



Distributional Records of Genera of Scelionid (Hymenoptera: Platygasteridae) Egg Parasitoids from South India

K. Mahalakshmi¹, S. Manickavasagam^{1*} and K. Rajmohana²

¹Parasitoid Taxonomy and Biocontrol Laboratory, Department of Entomology, Faculty of Agriculture, Annamalai University, Chidambaram - 608 002. T.N. India. ²Zoological Survey of India, Western Ghats Regional Station, Calicut - 673 006, Kerala

Faunistic surveys conducted between 2010 and 2011 through net sweep, yellow pan trap and Malaise trap in southern states of India revealed new distributional records of 17, 19 and three genera of scelionids respectively from Andhra Pradesh, Pudhucherry and Tamil Nadu.

Key words: Survey, parasitoids, Platygasteridae, distributional records.

Scelionids are exclusively egg parasitoids, with a wide host array, with host – dependent morphological specialization. They show high specificity in host partitioning at tribal level (Galloway and Austin, 1984). Majority of scelionids are solitary parasitoids, but most attack hosts that are clumped, although a few species do search out and oviposit into solitary eggs. Scelionids as a group attack a wide variety of arthropod eggs in various situations. However, most species are fairly host specific within parasitic Hymenoptera. Family Scelionidae, now a junior synonym of Platygasteridae, based on phylogenetic analyses (Sharkey, 2007), is one of the most widely distributed families. Of the three scelionid subfamilies Telenominae, Scelioninae and Teleasinae, the former two are highly abundant, diverse and significant to agro-ecosystem. While Lepidoptera and Heteroptera are the principal host groups for telenomines, Orthoptera, Heteroptera, Coleoptera, Odonata, Mantodea and araneomorph spiders form the major host assemblage of the Scelioninae (Rajmohana, 2006). The Teleasinae parasitize carabid eggs (Austin *et al.*, 2005). In India, work on taxonomy of this group was restricted mainly to Kerala (Rajmohana, 2006 and Rajmohana *et al.*, 2011) and Karnataka (Veenakumari *et al.*, 2011). Hence an attempt was made to survey these parasitoids from Andhra Pradesh, Pudhucherry and Tamil Nadu that resulted in the present findings.

Materials and Methods

Survey for collection of scelionid parasitoids was made during 2010 - 2011 in major districts of South Indian states viz., Tamil Nadu, Pudhucherry, Kerala, Karnataka and Andhra Pradesh. Yellow pan trap, Malaise trap and sweep net were used for collection. The recovered scelionid parasitoids were card mounted, labeled and identified up to generic level using the keys of Masner (1976), Galloway and Austin (1984), Rajmohana (2006 and 2011) and

Veenakumari *et al.*, (2011). All voucher specimens were deposited with Parasitoid Taxonomy and Biocontrol Laboratory, Department of Entomology, Annamalai University (EDAU), Chidambaram.

Results and Discussion

The survey resulted in new distributional records of 28 genera of scelionid parasitoids from the states of Andhra Pradesh, Pudhucherry and Tamil Nadu as detailed below:

A. Subfamily: Telenominae

1. *Paratelenomus* Dodd, 1914

Specimens examined: INDIA, Pudhucherry, 1 female, through net sweep from Pondicherry University premises forest ecosystem, ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj) and Andhra Pradesh, Uppalapodu, 1 female through yellow pan trap from maize ecosystem, iii, 2011 (A. Rameshkumar).

Distribution: Karnataka, Tamil Nadu, Kerala (Rajmohana *et al.*, 2011), Andhra Pradesh (New record) and Pudhucherry (New record).

2. *Psix* Kozlov and Le, 1976

Specimen examined: INDIA, Pudhucherry, 1 female, through net sweep from Pondicherry University premises forest ecosystem, ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj).

Distribution: Kerala, West Bengal, Karnataka, Uttar Pradesh, Tamil Nadu, New Delhi (Rajmohana *et al.*, 2011) and Pudhucherry (New record).

