

Article

Distribution and tritrophic associations of aphid parasitoids of the tribe Aphidiini (Aphidiinae: Braconidae: Hymenoptera) in India

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Abstract

The members of the tribes Aphidiini (Aphidiinae: Braconidae: Hymenoptera) are exclusively koinobiont aphid parasitoids and are widely distributed. Some of the species of parasitoids have been successfully used in the biological control of aphids worldwide. The Aphidiini comprises 70 species of parasitoids in India parasitizing 165 species of aphids in 24 states and 2 union territories. *Aphidius* is the highly speciose genus in India, comprising 35 species parasitizing 137 species of aphids feeding on 209 species of host plants (excluding unidentified ones) distributed in 20 states and 2 union territories, followed by *Pauesia* (19 species, 14 host plants, 7 states, and one union territory), and other genera comprise only 1-2 species. Among the parasitoids, *Aphidius matricariae* Haliday is highly polyphagous, parasitizing 47 species of aphids infesting 83 species of plants, followed by *Diaeretiella rapae* (McIntosh) (27 species of aphids feeding on 58 species of plants) and *Aphidius colemani* Viereck (22 species of aphids feeding on 42 species of plants). Twenty eight species of aphid parasitoids recorded in India are monophagous, and 63 species of the parasitoids parasitize less than 10 species of aphids. More than half of the parasitoid species were recorded in Jammu and Kashmir (36 species), followed by Meghalaya (31 species), West Bengal (26 species), Manipur (24 species), Sikkim (24 species), Uttarakhand (22 species), Himachal Pradesh (20 species), and less than 20 species in other states. The maximum tri-trophic associations (parasitoid–host aphid–host plant, triplet) were observed in Jammu and Kashmir (191 triplets), followed by Manipur (122 triplets), Uttar Pradesh (90 triplets), Meghalaya (81 triplets), Himachal Pradesh (80 triplets), Uttarakhand (78 triplets), Sikkim (64 triplets), and less than 50 triplets in other states.

Keywords aphids; Aphidiinae; Aphidiini; biodiversity; biological control; India; parasitoids.

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1 Introduction

Aphids (Hemiptera: Aphididae) are soft-bodied sap-sucking bugs feeding on almost all parts of the plants. More than 250 species of aphids are known to severely damage both agricultural and horticultural crops in

India (Singh and Singh, 2016). Small size, thelytokous parthenogenetic viviparity, complex life cycles with alternation of sexual and asexual generations, host plant alternation, polymorphism, and short and telescopic generations are the major traits that make aphids highly prolific in reproduction (Singh and Ghosh, 2002; Singh and Singh, 2022). They either devitalize the plants by directly sucking their nutrients or indirectly hamper their normal physiology by secreting a high amount of honeydew that blocks stomata and promotes the growth of black sooty moulds. They also transmit hundreds of viral diseases (Ghosh et al., 2017; Singh and Singh, 2021).

Three families of the order Hymenoptera are recognised to parasitize the aphids: Aphelinidae (only tribe Aphelinini), Encyrtidae, and Braconidae (only subfamily Aphidiinae) and contain their outbreaks. Among them, several species of parasitoids have been mass-cultured in laboratories and released into fields in many biocontrol programmes of aphids worldwide (Hågvar and Hofsvang, 1991; Singh and Singh, 2016; Das and Chakrabarti, 2023a, b). Because of this, their conservation values are advocated (Rakhshani and Starý, 2021; Das and Chakrabarti, 2023b). Presently, the worldwide trend in biological controls is the conservation strategies, based on existing natural enemies of that area (Zhang, 2025), which need information on the aphid-parasitoid species status of a particular area that makes the backbone of such a strategy (Pons et al., 2018).

The subfamily Aphidiinae Haliday, 1833, is a monophyletic group within Braconidae, and its members are exclusively koinobiont obligate endoparasitoids of aphids and are distributed worldwide (Starý, 1988). This subfamily includes about 505 species belonging to 38 genera around the world (Žikić et al., 2017). Several species of this subfamily are important agents for the biological control of aphid pests (Singh, 2001; Singh and Singh, 2016). Traditionally, the Aphidiinae includes four tribes: Aphidiini Haliday, 1833; Ephedrini Mackauer, 1961; Praini Mackauer, 1961; and Trioxini Ashmead, 1900. The tribe Aphidiini Haliday, 1833 includes five subtribes (Sanchis et al., 2000): Aphidiina Haliday, 1833 (includes *Aphidius* Nees, 1818; *Diaeretiella* Starý, 1960; *Diaeretellus* Starý, 1960; *Eoaphidius* Samanta and Raychaudhuri, 1990; *Indaphidius* Starý, 1979; *Kashmiria* Starý and Bhagat, 1978; *Lysaphidus* Smith, 1944); Archaphidina Mackauer, 1968 (includes *Archaphidus* Starý and Schlinger, 1967); Lysiphlebina Mackauer, 1961 (includes *Adialytus* Förster, 1862; *Lysiphlebia* Starý and Schlinger, 1967; *Lysiphlebus* Förster, 1862); Paralipsina Mackauer, 1961 (includes *Paralipsis* Förster, 1862); and Protaphidina Mackauer, 1961 (includes *Diaeretus* Förster, 1862; *Neopauesia* Paonam and Singh, 1988; *Pauesia* Quilis Pérez, 1931; *Protaphidius* Ashmead, 1900); *Pseudopauesia* Halme, 1986; *Xenostigmus* Smith, 1944). Starý and Ghosh (1983) have provided a key for the identification of most of the genera and species recorded in India.

The aphid parasitoids belonging to the tribe Aphidiini are cosmopolitan in distribution so that one species, *Diaeretiella rapae* (McIntosh), parasitizes about 100 species of the aphids infesting more than 180 plant species belonging to 43 plant families and is distributed in 87 countries throughout the world (Singh and Singh, 2015). Several species of Aphidiini, e.g. *Aphidius colemani* Viereck, *Aphidius ervi* Haliday, *Aphidius matricariae* Haliday, *Aphidius rhopalosiphii* de Stefani, *Aphidius smithi* (Sharma and Subba Rao), *Lysiphlebus testaceipes* (Cresson, 1880) are mass-reared in laboratories and were released in glasshouses as well as in fields to regulate several species of aphids infesting agricultural and horticultural crops, particularly in United States of America, Canada, several European countries, China, Japan, few African countries, Australia and New Zealand (Halfhill and Featherstone, 1973; Starý et al., 1988; Waterhouse, 1998; Levie et al., 2005; Yang et al., 2009; Boivin et al., 2012; Singh and Singh, 2016). However, very little attempt has been made to mass culture and release of aphidiine parasitoids in the field population in India (Singh and Rao, 1995; Singh, 2001; Joshi et al., 2010).

