



Rec. zool. Surv. India : 106(Part-2) : 13-23, 2006

MOTHS OF KANGER VALLEY NATIONAL PARK (BASTAR, CHHATTISGARH)

KAILASH CHANDRA AND D.K. NEMA

Central Regional Station, Zoological Survey of India, Jabalpur, M.P.

INTRODUCTION

Kanger Valley National Park (KVNP) is located between 18°45'00" to 18°56'30" N latitudes and 81°51'30" to 82°10'00" E longitudes. The total area of KVNP is 200 sq. km which is situated at 27 km from Bastar and the eastern part of the southern half of the Bastar district in Kanger valley. The park was notified in the year 1982 by Govt. of Madhya Pradesh. This valley possesses one of the last pockets of virgin forests in the southern Chhattisgarh. The park is significant floristically. The moist peninsular "Sal Forests" and the "South Indian Tropical Moist Deciduous Forests" are seen in their original forms here. The national park also possesses unique fauna, which is having the affinities with the peninsular fauna.

LIST OF MOTHS OF KANGER VALLEY NATIONAL PARK, CHHATTISGARH

Order LEPIDOPTERA

Suborder HETEROCERA

I. Family PYRALIDAE

1. *Maruca testulalis* (Guen'ee)
2. *Nausinoe geometralis* (Guen'ee)
3. *Nausinoe neptis* Cramer
4. *Sameodes cancellalis* (Zeller)

II. Family SPHINGIDAE

5. *Hippotion boerhaviae* (Fab.)

III. Family NOCTUIDAE

6. *Agrotis* sp.
7. *Episparis variabilis* Walker
8. *Helicoverpa armigera* (Hubner)
9. *Hyblaea puera* (Cramer)
10. *Ophiusa triphaenoides* Walker
11. *Prodenia litura* (Fabricius)
12. *Trigonodes hyppasia* Carmer

IV. Family LYMANTRIDAE

13. *Lymantria* sp.
14. *Orvasca subnotata* Walker
15. *Perina nuda* (Fabricius)

V. Family HYP SIDAE

16. *Asota caricae* (Fabricius)

VI. Family ARCTIIDAE

17. *Creatonotus gangis* (Linnaeus)
18. *Cyana puella* Drury
19. *Oeinistis altica* Linnaeus
20. *Phissama transiens* (Walker)
21. *Utethesia puchelloides* Hampson
22. *Nyctemera lacticinia* Cramer

VII. Family GEOMETRIDAE

23. *Aporandria specularia* Guen'ee
24. *Hyposidra talaca* (Walker)
25. *Macaria fasciata* Fabricius
26. *Pingasa ruginaria* Guen'ee

Order LEPIDOPTERA

Suborder HETEROCERA

I. Family PYRALIDAE

1. *Maruca testulalis* (Geyer)

1832. *Crochiphora testulalis* Geyer, *Hubn. Samml. Exot. Schmitt.*, 4(4) : 12.

1896. *Maruca testulalis* Hampson, *Fauna Brit. India*, Moths, 4 : 393.

Material examined : Bastar, KVNP, Kanger, 17.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : 26–30 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar) and Madhya Pradesh (Seoni, Umaria). *Elsewhere* : Australian and Oriental Regions, Neotropical and Ethiopian Regions and Japan.

2. *Nausinoe geometralis* (Guen'ee)

1854. *Lepyrodes geometralis* Guen'ee, *Delt. & Pyral.* : 278.

1896. *Lepyrodes geometralis*, Hampson, *Fauna Brit. India*, Moths, 4 : 368.

1939. *Nausinoe geometralis*, Klima, *Lep. Cat.* : 94.

1980. *Nausinoe geometralis*, Mandal & Bhattacharya, *Rec. zool. Surv. India*, 77(1-4) : 328.

Material examined : Bastar, KVNP, Kotamsar, 18.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : 22 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar) and Madhya Pradesh (Chhindwara). *Elsewhere* : West Africa, China, Formosa, Sri Lanka, Myanmar, Malayan Java and Australia.

3. *Nausinoe neptis* (Cramer)

1779. *Phalaena (Noctua) neptis* Cramer, *Pap. Exot.*, iii, pl. : 264.

1896. *Lepyrodes neptis*, Hampson, *Fauna Brit. India*, Moths, 4 : 368.

1939. *Nausinoe neptis*, Klima, *Lep. Cat.* : 94.

1980. *Nausinoe neptis*, Mandal & Bhattacharya, *Rec. zool. Surv. India*, 77(1-4) : 328.

Material examined : Bastar, KVNP, Machkot, 22.3.2004, (2 exs.), Coll. D.K. Harshey & Party.