3. *Trissolcus* Ashmead, 1893

Specimens examined: INDIA, Pudhucherry, 3 females and 2 males, through net sweep from Pondicherry University premises forest ecosystem, ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj) and Andhra Pradesh, Guntur, 2

*Corresponding author email: drmanicks2003@yahoo.co.in

females, 3 males, through yellow pan trap from maize ecosystem, i, 2011 (A. Rameshkumar).

Distribution: Maharashtra, West Bengal, Uttarakhand, Delhi Kerala (Rajmohana *et al.*, 2011), Pudhucherry (New record) and Andhra Pradesh (New record).

B. Subfamily: Teleasinae

1. *Trimorus* Foerster, 1856

Specimens examined: INDIA, Pudhucherry, 1 female and 4 males, through net sweep from Pondicherry University premises forest ecosystem, ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj).

Distribution: Karnataka, Uttarakhand, Maharashtra, Uttar Pradesh, Kerala (Rajmohana *et al.*, 2011) and Pudhucherry (New record).

C. Subfamily: Scelioninae

1. *Aradophagus* Ashmead, 1893

Specimens examined: INDIA, Pudhucherry, Karaikal, 1 female, through yellow pan trap from weed ecosystem, ii, 2011 (S. Manickavasagam and A. Rameshkumar), Tamil Nadu, Cuddalore, Srimushnum, 3 males, vi, 2011 (K. Mahalakshmi) and Andhra Pradesh, Hyderabad, Rajendranagar, 1 female, through net sweep from weed ecosystem, vi, 2011 (A. Rameshkumar).

Distribution: Karnataka (Johnson, 2011), Tamil Nadu (New record) and Andhra Pradesh (New record).

2. *Baeus* Haliday, 1833

Specimens examined: INDIA, Pudhucherry, 2 females and 2 males through net sweep from Pondicherry University premises forest ecosystem, ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj) and Andhra Pradesh, Hyderabad, Rajendranagar, 25 females, 32 males, through Yellow pan trap from weed ecosystem, i, 2011 (A. Rameshkumar).

Distribution: Kerala, Tamil Nadu, Karnataka (Johnson, 2011), Pudhucherry (New record) and Andhra Pradesh (New record).

3. *Baryconus* Foerster, 1856

Specimens examined: INDIA, Pudhucherry, 1 female, through net sweep from Pondicherry University premises forest ecosystem ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj) and Andhra Pradesh, Hyderabad, Rajendranagar, 2 females, 1 male, through net sweep and yellow pan trap from weed ecosystem, x, 2010 (A. Rameshkumar).

Distribution: Uttar Pradesh, Kerala, West Bengal, Madhya Pradesh, Maharashtra, Uttarakhand, Tamil Nadu, Orissa (Rajmohana, 2006

& 2011), Andhra Pradesh (New record) and Pudhucherry (New record).

4. *Ceratobaeus* Ashmead, 1893

Specimens examined: INDIA, Andhra Pradesh, Guntur, 7 females, through yellow pan trap and Malaise trap from weed ecosystem, vi, 2011 (A. Rameshkumar).

Distribution: Kerala, Tamil Nadu, Uttarakhand, Maharashtra, Uttar Pradesh, Karnataka (Rajmohana *et al.*, 2011) and Andhra Pradesh (New record).

5. *Cremastobaeus* Ashmead, 1893

Specimens examined: INDIA, Pudhucherry, 2 females and 2 males through net sweep from Pondicherry University premises forest ecosystem ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj) and Andhra Pradesh, Guntur, 4 females, 6 males, through yellow pan trap from maize ecosystem, i, 2011 (A. Rameshkumar).

Distribution: Uttarakhand (Rajmohana, 2011), Tamil Nadu, Kerala, Karnataka (Johnson, 2011), Andhra Pradesh, (New record) and Pudhucherry (New record).

6. *Cyphacolus* Priesner, 1951

Specimen examined: INDIA, Andhra Pradesh, Uppalapodu, 1 female, yellow pan trap from weed ecosystem, vii, 2011 (A. Rameshkumar)

Distribution: Karnataka, Uttarakhand (Johnson, 2011) and Andhra Pradesh (New record).

