

**ON A COLLECTION OF GROUSE - LOCUSTS (ORTHOPTERA :
TETRIGIDAE) FROM MAHARASHTRA, INDIA, WITH SOME NEW
DISTRIBUTIONAL RECORDS**

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INTRODUCTION

Walker (1871), Bolivar (1898, 1902 and 1917), Hancock (1912, 1913, 1915), Kirby (1914), Hebard (1929), Gunther (1938 and 1939) and Willemse (1938) have studied the Tetrigid fauna of India. However, none has dealt with the Tetrigid fauna of Maharashtra State exclusively.

The present study is based upon the material collected from the State by Dr. B. S. Lamba former Joint Director of the Zoological Survey of India, and Dr. S. Y. Paranjape and his colleagues of the Modern College, Pune. It reports a total of fifteen species of which eight are recorded here for the first time from Maharashtra State. The distributional records of all included species have been provided.

A list of eleven species recorded earlier by other authors from Maharashtra State is also appended at the end.

SYSTEMATIC ACCOUNT

Order	ORTHOPTERA
Superfamily	TETRIGOIDEA
Family	TETRIGIDAE
Subfamily	CLADONOTINAE

1. *Potua sabulosa* Hancock

1915. *Potua sabulosa* Hancock, *Rec. Indian Mus.*, 11 : 62 - 63.

Material examined : 1 Male, Satara District, Satara Road, Girivihar, 17.vii. 1983, S.Y. Paranjape & Party.

Distribution : India (Maharashtra - Satara District).

Remarks : Median carinula of vertex short, a little produced in front and extended up to the middle of eyes behind ; frontal costa arched between the antennae, narrowly forked

between the paired ocelli and widely forked in front ; paired ocelli placed below the middle of eyes ; antennae filiform and located below the level of eyes.

Pronotum extended upto the two-thirds of the posterior femora ; lateral carinae of pronotum distinct ; prozonal carinae prominent and run parallel ; lateral lobes of pronotum deflexed downwards and subtruncate at apex ; tegmina minute and elongate ; wings reduced to minute scales ; anterior femora little compressed, lower margin well serrated and tuberculated, upper margin finely serrated ; median femora compressed, bicarinate, upper margin undulated and lower margin denticulated - the nature of denticle laminate type ; posterior femora widened, upper margin curved and produced into a prominent spine at apex, lower margin subtuberculated ; posterior tibiae biannulate with yellow band ; first and third tarsal segments of posterior legs more or less equal in length ; first and second pulvilli a little shorter than the third.

This specimen differs from the description provided by Hancock (1915) for this species, in having the extension of pronotum up to two-thirds of the posterior femora and the presence of wings in the form of minute scales.

The present specimen was collected from the wet walls, covered with mosses and Bryophytes.

Subfamily SCSELIMENINAE

2. *Euscelimena harpago* (Serville)

1839. *Tetrix harpago* Serville, *Ins. Orth.*, : 763.

1887. *Scelimena harpago*, Bolivar, *Annls soc. ent. Belg.*, 31 : 216.

1938. *Euscelimena harpago*, Gunther, *Mitt. zool. Mus. Berl.*, 23 : 364.

Material examined : 1 Male, Pune, Shivajinagar, Bank of river Mutha, 559 m, 25.v. 1983, Dr, S.Y. Paranjape & Party.

Distribution : India (Maharashtra, Tamilnadu, Madhya Pradesh, Uttar Pradesh and Bihar) ; and Sri Lanka.

Remarks : It is semi-aquatic in nature : found near the water line of perennial water bodies. Its coloration and swimming adaptations have been described by Roonwal (1981).

3. *Criotettix latifrons* Hebard

1929. *Criotettix latifrons* Hebard, *Revue suisse Zool.*, 36 : 578.

Material examined : 2 Females, Nasik, Panchwati, Bank of river Godawari, 5.iii.1983, Dr. S.Y Paranjape and Party.

Distribution : South India.

Remarks : Collected by the side of perennial water bodies, especially rivers and streams. Recorded here for the first time from Maharashtra.

