

INSECTA : HYMENOPTERA

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INTRODUCTION

The present account based on the collection in Namdhapa, Arunachal Pradesh deals with 161 examples* comprising of 28 species and 5 subspecies distributed over 21 genera in 11 families : Apidae (5 genera, 7 species), Halictidae (1 genus, 2 species), Xylocopidae (1 genus, 1 species, 1 subspecies), Sphecidae (4 genera, 4 species), Scoliidae (1 genus, 1 species, 1 subspecies), Mutillidae (1 genus, 1 species), Pompilidae (1 genus, 1 species), Eumenidae (1 genus, 1 species), Vespidae (4 genera, 7 species, 3 subspecies), Chrysididae (1 genus, 2 species), Chalcididae (1 genus, 1 species). All the species are reported here for the first time from this region. All the material are deposited in the collection of Zoological Survey of India, Calcutta.

SYSTEMATIC ACCOUNT

Family : APIDAE

1. *Apis indica* Fabricius

1798. *Apis indica* Fabr., *Ent. Syst. Suppl.*, (1798) : 274.

1897. *Apis indica* : Bingham, *Fauna British India, Hym.*, 1 : 558, ♀ ♂ ♀ [Syns.].

Material examined : 16 ♀ ♀. INDIA : Arunachal Pradesh : Namdhapa, 7 ♀ ♀, 22.iv.1981 ; Hornbill, 6 ♀ ♀, 13.iv.1981 ; Deban, 2 ♀ ♀, 27.iv.1981, 1 ♀, 2.v.1981.

Distribution : Throughout India, Burma, Sri Lanka ; extending through the Malayasia on the east and to the Madagascar on the west.

2. *Apis (Megapis) dorsata* Fabricius

1793. *Apis dorsata* Fabr., *Ent. Syst.*, 2 : 328.

1897. *Apis dorsata* : Bingham, *Fauna British India, Hym.*, 1 : 557, ♀ ♂ ♀ [Syns.].

1904. *Apis (Megapis) dorsata* : Ashmead, *Proc. Ent. Soc. Wash.*, 6 : 120.

* All the collection were made by Dr. Shyamrup Biswas and party, Zoological Survey of India, Calcutta.

Material examined : 75 ♀ ♀. INDIA : Arunachal Pradesh : Namdhapa, 18 ♀ ♀, 21-22.iv.1981 ; Hornbill, 7 ♀ ♀, 13.iv.1981 ; Deban, 45 ♀ ♀, 27.iv.1981 ; Gibbon land, 5 ♀ ♀, 2.v.1981.

Distribution : Widely distributed throughout India, Burma, Sri Lanka ; extending upto China and Indonesia through Malayasia.

3. *Apis (Micrapis) florea* Fabricius

1787. *Apis florea* Fabr., *Mant. Insect.*, 1 : 305.

1897. *Apis florea* : Bingham, *Fauna British India*, Hym., 1 : 559, ♂ ♀ ♀ [Syns.].

1904. *Apis (Micrapis) florea* : Ashmead, *Proc. Ent. Soc. Wash.*, 6 : 122.

Material examined : 7 ♀ ♀, INDIA : Arunachal Pradesh : Namdhapa : Deban, 27.iv.1981.

Distribution : India, Sri Lanka, Burma ; extending in the Malayan region as far as Indonesia.

4. *Crocisa emarginata* Lepeletier

1841. *Crocisa emarginata* Lepel., *Hist. Nat. Ins. Hym.*, 2 : 449, ♀ ♂.

1897. *Crocisa emarginata* : Bingham, *Fauna British India*, Hym., 1 : 517, ♀ ♂ [Syns.].

Material examined : 1 ♂, INDIA : Arunachal Pradesh : Namdhapa : Deban, 27.iv.1981.

Distribution : Throughout India, Sri Lanka, Burma ; extending to South Africa on the west and China and Malaya Archipelago on the east.

5. *Anthophora zonata* (Linnaeus)

1758. *Apis zonata* Linn., *Syst. Nat.* (Ed. 10), 1 : 576.

1897. *Anthophora zonata* : Bingham, *Fauna British India*, Hym., 1 : 527, ♂ ♀ [Syns.].

Material examined : 1 ♂, INDIA : Arunachal Pradesh : Namdhapa : Deban, 27.iv.1981.

Distribution : Throughout India, Burma, Sri Lanka ; extending from Malayasia to Australia.

6. *Bombus orientalis* Smith

1854. *Bombus orientalis* Smith, *Cat. Hym. Brit. Mus. London*, 2 : 402, ♀.

1897. *Bombus orientalis* : Bingham, *Fauna British India*, Hym., 1 : 555, ♀ ♂ ♀ [Syns.].

