

Indian Lepidoptera  
(Insects as Umbrella species)

Issue Number 2006.2

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*Flutter by  
Butterfly  
Floating flower  
in the sky  
Kiss me with your  
Petal wings  
Whisper secrets  
Tell of spring*  
■ Author Unknown

Welcome to the beautiful and colorful  
World of Indian butterflies!!!!  
Subscribe today to know more about  
These lovely creatures.

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Dear All,

I am glad to see the responses that I got after the release of first issue of this newsletter. Many expressed their happiness to see something like this happening in the interest of our insects. Some of them even asked me to start this newsletter as hardcopies. This sounds like a very good idea and we can start thinking seriously in those directions once we have more contributors and subscribers. I hope this will be realized soon.

Last 6 months has been eventful. Some of the highlights are - reports of mass death of butterflies due to excessive use of Endosulfan in Kerala; witnessing an enormous Danainae migration during September and October in South India and induction of new active members from North East into our ButterflyIndia group. There were also few interesting happenings in the international front-like the recent discovery of 4 new butterfly species in New Guinea; Lepidopterists Society Meeting in Sierra Vista; people using gliders to follow the Migrations of Monarchs; report of Conservationists Suing the U.S. Fish and Wildlife service in order to Protect Sand Mountain blue butterfly in Nevada; release of 3 new books-“ Magnificent Monarchs” by Linda Glaser; “Butterflies of West Africa”- by Torben Larsen (2. volumes, Apollo Books, Stenstrup, Denmark) and Catalogue of the American Hesperioidea:Hesperiidae (Lepidoptera), and finally creation of a new website on Nicaraguan butterflies (“<http://www.bio-nica.org/index.htm>”)

From this issue, as part of this newsletter, I will be re-publishing few articles from other Journals. These articles are very relevant to Indian readers and I am sure not many people had a chance to read these articles. They will be published in this newsletter only after taking permission from the original authors. Readers are requested to quote the original Journal and not this newsletter while referring to these articles.

I am also starting a new section on the Indian Butterflies. In each issue, one group will be introduced along with photographs. I hope more and more people find this effort attractive and more importantly start contributing to this newsletter.

Happy insecting,  
Kishen Das, Editor

## **Hide-Seek Butterfly**

**Dr. Shubhalaxmi  
BNHS, Mumbai**

Common name: Blue Oakleaf

Latin name: *Kallima horsfieldi*

Wingspan: 85-110 mm

**Occurrence:** These are basically forest butterflies and are commonly seen in the forests during monsoon. The females lay eggs on Karvi (*Strobilanthes* sp.), the plant that is known to bloom once in seven years.

Butterflies, just like other insect orders are vulnerable to predation. All stages in the butterfly life cycle faces the prospect of attack by predator such as birds, lizards and other preying insects. Though they appear weak and helpless, they are well equipped with life saving techniques. To counter attacks from their predators, butterflies have developed various ways to protect themselves, one of them being the body color. Color plays an important role in the survival of the adult butterfly. Both the sides of the butterfly wings are not evenly marked and colored, the outer side of the wing may be brightly colored while the underside is dull colored. The idea is to either get easily merged with the surrounding or become invisible or else to stand out with bright colours and advertise being non-palatable to the predator.

When it comes to camouflaging coloration, the Blue Oakleaf butterfly is a classic example of such coloration. The undersides of its wings have the exact color pattern of a dead leaf, complete with 'stalk', 'midrib' and even 'fungus patterns' and worm holes. While the outer side of the wings are remarkably colored with different hues of blue. At rest the butterfly sits with closed wings that gives an impression on dead leaf on a branch of a tree or in a cluster of dry leaves. When disturbed, it opens its wings to take off, flashing its brilliant blue color that startles the predator. This gives the butterfly an opportunity to fly away and 'disappear' among the dead

leaves, leaving the predator to searching for the blue butterfly. But it will never make a mistake of landing on a green leaf or branch.

