ON SOME COLLECTIONS OF THYSANURA
FROM EAST AND NORTH EAST INDIA

A. K. HAZRA, M. BISWAS and S. K. MITRA
Zoological Survey of India, M-Block, New Alipore, Calcutta-700 053

The study of Indian fauna of Thysanura has been neglected except some stray works by
Escherich (1903), Silvestri (1913, 1938, 1948), Wygodzinsky (1954) and Hazra (1980).
Mendes (1990) pointed out: “The quite poorly known Indian fauna of thysanurans is for the
reason that these insects are not found frequently due to their concealing habit. Special efforts
are needed for their collection.” The present study is based on a small collection of about 150
examples present in the National Collection of Zoological Survey of India from the eastern
and North-eastern parts of India. This report however reflects only part of the knowledge that
we have on this group of insects from these areas. Thus there remains ample scope for further
exploration of more taxa from these regions in future. Ten species under six genera were
recorded so far from the states of North-eastern India.

The present paper deals with thirteen species of Thysanura under two families and nine
genera of which the genus Silvestrella termitophila, Stylifera impudica and Ctenolepisma
dubitalis are being recorded for the first time from India. Further, Ctenolepisma longicaudata,
not known earlier from Tripura, is being recorded for the first time from this state alongwith
Acrotelsa collaris, Ctenolepisma longicaudata and Ctenolepisma ciliata from Bihar having
no records of Thysanura so far. Acrotelsa collaris, Stylifera wygodziniskyi and Ctenolepisma
nigra are also being recorded for the first time from the state of Orissa. Stylifera impudica,
Silvestrella termitophila, Thermobia domestica and Afrolepisina nigrina, not known from
West Bengal, are also being recorded for the first time in this investigation. Sikkim
thysanuran fauna, known so far through one species viz., Lepisma saccharina (Wygodzinsky,
1954), is being enriched through records of two more species viz., Ctenolepisma longicaudata
and Ctenolepisma ciliata. Two more species of Thysanura namely Ctenolepisma ciliata and
Ctenolepisma dubitalis are being recorded for the first time from Manipur, earlier record
being only one species, viz., Ctenolepisma longicaudata from the state (Wygodzinsky, 1954).

The present contribution attempts to record various species of Thysanura from the states
of east and north east India and descriptions of the species have already been given by
Escherich (1905), Silvestri (1913), Wygodzinsky (1972) and Hazra (1993).
SYSTEMATIC ACCOUNT
Order THYSANURA
Sub order ZYGENTOMA
Super Family LEPISMATOIDAE

Key to the families
1. Eyes and ocelli absent ...................................................... 
   Eyes present ........................................................................
   Eyes present ........................................................................

2. Ocelli present, scales absent ...................................................... 
   Ocelli absent, scales present ......................................................

Family: LEPISMATIDAE
Genus Ctenolepisma Escherich, 1905

Ctenolepisma longicaudata Escherich, 1905


Distribution: INDIA: West Bengal, Uttar Pradesh, Sikkim, Bihar, Tripura, Manipur.

Remarks: The species is recorded for the first time from the states of Tripura, Bihar and Sikkim.
HAZRA, BISWAS & MITRA: On some collections of Thysanura from East & North East India 31

*Ctenolepisma ciliata* (Dufour, 1831)


*Distribution*: INDIA: West Bengal, Delhi, Bihar, Sikkim, Manipur.

*Remarks*: This species is the first record from the states of Sikkim, Bihar and Manipur.

*Ctenolepisma nigra* (Oudemans, 1890)


*Distribution*: INDIA: West Bengal, Orissa.

*Remarks*: This species is recorded for the first time from the state of Orissa.
Ctenolepisma dubitalis Wygodzinsky, 1959


Distribution: INDIA: Manipur.

Remarks: This species is recorded for the first time from India as well as from the state of Manipur.

Genus Acrotelsa Escherich, 1905

Acrotelsa collaris (Fabricius, 1793)

1793. Leppisma collaris Fabricius, Ent. Syst., 2 : 64.


Distribution: West Bengal, Orissa, Bihar.

Remarks: This species is recorded for the first time from the states of Bihar and Orissa.

Genus Stylifera Stech. 1932

Stylifera wygodzinskyi Hazra, 1980


Distribution: INDIA West Bengal, Orissa.

Remarks: This species is recorded for the first time from the states of Orissa.

Stylifera impudica (Escherich, 1905)

1905. Acrotelsa impudica Escherich, Zoologica (Stuttgart), 83 : 112.


Distribution: INDIA West Bengal.

Remarks: This species is recorded for the first time from India.

Genus: Thermobia Bergroth 1890

Thermobia domestica (Packard), 1873


1894. Lepismodes furnorum, Bergroth, Ent. Monthly Mag., 5 (2) : 111.


Distribution: India: West Bengal, Tamil Nadu.

Remarks: This species is recorded for the first time from the state of West Bengal.

Genus: Lepisma Linnaeus 1758

Lepisma saccharina Linnaeus, 1758


Distribution: India: Sikkim.