Wing expanse : 32 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar) and Madhya Pradesh (Seoni). *Elsewhere* : Sri Lanka, Myanmar, Malayan subregion and Australia.

4. *Sameodes cancellalis* (Zeller)

1852. *Botys cancellalis* Zeller, *K. Vet. A. K. Handl. P.* : 34.

1896. *Sameodes cancellalis*, Hampson, *Fauna Brit. India*, Moths, 4 : 375.

Material examined : Bastar, KVNP, Machkot, 20.3.2004, (2 exs.), Coll. D.K. Harshey & Party.

Wing expanse : 22 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar) and Madhya Pradesh (Hoshangabad, Seoni). *Elsewhere* : Sri Lanka, Africa, Australia, Myanmar, Fiji and Java.

II. Family SPHINGIDAE

5. *Hippotion boerhaviae* (Fabricius)

1775. *Sphinx boerhaviae* Fabricius, *Syst. Ent. p.* : 542.

1937. *Hippotion boerhaviae*, Bell & Scott, *Fauna Brit. India*, Moths, 5 : 424.

1997. *Hippotion boerhaviae*, Mandal & Maulik, *Fauna of West Bengal*, *Zool. Surv. India*, 7 : 637.

Material examined : Bastar, KVNP, Kotamsar, 18.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : 50–58 mm.

Distribution : India : Chhattisgarh (Bastar) and Madhya Pradesh (Indore, Seoni and Umaria), West Bengal, Andhra Pradesh, Gujrat, Orissa, Sikkim, Southern Penninsula, West Himalaya and Maharashtra. *Elsewhere* : Pakistan, Sri Lanka, Bhutan, South China, Malaya and Philippines.

III. Family NOCTUIDAE

6. *Agrotis* sp.

1816. *Agrotis* Ochs. *Eur. Schmett.*, iv : 66.

1818. *Peridroma*, Hubner, *Verz* : 227.

1896. *Agrotis*, Hampson, *Fauna Brit. India*, Moths, 2 : 180.

Material examined : Bastar, KVNP, Kotamsar, 18.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : 32 mm.

Distribution : Universally distributed including Chhattisgarh (Bastar).

7. *Episparis varialis* Walker

1858. *Episparis varialis* Walker, *Cat. Lep. Het. B. M.*, xvi : 7.

1888. *Episparis varialis*, Cotes & Swinhoe, *Cat. Moths of India* : 435.

1894. *Episparis varialis*, Hampson, *Fauna Brit. India*, Moths, 2 : 543.

Material examined : Bastar, KVNP, Machkot, 25.3.2004, (2 exs.), Coll. D.K. Harshey & Party.

Wing expanse : 60 mm.

Distribution : India : Peninsular India including Chhattisgarh (Bastar) and Madhya Pradesh (Indore, Seoni and Umaria) and Andaman. *Elsewhere* : Sri Lanka.

8. *Helicoverpa armigera* (Hubner)

1804. *Noctua armigera* Hubner, *Noct.*, ii : 180.

1896. *Heliothis armigera*, Hampson, *Fauna Brit. India*, Moths, 2 : 174-175.

1989. *Helicoverpa armigera*, Holloway, *The Moths of Borneo, Malayan Nature Journal*, 42(2 & 3) : 75.

Material examined : Bastar, KVNP, Machkot, 20.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : 31–41 mm.

Distribution : India : Universally distributed including Chhattisgarh (Bastar) and Madhya Pradesh (Jabalpur, Shivpuri).

9. *Hyblaea puera* Cramer

1779-83. *Hyblaea puera* Cramer, *Pap. Exot.*, : 103.

1894. *Hyblaea puera*, Hampson, *Fauna Brit. India*, Moths. 2 : 371.

Material examined : Bastar, KVNP, Machkot, 20.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : 32–40 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar) and Madhya Pradesh (Seoni). *Elsewhere* : Myanmar, Borneo, China, Malacca, Australia and Sri Lanka.

10. *Ophiusa triphaenoides* Walker

1858. *Ophiusa triphaenoides* Walker, *Cat. Lep. Het. B. M.*, xiv : 1358.

1888. *Minucia triphaenoides*, Cotes & Swinhoe, *Cat. Moths of India* : 400.

1894. *Ophiusa triphaenoides*, Hampson, *Fauna Brit. India*, Moths, 2 : 504.

Material examined : Bastar, KVNP, Machkot, 20.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : 60 mm.

Distribution : India : Chhattisgarh (Bastar) and Madhya Pradesh (Indore), Jharkhand, Maharashtra and Sikkim.