The conservation of natural enemies is important for ecosystems and sustainable pest management because they help to control pest populations and stabilise ecosystems. Therefore, in any particular area, for

conservation biological control of the aphid population, the resident population of their natural enemies (parasitoids/predators) must be conserved by applying cultural practices that need information on the resident aphid-parasitoid species status of that area that make the backbone of such a strategy (Hajek and Eilenberg, 2018). Also, the complexity of biogeographical factors decides the distribution pattern of the parasitoid species and directly influences their host associations (Hawkins, 1994). As a result, each species of parasitoid is also expected to have a specific territory from which it can be distributed and reach the preferable host aphids (Charles and Paine, 2016). In addition, the host plants critically impact the diversity of the feeding insects, especially on aphids and their parasitoids (Starý, 1981; Žikić et al., 2017). The conservation of aphid parasitoids is important for the natural control of aphids because they effectively suppress their populations (Powell, 1986; Vollhardt et al., 2008).

Several faunistic and biosystematical research studies on Aphidiinae have been conducted in India, although many parts are still unexplored (Starý and Ghosh, 1983; Singh et al., 1999; Akhtar et al., 2011a). Recently, Das and Chakrabarti (2023a) catalogued the Indian Aphidiinae without giving their tritrophic associations along with distribution. On this background, the parasitoids belonging to the tribe Aphidiini are catalogued and presented herein along with their aphid hosts, the host plants, and distribution in different states/union territories of India having highly diverse biogeography.

2 Materials and Methods

This study is based on the primary data of published literature on parasitoids, e.g., books, book chapters, journals, proceedings of conferences, review articles, and a few authentic theses (available on Shodhganga, <https://shodhganga.inflibnet.ac.in>) up to January 15, 2025. Where primary data are unavailable, secondary data were referred to. In most of the recent past literature, there are several errors in the scientific names of both parasitoids as well as their aphid host and food plants because of their modified status and other nomenclatural decisions and clarifications. The names of aphids, as well as plants that were miss-pelt in the original records, have been corrected where we logically ascertain the intended species. In the present study, attempts have been made to provide the valid scientific names of the parasitoids following the Global Biodiversity Information Facility (GBIF, 2025), aphids following Favret (2025), and the plants, following (WFO, 2025). Synonymy of only aphid parasitoids is given and for the synonymy of aphids and host plants, cited sources may be consulted.

3 Results and Discussion

The first mention of an aphid parasitoid in India was probably the description of *Aphidius colemani* by Viereck (1912) from Bengaluru, Karnataka, parasitizing *Aphis* sp. on tobacco. Thereafter, several species were described/recorded, particularly from north, northeast, and south India. For the first time, Agarwala et al. (1981a) catalogued 67 species and 12 undetermined species of Aphidiinae from India. It includes 27 species of parasitoids belonging to Aphidiini. Later, Starý and Ghosh (1983) listed 75 species of Aphidiinae in India and adjacent countries and provided aphid hosts, host plants, and distribution of individual taxa. This list includes 66 species of Aphidiinae recorded in India. After two decades, Dey and Akhtar (2007) listed 123 species of Aphidiinae under 23 genera, giving their distribution, parasitism, and host plants. Again, Akhtar et al. (2011a) catalogued 125 species of Aphidiinae under 22 genera, providing their hosts and distribution. This list includes 45 species of Aphidiini parasitoids under 10 genera with 3 undetermined species. Recently, Das and Chakrabarti (2023a) enlisted 157 species of Aphidiinae under 23 genera parasitizing 180 species of aphids feeding on 225 species of plants. In this study, 64 species of Aphidiini are mentioned along with their aphid hosts, host plants, and distribution without giving primary references.

In the present study, 69 identified species and 4 undetermined species under 13 genera comprise Indian Aphidiini fauna representing all four subtribes: Aphidiina, Archaphidina, Lysiphlebina, and Protaphidina. Data displayed in Table 1 that these species of Aphidiini parasitize 165 species of aphids feeding on 256 species of host plants in 24 states and 2 union territories of India. It is observed that about one-third of species (23 species under 4 genera) of the Aphidiini parasitoids known so far in India are endemic and mostly confined to either northeast or northwest India. More than half of the *Pauesia* Quilis Pérez species (12 species) are endemic. These species are marked with an asterisk (*). *Aphidius* Nees is the highly speciose genus in India, comprising 35 species parasitizing 137 species of aphids feeding on 209 species of host plants (excluding unidentified ones) distributed in 20 states and 2 union territories, followed by *Pauesia* Quilis Pérez (19 species, 14 host plants, 7 states, and one union territory), and other genera comprise only 1-2 species. Among the parasitoids, *Aphidius matricariae* Haliday is highly polyphagous, parasitizing 47 species of aphids infesting 83 species of plants, followed by *Diaeretiella rapae* (McIntosh) (27 species of aphids feeding on 58 species of plants) and *Aphidius colemani* Viereck (22 species of aphids feeding on 42 species of plants) (Table 1). These aphid parasitoids parasitize aphids infesting agricultural crops like cereals, pulses, vegetables, oil seeds, horticultural, and floricultural crops.

About 40% (28 species) of the aphid parasitoids recorded in India are monophagous, and 90% (63 species) parasitize less than 10 species of aphids. One of the species, *Pauesia antennata* (Mukerji, 1950), a unique parasitoid of the brown peach aphid, *Pterochloroides persicae* (Cholodkovsky, 1898) in Iran, Pakistan, Uzbekistan and Yemen (Rakhshani et al., 2005; Cross and Poswal, 2013), reported in northeast India (Agarwala et al., 1981b) on *Rhopalosiphum nymphaeae* (Linnaeus) seems misidentified.

Table 1 Number of tritrophic associations of Aphidiini parasitoids of aphids (parasitoids - aphid hosts - host plants, triplet) in different states and union territory of India.

