



E-ISSN: 2320-7078  
 P-ISSN: 2349-6800  
 JEZS 2016; 4(4): 381-383  
 © 2016 JEZS  
 Received: 24-05-2016  
 Accepted: 22-06-2016

**Phurpa Dorji**  
 School of Life Science, Sherubtse  
 College, Royal University of  
 Bhutan, Kanglung, Bhutan

## New record of Cicadas (Hemiptera: Cicadidae) from Eastern Bhutan

**Phurpa Dorji**

### Abstract

Cicadas in Bhutan were studied intermittently by Distant in 1912 and Hayashi in 1978, and reported fourteen species. Since then no studies were done on Cicadas of Bhutan. This paper reports five new records, *Hueschys sanguinea* (de Geer, 1773), *Polyneura ducalis* Westwood, *Tanna thalia* (Walker, 1850), *Haphsa sulaiyai* (Boulard, 2005) and *Talainga binghami* (Distant, 1890) from Bhutan.

**Keywords:** New records, Bhutan, Cicadidae

### 1. Introduction

Cicadas are singing bugs of superfamily Cicadidoea. Though extensive studies were done in Oriental region, the knowledge of Cicadid fauna of Bhutan is very limited. The first study reported four species from Bhutan [2], *Tanna bhutanensis* Distant, 1912, *Platylomia insignis* Distant, 1912, *Mata rama* (Distant, 1881) and *Terpnosia oberthuri* Distant, 1912. Studied during the Bhutan-Expedition in 1972, the following ten species were reported [1]: *Platyleura assamensis* Atkinson, *Pycna repanda* (Linnaeus, 1758), *Gaeana festiva* (Fabricius), *G. sulphurea* (Westwood), *Balinta octonotata* (Westwood), *Pomponia surya* Distant, *Ternosia andersoni* Distant, *Euterpnosia madhava* (Distant), *Oncotympana obnubila* (Distant) and *Platylomia saturata* (Walker). Since then no study has been done on Cicadas of Bhutan. In this paper, five species are reported for the first time from Bhutan in addition to the previous reports.

### 2. Materials and methods

Only adult specimens were collected during 2014 – 2016 from Tashigang, Mongar, Pema Gatsel and Lhuentse Districts in Eastern Bhutan. Collections were done using insect swift net, killed with ethyl acetate in insect killing jar, dry mounted and preserved. Latitudes and longitudes were provided in degree minute second, and Elevation above sea level (Alt.) noted in meters (m) using Garmin eTrex 10. Photographs were taken with Nikon D3300 with attached AF-S Micro Nikkor 40 mm lens. Measurements were taken with digital Vernier caliper nearest to 0.01 mm. Measurement provided refers to the total body length (Head + Mesosoma + Metasoma). Morphological examinations were done under stereoscopic microscope (VT-II, Olympus, Tokyo). The identification was based on the keys and descriptions provided by [3-11, 13, 14]. Terminology follows that of [12]. Specimens were deposited in the Zoology Museum, Sherubtse College, Kanglung, Bhutan.

### 3. Results and Discussion

Family: **Cicadidae**

Subfamily: **Cicadettinae**

Tribe: **Huechysini**

#### 3.1 *Hueschys sanguinea* (de Geer, 1773) (Fig. 1: C & D)

Diagnosis: Following parts black: body and legs, front and face to head, two large spots to mesonotum and abdomen sanguineous, base of abdomen narrowly; frontoclypeus with a central longitudinal groove; tegmina black, opaque; wings shining fuscous with anal area paler; rostrum passing the intermediate coxae. Measurement: 1♀ 17.39 mm.

Materials examined: Nganglam, Pema Gatsel (26°49'45.24" N, 91°14'17.60"E, Alt. 349 m): 1♀ collected by Phurpa Dorji, Thinley Gyeltshen & Tshering Nidup on 18.iv.2016 from

**Correspondence**  
**Phurpa Dorji**  
 School of Life Science, Sherubtse  
 College, Royal University of  
 Bhutan, Kanglung, Bhutan

Alabari village.