4. *Eucriotettix tricarinatus* (Bolivar)

1887. *Criotettix tricarinatus* Bolivar, *Annls Soc. ent. Belg.*, 31 : 223.

1929. *Eucriotettix tricarinatus*, Hebard, *Revue suisse Zool.*, 36 : 573.

Material examined : 1 Male, Ahmednagar , Bank of stream near Dongargan , 17. iii. 1983, Dr. S.Y Paranjape and Party.

Distribution : India (Tamilnadu and Kerala) ; and Sri Lanka.

Remarks : Collected from the marshy vegetation near the stream. Recorded here for the first time from Maharashtra.

5. *Eucriotettix flavopictus* (Bolivar)

1902. *Criotettix flavopictus* Bolivar, *Annals Soc. ent. Fr.*, 70 : 582.

1938. *Eucriotettix flavopictus*, Gunther, *Stettin. ent. ztg.*, 99 : 133, 170, 180, 187.

Material examined : 2 Females, Satara, Mahabaleshwar, Lingmala, 1372m., 20.vii. 1983, Dr. S.Y. Paranjape and Party.

Distribution : India (Tamilnadu, Kerala, Karnataka, Meghalaya-Cherrapunji) ; Burma-Dawna Hills.

Remarks : Spines of lateral lobes of pronotum are not much longer and pointed. This species is generally found in South India but once has been reported from Cherrapunji (Hancock, 1907). Present specimens were collected in the vicinity of torrential streams. Recorded here for the first time from Maharashtra.

6. *Eucriotettix* sp.

Material examined : 2 Males, Satara, Mahabaleshwar, Pratapgad, 10. x. 1982, Dr. S.Y Paranjape and Party.

Distribution : India ; Sri Lanka ; Burma ; Taiwan ; South China-Hainan, Indonesia-Borneo, Java and Bali ; Singapore ; Greater and Smaller Sunda Islands ; Tonkin ; and New Guinea.

Remarks : Specimens were collected in the vicinity of streams and water-falls. This species come very close to *Eucriotettix Pallidus* (Hancock) except that the posterior process of pronotum of it is not subnodulose.

7. *Thoradonta lativertex* Gunther

1983. *Thoradonta lativertex* Gunther, *Stettin. ent. ztg.*, 99 : 128.

Material examined : 1 Female, Jalgaon, 15. xi. 1982, Dr. S. Y. Paranjape and Party; 1(F), Jalgaon Bank of Sukhi Pal river, 5. i. 1983, Dr. S. Y. Paranjape and Party.

Distribution : India (Himachal Pradesh).

Remarks : Recorded here for the first time from Maharashtra. The specimens were collected near the perennial water bodies.

8. *Thoradonta pruthii* Gunther

1938. *Thoradonta pruthii* Gunther, *Stettin. ent. ztg.*, 99 : 129.

Material examined : 1 Male, Pune, Empress garden, 25. ii. 1983, Dr. S. Y. Paranjape and Party.

Distribution : India (Madhya Pradesh and Karnataka).

Remarks : Recorded here for the first time from Maharashtra. This material was collected in the vicinity of perennial water bodies, especially rivers and streams.

Subfamily TETRIGINAE

9. *Euparatettix personatus* (Bolivar)

1887. *Paratettix personatus* Bolivar, *Annls Soc. ent. Belg.*, 31 : 278.

1904. *Euparatettix personatus*, Hancock, *Spolia zeylan.*, 2 : 145.

Material examined : 1 Male, Ahmednagar, Shirdi, 11. xi. 1982, Dr. S. Y. Paranjape and Party.

Distribution : India (Throughout India); Burma; Sri Lanka; Indonesia - Java; Philippines; and Sulawesi.

Remarks : It was collected in the vicinity of marshy vegetation near lakes.

10. *Euparatettix histricus* (Stal)

1860. *Tetrix histrica* Stal, *Kong. Svens. Fregatten Eugenicis Resa Omkring Jorden*, Stockholm, 3 : 347.