11. *Prodenia litura* (Fabricius)

1775. *Noctua litura* Fabricius, *Syst. Ent.* : 601.

1991. *Prodenia litura*, Mandal and Maulik, *Fauna of Orissa, Zool. Surv. India*, 3 : 212.

Material examined : Bastar, KVNP, Kotamsar, 18.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : 36–40 mm.

Distribution : India : Chhattisgarh (Bastar) and Madhya Pradesh (Hoshangabad), West Bengal, Sikkim, Orissa, Tripura, Himachal Pradesh, Uttar Pradesh, Punjab, Maharashtra, Karnataka, Tamil Nadu and Kerala. *Elsewhere* : Nepal, Southern Myanmar, Sri Lanka, Singapore, Borneo, Java and Taiwan of Oriental and also Austral-Papuan, Ethiopian, Palaearctic and Hawaiian Regions.

12. *Trigonodes hyppasia* Cramer

1779. *Trigonodes hyppasia* Cramer, *Pap. Exot.*, **3** : 250.

1854. *Trigonodes hyppasia*, Hampson, *Fauna Brit. India*, Moths, **2** : 527.

Material examined : Bastar, KVNP, Kotamsar, 18.3.2004, (2 exs.), Coll. D.K. Harshey & Party.

Wing expanse : 46 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar) and Madhya Pradesh (Seoni, Umaria).

IV. Family LYMANTRIDAE

13. *Lymantria* sp.

1818. *Lymantria* Hubner, *Verz.* : 160.

1892. *Lymantria*, Hampson, *Fauna Brit. India*, Moths, **1** : 145.

Material examined : Bastar, KVNP, Machkot, 25.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : 40 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar) and Madhya Pradesh (Seoni). *Elsewhere* : Sri Lanka, Myanmar, Java, Amboina and Celebes.

14. *Orvasca subnotata* Walker

1865. *Orvasca subnotata* Walker, *List lipid. Insects Colln Br. Mus.*, **32** : 502.

1999. *Orvasca subnotata*, Holloway, *Malayan Nature Journal*, **53**(1 & 2) : 54.

Material examined : Bastar, KVNP, Machkot, 20.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : 32 mm.

Distribution : India : Chhattisgarh (Bastar) and Madhya Pradesh (Bhopal). *Elsewhere* : Oriental tropics to Borneo and Sumatra.

15. *Perina nuda* (Fabricius)

1787. *Bombyx nuda* Fabricius, *Mant. Ins.*, **2** : 117.

1892. *Perina nuda*, Hampson, *Fauna Brit. India*, Moths, **1** : 486.

1897. *Perina nuda*, Mandal & Maulik, *Fauna of West Bengal*, Zool. Surv. India, **7** : 670.

Material examined : Bastar, KVNP, Machkot, 20.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : Male : 38 mm. Female : 50 mm.

Distribution : India : Chhattisgarh (Bastar) and Madhya Pradesh (Indore, Mandla), Maharashtra, West Bengal and Assam. *Elsewhere* : China, Hong Kong, Japan, Nepal, Taiwan and Sri Lanka.

V. Family HYPSIDAE

16. *Asota caricae* (Fabricius)

1792. *Noctua caricae* Fabricius, *Syst. Ent.*, **3** 2 : 27.

1892. *Hypsa alciphron*, Hampson, *Fauna Brit. India*, Moths, **1** : 502.

1982. *Asota caricae*, Barlow, *An introduction to the Moths of South East Asia* : 77.

Material examined : Bastar, KVNP, Machkot, 20.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : Male : 62–67 mm. Female : 72–76 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar) and Madhya Pradesh (Seoni, Umariya). *Elsewhere* : Myanmar, Sri Lanka, Penang, Java, Amboina, Ceram, New Guinea, New Hebrides, Solomons and New Ireland.

VI. Family ARCTIIDAE

17. *Creatonotus gangis* (Linnaeus)

1764. *Phalaena gangis* Linnaeus, *Amoen. Acad.*, **6** : 410.

1991. *Creatonotus gangis*, Mandal & Ghosh, *Fauna of Tripura*, *Rec. zool. Surv. India*, **88**(3 & 4) : 313-314.

Material examined : Bastar, KVNP, Machkot, 20.3.2004 (1 ex.), Coll. D. K. Harshey & Party.

Wing expanse : 39 mm.

Distribution : India : Chhattisgarh (Bastar), Madhya Pradesh (Indore, Hoshngabad, Chhindwara and Umariya), West Bengal, Maharashtra, Gujarat, Andhra Pradesh, Kerala, Tamil Nadu, Assam, Meghalaya, Arunachal Pradesh and Tripura. *Elsewhere* : Myanmar, Sri Lanka, Western Malaysia, Java, Australia, China, Pakistan and Nepal.

