *Azanus ubaldus*, Dull Babul Blue *Azanus uranus*, Common Acacia Blue *Surendra quercetorum*, Grey Pansy *Junonia atlites* and Anomalous Nawab *Polyura agraria.*

Second and third records of Red Admiral *Vanessa atalanta* for Punjab province came from Wah Cantt on 9th March 2024 (belatedly reported by S. Kazmi) and Taxila on 22nd November 2024 (by Akram Awan), both in Rawalpindi district.

Common Lascar *Pantoporia hordonia* was recorded by M. Ayaz Mahmood from Margalla hills, Islamabad thrice in November. This species was first reported from Pakistan last year with 2 records from Margalla hills and one from Haveli, AJK.

On 4th November 2024 S. Kazmi recorded Spangle *Papilio protenor* from Wah Cantt, Rawalpindi. This is second record from Punjab province. First record was from Taxila in October 2023.

A female Striped Blue Crow *Euploea mulciber* was photographed in Taxila, Rawalpindi by Akram Awan on 13th November 2024. This is third sighting from Punjab (all from the same locality) and overall 5th record for Pakistan (remaining 2 are from Margalla hills).

Red Admiral *Vanessa atalanta*

Striped Blue Crow *Euploea mulciber*

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Below are some relevant links for you if you are interested in learning more about the Butterflies of Pakistan and PBS activities:

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Linkedin:
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X:
https://twitter.com/PakButterflySoc

iNaturalist:
https://www.inaturalist.org/observations?project_id=28750

Email:
pakistanbutterflies@gmail.com
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REWILDING INDUS

Rewilding Indus (RI) is a body of like minded individuals concerned with the crippling loss of biodiversity in Pakistan. This young initiative is a collective effort towards making a dent in Wildlife Research and Conservation in Pakistan. This Bulletin has been made possible through RI's technical support.