Parasitoid species	Number of			
	Aphid host species	Host plant species	Triplets	States/union territory
1. <i>Adialytus ambiguus</i>	13	17	23	10
2. <i>Adialytus salicaphis</i>	1	2	2	2
3. <i>Aphidius aquilus</i>	1	1	1	1
4. <i>Aphidius areolatus</i>	2	2	3	1
5. <i>Aphidius asteris</i>	7	9	13	8
6. <i>Aphidius avenae</i>	15	18	25	8
7. <i>Aphidius bifurcatus</i>	1	6	6	2
8. <i>Aphidius cingulatus</i>	3	3	5	3
9. <i>Aphidius colemani</i>	22	42	56	17
10. <i>Aphidius eglanteriae</i>	9	7	12	5
11. <i>Aphidius ervi</i>	5	8	8	4
12. <i>Aphidius erysimi</i>	2	5	5	4
13. <i>Aphidius funebris</i>	1	1	1	1
14. <i>Aphidius gifuensis</i>	7	14	15	4

Parasitoid species	Number of			
	Aphid host species	Host plant species	Triplets	States/union territory
15. <i>Aphidius hieraciorum</i>	2	2	2	1
16. <i>Aphidius hortensis</i>	7	13	14	6
17. <i>Aphidius macrosiphoniella</i>	4	4	4	2
18. <i>Aphidius matricariae</i>	47	83	123	16
19. <i>Aphidius matsuyamensis</i>	1	1	1	1
20. <i>Aphidius platensis</i>	2	4	4	2
21. <i>Aphidius pleotrichophori</i>	2	2	2	3
22. <i>Aphidius polycostulari</i>	2	3	4	3
23. <i>Aphidius qadrii</i>	9	12	13	10
24. <i>Aphidius rhopalosiphi</i>	9	8	12	6
25. <i>Aphidius ribis</i>	1	2	2	2
26. <i>Aphidius rosae</i>	4	7	8	8
27. <i>Aphidius salicis</i>	7	8	10	3
28. <i>Aphidius schimitscheki</i>	2	2	2	2
29. <i>Aphidius setiger</i>	1	1	1	1
30. <i>Aphidius similis</i>	4	7	9	2
31. <i>Aphidius smithi</i>	5	12	13	9
32. <i>Aphidius sonchi</i>	1	3	3	5
33. <i>Aphidius staryi</i>	1	1	1	1
34. <i>Aphidius transcaspicus</i>	3	4	4	2
35. <i>Aphidius tuberculatus</i>	2	2	2	2
36. <i>Aphidius urticae</i>	9	12	12	6
37. <i>Aphidius uzbekistanicus</i>	19	23	38	3
38. <i>Aphidius</i> sp.	45	70	88	15
39. <i>Archaphidus greenideae</i>	6	7	9	1
40. <i>Diaeretellus palustris</i>	1	1	1	3
41. <i>Diaeretiella rapae</i>	27	58	88	8
42. <i>Diaeretus leucopterus</i>	1	2	2	1
43. <i>Eoaphidius longicaudatus</i>	1	1	1	4
44. <i>Indaphidius curvicaudatus</i>	5	3	6	3
45. <i>Kashmiria aphidis</i>	3	1	3	8
46. <i>Lysiphlebia japonica</i>	11	14	25	2
47. <i>Lysiphlebia rugosa</i>	2	2	2	1
48. <i>Lysiphlebia</i> sp.	2	2	2	3
49. <i>Lysiphlebus confusus</i>	6	7	7	2
50. <i>Lysiphlebus fabarum</i>	6	6	7	5

Parasitoid species	Number of			
	Aphid host species	Host plant species	Triplets	States/union territory
51. <i>Lysiphlebus testaceipes</i>	3	4	4	1
52. <i>Lysiphlebus</i> sp.	4	5	5	3
53. <i>Neopauesia manipurensis</i>	1	1	1	3
54. <i>Pauesia antennata</i>	1	1	1	6
55. <i>Pauesia arcuata</i>	4	4	4	1
56. <i>Pauesia bazarrii</i>	1	1	1	1
57. <i>Pauesia confusa</i>	1	1	1	1
58. <i>Pauesia gulmargensis</i>	1	1	2	1
59. <i>Pauesia hazratbalensis</i>	1	1	1	1
60. <i>Pauesia himalayensis</i>	1	1	1	1
61. <i>Pauesia hundungensis</i>	1	1	1	1
62. <i>Pauesia indica</i>	1	4	4	4
63. <i>Pauesia labanensis</i>	1	1	1	1
64. <i>Pauesia lachniella</i>	1	2	2	1
65. <i>Pauesia laricis</i>	1	1	1	2
66. <i>Pauesia mashobrica</i>	2	2	3	4
67. <i>Pauesia orientalis</i>	1	1	1	2
68. <i>Pauesia picta</i>	3	3	3	3
69. <i>Pauesia pini</i>	2	3	3	1
70. <i>Pauesia pseudosilana</i>	1	1	1	1
71. <i>Pauesia salignae</i>	3	3	4	4
72. <i>Pauesia unilachni</i>	1	1	1	1
73. <i>Pauesia</i> sp.	2	2	2	1
Total	165	256	735	26

Among the aphids, *Aphis gossypii* and *Myzus persicae* both serve as hosts for 15 species of parasitoids feeding on 44 host plants; however, the tritrophic association is much higher in the case of *Myzus persicae* (85 triplets) than *Aphis gossypii* (65 triplets) (Table 2). Other polyphagous aphid species are *Brachycaudus helichrysi* (host to 10 parasitoid species, feeding on 29 plant species), *Lipaphis eriysmi* (host to 7 parasitoid species, feeding on 20 plant species), *Brevicoryne brassicae* (host to 5 parasitoid species, feeding on 16 plant species), *Aphis craccivora* (host to 9 parasitoid species, feeding on 15 plant species), and *Aphis spiraecola* (host to 6 parasitoid species, feeding on 15 plant species). Almost half of the aphid species recorded as hosts are parasitized by single species of these parasitoids.

Table 2 Number of species of aphid hosts and host plants, tritrophic associations (number of triplets) of Aphidiini parasitoids of aphids, and its distribution in different number of states and union territories of India.