Material examined : 2 ♀ ♀. INDIA : Arunachal Pradesh : Namdhapa : Chiria Camp, 1 ♀, 25.iv.1981 ; Gibbon land, 1 ♀, 2.v.1981.

Distribution : Throughout India (mainly found in Darjeeling, Sikkim and Arunachal Pradesh).

7. *Trigona ventralis* Smith

1858. *Trigona ventralis* Smith, *J. Proc. Linn. Soc. Zool.*, 2 : 50, ♀

1897. *Melipona ventralis* : Bingham, *Fauna British India, Hym.*, 1 : 562, ♀ [Syns.].

Material examined : 1 ♂, INDIA : Arunachal Pradesh : Namdhapa, 22.iv.1981.

Distribution : India, Burma, Indonesia.

Family : HALICTIDAE

8. *Nomia (Rhopalomelissa) aurifrons* Smith

1875. *Nomia aurifrons* Smith, *Trans. Ent. Soc. London*, (1875) : 43, ♀.

1897. *Nomia aurifrons* : Bingham, *Fauna British India, Hym.*, 1 : 455, ♀ [Syns.].

1965. *Nomia (Rhopalomelissa) aurifrons* : Michener, *Bull. Amer. Mus. Nat. Hist.*, New York, 130 : 159.

Material examined : 1 ♂, INDIA : Arunachal Pradesh : Namdhapa, 22.iv.1981.

Distribution : India, Burma, Bangladesh.

9. *Nomia (Curvinomia) albofasciata* Smith

1875. *Nomia albofasciata* Smith, *Trans. Ent. Soc. London*, (1875) : 57, ♀.

1897. *Nomia albofasciata* : Bingham, *Fauna British India, Hym.*, 1 : 452, ♀ [Syns.].

1965. *Nomia (Curvinomia) albofasciata* : Michener, *Bull. Amer. Mus. Nat. Hist.*, New York, 130 : 154.

Material examined : 15 ♂♂, 2 ♀♀, INDIA : Arunachal Pradesh : Namdhapa : Hornbill, 13.iv.1981.

Distribution : India, Burma, Indonesia.

Family : XYLOCOPIDAE

10. *Xylocopa (Zonohirsuta) collaris binghami* Cockerell

1841. *Xylocopa collaris* Lepel., *Hist. Nat. Ins.*, *Hym.*, 2 : 189, ♀.

1897. *Xylocopa collaris* : Bingham, *Fauna British India, Hym.*, 1 : 543, ♀♂ [Syns.].

1938. *Xylocopa (Zonohirsuta) collaris binghami* : Maa, *Rec. Ind. Mus. Calcutta*, 40 : 301, ♀.

Material examined : 1 ♂, INDIA : Arunachal Pradesh : Namdhapa, 20.iv.1981.

Distribution : India, Sri Lanka, Burma ; extending into the Malayan region and Siam.

Family : SPHECIDAE

11. *Sceliphron (Prosceliphron) formosum* (Smith)

1856. *Pelopoeus formosum* Smith, *Cat. Hym. Brit. Mus.*, 4 : 230, ♀.

1897. *Sceliphron formosum* : Bingham, *Fauna British India, Hym.*, 1 : 239, ♀ [Syns.].

1976. *Sceliphron (Prosceliphron) formosum* : Bohart and Menke, (a revisionary work on Sphecidae), *Univ. California Press* : 106 [Syns.].

Material examined : 1 ♂, INDIA : Arunachal Pradesh : Namdhapa : Deban, 27.iv.1981.

Distribution : India, Burma, China, Indonesia, Australia, New Guinea.

12. *Psen rufiventris* Cameron

1890. *Psen rufiventris* Cam., *Mem. Manch. L. Ph. Soc.*, (4) 3 : 267, ♀.

1976. *Psen rufiventris* : Bohart and Menke, (a revisionary work on Sphecidae), *Univ. California Press* : 167.

Material examined : 1 ♂, INDIA : Arunachal Pradesh : Namdhapa : Deban, 6.iv.1981.

Distribution : India (Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Arunachal Pradesh).

13. *Liris (Leptolarra) jaculator* (Smith)

1856. *Larrada jaculator* Smith, *Cat. Hym. Brit. Mus.*, 4 : 279, ♀.

1976. *Liris (Leptolarra) jaculator* : Bohart and Menke, (a revisionary work on Sphecidae), *Univ. California Press* : 246 [Syns.].

Material examined : 2 ♀ ♀, INDIA : Arunachal Pradesh : Namdhapa : Deban, 27.iv.1981.

Distribution : India, Burma.

14. *Ectemnius (Metacrabro) chrysites* (Kohl)

1892. *Crabro chrysites* Kohl, *Ann. Naturhist Hofmus. Wien.*, 7 : 197.

