



Rec. zool. Surv. India : 104 (Part 3–4) : 143-149, 2005

TYPES OF MANTODEA (INSECTA : MANTODEA) IN THE COLLECTION OF CENTRAL ENTOMOLOGICAL LABORATORY OF ZOOLOGICAL SURVEY OF INDIA, KOLKATA, INDIA

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INTRODUCTION

The Central Entomological Laboratory (C.E.L.) of Zoological Survey of India (Z.S.I.), Kolkata preserves the types of mantids described by Wood-Mason, J. (1878, 1982, 1989), Chopard, L. (1924) and Serville, J. G. A. (1869, 1931). Mukherjee *et al.* (1983, 1985) and Mukherjee (1995). Several types of mantids were traced in the 'General Collection' of the Orthoptera Section of Z.S.I., Kolkata and their type status were fixed by Mukherjee *et al.* (1992). These were transferred to the C.E.L. The earlier specimens that already bear "Type" label are considered as "Holotype" of respective species as there is no confusion about their type status. Here the word "Type" has been retained to conform to the label present with the specimens to avoid future confusion. Many other type specimens are reported to be in ZSIC (Ehrmann, 2002). These are yet to be traced and will be published.

Thus it became necessary to publish a detailed account of all the types present in the C.E.L. along with the condition of the specimen, type of preservation and other available data on the types. At present there are 48 specimens (dry 30 and in spirit 18, belonging to 26 genera and 37 species) in the type collections of C.E.L., Zoological Survey of India, M-Block, New Alipore, Kolkata-700 053, India.

1. *Acromantis nicobarica* Mukherjee, 1995. "Holotype" ♀, Regd. No. 8632/H5, Great Nicobar Expedition, Great Nicobar Island, Galathea Bay, stn. 6, coll. 487, Daniel and Bhowmick, 21.iii.1966 (DRY).
2. *Acromantis nicobarica* Mukherjee, 1995. "Allotype" ♂, Regd. No. 8633/H5, Great Nicobar Expedition, Campbell Bay, stn. 3, coll. 312, Daniel and Bhowmick, 03.iii.1966 (dry).

3. *Acromantis nicobarica* Mukherjee, 1995. "Paratype" ♂, Regd. No. 9497/H5, Great Nicobar Expedition, Campbell Bay, stn. 1, coll. 105, Daniel and Bhowmick, 03.iii.1966 (dry).
4. *Anaxarcha intermedia* Mukherjee, 1995. "Holotype" ♂, Regd. No. 8634/H5. Deban, Tirap, Arunachal Pradesh, S. Srivastava & party, 04.xii.1983 (dry).
5. *Aethalochroa spinipes* Wood-Mason, 1889. "Type" ♂, Regd. No. 9382/6, Karachi (in spirit).
6. *Aethalochroa affinis* Wood-Mason, 1889. "Type" ♂, Regd. No. 4374/4, Sind, J. A. Murray (dry).
7. *Archimantis armatus* Wood-Mason, 1877. "Type" ♀, North Australia, C. French, Regd. No. 587/1 (broken into three parts, in spirit).
8. *Choeradodis brunneri* Serville, 1882. "Type" ♀, Regd. No. 9918/6, Bogota, New Granada, purchased, Santha Fe de (dry).

Remarks : According to Ehrmann (2002) present name is *Choeradodis rhombicollis* (Latreille, 1833). Wood-mason described this species based on this one adult female (Regd. No. 9918/6, ZSIC) and a male nymph (Regd No. 1093/1, ZSIC) and the latter is yet to be traced.

Another synonym *Choeradodis servillei* of Wood-Mason (1880 : 83) was described on the basis of the holotype female (Regd. No. 4544/4, Costa Rica, ZSIC), one female ('in the collection of Messrs. Godman and Salvin') and a male (nymph, Regd. No. 772/1, Chiriqui, ZSIC, dry). These two (ZSIC) are yet to be traced. In later publications Wood-Mason worked on several male and female.

9. *Choeradodis laticollis* Serville, 1831. "Type" ♂, Regd. No. 6620/1, Ecuador, Buckley, purchased (abdomen lost, dry).
10. *Choeradodis laticollis* Serville, 1831. "Type" ♀, Regd. No. 6621/1, Ecuador, Buckley, purchased (broken, dry).