Distribution: Bhutan (Pema Gatsel); Taiwan; China; Philippines; Andaman and Nicobar Island; India; Myanmar; Indonesia; Borneo; Malay Peninsula; Tennasserim; Thagata; Vietnam; Timor; [10, 11, 15]

Remarks: New record for Bhutan

Subfamily: **Cicadinae**

Tribe: **Polyneurini**

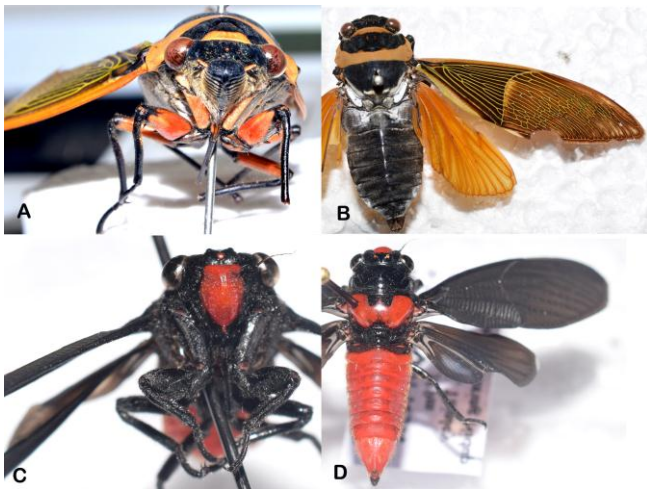
**3.2 *Polyneura ducalis* Westwood (Fig. 2: A & B)**

Diagnosis: Head including eyes as wide as base of mesonotum; pronotum longer than mesonotum, their lateral margins amplified and medially shortly angulate; tegmina opaque with dense venation and furcate, reticulate towards apex; rostrum reaching posterior coxae; tympanal orifices completely covered; operculum short and broad; abdomen longer than space between apex of head and base of cruciform elevation; femora and coxae reddish, base and apices of femora, tibiae and tarsi black.

Materials examined: Bartsham, Tashigang (27°22'29.42"N, 91°35'48.60"E, Alt. 1985 m): 1♂ collected by Phurpa Dorji, Thinley Gyeltshen & Tshering Nidup on 09.x.2014 from Jangjang Manee below the road to Bartsham town.

Distribution: Bhutan (Tashigang); Nepal; India; Burma; China (Tibet) [3, 11]

Remarks: New record for Bhutan



**Fig 1:** *Polyneura ducalis*: A-Frontal view; B-Dorsal view. *Huechys sanguinea*: C-Frontal view; D-Dorsal view.

Subfamily: **Cicadinae**

Tribe: **Leptopsaltriini**

**3.3 *Tanna thalia* (Walker, 1850) (Fig. 2: C & D)**

Diagnosis: Body slender with the following parts black: mesonotum with a central longitudinal fascia, on each of which is a short inwardly-curved fascia, and two spots in front of cruciform elevation, pronotum with two central fasciae united anteriorly and posteriorly, incisures and a spot at posterior angles, subapical spot to femora, bases and apices of tibiae, and apices of tarsi and rostrum black; wings hyaline; fore wings with bases of 2<sup>nd</sup> and 3<sup>rd</sup> apical cells narrowly infuscated; each lateral surface of the male 3<sup>rd</sup> abdominal sternum possess a tubercle-like projection, and the corresponding area of male 4<sup>th</sup> sternum is strongly sclerotized, not discernible as a projection; opercula not

extending beyond 2<sup>nd</sup> sternite. Measurement: 1♀ 19.15 mm; 2♂ 25.22 mm.

Materials examined: Lhuentse (27°40'26"N, 91°11'10"E, Alt. 1260 m): 2♂ & 1 ♀ collected by Phurpa Dorji, Thinley Gyeltshen & Kinzang Chopel on 08.v.2016 below the Dzong area.

Distribution: Bhutan (Lhuentse); Nepal; India; China (Tibet); Pakistan [3, 14]

Remark: New record for Bhutan.