In reality this technique really works, once while walking through the forested trail, I found a robin chasing this butterfly. The exhausted butterfly immediately took shelter among the cluster of fallen leaves on the ground. Suddenly the blue butterfly got disappeared among the leaves. The robin followed and it too landed next to the cluster of dead leaves. The robin knew that the butterfly had landed on the very place, but not able to locate it. I was witnessing the whole drama and was very tensed, as I could see the butterfly with its closed wings was very close to the feet of the robin. The robin turned around but couldn't locate the butterfly finally it started disturbing the leaves, the idea was to disturb the resting butterfly, but probably the butterfly was more smarter than the robin and did not budge at all. Watching this game of hide-seek for more than 10 minutes, I became restless. I was just wishing god, the robin shouldn't locate the butterfly but the butterfly seemed to be more confident of its camouflaging colors and remained still. Later on the inquisitive robin gave up its quest and flew away and seconds later the butterfly also took to flight happily. As a spectator I was left spellbound!

### **Transformation**

**Alaka Yeravadekar,  
Pune**

Mother shied away like a startled horse. Father just raised a disgusted eyebrow. That was when I brought those wriggly things home from the hill. Little black and white striped fellas curled onto a leaf. After a bout of negotiations I was allowed to keep them as long as they were kept on the terrace in a CLOSED container.

Then the fun started. After a bit of hunting around, dust-covered clothes and a brainwave, some chocolates were quietly divested off their transparent plastic box. Placing the wrigglers in it was a matter of few seconds. I put in a few leaves and bits of stick. How much oxygen do 1-cm.

caterpillars need? Couple of tiny holes was punched at the top. These should take care of any vapor from the leaves and free me from guilt of asphyxiating two tiny lives to death.

Those little twerps grew by leaps and bounds. And boy, they were fastidious about what they ate. Only the leaves of a certain creeper would do. So there would be yours truly trudging to the hill everyday to procure fresh leaves. The tiny cats doubled in size every alternate day. Twirls of skin shed from their striped bodies. They had now grown into real whoppers. Their movements grew more sluggish. Were they pensive about the abrupt twist their life would take?

This would be the day. Yes! Heart thudding, I bounced out of the bed and ran to the terrace where the box was kept. Then, heaved a sigh of relief. No, they were still just cats, though one of them had attached itself like a J-hook on the underside of the box lid. Their stripes were now colored a lemon green and black.

Now, the long wait. Workplace absence was taken care of by a phone call. All daily activities were thrown to the wind, to the consternation of my family. Every two minutes I would do a refresh scan of the box.

The cats seemed to have entered into a trance. Unmoving. And then I got a phone call I could not avoid. 10 minutes gone - what would those cats be up to in all that time? Luckily, nothing. Heart back in the normal place.

And then – it happened. Videocam poised, gripped in a fever of excitement, I stared. The pale green liquid abruptly oozed out of the sides of the caterpillars, rapidly encasing their bodies. The outer skin was sloughed off like one would unzip a coat. All over in 20 seconds flat. Then came the gyrating throes of death – or life?

Finally the dizzying movement was stilled. What remained was something that looked like pistachios dangling from the lid, glinting gold here and there.

By now even the family had shown a sneaking interest in the welfare of those pupae. The lid had to come off, as the butterflies should not be stressed in anyway when they emerged. But then the birds could get at them out on the terrace. This time I faced no objection to keeping the pupae inside the house for the next few weeks. As the days progressed, the internal changes became

apparent. The green of the chrysalis seemed to vanish as the dark and light pattern of wings showed through.

And one fine morning as I stared at those inert forms, the shells just broke open. A thin foot, then several others and the rest of the body emerged. The butterflies had arrived! The video cam sprang into action once again.

Beauty sure comes in small packages. These were crammed in just 2 cc. On their gossamer wings they brought pieces of sky splattered with clouds, all smartly edged in black. They clung on to the now pale ghostly shells, unfurling, drying and straightening their wings. Lazing in the sun.

After a while, both flew away.

For a person who till then went 'eeeks' at the sight of a caterpillar, was there just a hint of tears in my eyes?

**Hazards of butterfly collecting -  
'Fossil on a pin' – Keele University, UK, 1993**

**Permission has been taken from the author to re-publish this article. People referring to this article should quote "LARSEN, T.B. 2005. Hazards of butterfly collecting – Fossil on a pin, UK. *Entomologists' Record and Journal of Variation*, 117:109-111."**

**Torben B. Larsen**

In 1993 I was asked to give a paper on butterfly conservation needs in Africa as part of 25<sup>th</sup> anniversary symposium organized by the British Butterfly Conservation Society (BCS) at Keele University. This was a lively and interesting affair. Some of the most impressive presentations were those of the several studies on the reasons for the decline of butterflies in the UK. Many have been drastically reduced in both numbers and distribution over the past 50 years. The proceedings were published in an attractive book (PULLIN, A. S. (ed). 1995. *Ecology and Conservation of Butterflies*. Chapman & Hall, UK).