Remarks : According to Ehrmann (2002) the holotype ♂ is in MNHN (Natural History Museum of Paris). According to Wood-Mason (1889), there are five males and five females in ZSIC. Above two (Sl. No. 9 & 10) belong to those ten examples. Clearly these two cannot be the type of *Choeradodis laticollis*. However there is 'type' label on these two specimens and kept as such.

11. *Comptothespis australiensis* Wood-Mason, 1889. "Holotype" ♀, Regd. No. 4323/4, Australia, Westwood (E), (dry, broken).
12. *Dysaules himalayanus* Wood-Mason, 1889. "Type" ♂, Regd. No. 6527/1, Kulu (dry).
13. *Dysaules himalayanus* Wood-Mason, 1889. "Type" ♀, Regd. No. 6526/1, Kulu (entire, dry).

Remarks : Ehrmann (2002) mentioned "Type" ♂ as holotype and "Type" ♀ as allotype.

14. *Elmantis nira* Mukherjee and Hazra, 1983. "Holotype" ♂, Regd. No. 7854/H5, Nira, Pune, India, M. B. Rao, 11.v.1972 (dry).
15. *Elmantis nira* Mukherjee and Hazra, 1983. "Paratype" ♂, Regd. No. 7855/H5, WRS, Pune, Kamthodi, 07.viii.1969, B. S. Lamba (dry).
16. *Euthyphleps rectivenis* Wood-Mason, 1889. 'Holotype' ♀, Regd. No. 6557/1, Kulu, Kangra, N. W. Himalayas, 3600 ft., A. G. Young (total length 86.05 mm, broken, dry).
17. *Gimantis authaemon* Wood-Mason, 1882. "Type" ♀, Regd. No. 2056/2, Mergui Expedition, Minthantoung, on the Tenasserim River, near Mergui, Dr. J. Anderson, 22.xii.1882 (in spirit).

Remarks : Ehrmann (2002) mentioned "Type" ♀ as holotype.

18. *Hapalopeza periyara* Mukherjee and Hazra, 1985. "Holotype" ♀, Regd. No. 8631/H5, ZSI/SRS/Madras, Mullaperiyar Expedition, 1981, Periyar Lake, stn. 1, lot. 2, 11.ii.1981, alt. 880 m, K. Mathew and party, ZSI lot no. 92/81, 3/MPR, Kerala, India, (in spirit).

Remarks : According to Ehrmann (2002) present name is *Hapalopeza (Hapalopeza) periyara* Mukherjee and Hazra 1985.

19. *Hestias pictipes* Wood-Mason, 1879. "Type" ♂, date and locality unknown; Regd. No. 1253/1, donor J. Wood-Mason (in spirit).
20. *Hestias pictipes* Wood-Mason, 1879. "Type" ♀, Regd. No. 1254/1, Marble Rock, Jabbalpur, museum collector (in spirit).

Remarks : According to Ehrmann (2002) the male is holotype and the female is allotype. The present name of the species is *Ephestiasula pictipes* (W.-Mason, 1879).

21. *Heterochaetula tricolor* Wood-Mason, 1876. "Type" ♀, Regd. No. 9556/6, Calcutta (Kolkata), (dry).
22. *Hierodula (Rhombodera) atricoxis* Wood-Mason 1878. "Lectotype" ♂, Regd. No. 767/1, Rev. MacFarlane, 'one of the island of Torres Strait' (Murray Island), purchased, (broken, in spirit).
23. *Hierodula (Rhombodera) atricoxis var. grandis* Wood-Mason 1882. "Holotype" ♀, Regd. No. 677/1, Murray island, Torres Strait (in spirit).

Remarks : According to Ehrmann (2002) :

- (i) present name of both the above species (Sl. Nos. 21 & 22) is *Tamolanica atricoxis* (Wood-Mason, 1878).
- (ii) Holotype ♂ and allotype ♀ of *Hierodula (Rhombodera) atricoxis* are said to be in ZSIC. Therefore holotype ♂ is the "Lectotype" ♂, Regd. No. 767/1 and the allotype ♀ is the "Holotype" ♀, Regd. No. 677/1.