Aphid species		Number of			
		Parasitoid species	Host plant species	Triplets	States/UT
1.	<i>Acutosiphon obliquoris</i>	1	1	1	2
2.	<i>Acyrtosiphon rubi</i>	2	1	2	1
3.	<i>Acyrtosiphon pisum</i>	2	2	3	2
4.	<i>Acyrtosiphon pisum</i>	4	10	11	13
5.	<i>Acyrtosiphon</i> sp.	5	9	9	4
6.	<i>Amphorophora ampullata bengalensis</i>	2	2	2	2
7.	<i>Aphis affinis</i>	1	1	1	1
8.	<i>Aphis aurantii</i>	3	3	5	6
9.	<i>Aphis craccivora</i>	9	15	21	11
10.	<i>Aphis fabae</i>	3	5	6	5
11.	<i>Aphis farinosa</i>	1	2	2	2
12.	<i>Aphis gossypii</i>	15	44	65	18
13.	<i>Aphis intybi</i>	1	1	1	1
14.	<i>Aphis kurosawai</i>	1	1	1	1
15.	<i>Aphis longisetosa</i>	3	3	3	3
16.	<i>Aphis nasturtii</i>	1	2	2	2
17.	<i>Aphis nerii</i>	2	5	5	3
18.	<i>Aphis</i> nr. <i>salviae</i>	1	1	1	1
19.	<i>Aphis odinae</i>	2	3	3	2
20.	<i>Aphis pomi</i>	1	1	1	1
21.	<i>Aphis punicae</i>	2	2	2	2
22.	<i>Aphis solanella</i>	5	5	5	2
23.	<i>Aphis</i> sp.	8	14	14	5
24.	<i>Aphis spiraeicola</i>	6	15	17	7
25.	<i>Aphis verbasci</i>	1	1	1	1
26.	<i>Aphis</i> nr. <i>Salviae</i>	1	1	1	1
27.	<i>Aulacorthum solani</i>	2	2	2	2
28.	<i>Aulacorthum</i> sp.	1	1	1	1
29.	<i>Brachycaudus cardui</i>	1	1	1	1
30.	<i>Brachycaudus cardui</i>	2	2	2	1
31.	<i>Brachycaudus helichrysi</i>	10	29	29	9
32.	<i>Brachycaudus</i> sp.	2	2	2	2
33.	<i>Brevicoryne brassicae</i>	5	16	21	14
34.	<i>Capitophorus carduinus</i>	1	2	2	2
35.	<i>Capitophorus elaeagni</i>	2	2	2	1

	Aphid species	Number of			
		Parasitoid species	Host plant species	Triplets	States/UT
36.	<i>Capitophorus formosartemisiae</i>	2	1	2	2
37.	<i>Capitophorus hippophaes hippophaes</i>	1	1	1	1
38.	<i>Capitophorus mitegoni</i>	1	1	1	1
39.	<i>Capitophorus</i> sp.	1	4	4	3
40.	<i>Capitophorus tricholepidis</i>	1	1	1	1
41.	<i>Cavariella (Cavariella) aegopodii</i>	1	3	3	3
42.	<i>Cavariella (Cavariella) biswasi</i>	1	1	1	1
43.	<i>Cavariella (Cavariella) himachali</i>	1	1	1	1
44.	<i>Ceratovacuna lanigera</i>	1	1	1	1
45.	<i>Ceratovacuna silvestrii</i>	1	1	1	1
46.	<i>Chaetosiphon gracilicorne</i>	1	1	1	1
47.	<i>Chaetosiphon chaetosiphon</i>	2	2	2	1
48.	<i>Chaetosiphon glabrum</i>	2	2	2	1
49.	<i>Chaetosiphon</i> sp.	1	1	1	1
50.	<i>Chaetosiphon tetrarhodum</i>	3	4	5	1
51.	<i>Chaitophorus himalayensis</i>	1	1	1	1
52.	<i>Chaitophorus indicus</i>	1	1	1	1
53.	<i>Chaitophorus salijaponicus niger</i>	1	1	1	1
54.	<i>Chaitophorus</i> sp.	3	3	4	2
55.	<i>Cinara atrotibialis</i>	8	2	9	5
56.	<i>Cinara eastopi</i>	1	1	1	1
57.	<i>Cinara lachnirostris</i>	1	2	2	1
58.	<i>Cinara maculipes</i>	2	2	2	2
59.	<i>Cinara orientalis</i>	2	1	2	1
60.	<i>Cinara</i> sp.	2	3	3	1
61.	<i>Cinara tenuipes</i>	2	1	2	1
62.	<i>Cinara tujafilina</i>	1	1	1	1
63.	<i>Coloradoa rufomaculata</i>	2	1	2	2
64.	<i>Cryptomyzus taoi</i>	1	2	2	2
65.	<i>Dysaphis emicis</i>	1	1	1	1
66.	<i>Dysaphis pyri</i>	1	2	2	1
67.	<i>Dysaphis tulipae</i>	1	1	1	1
68.	<i>Ericolophium holsti</i>	1	1	1	1
69.	<i>Eulachnus thunbergii</i>	4	2	5	6
70.	<i>Eutrichosiphum dubium</i>	1	1	1	1
71.	<i>Eutrichosiphum pseudopasaniae</i>	1	1	1	1