7. *Calotelea* Westwood, 1837

Specimen examined: INDIA, Pudhucherry, 1 female, through net sweep from Pondicherry University premises forest ecosystem ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj).

Distribution: Tamil Nadu, Kerala, Maharashtra, Uttarakhand (Rajmohana, 2011) and Pudhucherry (new record).

8. *Doddiella* Kieffer, 1913

Specimens examined: INDIA, Andhra Pradesh, Hyderabad, Rajendranagar, 2 males, through net sweep from weed ecosystem, vi, 2011 (A. Rameshkumar).

Distribution: Uttarakhand, Kerala (Rajmohana *et al.*, 2011), Tamil Nadu (Johnson, 2011) and Andhra Pradesh (New record).

9. *Dicroscelio* Dodd, 1913

Specimens examined: INDIA, Andhra Pradesh, Guntur, 3 females and 4 males, through yellow pan trap from maize ecosystem, i, 2011 (A. Rameshkumar).

Distribution: Maharashtra, Karnataka, Himachal

Pradesh, Kerala (Rajmohana, 2011), Tamil Nadu (Johnson, 2011) and Andhra Pradesh (New record).

10. *Dyscritobaeus* Perkins, 1910

Specimen examined: INDIA, Pudhucherry, 1 female, through net sweep from Pondicherry University premises forest ecosystem ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj).

Distribution : Tamil Nadu, Kerala, Karnataka (Johnson, 2011) and Pudhucherry (New record).

11. *Duta* Nixon, 1933

Specimens examined: INDIA, Pudhucherry, 2 females and 2 males through net sweep from Pondicherry University premises forest ecosystem ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj) and Andhra Pradesh, Guntur, 3 females and 3 males, through yellow pan trap from maize ecosystem, x, 2010 (A. Rameshkumar).

Distribution: Kerala, Karnataka, Uttarakhand (Rajmohana, 2011), Tamil Nadu (Johnson, 2011) Andhra Pradesh (New record) and Pudhucherry (New record).

12. *Encyrtoscelio* Dodd, 1914

Specimen examined: INDIA, Pudhucherry, 1 male, through net sweep from Pondicherry University premises forest ecosystem, ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj).

Distribution: New Delhi (Rajmohana, 2011), Tamil Nadu, Andhra Pradesh, Kerala, Karnataka (Johnson, 2011) and Pudhucherry (New Record).

13. *Gryon* Haliday, 1833

Specimens examined: INDIA, Pudhucherry, 75 females and 131 males, through net sweep from Pondicherry University premises forest ecosystem ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj).

Distribution: Tamil Nadu, Uttarakhand, Karnataka, Kerala, Maharashtra, New Delhi Uttar Pradesh, (Rajmohana, 2011), Andhra Pradesh, (Johnson, 2011) and Pudhucherry (New record).

14. *Idris* Foerster, 1856

Specimens examined: INDIA, Pudhucherry, 2 females and 1 male through net sweep from Pondicherry University premises forest ecosystem ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj).

Distribution: Uttar Pradesh, Karnataka, Kerala, Bihar, Uttarakhand, Tamil Nadu, Maharashtra, New Delhi, Himachal Pradesh (Rajmohana, 2011), Andhra Pradesh (Johnson, 2011) and Pudhucherry (New record).

15. *Leptoteleia* Kieffer, 1908

Specimen examined: INDIA, Pudhucherry, 1 female, through net sweep from Pondicherry University premises forest ecosystem ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj).

Distribution: West Bengal, Tamil Nadu, Kerala (Rajmohana, 2011), Karnataka (Johnson, 2011) and Pudhucherry (New record).

16. *Macroteleia* Westwood, 1835

Specimens examined: INDIA Pudhucherry, 5 females and 8 males, through net sweep from Pondicherry University premises forest ecosystem ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj) and Andhra Pradesh, Hyderabad, Rajendranagar, 2 females and 3 males through yellow pan trap from weed ecosystem and Guntur, 2 females and 1 male, through yellow pan trap from maize ecosystem, x, 2011 (A. Rameshkumar).