24. *Hierodula doveri* Chopard, 1924. "Type", ♀ Barkuda Island, Chilka Lake, Ganjam District, Orissa, Regd. No. 5906/H2, 25.iv.1920 (entire, in spirit; also labeled as 'Madras Presidency' as the locality previously belonged to that old division which is actually now Orissa).
25. *Hierodula (Rhombodera) pustulifera* Wood-Mason, 1878. "Lectotype" ♀, Regd. No. 4287/4, purchased, Rev. MacFarlane, 'one of the island of Torres Strait' (total length 80 mm, broken into several pieces, in spirit).

Remarks : According to Ehrmann (2002) this is a syntype and present name is *Hierodula pustulifera* Wood-Mason 1878. Mukherjee *et al.* (1992) designated it as lectotype.

26. *Hierodula sternostriata* Wood-Mason 1882. "Lectotype" ♀, Regd. No. 8447/H5, Trinity Bay, Australia (in spirit, femora, tibiae and tarsi of anterior legs lost).
27. *Hierodula sternostriata* Wood-Mason 1882. "Paralectotype" ♀, Regd. No. 2031/2, Trinity Bay, Australia (dry, mentioned as 'Type' on card).

Remarks : According to Ehrmann (2002) present name is *Hierodula sternostriata sternostriata* (Wood-Mason 1882) and holotype (male), allotype (female) and paratypes (male and female) are in ZSIC. So "Lectotype" ♀, Regd. No. 8447/H5 is actually the allotype ♀ and holotype ♂ is yet to be traced. Mukherjee *et al.* (1992) mentioned Regd. No. 10346/H5 which is now rejected. Wood-Mason (1882) described this species as *Parhierodula sternostriata*.

28. *Hierodula (Hierodula) assamensis* Mukherjee, 1995. "Paratype" ♀, Regd. No. 8637/H5. Deomali forest, Tirap, Arunachal Pradesh, 11.xi.1971, 250 mt., G. S. Arora (dry).

Remarks : According to Ehrmann (2002) present name is *Hierodula assamensis* Mukherjee, 1995 and holotype ♀ and paratype ♀ are in ZSIC. However the holotype ♀ could not be traced.

29. *Hierodula (Hierodula) beieri* Mukherjee, 1995. "Holotype" ♂, Regd. No. 8638/H5. NEFA Survey, stn.32, 31.x.1966, Bame village, Siang, Arunachal Pradesh, 600 m., S. K. Tandon and G. S. Arora (dry).

Remarks : According to Ehrmann (2002) present name is *Hierodula beieri* Mukherjee, 1995.

30. *Hierodula (Hierodula) nicobarica* Mukherjee, 1995. "Holotype" ♂, Regd. No. 91/1. Nicobar Island, F. De Roepstroff (in spirit).
31. *Hierodula (Hierodula) nicobarica* Mukherjee, 1995 "Allotype" ♀, Regd. No. 91A/1, Nicobar Island, F. De Roepstroff (in spirit).

Remarks : According to Ehrmann (2002) present name is *Hierodula nicobarica* Mukherjee, 1995.

32. *Iris orientalis* Wood-Mason, 1882. "Lectotype" ♂, Regd. No. 6508/1, Kulu, Kangra, N. W. Himalayas, A. G. Young, 1880 (dry, broken).

Remarks : Mukherjee *et al.* (1992) designated it as lectotype.

33. *Leptomantis nigrocoxata* Mukherjee, 1995. "Holotype" ♀, Regd. No. 8635/H5. Alubocri, Arunachal Pradesh, J. M. Julka, 800 ft., 13.xi.1969 (dry).

34. *Leptomantis nigrocoxata* Mukherjee, 1995. "Paratype" ♀, Regd. No. 5093/9 (dry, other data not available).

Remark : According to Ehrmann (2002) present name is *Leptomantella (Leptomantella) nigrocoxata* (Mukherjee, 1995).

35. *Mantis indica* Mukherjee, 1995. "Holotype" ♀, Regd. No. 8639/H5, Chail, Himachal Pradesh, M. Chandra, 04.vi.1971 (dry).