The contrast between how much is known about so many of the few species of butterflies occurring in the United Kingdom and how little is known about most of the 4,000 species occurring in Africa could not have been more apparent. This also leads to some very different attitudes to the study and collecting of butterflies.

In the discussion following my talk, where I had emphasized habitat conservation as the overriding issue in Africa, a member of the audience asked me about the collecting of butterflies – a potentially fraught topic amongst a large company of the august membership of Butterfly Conservation. I quoted a letter I had just received from a couple who had recently been to Yemen, one of my old haunts, and part of the Afrotropical Region: “We also saw a Nymphalid that is not illustrated in any of your Arabian books and papers. We therefore knew it must be very rare and obviously we did not catch it.” “When I get a letter like that”, I said – beginning to make the motions of throttling someone with my bare hands – “I feel very, very frustrated”. I was not very sure how this would go down, but as the audience gradually caught on to what my hands were illustrating, a gratifying murmur of laughter slowly rippled through the auditorium: “How are we going to think about butterfly conservation when we do not even know what we have got?” Here was an important opportunity missed through a thoroughly confused attitude to conservation. No harm could possibly be done by taking a few butterflies out of a place, which had not seen a butterfly net since I was there in the 1980s. The benefit of a complete picture of Yemen’s fauna for future conservation efforts is evident.

Actually the issue is even more critical than that. In most tropical parts of the world a butterfly or any other insect that is correctly labelled and placed in a safe collection may a few years from now be a “fossil on a pin”. During the late 1960s I collected extensively in two interesting forests in western Nigeria, Ilaro and Olokemeji. They were the two forests closest to the Dahomey Gap, a tongue of savannah country stretching to the coast of Togo and Bénin, separating the West African fauna from that of Nigeria and Central Africa. I have hundreds of butterflies from there. All are now effectively “fossils” - the forests are gone ... not just degraded, but is no more - like Monty Python’s parrot.

Near Ilaro Forest – in 1969 - I collected a most distinctive forest butterfly that was named *Euriphene kiki* Bernardi & Larsen, 1980. I went back to the locality to find some more ten years later, but no forest was left anywhere in the vicinity. None has been located in other collections. It now sits in the Paris Natural History Museum – a fossil on a pin that tells us at least something

about an organism that has now most probably disappeared in nature. The inset photo shows an Ilaro instant fossil of a small member of the curious African Lipteninae branch of the Lycaenidae. It belongs to the *Liptena alluaudi/albicans*-complex, which probably comprises four or more species between Côte d'Ivoire and western Nigeria that I still have not sorted out to my satisfaction. I have seen no Nigerian material from this group of species since the one figured was caught (I still remember a lovely picnic with my parents on 21 June 1967).



I am afraid that the welcome emphasis on conservation has had unwelcome side-effects. Collecting insects in most parts of the world has become increasingly difficult. Nowhere was this better illustrated than when we were living in the Philippines. A group of entomologists from a university in eastern Europe was trying to develop a molecular profile of different populations some dangerous groups of mosquitoes, especially those responsible for dengue fever. To my mind this was a most noble objective – my wife and I had just managed to contract dengue fever. It was a benign form, but we still wandered about our house for two weeks in a zombie-like condition. The intrepid team of researchers was taken to jail in handcuffs while working on Palawan ... they had tried to get formal permission to catch mosquitoes in the Philippines, but never had a reply from the Department of the Environment. Eventually they decided to 'just do it'. Their ambassador had to travel down from Jakarta to secure their release. They left behind 22 vials of dead mosquitoes in alcohol – which presumably now are in the 'black museum' of the environment department as a major triumph.

At the same time Manila was plastered with posters on how to kill as many mosquitoes as possible in dozens of ingenious ways. Newspaper cartoonists and editorial staff had a field day. Slap a mosquito while having dinner on your porch and the troops of the Department of Environment would arrest you. Tropical biodiversity might have a value that should go to country in question ... but a sense of proportion really is necessary as well!