Aphid species		Number of			
		Parasitoid species	Host plant species	Triplets	States/UT
72.	<i>Eutrichosiphum</i> sp.	1	1	1	1
73.	<i>Greenidea ficicola</i>	3	3	3	2
74.	<i>Greenidea psidii</i>	1	2	2	2
75.	<i>Greenidea</i> sp.	1	3	3	1
76.	<i>Hayhurstia atriplicis</i>	1	1	1	4
77.	<i>Holotrichosiphon dubium</i>	1	1	1	1
78.	<i>Hyadaphis coriandri</i>	2	1	2	2
79.	<i>Hyalopterus pruni</i>	4	7	9	8
80.	<i>Hyperomyzus carduellinus</i>	1	3	3	5
81.	<i>Hysteroneura setariae</i>	1	1	1	1
82.	<i>Impatientinum asiaticum dalhousiensis</i>	2	3	3	1
83.	<i>Impatientinum impatiens</i>	1	1	1	1
84.	<i>Indoidiopterus geranii</i>	1	1	1	1
85.	<i>Lachnus</i> sp.	2	2	2	1
86.	<i>Lachnus tropicalis</i>	1	1	1	1
87.	<i>Lachnus tropicalis</i>	4	8	9	6
88.	<i>Liosomaphis atra</i>	1	1	1	1
89.	<i>Liosomaphis himalayensis</i>	1	5	5	5
90.	<i>Lipaphis erysimi</i>	7	20	30	23
91.	<i>Lipaphis pseudobrassicae</i>	3	4	5	3
92.	<i>Macrosiphoniella kalimpongensis</i>	1	1	1	1
93.	<i>Macrosiphoniella kikungshana</i>	1	1	1	2
94.	<i>Macrosiphoniella pseudoartemisiae</i>	7	4	8	7
95.	<i>Macrosiphoniella sanborni</i>	4	4	6	7
96.	<i>Macrosiphoniella yomogifoliae</i>	3	3	4	4
97.	<i>Macrosiphum rosae</i>	5	6	11	9
98.	<i>Macrosiphum</i> sp.	4	6	7	1
99.	<i>Matsumuraja nuditerga</i>	2	1	2	1
100.	<i>Melanaphis bambusae</i>	1	1	1	1
101.	<i>Melanaphis donacis</i>	2	1	2	2
102.	<i>Melanaphis sacchari</i>	3	5	10	5
103.	<i>Melanaphis sacchari indosacchari</i>	1	1	1	1
104.	<i>Melanaphis sacchari sacchari</i>	2	1	2	2
105.	<i>Melanaphis</i> sp.	1	1	1	1
106.	<i>Metopolophium dirhodum</i>	1	2	2	2
107.	<i>Metopolophium graminum</i>	1	1	1	1

Aphid species		Number of			
		Parasitoid species	Host plant species	Triplets	States/UT
108.	<i>Microlophium carnosum</i>	2	1	2	1
109.	<i>Microlophium</i> sp.	1	1	1	1
110.	<i>Micromyzodium dasi</i>	1	1	1	1
111.	<i>Mollitrichosiphum montanum</i> (	1	1	1	1
112.	<i>Mollitrichosiphum nandii</i>	1	1	1	2
113.	<i>Mollitrichosiphum</i> sp.	1	2	2	2
114.	<i>Myzakkaia polygonicola</i>	1	1	1	2
115.	<i>Myzaphis rosarum</i>	5	3	5	1
116.	<i>Myzaphis turanica</i>	1	2	2	1
117.	<i>Myzocallis ulmifoliae</i>	1	1	1	1
118.	<i>Myzus cerasi</i>	2	3	3	3
119.	<i>Myzus cornutus</i>	1	1	1	1
120.	<i>Myzus dycei</i>	5	5	8	6
121.	<i>Myzus mumecola</i>	3	2	3	1
122.	<i>Myzus ornatus</i>	4	11	11	7
123.	<i>Myzus persicae</i>	15	44	85	21
124.	<i>Myzus persicae nicotianae</i>	2	1	2	2
125.	<i>Myzus siegesbeckicola</i>	1	1	1	1
126.	<i>Myzus sorbi</i>	2	1	2	2
127.	<i>Myzus</i> sp.	2	2	2	2
128.	<i>Myzus varians</i>	1	1	1	1
129.	<i>Neomyzus circumflexus</i>	2	2	2	1
130.	<i>Ovatus (Ovatus) crataegarius</i>	1	1	1	1
131.	<i>Periphyllus aesculi</i>	1	1	1	1
132.	<i>Periphyllus</i> sp.	1	1	1	1
133.	<i>Periphyllus vandenboschi</i>	1	1	1	1
134.	<i>Phorodon cannabis</i>	1	1	1	5
135.	<i>Phorodon</i> sp.	1	1	1	1
136.	<i>Prociphilus himalayaensis</i>	1	1	1	1
137.	<i>Prociphilus</i> sp.	1	1	1	2
138.	<i>Pseudomegoura magnoliae</i>	2	2	3	3
139.	<i>Pterocomma populeum</i>	1	1	1	1
140.	<i>Pterocomma</i> sp.	1	2	2	2
141.	<i>Pyrolachnus pyri</i>	2	3	3	3
142.	<i>Rhopalosiphum maidis</i>	7	9	22	8
143.	<i>Rhopalosiphum nymphaeae</i>	5	5	5	5

Aphid species		Number of			
		Parasitoid species	Host plant species	Triplets	States/UT
144.	<i>Rhopalosiphum padi</i>	2	2	2	2
145.	<i>Schizaphis graminum</i>	4	7	8	3
146.	<i>Schizaphis rotundiventris</i>	1	1	1	1
147.	<i>Schizaphis</i> sp.	3	2	2	2
148.	<i>Semiaphis heraclei</i>	1	1	1	1
149.	<i>Semiaphis</i> sp.	1	1	1	1
150.	<i>Shinjia orientalis</i>	3	4	4	3
151.	<i>Sinomegoura photiniae</i>	1	1	1	1
152.	<i>Sipha burakowskii</i>	1	1	1	1
153.	<i>Sipha maydis</i>	2	5	6	3
154.	<i>Sitobion alopecuri</i>	1	1	1	1
155.	<i>Sitobion avenae</i>	3	6	8	4
156.	<i>Sitobion himalayensis</i>	1	1	1	1
157.	<i>Sitobion indicum</i>	1	1	1	1
158.	<i>Sitobion miscanthi</i>	7	9	15	8
159.	<i>Sitobion rosaeiformis</i>	7	5	9	7
160.	<i>Sitobion</i> sp.	3	4	8	3
161.	<i>Sitobion takahashii</i>	1	1	1	1
162.	<i>Tricaudatus polygoni</i>	1	1	1	1
163.	<i>Tuberolachnus salignus</i>	1	1	1	1
164.	<i>Uroleucon achilleae</i>	1	1	1	1
165.	<i>Uroleucon sonchi</i>	2	2	2	2
166.	Unidentified aphid	12	14	18	5
Total		73	256	735	26

Regarding the distribution of Aphidiini parasitoids, more than 90% of species (64 out of 69 species) are recorded in northeast and northwest India. In each region, 45 species of the parasitoids are reported. This figure is much higher than in south India (only 11 species of parasitoids). This is probably due to the abundance of aphid species and their host plant species in the northeast (73 species of aphids feeding on 108 species of plants) and northwest (121 species of aphids feeding on 152 species of plants). It is observed that 26 species of parasitoids, 36 species of aphid hosts, and 47 species of host plants overlap in the northeast and northwest regions of India. In south India, only 20 aphid species feeding on 46 species of plants were reported to be parasitized by Aphidiini parasitoids.

