Fauna of Protected Areas - 28:

ADDITIONS TO THE MANTID FAUNA (INSECTA: MANTODEA) OF PENCH NATIONAL PARK, MAHARASHTRA, INDIA

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web supplement

Mantids (Insecta: Mantodea) are predatory insects that feed on a variety of insects including other mantids. They occur in almost all tropical and semitropical habitats but are rarer in colder climatic regions. According to Mukherjee *et al.* (1995), India has a diverse fauna of mantids with about 162 species under 68 genera and six families, however due to recent synonymization of some genera like *Cimantis* Giglio-Tos (with *Amantis* Giglio-Tos) and *Parhierodula* Giglio-Tos (with *Hierodula* Burmeister) and some species like *Mantis nobilis* Brunner von Wattenwyl [now *Statilia nemoralis* (Saussure)] the total number of genera and species in India has changed (see Ehrmann, 2002). In addition, recently one more genus, namely *Euchomenella* Giglio-Tos was added to the fauna of India when a new species, namely *E. indica* Ghate & Mukherjee, was described (Ghate & Mukherjee, 2004). About 2300 species of mantids under 434 genera are known from the world at present, as per the latest catalogue of Mantodea (Ehrmann, 2002). The purpose of this note is to add a few species to the recently published list of mantids in the Pench Fauna volume of Zoological Survey of India (Sureshan *et al.,* 2004). These insects were discovered in older collections of the Zoological Survey of India, Pune, after submission of the final manuscript for Pench Fauna volume.

Pench National Park is situated at about 80kms east to the city of Nagpur in Maharashtra State. Nagpur District lies in the extreme northern region of Maharashtra state, bordered by Madhya Pradesh and Chattisgarh states. Details of area, climate and vegetation of the Pench National Park can be seen in the above quoted fauna volume published by Zoological Survey of India.

The names of the species that are in addition to the earlier list are given below, along with brief diagnostic features. The distribution record is followed from that of Mukherjee *et al.* (1995). All the specimens are deposited in the Zoological Survey of India, Western Regional Station, Pune. All measurements are in mm. The following abbreviations are used in the text:
BL - Body Length (From anterior margin of head to the tip of abdomen); FW - Forewing; PN - Pronotum

SYSTEMATIC ACCOUNT

Order: Mantodea
Family: Mantidae
(Subfamily: Paramantinae; Tribe: Mantini)

1. *Statilia maculata* (Thunberg)

Material examined: One Female; Kolitmala, 12.iii.1998, coll. R.H. Kamble, (Reg. No. E/3919)
Diagnostic characters: Body brown, prosternum with a black patch. In fore leg, coxae with 5-6 white, triangular and tubercular spines. Claw groove of femora shining yellow and a black patch in front of it. Fore wing a little longer than abdomen. Stigma without black spot.
Measurements: BL - 43; PN - 15; FW - 37
Distribution: India: Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Himachal Pradesh, Madhya Pradesh, Meghalaya, Sikkim, Uttar Pradesh, West Bengal, Maharashtra, Eastern Asia.
Remarks: A widely distributed and common species.

Family: Toxoderidae
(Subfamily: Toxoderinae, Tribe Toxoderini)

***2. Cheddikulama straminea* Henry**

Material examined: One female, Totla doh, 2.iii.1999, coll. M.S. Pradhan, (Reg. No. E/4238)
Diagnostic characters: Head wider than long, pentagonal; eyes laterally mammiform; pronotum slender, long, supra coxal dilation prominent; laterally denticulate. In fore leg, femur slender, nearly straight, with four external, four discoidal and 13 internal spines; tibia with 11/12 external and 13 internal spines. Both wings well developed in female but much shorter than abdomen. Fore wing narrow, sub-opaque, pale straw colored. Hind wing shorter than fore wing, rose-pink at base of anal area. Supra anal plate transverse. Cerci short, oval, strongly compressed from base.
Measurements: BL - 68; PN - 18; FW - 32
Distribution: India: Uttar Pradesh, Maharashtra; *Elsewhere*: Sri Lanka.
Remarks: The insect matches very well with the original description given by Henry (1932) except for the spines on femora (internal femoral spines 13 instead of 14 and internal tibial spines 13 instead of 15) but the variation is minor. This is the first definite record of this species, based on observation of a mature insect, from Maharashtra. Earlier only a nymph was collected in Borivili National Park and was identified as *Cheddikulama* sp. due to distinctive head characters (Sureshan *et al.*, 2004). There is also a specimen in Natural History Museum, Karlsruhe, Germany that was collected from Ahmednagar in 1974 (Reinhard Ehrmann, SMNK, Karlsruhe, personal communication). Thus it seems that this rare insect is definitely found in some grassy areas in Maharashtra and a more careful survey is necessary.

Family: Liturgusidae
(Subfamily: Liturgusinae; Tribe Liturgusini)

***3. Humbertiella indica* Saussure**

Material examined: One Male; Phepharikund, 25.ix.1994, coll. M.S. Pradhan & party, (Reg. No. E/2824)
Diagnostic characters: Body pale brown; fore femora with a black divided longitudinal line, longer internal spines black at tips only. Both wings longer than abdomen, hyaline but smoky.
Measurement: BL - 30; PN - 6; FW - 28
Distribution: India: Gujrat, Karnataka, Madhya Pradesh, Maharashtra, Uttar Pradesh, Tamil Nadu. *Elsewhere*: Nepal, Sri Lanka.
Remarks: This species is very similar to *H. similis* Giglio-Tos. [see Werner (1933) for the discussion about similarity of the various species of *Humbertiella*]. Studies on male genitalia as well as molecular markers, with specimens collected from different localities, are now necessary to clarify the identity.