18. *Cyana puella* Drury

1773. *Cyana puella* Drury, III. *Exot. Ins.*, ii : 3.

1894. *Cyana puella.*, Hampson, *Fauna Brit. India*, Moths, 2 : 57.

Material examined : Bastar, KVNP, Kotamsar, 18.3.2004, (2 exs.), Coll. D.K. Harshey & Party.

Wing expanse : Male : 28 mm.; Female : 36 mm.

Distribution : India : Chhattisgarh (Bastar), Madhya Pradesh (Seoni, Umaria), Maharashtra and S. India. *Elsewhere* : Nepal, Sri Lanka and Java.

19. *Utetheisa pulchelloides* Hampson

1907. *Utetheisa pulchelloides* Hampson, *Ann. Mag. nat. Hist.*, (7)19 : 239.

1939. *Utetheisa pulchelloides* Hampson, Jordan, *Novit, Zool.*, 41 : 281-3.

1988. *Utetheisa pulchelloides* Holloway, *The Moth of Borneo*, 6 : 56.

Material examined : Bastar, KVNP, Kotamsar, 18.3.2004, (2 exs.), Coll. D.K. Harshey & Party.

Wing expanse : Male : 40–46 mm.; Female : 45 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar) and Madhya Pradesh (Indore, Seoni). *Elsewhere* : Europe, Africa, Sri Lanka, Philippines, Malay Archipelago, New Guinea and Australia.

20. *Oeonistis altica* Linnaeus

1768. *Phalaena (Noctua) altica* Linnaeus, *Her in Chinam* : 10, 11.

1894. *Philagria entella*, Hampson, *Fauna Brit. India*, Moths, 2 : 71.

2001. *Oeonistis altica*, Holloway, *Malayan Nature Journal*, 55(3 & 4) : 293.

Material examined : Bastar, KVNP, Kotamsar, 18.3.2004, (2 exs.), Coll. D.K. Harshey & Party.

Wing expanse : Male : 42 mm.; Female : 46 mm.

Distribution : India : Chhattisgarh (Bastar), Madhya Pradesh (Balaghat, Hoshangabad) and S. India. *Elsewhere* : Sri Lanka, Myanmar, Borneo, New Hebrides, China, Taiwan, Vietnam and Philippines.

21. *Phissama transiens* (Walker)

1855. *Spilosoma transiens* Walker, *List lep. Insects Brit Mus.*, 3 : 675.

1894. *Phissama transiens*, Hampson, *Fauna Brit. India* Moths, 2 : 29-30.

Material examined : Bastar, KVNP, Machkot, 20.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : Male : 38–48 mm.; Female : 48–55 mm.

Distribution : India : Chhattisgarh (Bastar), Madhya Pradesh (Mandla, Hoshangabad), West Bengal, Assam, Arunachal Pradesh and Sikkim. *Elsewhere* : China, Indonesia and Philippines.

22. *Nyctemera lacticina* Cramer

1775. *Phalaena (Geometra) lacticina*, Cramer, *Uitl. Kapellen*. 2 : 47.

1894. *Nyctemera lacticina*, Hampson, *Fauna Brit. India* Moths, 2 : 47.

1957. *Nyctemera lacticina* Cramer, *Roepke* : 164.

1988. *Nyctemera lacticina*, Holloway, *The Moths of Borneo, The Malayan Nature Society* 6 : 65.

Material examined : Bastar, KVNP, Machkot, 20.3.2004, (1 ex.), Coll. D.K. Harshey and Party.

Wing expanse : Male : 42 mm.; Female : 48 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar). *Elsewhere* : China, Sri Lanka and Myanmar.

VII. Family GEOMETRIDAE

23. *Aporandria specularia* Guen'ee

1857. *Aporandria specularia* Guen'ee, *Histoire. Natural. Des. Insectes*, Lepidopteres : 342.

1895. *Aporandria specularia*, Hampson, *Fauna Brit. India*, Moths, 3 : 495.

Material examined : Bastar, KVNP, Kangerdhara, 20.3.2004, (1 ex.), Coll. D.K. Harshey and Party.

Wing expanse : Male : 54 mm.; Female : 60 mm.

Distribution : India : Chhattisgarh (Bastar), Madhya Pradesh (Seoni), Assam, Kerala and Tamil Nadu. *Elsewhere* : Sri Lanka and Sumatra.

24. *Hyposidra talaca* (Walker)

1860. *Lagyra talaca* Walker, *Cat. Lep. Het. Brit. Mus.*, 20 : 59.