My own attitude is clear. Any insect from a tropical country on a pin, in alcohol, or in papers, with good locality data is potentially an instant fossil of great value. But surely butterflies are different? So many collectors ... so much interest in rare species. I disagree. Virtually nothing is known about any African butterfly. Steve Collins and I have just described a new species called *Charaxes chevroti*, known only from the tiny, isolated Kagoro Forest in northern Nigeria, which may by now almost be destroyed. This is possibly one of the few insects in Africa that could reasonably be placed on a list of protected species – but to be honest, I would prefer to see another specimen on a pin. The butterfly used to be quite common in the forest. If the forest has gone, so has the butterfly. If the forest survives, the butterfly will be just fine. Latest reports from Kagoro are not encouraging.

### **Butterfly Caterpillars and Water**

**Deapesh Misra**  
**Mysore**

In the months of August-September in 2003 I reared a few caterpillars at my home in Mysore, Karnataka (India). During this time among other things, I was curious to know if the caterpillars needed water for their growth and if I could in some way conclusively learn something about this since I had not read anything about the relation between rearing butterfly caterpillars indoors and their need for water.

The experiment consisted of placing few drops of water using an old syringe on the surface of the leaves, which were being fed to the caterpillar and the plastic container's bottom, which housed the caterpillars. Drops of small and big sizes were placed so as to negate the effects of the water drops sticking to the caterpillars' mouth due to reduced adhesion between the drop and the leaf

surface. This was a problem with caterpillars which were small in size, for instance the Common Emigrant, *Catopsilia pomona* (being fed *Cassia javanica* leaves) and the younger Tailed Jay, *Graphium agamemnon* caterpillar (being fed *Anona squamosa* leaves) would invariably have the drops of water stuck to their heads when they came in contact with it and were observed trying to shake it off. The grown Tailed Jay caterpillar (being fed *Anona squamosa* leaves) was observed drinking up the water drop. It seemed that the caterpillar needed these water drops.

In the wild, dewdrops perhaps satisfy the need for water (if there is a need for water). But when the caterpillars are hand reared, the only source of water to them is the leaves. These leaves are generally not fresh and so perhaps there might be a need for a source of water for the rapidly growing caterpillars.

In conclusion, it was observed that the caterpillars would drink the water drops. It could not be ascertained whether they needed water or not. It also could not be ascertained whether they drink the water due to a need or since they came across it or since it perhaps stuck to their heads.

### **Butterfly Identification – Pansies**

#### **Text and Photographs**

**Kishen Das K.R.**

**Mysore**

#### **Word: “PANSY”**

Noun:

- 1) Large-flowered garden plant derived chiefly from the wild pansy of Europe and having velvety petals of various colors.
- 2) A timid man or boy considered childish or unassertive
- 3) Offensive terms for an openly homosexual man

**Species:** There are 6 Pansies in total, namely Yellow Pansy (*Junonia hierta*), Grey Pansy (*Junonia atlites*), Lemon Pansy (*Junonia lemonias*), Peacock Pansy (*Junonia almana*), Blue Pansy (*Junonia orithya*) and Chocolate Pansy (*Precis iphita*)

**Identification:** Pansies are easy to identify because of the presence of large ocelli or eyelike spots on the upperside of their wings. It's difficult to identify them when they are sitting with their wings closed as their markings on the underside mimic the dry leaf pattern, which helps in camouflaging among the leaf litter. Males and females look similar but can be distinguished in field after careful observation.

**Habitat:** Pansies are found in all types of habitats from evergreen to scrub jungles. Peacock Pansy and Grey Pansy are more common near the water bodies, Lemon Pansy and Chocolate Pansy are abundant in wooded areas, Yellow Pansy and Blue Pansies can be more seen in dry areas.

**Host Plants:** The host plants of pansies are *Sida rhombifolia*, *Cannabis sativa*, *Barleria* spp., *Corchorus capsularis*, *Hygrophila auriculata* and *Nelsonia canescens*.

**Behavior:** The Chocolate and Lemon pansies are very particular about their territory. They have been seen chasing off even the larger swallowtails like the Birdwings, Helens, Ravens, Jays and Roses. Yellow Pansies can be often seen basking on tar roads and rocks. Blue Pansies are common in rocky areas where they can be seen basking for shorter periods. Although pansies are easy to approach, they always keep a certain distance and hence photographing pansies is a difficult task. Early morning between 7-8 AM is the best time to photograph pansies, as they will be basking in the sun. Pansies are found through out of the year although their number increases during monsoon and post-monsoon months.

**What you can do?** Try to study the territorial behavior of Pansies. You can observe the life cycle of Pansies and see whether there are any unrecorded host plants. You can also study their association with the nectar plants and mud-puddling behavior.