***4. Humbertiella ceylonica* Saussure**

Material examined: One Male; Near Narhar, 6.x.1994, coll. M.S. Pradhan, (Reg. No. E/2826)
Diagnostic characters: Body deep brownish, frontal sclerite blackish.

[w] See Image 1 in the web supplement at www.zoosprint.org

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Tubercles of pronotum well marked. Long internal spines of fore femur entirely black. Fore wing in male longer than body, darker.
Measurement: BL - 28; PN - 5.5; FW - 27
Distribution: India: Assam, Bihar, Karnataka, Madhya Pradesh, Tamil Nadu, Uttar Pradesh, West Bengal, Maharashtra; *Elsewhere*: Myanmar; Sri Lanka.
Remarks: A very common bark mantis.

Family: Hymenopodidae
(Subfamily: Acromantinae; Tribe: Acromantini)
5. *Hestiasula brunneriana* Saussure
Material examined: One nymph; Bakari tank, 23.ii.1999, coll. M.S. Pradhan, (Reg. No. E/4237)
Diagnostic characters: Frontal sclerite transverse, its superior angle produced in a blunt angle; fore femur foliaceous, oval, with outer face brown with few black spots, inner face with typical three black spots along superior edge, another black spot in the middle a little above the spines; all spines black at tips only.
Measurement: BL - 11; PN - 2.8; FW - not known.
Distribution: India: Andhra Pradesh, Meghalaya, West Bengal, Maharashtra; *Elsewhere*: Bangladesh; Sri Lanka.
Remarks: Although it was a nymph, the species has distinct characters to determine it without problem. It is a rather common species in different parts of Maharashtra and morphological details and illustrations of adult of this species have already been published (Ghate *et al.*, 2001)

Discussion

As far as mantids of Pench National Park, Maharashtra, are concerned, the present study adds five species of mantids to the already published list. These species are reported for the first time from Pench National Park. Recently Sureshan *et al.* (2004) had reported nine species of mantids from Pench National Park. Thus there are a total of 14 species of mantids, belonging to 11 genera and four families (Hymenopodidae, Liturgusidae, Mantidae and Toxoderidae), now known to be present in Pench National Park.

The updated list of mantids so far known from Pench is given below:

1. *Amantis saussurei* (Bolivar)
2. *Deiphobe indica* Giglio-Tos
3. *Cheddikulama straminea* Henry
4. *Creobroter apicalis* Saussure
5. *Creobroter laevicollis* (Saussure)
6. *Hestiasula brunneriana* Saussure
7. *Humbertiella affinis* Giglio-Tos
8. *Humbertiella ceylonica* Saussure
9. *Humbertiella indica* Saussure
10. *Hierodula tenuidentata* Saussure
11. *Mantis inornata* Werner (now: *Mantis religiosa inornata* Werner, as per Bazyluk 1960)
12. *Phyllothelys westwoodi* Wood-Mason
13. *Statilia maculata* (Thunberg)
14. *Tenodera sp.*

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WILDLIFE CONSERVATION AWARD TO DR SHRIVASTAV

Dr. A.B. Shrivastav, Wildlife Health Expert, working as a Professor of Pathology and In charge of Department of Wildlife Health and Management, College of Veterinary Science and Animal Husbandry, Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur has been honoured with prestigious **"Shahid Amrita Devi Vishnoi Wildlife Conservation Award"** for the year 2005. The Shahid Amrita Devi Forest and Wildlife Conservation award is presented by the State Forest Department, Government of MP to honour the outstanding and valuable services of the persons dedicatedly serving for the conservation of the wildlife and forest. The function was organized in Van Bhavan, Bhopal. He was given a certificate and cheque of rupees fifty thousand.

The award was presented to Dr.Shrivastav by the State Forest Minister Mr. Himmat Singh Kothari in the presence of Public Health and Medical Education Minister, Mr. Ajay Vishnoi, and Mr. Jaswant Singh, Member of Parliament, Jodhpur, Mr. Hasim, Principal Chief Conservator of Forest of Madhya Pradesh and reputable citizens and senior Forest officials.

Dr. Shrivastav is the only one in the country involved in all major activities for wildlife conservation like treatment of sick/injured wild animals, disease diagnosis, immobilization of wild animals, and wildlife forensics. Dr. Shrivastav has been selected for this rare honour for saving lives of number of mammals e.g. tiger, leopard, elephants, peafowl etc. in and out side the State. He has reported / diagnosed number of infections, which rare or first report in the literature. He has reported Paragonimiais in lung of tigers, Sarcocystis in tiger, Feline Panleukopaenia in tigers, Heamangioma in tigers, Sarcocystis in Barasingha, Collibacilosis in wild dogs, Lymphoid Leucosis and Infectious Coryza in peafowl. Early scientific disease diagnosis has helped in saving the life of other animals.

He has successfully treated Pyometra in an elephant and Epistaxis in a tiger, rare cases in the literature along with numerous other wild animals and immobilization of several wild animals including tigers, leopard, bear, elephant, chital etc.

Dr. Shrivastav is working on simple but traditional techniques for solving wildlife forensic cases like identification species through gross and comparative anatomical features of visceral organs, comparative osteology and microscopic structure of hair of different native wild species. Dr. Shrivastav, as when involved, is actively supporting research projects of Wildlife Institutes of India. Dr. Shrivastav has done M.V.Sc (Pathology), Ph.D and P.G. Diploma in Wildlife Management from WII. He was also visiting scientist at National Wildlife Health Centre, Madison USA.

He has published more than 80 research papers and popular articles in national and international journals.