1887. *Paratettix histricus*, Bolivar, *Annals Soc. ent. Belg.*, 31 : 279.

1937. *Euparatettix histricus*, Gunther, *Revue suisse Zool.*, 44 : 133.

Material examined : 1 Male, Dhule, near Nekana Lake, 9. x. 1982, Dr. S. Y. Paranjape and Party; 1(M), Raigad, Khopoli, near Khandala Lake, 11. x. 1982, Dr. S. Y. Paranjape and Party; 1(M), Pune, near Pashan Lake, 20. xi. 1982, Dr. S. Y. Paranjape and Party; 1(M), Pune, Shivajinagar, bank of river Mula, Dr. S. Y. Paranjape and Party; 1 Female, Nasik, bank of river Godawari, 5. ii. 1983, Dr. S. Y. Paranjape and Party; 1(F), Ahmednagar, Sangammer, bank of river Pravara, 7. ii. 1983, Dr. S. Y. Paranjape and Party; 1(F), Pune, Shivajinagar, bank of river Mutha, 5.iii. 1983, Dr. S. Y. Paranjape and Party.

Distribution : India (Tamilnadu, Orissa, Bihar, West Bengal, and Meghalaya); Sri Lanka; Java; Borneo; Sumatra; Philippines-Mindanao; Malay Islands; N. Australia; and N. Caledonia.

Remarks : Colour variations are recorded as follows : whole pronotum dark brown or dirty yellow, except the middle of shoulders which is brown; median longitudinal stripe white, and the thin lateral line white which runs from the anterior to the posterior part of shoulders; head and anterior part of shoulders dark brown, and the rest part ashy with one oblique dark brown patch behind the shoulders; whole pronotum dark brown except the middle of shoulders which is brown; whole pronotum dirty yellow are recorded.

Specimens were collected from the marshy vegetation near lakes or rivers. Recorded here for the first time from Maharashtra.

11. *Hedotettix gracilis* (De Hann)

1842. *Acridium (Tetrax) gracile* De Hann, *Temminck, Verh- handel., Orth.*, : 167, 169.

1887. *Hedotettix gracilis*, Bolivar, *Annl's Soc. ent. Belg.*, 31 : 188, 283.

1914. *Hedotettix gracilis*, Kirby, *Faun. Brit. India, Orth. Acrid.*, : 72.

Material examined : 12 Males, 4 Females, Pune, Bhorghat, 15. x. 1965, Dr. B.S. Lamba ; 1(M), Raigad, Khopoli, near Khandala Lake, ii. x. 1982, Dr. S. Y. Paranjape and Party; 1(F), Pune, Shivajinagar, bank of river Mula, 28. xi. 1982, Dr. S. Y. Paranjape and Party.

Distribution : India (Throughout) ; Burma ; Sri Lanka ; Pakistan ; Bangladesh ; Thailand ; Indonesia-Sumatra, Java ; Sulawesi ; Vietnam ; and Taiwan.

Remarks : Specimens were collected from the marshy vegetation.

12. *Hedotettix punctatus* Hancock

1909. *Hedotettix punctatus* Hancock, *Trans. R. ent. Soc. Lond.*, 1908: 422.

Material examined : 1 Male, 1 Female, Pune, Pashan Lake, 12. ii. 1983, Dr. S. Y. Paranjape and Party.

Distribution : India and Borneo.

Remarks : Gunther (1941) studied the material of this species from Madhya Pradesh (Basha Ghat), and Rajasthan. It was also studied by me from Karnataka (Bangalore). Present report from Maharashtra is a new record. The specimens were collected from the vicinity of marshy vegetation.

13. *Coptotettix conspersus* Hancock

1915. *Coptotettix conspersus* Hancock, *Rec. Indian Mus.*, 11 : 119.

Material examined : 162 Males, 165 Females, Pune, Bhorghat, 15. x. 1965, Dr. B. S. Lamba; 1(M), 1(F), Pune, Pashan Lake, 12. ii. 1983, Dr. S. Y. Paranjape and Party; 1(M), 1(F), Ahmednagar, bank of river Sina, 2. ii. 1983, Dr. S. Y. Paranjape and Party.