1976. *Ectemnius (Metacrabro) chrysites* : Bohart and Menke, (a revisionary work on Sphecidae), *Univ. California Press* : 425 [Syns.].

Material examined : 1 ♀, INDIA : Arunachal Pradesh : Namdhapa : Deban, 6.iv.1981.

Distribution : India, Japan, Korea, Taiwan, Ryukyus, Philippines, U.S.S.R.

Family : SCOLIIDAE

15. *Megascolia (Regiscolia) azurea christiana* (Guglia and Betrem)

1958. *Scolia (Triscolia) azurea christiana* Guglia and Betrem, *Ann. Mus. Civico St. Nat.*, 70 : 96.
 1964. *Megascolia (Regiscolia) azurea christiana* Betrem and Bradley, *Zool. Meded.*, 39 : 443 (new comb.).

Material examined : 3 ♀ ♀ , INDIA : Arunachal Pradesh : Namdhapa : Chiria Camp, 25.iv.1981.

Distribution : India, Burma, Sri Lanka.

Family : MUTILLIDAE

16. *Mutilla gribodoi* Magr.

1892. *Mutilla gribodoi* Magr., *Ann. Mus. Civ. Gen.*, (2) 12 : 229, ♂.
 1897. *Mutilla gribodoi* : Bingham, *Fauna British India, Hym.*, 1 : 46, ♂.

Material examined : 2 ♀ ♀ , INDIA : Arunachal Pradesh : Namdhapa : Deban, 27.iv.1981.

Distribution : India, Burma.

Family : POMPILIDAE

17. *Pompilus bioculatus* Bingham

1896. *Pompilus bioculatus* Bingham, *J. Proc. Linn. Soc. Zool.*, 25 : 431.
 1897. *Pompilus bioculatus* : Bingham, *Fauna British India, Hym.*, 1 : 167, ♀ ♂.

Material examined : 1 ♀ , INDIA : Arunachal Pradesh : Namdhapa : Deban, 27.iv.1981.

Distribution : India, Burma, China, Japan.

Family : EUMENIDAE

18. *Odynerus fraternus* Bingham

1897. *Odynerus fraternus* Bingham, *Fauna British India, Hym.*, 1 : 366, ♀.

Material examined : 1 ♂ , INDIA : Arunachal Pradesh : Namdhapa : Hornbill, 11.iv.1981.

Distribution : India, Burma.

Family : VESPIDAE*

19. *Polistes (Megapolistes) olivaceus* (De Geer)

1773. *Vespa olivacea* De Geer, *Mem. Hist. Insect*, 3 : 582, fig.

1897. *Polistes hebraeus* : Bingham, *Fauna British India, Hym.*, 1 : 398, ♀ or ♂ [Syns.].

1983. *Polistes (Megapolistes) olivaceus* : Das and Gupta, *Oriental Ins.*, 17 : 407 [Syns.].

Material examined : 1 ♀, INDIA : Arunachal Pradesh : Namdhapa : Deban, 2.iv.1981.

Distribution : India, Nepal, Burma, Sri Lanka, South China, Taiwan, Philippines, Thailand, Vietnam, Malaysia, North Africa, Fiji, Tahiti, Japan, Mauritius, Australia, New Zealand.

20. *Polistes (Nygmpolistes) tenebricosus sulcatus* Smith

1852. *Polistes sulcatus* Smith, *Trans. Ent. Soc. London*, (2) 2 : 38, ♂ ♀.

1983. *Polistes (Nygmpolistes) tenebricosus sulcatus* : Das and Gupta, *Oriental Ins.*, 17 : 406 [Syns.].

Material examined : 1 ♀, INDIA : Arunachal Pradesh : Namdhapa : Deban, 2.iv.1981.

Distribution : India, Nepal, China, Japan.

21. *Vespa (Vespa) basalis* Smith

1852. *Vespa basalis* Smith, *Trans. Ent. Soc. London*, (2) 2 : 46, ♀.

1983. *Vespa (Vespa) basalis* : Das and Gupta, *Oriental Ins.*, 17 : 438 [Syns.].

Material examined : 2 ♀ ♀. INDIA : Arunachal Pradesh : Namdhapa : Deban, 1 ♀, 28.iv.1981 ; Gibbon land, 1 ♀, 2.v.1981.

Distribution : India, Burma, Sri Lanka, Nepal, Indo-China, Taiwan, Thailand, China.

22. *Vespa (Vespa) tropica tropica* (Linnaeus)

1758. *Sphex tropica* Linn., *Syst. Nat.* (Ed. 10), 1 : 571, ♀.

1897. *Vespa cincta* : Bingham, *Fauna British India, Hym.*, 1 : 402, ♀ or ♂ [Syns.].

1983. *Vespa (Vespa) tropica tropica* : Das and Gupta, *Oriental Ins.*, 17 : 443 [Syns.].