Subfamily: **Cicadinae**

Tribe: **Dundubiini**

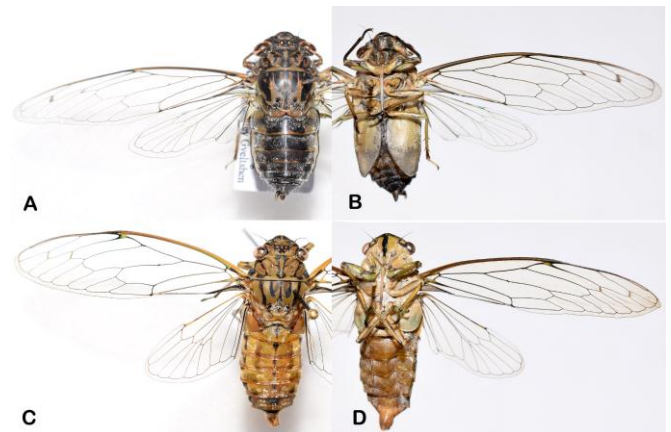
**3.4 *Haphsa sulaiyai* (Boulard, 2005) (Fig. 2: A & B)**

Diagnosis: Pronotal collar very narrow posteriorly; body broad, shorter than 3.2x as wide as III abdominal tergite; forewing with fuscous spot at bases of second and third apical cells; only minimum gap between timbal cover and cruciform; male abdomen about as long as head and thorax together; male operculum long, extending to posterior margin of abdominal sternite VI, not covering lateral margin of corresponding timbal cover in lateral view. Measurement: 4♂ 24.85 mm.

Materials examined: Lhuentse (27°40'26"N, 91°11'10"E, Alt. 1260 m): 2♂ & 1 ♀ collected by Phurpa Dorji, Thinley Gyeltshen & Kinzang Chopel on 08.v.2016 below the Dzong area; Fawan, Lheuntse (27° 29' 8.016"N and 91° 10' 58.008"E, Alt. 953 m): 1♂ collected by Phurpa Dorji, Kinzang Chopel & Thinley Gyeltshen on 08.v.2016 near water fall; Gyelpoishing, Mongar (27° 0' 23.76"N and 90° 8' 24"E, Alt. 565 m): 1♂ collected by Phurpa Dorji, Kinzang Chopel & Thinley Gyeltshen on 08.v.2016 from Dam area.

Distribution: Bhutan (Lhuentse, Mongar); Thailand [13]

Remark: New record for Bhutan



**Fig 2:** *Haphsa sulaiyai*: A. Dorsal view; B. ventral view. *Tanna thalia*: C-Frontal view; D-Dorsal view

Subfamily: **Cicadinae**

Tribe: **Talaingini**

**3.5 *Talainga binghami* Distant, 1890 (Fig. 3)**

Diagnosis: Body and legs black; eyes ochraceous with posterior margins pale sanguineous; tympanal orifices largely exposed; tympanal covering little narrower and much shorter than the orifices and anterior margins convex; pronotal lateral margins and a curved fascia on lateral areas behind eyes pale sanguineous, posterior margin narrowly ochraceous; segmental margin of abdomen more or less

greyishly pilose; forewing semi-opaque, talc-like, creamy-ochraceous, venation reticulate and black, ulnar and apical areas broken up into numerous smaller cells which are black margined, basal cell shaded black; hind wing pale bluish-green, venation at apical areas more or less reticulate with black margins. Measurement: ♀ 25.79 m.

Materials examined: Kanglung, Tashigang (27°16'47.42"N, 91°30'48.71"E, Alt. 1969 m): 1♀ collected by Phurpa Dorji on 20.v.2015 from Thragom village above the highway; 1♂ & 1♀ collected by Phurpa Dorji and Kinzang Chopel on 22.v.2016 from Thragom village above the highway.