36. *Mantis indica* Mukherjee, 1995. "Allotype" ♂, Regd. No. 8640/H5, Renuka Lake, Himachal Pradesh, A. Kumar, 30.xi.1975 (dry).

37. *Mesopteryx robusta* Wood-Mason, 1882. "Holotype" ♀, Regd. No. 44/1, Naga Hills, Assam, 'one of the Museum Collector under Captain J. Butler' or 'probably by Wood-Mason 'on the South Andaman Island in 1872' (Wood-Mason, 1882). (Abdomen broken, in spirit).

Remark : Mukherjee *et al.* (1995) wrongly mentioned it as male on page 304.

38. *Nanomantis lactea* Mukherjee, 1995. "Holotype" ♀, Regd. No. 5727/4, Conoor, South India, Lindsay (in spirit).

39. *Oxyophthalma engaea* (Wood-Mason, 1889). "Holotype" ♂, Regd. No. 9370/6, Nilgiri Mountains, South India, G. F. Hampson ('the broken specimen', in spirit).

Remarks : According to Ehrmann (2002), along with holotype ♂, allotype ♀ and paratypes ♂ ♀ are in ZSIC and these are yet to be traced.

40. *Parananomantis brevis* Mukherjee, 1995. "Holotype" ♂, Regd. No. 8636/H5 Jhargram, Midnapur, T. Mukherjee, 06.ix.1986 (dry).

41. *Phyllothelys westwoodi* Wood-Mason, 1877. "Type" ♂, Regd. No. 178/1, Bhutan, Dooars (broken, in spirit).

Remarks : According to Ehrmann (2002) this is paratype ♂. The rest syntypes (♂ ♀) mentioned by Ehrmann are yet to be traced in ZSIC.

42. *Phyllothelys malayae* Wood-Mason, 1889. "Type" ♂, Regd. No. 9799/6, Perak (dry).

Remarks : According to the literature, the species was published in Ann. Mag. Nat. Hist. Nov. 1889, p. 367 (from Perak, Malay Peninsula, coll. W. Doherty, male). The broken parts of the specimen (fore wing, part of abdomen and process of vertex) are mounted on card. Ehrmann (2002) did not mention this species.

43. *Polyspilota insignis* Wood-Mason, 1882. "Type" ♂, Regd. No. 9610/6, Cameroon, Africa (broken, dry).

44. *Pseudothespis meghalayensis* Mukherjee, 1995. "Holotype" ♂, E.R.S. Regd No. 16929 (A1/5941). Fruit Gardens, Meghalaya, M. S. Jyrwa, dry, (it does not bear any other Regd. No.)
45. *Sphodromantis arabica* Wood-Mason, 1882. "Type" ♀, Osman, Arabia, Regd. No. 647/1, coll. Miles (entire, in spirit).

Remarks : According to Ehrmann (2002) *Sphodromantis arabica* is a synonym of *Sphodromantis trimacula* (Saussure, 1870).

46. *Toxoderopsis spinigera* Westwood & Wood-Mason, 1889, "Holotype" ♀, Regd. No. 8145/H5, Mumbai (Bombay) (broken, dry).

Remarks : The specimen already bears older Regd. No. 8145/H5 and thus Regd. No. 10044/H5 (Mukherjee *et al.* 1992) is invalid. According to Ehrmann (2002) holotype is ♂ and allotype is ♀ But according to literature the holotype is ♀ So far no ♂ has been traced in ZSIC. Mukherjee *et al.* (1992) designated it as holotype.

47. *Toxoderopsis taurus* Wood-Mason, 1889. "Lectotype" ♀, Regd. No. 9534/6, Khurda, Orrisa, W. C. Taylor (broken, dry).

Remarks : Mukherjee *et al.* (1992) designated it as lectotype.

48. *Toxoderopsis taurus* Wood-Mason, 1889. "Paralectotype" ♂, Regd. No. 8146/H5, Sind, W. C. Taylor (broken, dry).

Remarks : Mukherjee *et al.* (1992) designated it as paralectotype. Since the specimen already bears older Regd. No. 8146/H5, the Regd. No. 10045/H5 (Mukherjee *et al.*, 1992) is invalid.

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