



An annotated checklist of the genus *Popillia* (Coleoptera: Scarabaeidae) of India

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ABSTRACT: *Popillia* Dejean, 1821 is one of the small genera in the subfamily Rutelinae of Scarabaeidae family. (Coleoptera). The species of *Popillia* are economically important pest of several agricultural and horticultural crops. Though several authors though reported the occurrence of these species throughout the Oriental region, a comprehensive checklist of the Indian fauna is not in place. This paper provides a comprehensive checklist of 43 species of the genus *Popillia* of Indian fauna along with their synonyms, combinations and distribution.

Key words: Checklist, *Popillia*, India, Scarabaeidae

INTRODUCTION

Popillia Dejean, 1821 is a small genus of tribe Anomalini and subtribe Popilliina in the subfamily Rutelinae of Scarabaeidae which is represented by 322 species and 27 subspecies globally (Schoolmeesters 2021). Arrow (1917) gave an account on 42 species in Indian sub-continent in his Fauna volume of British India (part-2). The species of this genus are serious pests of agricultural and horticultural crops and are often found in great numbers in aggregation. They cause damage by feeding on leaves, flowers and fruits. The affected plants are left with only veins with complete skeletonization of the foliage. The adult beetles feeding on fruits of horticultural crops viz., apple, peach, pear, plum (Sreedevi *et al.*, 2019) results in heavy fruit drop thus causing serious economic losses. The larvae are subterranean feeders on roots of different horticultural plants and grasses in different ecosystems. Certain species of this genus feed extensively on roots of grasses thus becoming detrimental to golf courses, parks, lawns. Several authors though reported the occurrence of these beetles throughout the globe, yet a comprehensive checklist of the Indian fauna is still not available. We made an attempt to compile the annotated checklist as given below.

ANNOTATED CHECKLIST OF THE GENUS, *POPILLIA*

1. *Popillia acuta* Newman, 1838

Synonyms and Combinations: *Popillia nasuta* Newman, 1838

Distribution: Himachal Pradesh, Uttarakhand and Maharashtra (Arrow 1917; Chandra 2005; Chandra *et al.*, 2012a,b; Sreedevi *et al.*, 2017; Chandra *et al.*, 2018).

2. *Popillia adamas* Newman, 1838

Synonyms and Combinations: *Popillia adamas viridinitens* Kraatz, 1892

Distribution: West Bengal, Jharkhand (Mandar) and Maharashtra (Bombay, Bandra, Khandala, Khandesh). (Arrow 1917).

3. *Popillia amabilis* Arrow, 1913

Distribution: Assam, Manipur, Nagaland, Meghalaya and West Bengal. (Arrow, 1917; Chatterjee and Biswas 2000b; Chatterjee 2004; Sarkar *et al.*, 2016; Gosh *et al.*, 2020).

4. *Popillia birmanica* Arrow, 1913

Distribution: Tripura and Assam. (Arrow 1917; Chatterjee and Biswas 2000a).

5. *Popillia chlorion* Newman, 1838

Distribution: Tamil Nadu (Madras, Nilgiris hills, Ooty) (Arrow 1917; Chandra 2009).

6. *Popillia clypealis* Ohaus, 1897

Distribution: Assam, Meghalaya (Khasi hills), Jammu & Kashmir, Himachal Pradesh (Shimla), Punjab and Uttarakhand. (Arrow 1917; Chatterjee and Biswas 2000b; Chandra 2005; Chandra *et al.*, 2018).

7. *Popillia complanata* Newman, 1838

Distribution: Maharashtra (Bombay), N. Karnataka, Tamil Nadu (Nilgiris hills, Nadhugani), Kerala (Malabar), (Arrow 1917; Chandra 2009).

8. *Popillia cupricollis* Hope, 1831

Synonyms and Combination:

Popillia hirta Lin, 1987

Popillia suturata Newman, 1841

Popillia caschmirensis Kollar & Redtenbacher, 1848

- Popillia smaragdula* Hope, 1831
Popillia formosa Hope, 1831
Popillia hilaris Burmeister, 1855
 Distribution: Arunachal Pradesh, Meghalaya, Assam, Sikkim, Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Uttarakhand, Uttar Pradesh and West Bengal (Arrow 1917; Kacker 1966 ; Chatterjee and Biswas 1995; Chatterjee and Biswas 2000b; Chatterjee and Biswas 2003; Chandra 2005; Chatterjee 2010; Chandra *et al.*, 2012a,b; Sreedevi *et al.*, 2017; Chandra *et al.*, 2018).
9. *Popillia cyanea* Hope, 1831
 Synonyms and Combinations:
Popillia concolor Castelnau, 1840
Popillia cyanea somnulosa Newman, 1841
Popillia beryllina Hope, 1831
 Distribution: Arunachal Pradesh, Assam, Nagaland, Sikkim, Meghalaya, Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Uttarakhand, Uttar Pradesh and West Bengal. (Arrow 1917; Kacker 1966; Chatterjee and Saha 1981; Chatterjee and Biswas 1995; Chatterjee and Biswas 2000b; Chandra 2005; Chatterjee 2010; Chandra *et al.*, 2012a, b; Pathania *et al.*, 2015; Sreedevi *et al.*, 2017; Chandra *et al.*, 2018; Gosh *et al.*, 2020).
10. *Popillia difficilis* Newman, 1838
 Distribution: India (Newman, 1838).
11. *Popillia eximia* Arrow, 1913
 Distribution: Tamil Nadu (Madras, Nilgiris hills) (Arrow 1917; Chandra 2009).
12. *Popillia feae* Kraatz, 1892
 Synonyms and Combinations; *Popillia semiaenea* Kraatz, 1892
Popillia semiaenea cupricollis Kraatz, 1892
Popillia semiaenea aenea Kraatz, 1892
Popillia tesari Sabatinelli, 1984
Popillia simoni Kraatz, 1892
 Distribution: Assam, West Bengal, Sikkim, Meghalaya, Himalaya. (Arrow 1917; Chatterjee and Biswas 2000b; Chatterjee and Biswas 2003; Chandra *et al.*, 2018)
13. *Popilla felix* Arrow, 1913
 Distribution: Assam (Arrow 1917).
14. *Popillia gemma* Newman, 1838
 Synonyms and Combinations: *Popillia nitidicollis* Gory, 1844
Popillia metallicollis Fairmaire, 1887
 Distribution: Assam, Sikkim and Indian Himalaya. (Arrow 1917; Chandra *et al.*, 2018).
15. *Popillia girardi* Sabatinelli, 1994
 Distribution: Tamil Nadu (Chennai) and Kerala (Sabatinelli, 1994, Chandra 2009).
16. *Popillia impressipyga* Ohaus, 1897
 Distribution: Assam, Sikkim, Meghalaya and Indian Himalaya (Arrow 1917; Chatterjee and Biswas 2000b; Chandra *et al.*, 2018).
17. *Popillia kanarensis* Arrow, 1917
 Distribution: Maharashtra (Arrow 1917).
18. *Popillia laevicollis* Kraatz, 1892
 Distribution: Assam, Meghalaya, Sikkim, Indian Himalaya, Uttarakhand and West Bengal. (Arrow 1917; Chatterjee and Biswas 1995; Chatterjee and Biswas 2000b; Chatterjee 2010; Chandra *et al.*, 2012a, b; Chandra *et al.*, 2018).
19. *Popillia laevis* Burmeister, 1855
 Synonyms and Combinations; *Popillia clara* Arrow, 1913
 Distribution: Chhattisgarh, Tamil Nadu (Chennai, Nilgiris hills), Pondicherry and Kerala (Travancore) (Arrow 1917; Chandra 2009; Chandra and Gupta 2012a; Chandra *et al.*, 2018).
20. *Popillia laevistriata* Arrow, 1913
 Distribution: Tripura and Assam. (Arrow 1917; Chatterjee and Biswas 2000a)
21. *Popillia lasiopyga* Lin, 1987
 Distribution: Sikkim and Indian Himalaya (Chandra *et al.*, 2018)
22. *Popillia lucida* Newman, 1838
 Distribution: Indian Himalaya, Uttarakhand, Tamil Nadu and Kerala. (Madras, Nilgiris hills), (Arrow 1917; Chandra 2009; Chatterjee 2010; Chandra *et al.*, 2012a; Chandra *et al.*, 2018).
23. *Popillia madrasicola* Machatschke 1913
 Synonyms and Combinations: *Popillia propinqua* Arrow, 1913
 Distribution: Tamil Nadu (Nilgiri Hills, Ootakamand), Kerala (Chandra 2009)
24. *Popillia maccllelandi* Hope, 1845
 Distribution: Arunachal Pradesh, Nagaland, Assam, Manipur, Meghalaya, Himachal Pradesh, Uttarakhand, and West Bengal. (Arrow 1917; Chatterjee and Biswas 2000b; Chandra and Gupta 2012b; Sarkar *et al.*, 2016; Sreedevi *et al.*, 2017; Chandra *et al.*, 2018; Gosh *et al.*, 2020).