Distribution: Bhutan (Tashigang), Vietnam, India, Burma <sup>[11]</sup>

Remarks: New record for Bhutan

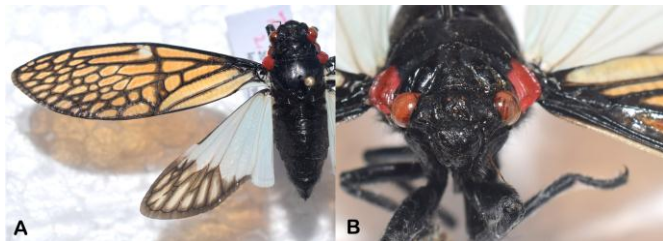


Fig 3: *Talainga binghami*: A. Dorsal view; B. Frontal view

#### 4. Acknowledgement

The author is deeply indebted to Mr. Tshering Nidup, Mr. Thinley Gyeltshen and Mr. Kinzang Chopel for the collection of the specimens studied in this paper. Very special thanks to Sherubtse College, Royal University of Bhutan, Kanglung, Bhutan for funding the publication.

#### 5. References

1. Hayashi M. Ergebnisse der Bhutan-Expedition 1972 des Naturhistorischen Museums in Basel Homoptera: Fam. Cicadidae. Entomologica Basiliensia. 1978, 3.
2. Distant WL. New genera and species of Oriental Homoptera. The Annals and Magazine of Natural History. 1912; (48):459-471.
3. Hayashi M. The Cicadidae (Homoptera, Auchenorrhyncha) from East and Central Nepal (Part I). Bulletin of the National Science Museum, Series A (Zoology). 1978; 4(3):163-195.
4. Hayashi M. The Cicadidae (Homoptera, Auchenorrhyncha) from East and Central Nepal (Part II). Bulletin of the National Science Museum, Series A (Zoology). 1978; 4(4):167-179.
5. Lee YJ, Hayashi M. Taxonomic Review of Cicadidae (Hemiptera, Auchenorrhyncha) from Taiwan, Part 1. Platyleurini, Tibicenini, Polyneurini, and Dundubiini (Dundubiina). Insecta Koreana. 2003; 20(2):149-185.
6. Lee YJ, Hayashi M. Taxonomic Review of Cicadidae (Hemiptera, Auchenorrhyncha) from Taiwan, Part II. Dundubiini (A Part of Cicadina) with two new species. Insecta Koreana. 2003; 20(3, 4):359-392.
7. Lee YJ, Emery D. New genera and species of Leptosaltriini (Hemiptera: Cicadidae: Cicadinae) from India and Tibet, with the descriptions of five new subtribes. Zoosystema. 2013; 35(4):525-535.
8. Lee YJ, Emery D. Description of a new genus and species of the tribe Dundubiini (Hemiptera: Cicadidae: Cicadinae) from India, with taxonomic notes on Dundubiini including the description of two new subtribes. Zoosystema. 2014; 36(1):73-80.
9. Lee YJ. Taxonomic notes on the Genus *Haphsa*

(Hemiptera: Cicadidae) with descriptions of two new species. Florida Entomologist. 2009; 92(2):330-337.

10. Lee YJ, Hayashi M. Taxonomic Review of Cicadidae (Hemiptera, Auchenorrhyncha) from Taiwan, Part 3. Dundubiini (Two Other Genera of Cicadina), Moganiini, and Huechysini with a New Genus and Two New Species. Journal of Asia-Pacific Entomology. 2004; 7(1):45-72.
11. Distant WL. Fauna of British India Homoptera: Rhynchota - Vol. III (heteroptera - Homoptera). Taylor and Francis, Red lion court, Fleet street, Calcutta and Simla, 1906, 1-532.
12. Moulds MS. An appraisal of the higher classification of cicadas (Hemiptera: Cicadoidea) with special reference to the Australian fauna. Records of the Australian Museum. 2005; 57:375-446.
13. Wang XU, Yang M, Wei C. A review of the cicada genus *Haphsa* Distant from China (Hemiptera: Cicadidae). Zootaxa. 2015; 3957(4):408-424.
14. Ahmed Z, Khatri I, Zaidi S. New records of Cicadas (Hemiptera: Cicadidae) from Pakistan. Pakistan Entomologist. 2014; 36(1):21-23.
15. Lee YJ. Cicadas (Hemiptera: Cicadidae) from Samar and Leyte, Philippines, with a new species. Journal of Asia-Pacific Entomology. 2011; 14:253-257.