1895. *Hyposidra talaca*, Hampson, *Fauna Brit. India*, Moths, 3 : 213.

Material examined : Bastar, KVNP, Kotamsar, 18.3.2004, (2 exs.), Coll. D.K. Harshey and Party.

Wing expanse : Male : 44 mm.; Female : 54–60 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar), Madhya Pradesh (Hoshangabad) and Andamans. *Elsewhere* : Myanmar, Java, Sri Lanka, Borneo, Celebes, and Philippines.

25. *Macaria fasciata* Fabricius

1775. *Macaria fasciata* Fabricius, *Syst. Ent.*, : 629.

1895. *Macaria fasciata*, Hampson, *Fauna Brit. India*, Moths, **3** : 202-203.

Material examined : Bastar, KVNP, Kotamsar, 18.3.2004, (2 exs.), Coll. D.K. Harshey & Party.

Wing expanse : 42 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar), Madhya Pradesh (Hoshangabad, Seoni), and Andamans. *Elsewhere* : Myanmar and Sri Lanka.

26. *Pingasa ruginaria* Guen'ee

1857. *Hypochroma ruginaria*, Gurn'ee, *Hist. nat. Insectes, Spec. gen. Lep.*, **9** : 278.

1895. *Pseudoterpna ruginaria*, Hampson, *Fauna Brit. India*, Moths, **3** : 472.

1996. *Pingasa ruginaria*, Holloway, *The Malayan Nature Journal*, Malaysian Nature Society, **49**(3 & 4) : 206.

Material examined : Bastar, KVNP, Machkot, 22.3.2004, (1 ex.), Coll. D.K. Harshey & Party.

Wing expanse : 46 mm.

Distribution : India : Throughout India including Chhattisgarh (Bastar). *Elsewhere* : West Africa, Kilima-njaro, Natal, Formosa and Borneo.

SUMMARY

During the extensive survey of Kanger Valley National Park by the scientific team of Zoological Survey of India, Jabalpur from 10.3.2003 to 29.3.2003, 26 species of moths belonging to 25 genera under 7 families are identified. This is the first study on the Moths of KNVP and all these species are reported for the first time from the park.

ACKNOWLEDGMENTS

The authors are grateful to Dr. J.R.B. Alfred, Director, Zoological Survey of India for providing the necessary facilities and encouragement. Authors are also thankful to Dr. D.K. Harshey, Assistant Zoologist and his team members for the collection of specimens and Shri M.E. Limje, Photographer Grade-III for the photographic work.

REFERENCES

- Barlow, H.S. 1982. *An introduction to the Moths of South East Asia* : Malayan Nature Society, Kuala Lumpur, 77.
- Bell, T.R.D. and Scott, F.B. 1937. *Fauna of British India Moths*, **5** : 424.

- Cotes, E.C. and Swinhoe, C. 1886-1889. *A catalogue of Moths of India* : 400, 435.
- Hampson, G.F. 1894. *Fauna of British India, Moths*, **2** : 1-528.
- Hampson, G.F. 1895. *Fauna of British India, Moths*, **3** : 1-517.
- Hampson, G.F. 1896. *Fauna of British India, Moths*, **4** : 1-595.
- Holloway, J.D. 1988. *The Moths of Borneo (Arctiidae)*, *Malayan Nature Society*, **6** : 56, 65.
- Holloway, J.D. 1989. *The Moths of Borneo (Noctuidae)*, *Malayan Nature Society*, **42**(2 & 3) : 75.
- Holloway, J.D. 1996. *The Moths of Borneo (Geometridae)*, *Malayan Nature Society*, **49**(3 & 4) : 206.
- Holloway, J.D. 2001. *The Moths of Borneo (Arctiidae)*, *Malayan Nature Society*, **55**(3 & 4) : 293.
- Mandal, D.K. and Bhattacharya, 1980. Pyraustinae from Andaman Island, *Rec. zool. Surv. India*, **77** : 293-342.
- Mandal, D.K. and Ghosh, S.K. 1991. On little-known Moths of Tripura, India. *Rec. zool. Surv. India*, **88**(3 & 4) : 313-314.
- Mandal, D.K. and Maulik, D.R. 1991. Insecta Noctuidae, Sphingidae. *Fauna of Orissa, State Fauna Series 1 (Part-3)* : 212. *Zool. Surv. India*.
- Mandal, D.K. and Maulik, D.R. 1997. Sphingidae, Lasiocampidae, Lymantridae. *Fauna of West Bengal, State Fauna Series 3 (Part-7)* : 637, 670. *Zool. Surv. India*.