Yellow Pansy ( *Junonia hierta* )

Grey Pansy ( *Junonia atlites* )



Lemon Pansy ( *Junonia lemonias* )

Peacock Pansy ( *Junonia almana* )



Blue Pansy ( *Junonia orithya* )

Chocolate Pansy ( *Junonia iphita* )

**Butterfly Deaths in Nelliampathy Hills, Kerala – Letter to the Chief Minister of Kerala**

**Kishen Das K. R.**  
**Mysore**

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From,

Date: 1/18/2006

Place: Mysore

Kishen Das, #951, 6th Cross, I main,  
Srirampura II Stage,  
Mysore-570023 Karnataka  
Phone Number: 09880275941

To,

Hon'ble CM of Kerala Mr. Oomen Chandy,  
CC to Hon'ble Minister of Forests Mr. Sujanapal,  
Chief Wildlife Warden, Forest head Quarters, Vazhuthakkad, Thiruvananthapuram, Kerala  
Chief Conservator of Forests WL, Forest head Quarters, Vazhuthakkad,  
Thiruvananthapuram, Kerala.,  
Divisional Forest officer, Aynampadam, Nemmara P.O, Palakkad Dt, Kerala.,

Dear Sir,

We would like to bring your notice to the atrocities that are happening in and around Nelliampathy Hills due to excessive use of **Endosulfan insecticide** and **encroachments**. **Chulliarmedu** and **Thenmala** area of **Nelliampathy** Hills are located 8 kms from Kollengode. This place is full of mango plantations and is adjacent to the semi-evergreen and evergreen patches of Nelliampathy Hills. Lot of tribal settlements can be seen around this place. The total population is estimated to be around 30,000.

**Ecological Protection Group** (EPG) is a group from Kollengode interested in Nature

Conservation. This group is carrying out nature awareness camps for last few years and is actively involved in the local environmental issues.

On 20th December 2005, **WPSI (Wildlife Protection Society of India)** identified the **mass death of butterflies** near Chulliarmedu and Thenmala regions, with the help of EPG members in relation to "The study on ecological and sociological impact of pesticide use in the agriculture and natural ecosystems". This mass death of butterflies is probably due to the **excessive use of Endosulfan**. The butterfly species seen dead are *Euploea core*, *Euploea sylvester*, *Tirumala limniace*, *Tirumala septentrionis*, *Pachliopta hector*, *Papilio polymnestor* and *Danaus genutia*. Since the dead specimens were fresh and bodies were found intact, predation by birds, dragonflies or rodents is out of question. Right now these butterfly specimens have been preserved and we are trying to get them analyzed. During our survey at Nelliampathy Hills we found **92 species** of butterflies (Please refer to Document #1). Survival of all these 92 butterfly species is at stake right now, due to **uncontrolled usage of Endosulfan** and **encroachments** that resulted in **decrease in the abundance of butterfly host and nectar plants**.

"**Common Baron** (*Euathalia aconthea*)" is a very common butterfly seen around mango plantations, as its host plant is ***Mangifera indica*** (Mango). Unfortunately not a single Common Baron was seen around these mango plantations. At the same time we sighted Common Baron at Tattamangalam and Kollengode town, probably owing to the fact that people **don't use Endosulfan** within these towns.

Last week Ecological Protection Group (EPG) conducted a **health survey** in this area and found several cases of **cancer, nervous disorders and handicaps** in the **tribal settlements**. Even the cattle are affected badly. Few cows are dead and some of them are blinded. The sufferings of people of **Padre village** in Kerala is known to everyone (Please refer to Document #4) and we hope this is not repeated in Chulliarmedu and Thenmala regions.

Various studies have shown that **endosulfan** considerably **affects the birdlife and other wildlife** (Please refer to Documents #2 and 3#). In Chulliarmedu and Thenmala regions, samples of Endosulfan was found near the streams where **many birds** (Bulbuls, Bee-eaters, Parakeets,

Flycatchers etc) were seen feeding, so probably birds are also **affected by this insecticide**. Recent report on the **bird diversity of Nelliampathy** also suggests the **decline in birdlife** (Please Refer to Document # 6) due to the **excess use of Pesticide**.

**Water Streams** from Nelliampathy Hills run through these plantations and end up in **Chulliyar Dam**. Studies have to be conducted to find out the **amount of Endosulfan** carried by these streams into the dam.