Material examined : 1 ♀, INDIA : Arunachal Pradesh : Namdhapa : Deban More, 28.iv.1981.

Distribution : India, Burma, Sri Lanka, Indo-China, Malaysia, Indonesia, Australia, Central Asia, South America.

* Das and Gupta (1983) may be referred for detailed synonymy.

23. *Vespa (Vespa) mandarinia magnifica* Smith

1852. *Vespa magnifica* Smith, *Trans. Ent. Soc. London*, (2) 2 : 45.

1983. *Vespa (Vespa) mandarinia magnifica* : Das and Gupta, *Oriental Ins.*, 17 : 440.

Material examined : 2 ♀ ♀ . INDIA : Arunachal Pradesh : Namdhapa : Hornbill, 11-13.iv.1981.

Distribution : India, Nepal, Burma, Sri Lanka, South Asia, Taiwan, South China.

24. *Provespa anomala* (Saussure)

1853. *Vespa anomala* Sauss., *Mon. Guep. Soc.*, 2 : 112, ♀ , pl. xiv, fig. 2.

1897. *Vespa dorylloides* : Bingham, *Fauna British India, Hym.*, 1 : 400, ♀ ♂ [Syns.].

1983. *Provespa anomala* : Das and Gupta, *Oriental Ins.*, 17 : 433 [Syns.].

Material examined : 4 ♀ ♀ . INDIA : Arunachal Pradesh : Namdhapa, 1 ♀ , 18.iv.1981 ; Gibbon land, 2 ♀ ♀ , 2.v.1981 ; Miao, 1 ♀ , 5.v.1981.

Distribution : India, Burma, Indonesia, Malayasia.

25. *Parapolybia varia* (Fabricius)

1787. *Vespa varia* Fabr., *Mant. Insect.*, 1 : 293.

1897. *Polybia orientalis* : Bingham, *Fauna British India, Hym.*, 1 : 383, ♀ [Syns.].

1983. *Parapolybia varia* : Das and Gupta, *Oriental Ins.*, 17 : 430 [Syns.].

Material examined : 6 ♂ ♂ , 7 ♀ ♀ . INDIA : Arunachal Pradesh : Namdhapa : Deban, 4 ♂ ♂ , 2-7.iv.1981 ; 7 ♀ ♀ , 27.iv.1981 ; 1 ♂ , 28.iv.1981 ; Chiria camp, 1 ♂ , 25.iv.1981.

Distribution : India, Nepal, Burma, Luichow Is., Philippines, Malayasia, China, Japan.

Family : CHRYSIDIDAE

26. *Chrysis (Trichrysis) imperiosa* Smith

1874. *Chrysis imperiosus* Smith, *Trans. Ent. Soc. London*, (1874) : 460.

1959. *Chrysis (Trichrysis) imperiosa* : Linsenmaier, *Mitt. Schweiz. ent. Ges.*, 32(1) : 170.

Material examined : 1 ♀ , INDIA : Arunachal Pradesh : Namdhapa : Deban, 27.iv.1981.

Distribution : India, Sri Lanka, Burma.

27. **Chrysis (Hexachrysis) principalis** Smith

1874. *Chrysis principalis* Smith, *Trans. Ent. Soc. London*, (1874) : 461, ♀

1968. *Chrysis (Hexachrysis) principalis* : Linsenmaier, *Mitt. Schweiz. ent. Ges.*, 41 : 122.

Material examined : 1 ♂, INDIA : Arunachal Pradesh : Namdhapa : Deban, 27.iv.1981.

Distribution : India, Burma, Sri Lanka.

Family : CHALCIDIDAE

28. **Brachymeria lasus** (Walker)

1841. *Chalcis lasus* Walker, *Entomologist*, (1841) : 219.

1973. *Brachymeria lasus* : Joseph, Narendran and Joy, *Zool. Mon. No. 1, Univ. of Calicut, Calicut* : 29, fig. 1 [Syns.].

Material examined : 1 ♀, INDIA : Arunachal Pradesh : Namdhapa : Deban, 27.iv.1981.

Distribution : India, Sri Lanka, Burma.

SUMMARY

The paper deals with 161 examples, collected from Namdhapa, Arunachal Pradesh, comprising of 28 species, 5 subspecies distributed over 21 genera in 11 families. All the species are reported here for the first time from this region.

ACKNOWLEDGEMENTS

The authors are thankful to Dr. B. K. Tikader, Director, Zoological Survey of India, Calcutta for providing necessary facilities to undertake the present study. Thanks are also due to Dr. A. K. Ghosh, Deputy Director and Dr. J. K. Jonathan, Superintending Zoologist, Zoological Survey of India, Calcutta for their guidance and keen interest for the completion of this work.

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