In India, more than half of the parasitoid species were recorded in Jammu and Kashmir (36 species) followed by Meghalaya (31 species), West Bengal (26 species), Manipur (24 species), Sikkim (24 species), Uttarakhand (22 species), Himachal Pradesh (20 species) and less than 20 species in other states. The maximum tri-trophic associations (parasitoid–host aphid–host plant, triplet) were observed in Jammu and

Kashmir (191 triplets), followed by Manipur (126 triplets), Uttar Pradesh (89 triplets), Meghalaya (80 triplets), Himachal Pradesh (80 triplets), Uttarakhand (78 triplets), Sikkim (63 triplets), and less than 50 triplets in other states (Fig. 1).



Fig. 1 Map of India showing the number of tritrophic associations (triplets, parasitoids – aphids – plant species) belonging to the tribe Aphidiini (Aphidiinae: Braconidae: Hymenoptera) in different states/union territories of India. No parasitoid species was recorded in red shaded states/union territory of India.

3.1 *Adialytus ambiguus* (Haliday, 1834) [synonym *Adialytus arvicola* (Starý, 1961); *Aphidius ambiguus* Haliday, 1834; *Aphidius delhiensis* Subba Rao and Sharma 1960; *Lysiphlebus ambiguus* (Haliday, 1834); *Lysiphlebus delhiensis* (Subba Rao and Sharma 1960)]

- *Aphis (Aphis) verbasci* Schrank, 1801
 - *Verbascum thapsus* L. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841
 - *Camellia sinensis* (L.) Kuntze - Assam (Hazarika et al., 2001)
- *Chaetosiphon (Chaetosiphon) chaetosiphon* (Nevsky, 1928)
 - *Rosa webbiana* Wall. ex Royle - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Chaitophorus himalayensis* (Das, 1918)
 - *Salix alba* L. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Chaitophorus* sp.
 - *Salix* sp. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Macrosiphum* sp.

- *Rosa* sp. - Jammu and Kashmir (Bhagat and Ahmad, 1991)
 - *Melanaphis sacchari* (Zehntner, 1897)
 - *Cenchrus americanus* (L.) Morrone - Bihar (Singh et al., 1999; Chaudhary et al., 2003); Uttar Pradesh (Ahmad and Singh, 1993; Tiwari et al., 2024)
 - *Saccharum officinarum* L. - Assam (Ramaseshiah and Menon, 1971); Bihar (Chaudhary et al., 2003); Delhi (Subba Rao and Sharma, 1960); Uttar Pradesh (Tiwari et al., 2024)
 - *Sorghum bicolor* (L.) Moench - Bihar (Chaudhary et al., 2003); Uttar Pradesh (Singh et al., 1999)
 - *Zea mays* L. - Bihar (Chaudhary et al., 2003); Uttar Pradesh (Singh et al., 1999)
 - Unidentified grass - Uttarakhand (Das and Chakrabarti, 1989a)
 - *Melanaphis sacchari indosacchari* (David, 1956)
 - *Saccharum officinarum* L. - Uttar Pradesh (Varma et al., 1978)
 - *Melanaphis* sp.
 - Grass - Uttarakhand (Das and Chakrabarti, 1989a)
 - *Rhopalosiphum maidis* (Fitch, 1856)
 - *Cenchrus americanus* (L.) Morrone - Uttar Pradesh (Singh and Tripathi, 1987; Ahmad and Singh, 1993)
 - *Triticum aestivum* L. - Meghalaya (Samanta, 1986); Uttar Pradesh (Singh et al., 1999)
 - *Zea mays* L. - Manipur (Subhrani et al., 2010); Uttar Pradesh (Singh et al., 1999; Tiwari et al., 2024)
 - *Schizaphis (Schizaphis) graminum* (Rondani, 1852)
 - *Cenchrus americanus* (L.) Morrone - Uttar Pradesh (Singh et al., 1999)
 - *Zea mays* L. - Uttar Pradesh (Singh et al., 1999)
 - *Sipha (Rungsia) maydis* Passerini, 1860
 - *Cynodon dactylon* (L.) Pers. - Himachal Pradesh (Chakrabarti and Debnath, 2009); Jammu and Kashmir (Shuja-Uddin, 1978; Chakrabarti and Debnath, 2009); Uttarakhand (Chakrabarti and Debnath, 2009)
 - *Poa angustifolia* L. - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009)
 - *Poa flexuosa* Sm. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Zanthoxylum armatum* DC. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
 - *Sitobion (Sitobion) miscanthi* (Takahashi, 1921)
 - *Helianthus* sp. - Meghalaya (Samanta, 1986); West Bengal (Tamili, 1988)
- 3.2 *Adialytus salicaphis* (Fitch, 1855)
- *Chaitophorus* sp.
 - *Populus* sp. - Jammu and Kashmir (Khan and Shah, 2017)
 - *Salix caprea* L. - Jammu and Kashmir (Shuja-Uddin, 1978); Uttarakhand (Chakrabarti and Debnath, 2009)
- 3.3 *Aphidius aquilus* Mackauer, 1961
- *Aphis (Aphis) punicae* Passerini, 1863
 - *Urtica* sp. - Jammu and Kashmir (Saha, 1988)
- 3.4 *Aphidius areolatus* Ashmead, 1906
- *Periphyllus aesculi* Hille Ris Lambers, 1933
 - *Aesculus indica* (Wall. ex Cambess.) Hook. - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009)
 - *Periphyllus vandenboschi* Hille Ris Lambers, 1966