Apart from excessive use of Endosulfan, there have been **encroachments** all around the place. The evergreen forest is being **cut rapidly and burnt**. Then these areas are planted with **Mango Saplings** and are sprayed with **excess of Endosulfan**. 2 weeks back we did a survey of butterflies in one such encroached place. We were able to see **only 7 species**, where as near by semi-evergreen patch yielded **45 species** of butterflies. It's clear that these encroachments are causing **enormous damage to the eco-system** and hence should be stopped at the earliest.

**WPSI** has already contacted the CM, Forest Secretary, Agricultural Production Commissioner, Chief Wildlife Warden and Conservator of Forests Palakkad, but till now there is no response. Agriculture department has shown some interest in this matter and recently conducted an awareness program for the local agriculturists. **Gurvayurappan of WPSI** has suggested constituting a society for organic mango cultivators to **promote organic farming and it's marketing**. The present farmers those who are using chemical pesticides are ready to accept organic practices if the **government supports it**.

We hope you will take **immediate action** in this regard and **save the lives of thousands of tribal people and the local bio-diversity of Nelliampathy hills**. Although **Endosulfan has been banned** in many of the countries owing to its ill effects (Please Refer to Document # 5); not sure why its still not been done in India. We kindly request you to **recommend** the Indian government to **completely ban this insecticide** and also **to stop the encroachments**.

Attaching following documents -

- 1) Butterfly **checklist of Nelliampathy Hills** Compiled by Kishen Das
- 2) Preliminary recommendations monitoring and minimizing the environmental impact of tsetse controls operations (**Source: The Food and Agriculture Organization, United Nations**)
- 3) Information about Endosulfan from EXTOXNET **primary files maintained and archived at Oregon State University, Revised June 1996**
- 4) Articles on ill-effects of Endosulfan in Padre Village, Kerala. (Source: **BBC and Down To Earth**)
- 5) "A call for action against a dangerous pesticide", **A summary report by Environmental Justice Foundation.**
- 6) Quotes from " Nameer, P. O & Praveen, J (2006) Bird diversity of Nelliampathies, southern Western Ghats. **A Report to Oriental Bird Club.**" (A one year bird study conducted as a part of OBC Small Grant Scheme in the Nelliampathy Hills)
- 7) Photos of the affected place.

For further details please contact EPG or WPSI:

The Secretary,  
Ecological Protection Group,  
C/O Dotcompals, Tattamangalam  
P.O, Palakkad- 678102.

And

S. Guruvayurappan,  
Project officer and co-ordinator of Wildlife protection society of india (South India Branch)  
Phone: 04923 227867 Mobile: 0 944 77 00 321  
Email: [guru@wpsi-india.org](mailto:guru@wpsi-india.org) and [sguruvayurappan@gmail.com](mailto:sguruvayurappan@gmail.com)

In Conservation,  
Kishen Das, Mysore

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The above letter refers to 7 documents. If any of you interested in these documents please contact [kishen.das@gxs.com](mailto:kishen.das@gxs.com) or [kishan\\_nie@rediffmail@yahoo.com](mailto:kishan_nie@rediffmail@yahoo.com). However the checklist of Butterflies of Nelliampathy Hills has been given below, as this will be of some interest to the readers.

I request the readers to contact the concerned people in this regard and ask them to take action. This is one opportunity to show our love towards these fragile winged creatures. So lets not miss it.

### **Checklist of Butterflies at Nelliampathy Hills compiled by Kishen Das.**

#### **Family Papilionidae:**

1. Red Helen - *Papilio helenus*
2. Tailed Jay -*Graphium agamemnon*
3. Common Jay -*Graphium doson*
4. Paris Peacock -*Papilio paris*
5. Malabar Raven -*Papilio dravidarum*
6. Common Mormon -*Papilio polytes*
7. Crimson Rose -*Pachliopta hector*
8. Common Rose -*Pachliopta aristolochiae*
9. Southern Birdwing -*Troides minos*
10. Blue Mormon -*Papilio polymnestor*
11. Common Blue Bottle -*Graphium sarpedon*
12. Malabar Rose -*Pachliopta pandiyana*
13. Malabar Banded Peacock (?)- *Papilio Buddha* \*
14. Lime - *Papilio demoleus*