25. *Popillia marginicollis* Hope, 1831
Synonyms and Combinations:
Popillia marginicollis purpuricollis Kraatz, 1892
Popillia marginicollis atrata Kraatz, 1892
Popillia marginicollis viridichlamys Benderitter, 1929
Distribution: Assam, Sikkim, Himachal Pradesh and Uttarakhand. (Arrow 1917; Biswas, Chatterjee and Sengupta 1999; Sreedevi *et al.*, 2017; Chandra *et al.*, 2018).
26. *Popillia minuta* Hope, 1831
Distribution: Sikkim and Indian Himalaya (Chandra *et al.*, 2018).
27. *Popillia nitida* Hope, 1831
Synonyms and Combinations: *Popillia trichiopyga* Lin, 1981
Distribution: Assam, Manipur, Meghalaya (Khasi Hills), Sikkim and West Bengal. (Arrow 1917; Kacker 1966; Chatterjee and Biswas 1995; Chatterjee and Biswas 2000b; Chatterjee 2004; Chandra *et al.*, 2018).
28. *Popillia nottrotti* Kraatz, 1892
Distribution: Arunachal Pradesh, Sikkim, Indian Himalaya and West Bengal. (Arrow 1917; Chatterjee and Biswas 1995; Chandra and Gupta 2012b; Chandra *et al.*, 2018).
29. *Popillia patkaina* Arrow, 1917
Distribution: Assam and Meghalaya (Patkhai hills) (Arrow 1917)
30. *Popillia patricia* Arrow, 1917
Synonyms and Combinations: *Popillia bothynoma* Ohaus, 1938
Distribution: Nagaland, Assam and Meghalaya (Khasi Hills and Jaintia Hills). (Arrow 1917; Chatterjee and Biswas 2000b; Gosh *et al.*, 2020).
31. *Popillia pilicollis* Kraatz, 1892
Distribution: Arunachal Pradesh, Assam, Sikkim, Indian Himalaya and West Bengal (Gopaldhara, Rungbong Valley, Kurseong, Mungphu), (Arrow 1917; Chatterjee and Biswas 1995; Chandra *et al.*, 2018).
32. *Popillia pilosa* Arrow, 1913
Distribution: Himachal Pradesh and Uttarakhand (Dehradun, Kumaon, Almora, Lansdowne, Garhwal, Ranikhet). (Arrow 1917; Chandra 2005; Chatterjee 2010; Chandra *et al.*, 2012ab; Pathania *et al.*, 2015).
33. *Popillia pulchripes* Arrow, 1913
Synonyms and Combinations: *Popillia complanata testaceipes* Ohaus, 1897
Distribution: Tamil Nadu (Madras, Nilgiris hills) (Arrow 1917; Chandra 2009).
34. *Popillia pulchra* Arrow, 1913
Distribution: Meghalaya (East Khasi Hills Dist.) (Chatterjee and Biswas 2000b).
35. *Popillia puncticollis* Kraatz, 1897
Distribution: Meghalaya (Jaintia Hills Dist.), Sikkim and Indian Himalaya (Arrow 1917; Chatterjee and Biswas 2000b; Chandra *et al.*, 2018).
36. *Popillia schizonycha* Arrow, 1913
Distribution: Karnataka (Bangalore) and Tamil Nadu (Madras, Nilgiris hills) (Arrow 1917; Chandra 2009).
37. *Popillia semicuprea* Kraatz, 1892
Synonyms and Combinations:
Popillia spediceipennis Lin, 1987
Popillia fallaciosasemicuprea Kraatz,
Distribution: Indian Himalaya and Sikkim (Chandra *et al.*, 2018)
38. *Popillia shillongensis* Sabatinelli, 1994
Distribution: Assam (Sabatinelli, 1994)
39. *Popillia sikkimensis* Lin, 1987
Synonyms and Combinations: *Popillia unicolor* Frey, 1975
Popillia virescens concolor Kraatz,
Distribution: Sikkim and Indian Himalaya (Chandra *et al.*, 2018)
40. *Popillia simlana* Arrow, 1913
Distribution: Himachal Pradesh and Punjab. (Arrow 1917; Chandra 2005; Chandra *et al.*, 2018).
41. *Popillia subquadrata* Kraatz, 1892
Distribution: Nagaland and Assam. (Arrow 1917; Gosh *et al.*, 2020).
42. *Popillia sulcata* Kollar & Redtenbacher, 1848
Synonyms and Combinations:
Popillia sulcata testaceipennis Kraatz, 1892
Popillia scutellaris Blanchard, 1850
Popillia sulcata cupripennis Kraatz, 1892
Distribution: Indian Himalaya, Jammu & Kashmir and Uttarakhand (Chatterjee 2010; Chandra *et al.*, 2012a; Chandra *et al.*, 2018).
43. *Popillia testaceipennis* Kraatz, 1892
Distribution: Meghalaya (East Khasi Hills, West Garo Hills) (Chatterjee and Biswas 2000).

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