- *Acer caesium* Wall. Ex D. Brandis - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - Unidentified aphid
 - *Aesculus indica* (Wall. ex Cambess.) Hook. - Jammu and Kashmir (Bhagat, 1983)
- 3.5 *Aphidius asteris* Haliday, 1834 [synonym *Aphidius absinthii* Marshall, 1896; *Aphidius commodus* Gahan, 1926]
- *Aphis* (*Aphis*) *gossypii* Glover, 1877
 - *Ageratum conyzoides* L. - Manipur (Singh, 1987)
 - *Macrosiphoniella* (*Macrosiphoniella*) *kikungshana* Takahashi, 1937
 - *Artemisia* sp. - Himachal Pradesh (Chakrabarti and Debnath, 2009); Uttarakhand (Das and Chakrabarti, 1991)
 - *Macrosiphoniella* (*Macrosiphoniella*) *pseudoartemisiae* Shinji, 1933
 - *Artemisia vulgaris* L. - Manipur (Singh, 1987); Uttarakhand (Akhtar et al., 2011b); West Bengal (Raychaudhuri et al., 1982)
 - Unidentified plant - Karnataka (Dharmadhikari and Ramaseshiah, 1970)
 - *Macrosiphoniella* (*Macrosiphoniella*) *sanborni* (Gillette, 1908)
 - *Chrysanthemum* sp. - Uttarakhand (Raychaudhuri et al., 1982; Chakrabarti and Debnath, 2009)
 - *Tanacetum cinerariifolium* (Trevis.) Sch.Bip. - Jammu and Kashmir (Khan and Shah, 2017)
 - *Macrosiphoniella* (*Macrosiphoniella*) *yomogifoliae* (Shinji, 1922)
 - *Artemisia vulgaris* L. - Manipur (Singh and Singh, 1986a)
 - *Artemisia* sp. - Sikkim (Agarwala et al., 1980; Raychaudhuri et al., 1982); Uttarakhand (Chakrabarti et al., 2002; Akhtar et al., 2011b)
 - *Macrosiphoniella* sp.
 - *Artemisia* sp. - West Bengal (Raychaudhuri et al., 1982)
 - *Chrysanthemum* sp. - Himachal Pradesh (Chakrabarti and Debnath, 2009); Uttarakhand (Das and Chakrabarti, 1991); Jammu and Kashmir (Bhagat and Ahmad, 1991)
 - *Myzus* (*Nectarosiphon*) *persicae* (Sulzer, 1776)
 - *Brassica* sp. - Tamil Nadu (Nagalingam, 1988)
 - *Capsicum frutescens* L. - Tamil Nadu (Nagalingam, 1988)
 - *Solanum melongena* L. - Tamil Nadu (Nagalingam, 1988)
- 3.6 *Aphidius avenae* Haliday, 1834 [synonym *Aphidius picipes* (Nees, 1811)]
- *Acyrtosiphon* (*Acyrtosiphon*) *pisum* (Harris, 1776)
 - *Lablab purpureus* (L.) Sweet ssp. *purpureus* - Meghalaya (Samanta, 1986)
 - *Pisum sativum* L. - Meghalaya (Samanta, 1986); Nagaland (Pramanik, 1986)
 - *Acyrtosiphon* sp.
 - *Pisum* sp. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
 - *Aphis* (*Aphis*) *gossypii* Glover, 1877
 - *Capsicum frutescens* L. - Manipur (Subhrani et al., 2010)
 - *Coriandrum sativum* L. - Manipur (Subhrani et al., 2006)
 - *Solanum* sp. - Manipur (Singh, 1987)
 - *Ceratovacuna silvestrii* (Takahashi, 1927)
 - Unknown plant - Meghalaya (Samanta and Raychaudhuri, 1984a)
 - *Chaetosiphon* (*Chaetosiphon*) *chaetosiphon* (Nevsky, 1928)
 - *Rosa macrophylla* Lindl. - Jammu and Kashmir (Bhagat, 1987)

- *Chaetosiphon (Pentatrachopus) glabrum* David, Rajasingh and Narayanan, 1971
 - *Rosa* sp. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
- *Hyadaphis coriandri* (Das, 1918)
 - *Coriandrum sativum* - Manipur (Subhrani et al., 2006)
- *Macrosiphum (Macrosiphum) rosae* (Linnaeus, 1758)
 - *Rosa indica* L. - Jammu and Kashmir (Bhagat, 1982; Chakrabarti and Debnath, 2009)
 - *Rosa webbiana* Wall. ex Royle - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009)
 - *Rosa* sp. - Mizoram (Sarkar, 1991)
- *Macrosiphum* sp.
 - *Bromus inermis* Leyss. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Rosa macrophylla* Lindl. - Jammu and Kashmir (Bhagat, 1984)
- *Matsumuraja nuditerga* Hille Ris Lambers, 1965
 - *Boehmeria virgata* subsp. *macrophylla* (Hornem.) Friis and Wilmot-Dear - Manipur (Singh, 1987)
- *Myzaphis rosarum* (Kaltenbach, 1843)
 - *Rosa macrophylla* Lindl. - Jammu and Kashmir (Saha, 1988; Chakrabarti and Debnath, 2009)
- *Myzaphis turanica* Nevsky, 1929
 - *Rosa macrophylla* Lindl. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Rosa* sp. - Jammu and Kashmir (Bhagat, 1984; Saha, 1988)
- *Myzus (Nectarosiphon) persicae* (Sulzer, 1776)
 - *Brassica oleracea* L. - Mizoram (Sarkar, 1991)
 - *Carica papaya* L. - Manipur (Subhrani et al., 2010)
 - *Solanum melongena* L. - Manipur (Subhrani et al., 2010)
 - *Urtica dioica* L. - Manipur (Singh, 1987)
- *Sitobion (Sitobion) miscanthi* (Takahashi, 1921)
 - Unidentified Poaceae - Sikkim (Tamili, 1988)
- *Sitobion (Sitobion) rosaeiformis* (Das, 1918)
 - *Rosa* sp. - Meghalaya (Samanta, 1986); West Bengal (Tamili, 1988)
- *Tricaudatus polygoni* (Narzikulov, 1953)
 - *Persicaria chinensis* (L.) H. Gross - Manipur (Singh, 1987)

3.7 *Aphidius bifurcatus* Rakhshani and Tomanovic, 2012*

- Unidentified aphid
 - *Brassica rapa* L. - Jammu and Kashmir (Rakhshani et al., 2012)
 - *Centaurea cineraria* L. - Uttar Pradesh (Rakhshani et al., 2012)
 - *Salvia* sp. - Uttar Pradesh (Rakhshani et al., 2012)
 - *Trifolium alexandrinum* L. - Uttar Pradesh (Rakhshani et al., 2012)
 - *Zea mays* L. - Jammu and Kashmir (Rakhshani et al., 2012)
 - Unidentified grass - Jammu and Kashmir (Rakhshani et al., 2012)

3.8 *Aphidius cingulatus* Ruthe, 1859

- *Macrosiphoniella* sp.
 - *Populus ciliata* Wall. ex Royle - Uttarakhand (Sarkar, 2022)
 - *Salix tetrasperma* Roxb. - Uttarakhand (Sarkar, 2022)
- *Pterocomma populeum* (Kaltenbach, 1843)
 - *Populus tremuloides* Michx. - Jammu and Kashmir (Takada and Rishi, 1980; Saha, 1988)

- *Pterocomma* sp.