Distribution : India (West Bengal, Assam, and Uttar Pradesh) ; and Sri Lanka.

Remarks : Pronotum presents significant colour variations : it varies from brown to dark brown or rusty, creamy to whitish in general, but variegation or shades of different colours also marked. These shades of colour may be as follows : a broad transverse yellow or brown band on the shoulders, or a long linear white line in the middle of pronotum, which runs from head to the posterior end of tegmen or head and the anterior part of shoulders more darker than the posterior, or the colour of posterior angles of lateral lobes of pronotum may be different than that of pronotum. Posterior femora also show colour variations. It may resemble or completely differ in colour with the pronotum.

The undulations of median carina of pronotum also vary. These are either superficial, or clearly marked with intermediate stages as well. In males, the depth of these undulations are less pronounced than the females, but exceptions are also met with. The granules and rugulae on the pronotum may be feeble or prominent, and distributed sparsely.

Recorded here for the first time from Maharashtra.

14. *Ergatettix dorsifera* (Walker)

1871. *Tettix dorsifera* Walker, *Cat. Derm. Salt. Brit. Mus.*, 5 : 825.

1929. *Ergatettix dorsifera*, Hebard, *Revue suisse Zool.*, 36 : 588.

Material examined : 3 Males, 5 Females, Pune, Bhorghat, 15. x. 1965, Dr. B. S. Lamba.

Distribution : India (Uttar Pradesh, Bihar, Orissa, West Bengal, Madhya Pradesh, Assam, Kerala, Karnataka, and Maharashtra); Burma; Sri Lanka; Bangladesh; Nepal; and Sumatra.

Remarks : It is closely related to *Ergatettix guntheri* steinmann but differs in having less distinct undulation on median carina, and without dilated lobes on the lateral carinae of hind process of pronotum; and less developed tubercles on external surface in the middle of hind femora.

15. *Ergatettix guntheri* Steinmann

1912. *Euparatettix nodulosus* Hancock, *Mem. Dep. Agric. India ent. Ser.*, 4 : 155. (preoccupied).

1970. *Ergatettix guntheri* Steinmann, *Acta zool. hung.*, 16 (1-2) : 234.

Material examined : 1 Male, Ahmednagar, Shirdi, 11. xi. 1982, Dr. S. Y. Paranjape and Party, Dhule, near Nekana lake, 20. i. 1983, Dr. S. Y. Paranjape and party.

Distribution : India (West Bengal, Assam, Madhya Pradesh, Orissa, Bihar, Uttar Pradesh, and Maharashtra); Bangladesh; and Sri Lanka.

Remarks : The dorsum of pronotum with strongly developed rugulae and nodules, median carina of pronotum with clear undulations and distinctly developed tubercles on external surface of hind femora.

List of other species recorded by earlier authors from Maharashtra State.

Name	Locality
1. <i>Acanthalobus curticornis</i> Hancock	Satara District : Yenna Valley, Medha, 2200 Ft. (F. H. Gravely).
2. <i>Scelimena uncinata</i> (Serville)	Bombay.
3. <i>Thoradonta sinuata</i> Hancock	Satara District : Western of Yenna Valley, Moleshwar, 3200 Ft. (F.H. Gravely).
4. <i>Euparatettix corpulentus</i> Hancock	Western base of Western Ghats : Kasara.

5. <i>Tetrix lineifera</i> (Walker)	Bombay.
6. <i>Tetrix lineosua</i> (Walker)	Bombay.
7. <i>Tetrix nigricolle</i> (Walker)	Bombay.
8. <i>Tetrix obliquifera</i> (Walker)	Bombay.
9. <i>Tetrix umbrifera</i> (Walker)	Bombay.
10. <i>Coptotettix indicus</i> Hancock	Bombay : Kalayan; Satara District, Koyna Valley, Vela, 2,100 Ft. (F. H. Gravelly).

SUMMARY

Fifteen species are reported from Maharashtra, out of which eight are new records for this State.

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* Original not seen