Genus: Tricholepisma Paclt., 1967

Tricholepisma gravelyi (Silvestri, 1913)

1967. Lepisma (Tricholepisma) gravelyi, Paclt, Genera Insectorum; 218 : 23.

Material examined: 1♂, India: Indian Museum Compound, Calcutta, from tree trunk with termites, date not cited, Donor: C. Paiva.

Distribution: India: West Bengal (Calcutta).

Genus: Afrolepisma Mendes, 1981

Afrolepisma nigrina (Silvestri, 1913)


HAZRA, BISWAS & MITRA: On some collections of Thysanura from East & North East India

**Distribution**: INDIA: West Bengal, Orissa.

**Remarks**: It is the first record of the species from West Bengal.

**Genus**: *Silvestrella* Escherich, 1905

*Silvestrella termitophila* Escherich, 1905


**Distribution**: INDIA: West Bengal.

**Remarks**: This genus and species, originally described from South Africa (Escherich, 1905), is being recorded for the first time from India.

**Family**: NICOLETIIDAE

**Genus**: *Atelura* Vonheyden, 1855

*Atelura typhloponis* Silvestri, 1913


**Material examined**: 1 ♀ (Z.S.I. Reg. No. 8034/18), INDIA: Siliguri, Base of Himalayas, with ants under log and wood, 3-4, vi.1911, Coll. N. A. & S. W. Kemp.

**Distribution**: INDIA: West Bengal.

**ZOOGEOGRAPHY**

The knowledge of Thysanura from India is very inadequate. Uptil now we have no information about this group of insects from all the states of N.E. India. Thus no species of Thysanura so far has been reported from four states, viz., Arunachal Pradesh, Assam, Meghalaya and Nagaland. From Tripura two species were recorded recently by the authors (Hazra, Biswas and Mitra, in press).

Out of the thirteen species reported here, *Ctenolepisma longicaudata* is most widely distributed being present in West Bengal, Sikkim, Manipur, Tripura and Bihar. *Ctenolepisma ciliata* is represented in four states of N.E. India, viz., West Bengal, Bihar, Sikkim and Manipur. *Ctenolepisma dubitalis* remains restricted to Manipur only. *Ctenolepisma nigra*, since its first record by Silvestri (1913) from Calcutta, hitherto remains unrecorded from other parts of N.E. India. *Acrotelsa collalis*, so far has been recorded from West Bengal,
1. Ctenolepisma longicaudata
2. Ctenolepisma cilia
3. Ctenolepisma nigra
4. Ctenolepisma dubitalis
5. Acratelsa collaris
6. Stylifera wygodzinskyi
7. Stylifera impudica
8. Thermobia domestica
9. Lepisma saccharina
10. Tricholepisma gravetyi
11. Afrolepisma nigrina
12. Silvestrella termotoliphila
13. Atelura typholoponiss

Map-1
<table>
<thead>
<tr>
<th>Species</th>
<th>West Bengal</th>
<th>Bihar</th>
<th>Orissa</th>
<th>Sikkim</th>
<th>Tripura</th>
<th>Assam</th>
<th>Arunachal</th>
<th>Manipur</th>
<th>Meghalaya</th>
<th>Mizoram</th>
<th>Nagaland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td><strong>A. LEPISMATIDAE:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>1. Acrotesla collaris</em></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><em>2. Ctenolepisma longicaudata</em></td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><em>3. Ctenolepisma nigra</em></td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><em>4. Ctenolepisma ciliata</em></td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>5. Ctenolepisma dubitalis</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><em>6. Stylifera wygodzinskyi</em></td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7. Lepisma saccharina</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8. Tricholepisma gravelyi</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><em>9. Afrolepisma nigrina</em></td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><em>10. Thermobia domestica</em></td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>11. Stylifera impudica</strong></td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>12. Silvestrella termitophila</strong></td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>NICOLETIDAE:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Atelura typhloponis</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* First record from the State
** First Record from India
Orissa and Bihar. *Lepisma saccharina*, recorded by Wygodzinsky (1954) for the first time from Sikkim, was further recorded in this investigation. *Tricholepisma gravelyi* described by Silvestri (1913) from Maidan, Calcutta, West Bengal is the only record of this species from eastern India. *Afrolepisma nigrina*, recorded by Silvestri (1913) for the first time from Orissa, also was found to occur in West Bengal. *Silvestrella termitophila*, originally described from South Africa (Escherich, 1905), is recorded for the first time from India (West Bengal). *Atelura typhloponis*, a myrmecophil, described by Silvestri (1913) from Siliguri, has not been recorded from any other part of India so far.

*Stylifera wygodzinskyi*, described for the first time from West Bengal (Hazra, 1980), is reported for the first time from Orissa. *Stylifera impudica*, known from Nearctic and Neotropical regions, recorded for the first time from India. *Thermobia domestica*, recorded by Silvestri (1913) from Lahore (Pakistan) is the first record from West Bengal. However, Mendes (1990) also recorded this species from Mandapam (South India) (Map-I).

**ACKNOWLEDGEMENT**

We express our sincere thanks to Dr. J.R. B. Alfred, Director, Zoological Survey of India for providing laboratory facilities.

**REFERENCES**