#### **Family Pieridae:**

15. Common Emigrant -*Catopsilia pomona*

16. Common Albatross - *Appias albina*
17. Chocolate Albatross - *Appias lyncida*
18. Common Grass yellow -*Eurema hecabe*
19. Three spot Grass yellow -*Eurema blanda*
20. Small Grass Yellow -*Eurema brigitta* \*
21. Spotless Grass Yellow -*Eurema laeta* \*
22. Lesser Gull -*Cepora nadina*
23. Great Orange Tip -*Hebomoia glaucippe*
24. Plain Puffin -*Appias indra*
25. Psyche -*Leptosia nina*
26. Common Jezebel - *Delias eucharis*

**Family Nymphalidae:**

27. Common Four Ring -*Ypthima huebneri*
28. Common Five ring -*Ypthima baldus*
29. Dark Evening brown - *Melanitis phedima*
30. Tamil yeoman -*Cirrochroa thais*
31. Common Leopard - *Phalanta phalanta*
32. Southern Rustic -*Cupha erymanthis*
33. Blue tiger -*Tirumala limniace*
34. Plain Tiger - *Danaus chrysippus*
35. Striped Tiger - *Danaus genutia*
36. Glassy tiger -*Parantica aglea*
37. Nilgiri Tiger -*Parantica nilgiriensis*
38. Dark Blue Tiger -*Tirumala septentrionis*
39. Great Eggfly -*Hypolimnas bolina*
40. Daniad Eggfly -*Hypolimnas misippus*
41. Common Bushbrown -*Mycalesis perseus*
42. Gladeye Bush Brown -*Mycalesis patnia*
43. Whitebar Bush Brown -*Mycalesis anaxias* \*

44. Tamil Catseye -*Zipoetis saitis*
45. Common Sailer -*Neptis hylas*
46. Chestnutstreaked Sailer -*Neptis jumbah*
47. Clipper -*Parthenos sylvia*
48. Commander -*Limenitis procris*
49. Cruiser - *Vindula erota*
50. Common Indian Crow -*Euploea core*
51. Double Branded Crow -*Euploea sylvester*
52. Common Baron -*Euathalia aconthea*
53. Chocolate Pansy -*Junonia iphita*
54. Blue Pansy -*Junonia orithya*
55. Yellow Pansy -*Junonia hierta*
56. Blue Admiral -*Kanishka canace* \*
57. Common Map -*Cyretis thyodamas*
58. Common Palmfly -*Elymnias hypermnestra*
59. Club Beak -*Libythea lepita*
60. Common Castor - *Ariadne merione*

**Family Lycaenidae:**

61. White Hedge Blue -*Udara akasa*
62. Common Cerulean -*Jamides celeno*
63. Dark Cerulean -*Jamides bochus*
64. Metallic Cerulean - *Jamides alecto*
65. Pea Blue -*Lampides boeticus*
66. Zebra Blue - *Leptotes plinius*
67. Indian Red Flash -*Rapala larbus*
68. 6 Line Blue (?) -*Nacaduba* sp.
69. Yamfly -*Loxura atymnus*
70. Indigo Flash -*Rapala varuna*
71. Tiny Grass Blue -*Zizula hylax*

72. Gram Blue -*Euchrysops cnejus*
73. Quaker -*Neopithcops zalmora*
74. Southern Malayan (?) -*Megisba Malaya*

**Family Hesperidae:**

75. Common Banded Awl -*Hasora chromus*
76. White Banded Awl -*Hasora taminatus*
77. Brown Awl -*Badamia exclamationis*
78. Chestnut Bob -*Lambrix salsala*
79. Ace ( ? ) -*Halpe* Sp.
80. Swift ( ? ) -*Pelopidas* Sp.
81. Dark Palm Dart -*Telicota ancilla*
82. Tamil Grass Dart -*Taractrocera ceramus* \*
83. Common Yellow Breasted Flat -*Gerosis bhagava*
84. Coon -*Psolos fuligo*
85. Spotted Small Flat -*Sarangesa purendra*
86. Water Snow Flat -*Tagiades litigosa*
87. Common Spotted Flat -*Celaenorrhinus leucocera*
88. Tamil Spotted Flat -*Celaenorrhinus ruficornis*
89. Fulvous Pied Flat -*Pseudocoladenia dan*
90. Common Small Flat -*Sarangesa dasahara*
91. Common Banded Demon -*Notocrypta paralysos*
92. Golden Angle -*Odonthoptilum rasonneti*

**P.S.** The species indicated by \* have been seen by Praveen J. “?” indicates the species whose sighting cannot be confirmed / cannot be identified in field.