Distribution: Maharashtra, Uttarakhand, Kerala, Karnataka, West Bengal (Rajmohana, 2011), Tamil Nadu (Johnson, 2011), Pudhucherry (New record) and Andhra Pradesh (New record).

17. *Nixonia* Masner, 1958

Specimen examined: INDIA, Tamil Nadu, Pechipparai, 1 male, through yellow pan trap from forest ecosystem, iii, 2011 (A. Rameshkumar).

Distribution: Haldwani, Uttar Pradesh (now in Uttarakhand) (Johnson, 2011) and Tamil Nadu (New record)

18. *Oxyscelio* Kieffer, 1907

Specimens examined: INDIA, Pudhucherry, 1 female and 1 male, through net sweep from Pondicherry University premises forest ecosystem ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj).

Distribution: Tamil Nadu, Andhra Pradesh, Kerala, Karnataka (Johnson, 2011) and Pudhucherry (New record).

19. *Paridris* Kieffer, 1908

Specimens examined: INDIA, Andhra Pradesh, Hyderabad, Rajendranagar, 1 female and 1 male, through yellow pan trap from weed ecosystem, vi, 2011. (A. Rameshkumar).

Distribution: Kerala, Karnataka, Uttarakhand, Madhya Pradesh (Rajmohana *et al.*, 2011), Tamil Nadu (Johnson, 2011) and Andhra Pradesh (New record).

20. *Palpoteleia* Kieffer, 1926

Specimens examined: INDIA, Pudhucherry, 2 females and 1 male through net sweep from Pondicherry University premises forest ecosystem

ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj) and Andhra Pradesh, Hyderabad, Rajendranagar, through net sweep and yellow pan trap from weed ecosystem, x, 2011 (A. Rameshkumar).

Distribution: Uttarakhand (Rajmohana, 2011), Kerala, Karnataka, Tamil Nadu (Johnson, 2011), Pudhucherry (New record) and Andhra Pradesh (New record).

21. *Platyscelio* Kieffer, 1905

Specimens examined: INDIA, Tamil Nadu, Cuddalore, Chidambaram, 2 females, through yellow pan trap from brinjal ecosystem, i, 2011 (R. Kanagaraj) and Pudhucherry, 1 male, through net sweep from Pondicherry University premises forest ecosystem ii, 2011 (S. Manickavasagam, A. Rameshkumar and R. Kanagaraj).

Distribution: Karnataka, Kerala, Orissa, Uttarakhand (Rajmohana, 2011), Andhra Pradesh (Johnson, 2011), Tamil Nadu (New record) and Pudhucherry (New record).

22. *Probaryconus* Kieffer, 1908

Specimens examined: INDIA, Andhra Pradesh, Guntur, 2 females and 4 males, through net sweep and yellow pan trap from maize ecosystem, i, 2011 (A. Rameshkumar).

Distribution: Kerala, Karnataka, Uttarakhand, Himachal Pradesh, (Rajmohana *et al.*, 2011), Tamil Nadu (Johnson, 2011) and Andhra Pradesh (New record).

23. *Psilanteris* Kieffer, 1916

Specimen examined: INDIA, Andhra Pradesh, Hyderabad, Rajendranagar, 1 female, through yellow pan trap from forest ecosystem, vi, 2011 (A. Rameshkumar).

Distribution: Karnataka, Kerala, Maharashtra, Uttarakhand, (Rajmohana *et al.*, 2011), Tamil Nadu (Johnson, 2011) and Andhra Pradesh (New record).

24. *Sparasion* Lattreille, 1802

Specimens examined: INDIA, Pudhucherry, 1 male, through net sweep from Pondicherry University premises forest ecosystem, ii, 2011 (S. Manickavasagam, A. Rameshkumar and

R. Kanagaraj), Andhra Pradesh, Hyderabad, Rajendranagar, 2 females, through yellow pan trap from weed ecosystem, ii, 2011 (A. Rameshkumar).

Distribution: Kerala (Rajmohana, 2011), Tamil Nadu, Karnataka (Johnson, 2011), Andhra Pradesh (New record) and Pudhucherry (New record).

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