- *Populus ciliata* Wall. ex Royle - Himachal Pradesh (Chakrabarti and Debnath, 2009); Uttarakhand (Das and Chakrabarti, 1991)
- *Salix tetrasperma* Roxb. - Uttarakhand (Das and Chakrabarti, 1991)

3.9 *Aphidius colemani* Viereck, 1912

- *Aphis (Aphis) gossypii* Glover, 1877

- *Capsicum annuum* L. - Madhya Pradesh (Chintkuntlawar et al., 2015)
- *Chromolaena odorata* (L.) R.M.King and H.Rob. - Manipur (Singh and Singh, 1986b)
- *Hibiscus rosasinensis* L. - Manipur (Singh, 1987)
- *Ipomea* sp. - West Bengal (Tamili, 1988)
- *Lantana camara* L. - Karnataka (Radhakrishnan and Muraaleedharan, 1991); Kerala (Radhakrishnan and Muraaleedharan, 1991); Tamil Nadu (Radhakrishnan and Muraaleedharan, 1991)
- *Nicotiana* sp. - Karnataka (Krishnamurthi and Usman, 1954)
- *Polygonum* sp. - Meghalaya (Samanta, 1986)
- *Pyrus* sp. - Mizoram (Sarkar, 1991)
- *Solanum melongena* L. - Punjab (Shankar and Tripathi, 2021)
- *Vitis* sp. - Meghalaya (Starý and Ghosh, 1978; Raychaudhuri et al., 1982)

- *Aphis (Aphis) nerii* Boyer de Fonsc., 1841

- *Calotropis gigantea* (L.) W.T.Aiton - Jammu and Kashmir (Khan and Shah, 2017)
- *Calotropis procera* (Aiton) Dryand. - Uttarakhand (Bisht et al., 2001)
- *Calotropis* sp. - Jammu and Kashmir (Takada and Rishi, 1980; Saha, 1988)
- *Nerium indicum* Mill. - Jammu and Kashmir (Khan and Shah, 2017)

- *Aphis (Aphis) solanella* Theobald, 1914

- *Vitis* sp. - Meghalaya (Starý and Ghosh, 1983)

- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841

- *Camellia sinensis* (L.) Kuntze - Karnataka (Muraleedharan et al., 1988; Radhakrishnan and Muraaleedharan, 1992); Kerala (Muraleedharan et al., 1988; Radhakrishnan and Muraaleedharan, 1992); Tamil Nadu (Muraleedharan et al., 1988; Radhakrishnan and Muraaleedharan, 1992)

- *Aphis* sp.

- *Nicotiana* sp. - Karnataka (Viereck, 1912; Raychaudhuri et al., 1982)
- *Rumex* sp. - Uttarakhand (Das and Chakrabarti, 1990)

- *Brevicoryne brassicae* L.

- *Brassica oleracea* L. var. *capitata* - Manipur (Bijaya et al., 1996)

- *Chaitophorus* sp.

- *Salix caprea* L. - Jammu Kashmir (Das and Chakrabarti, 2023a)

- *Dysaphis (Dysaphis) emicis* (Mimeur, 1935)

- Unidentified plant - Himachal Pradesh (Das, 1983)

- *Dysaphis (Dysaphis) tulipae* (Boyer de Fonsc., 1841)

- Unidentified plant - Himachal Pradesh (Saha et al., 1982; Chakrabarti and Debnath, 2009)

- *Dysaphis (Pomaphis) pyri* (Boyer de Fonscolombe, 1841)

- *Malus domestica* (Suckow) Borkh. - Jammu and Kashmir (Khan and Shah, 2017)
- *Prunus persica* (L.) Stokes - Jammu and Kashmir (Khan and Shah, 2017)

- *Hyalopterus pruni* (Geoffroy, 1762)

- *Phragmites karka* (Retz.) Trin. ex Steud. - Manipur (Singh and Singh, 1986b)

- *Prunus cerasus* L. - Nagaland (Raychaudhuri et al., 1979; Raychaudhuri et al., 1982)
- *Prunus persica* (L.) Stokes - Manipur (Raychaudhuri et al., 1979; Subhrani et al., 2006); Uttarakhand (Das and Chakrabarti, 1990; Das and Chakrabarti, 1991)
- *Sorbaria tomentosa* (Lindl.) Rehder - Uttarakhand (Sarkar, 2022)
- *Lipaphis* (*Lipaphis*) *erysimi* (Kaltenbach, 1843)
 - *Brassica oleracea* L. var. *capitata* - Manipur (Singh and Singh, 1986b; Subhrani et al., 2006)
- *Macrosiphoniella* (*Macrosiphoniella*) *kalimpongensis* Basu and Raychaudhuri, 1976
 - *Poa* sp. - Meghalaya (Samanta, 1986)
- *Macrosiphoniella* (*Macrosiphoniella*) *pseudoartemisiae* Shinji, 1933
 - *Artemisia vulgaris* L. - Sikkim (Tamili, 1988)
- *Melanaphis donacis* (Passerini, 1862)
 - *Arundo donax* L. - Nagaland (Singh et al., 1991)
- *Myzus* (*Myzus*) *varians* Davidson, 1912
 - *Prunus domestica* L. - Manipur (Subhrani et al., 2006)
- *Myzus* (*Nectarosiphon*) *persicae* (Sulzer, 1776)
 - *Ageratum conyzoides* L. - Bihar (Ahmad and Singh, 1996a)
 - *Brassica juncea* (L.) Czern - Himachal Pradesh (Dey and Akhtar, 2007; Akhtar, 2009)
 - *Brassica nigra* (L.) W.D.J.Koch - Manipur (Singh, 1987)
 - *Brassica oleracea* L. var. *capitata* - Manipur (Bijaya et al., 2001a; Devi et al., 1999); Uttar Pradesh (Ahmad and Singh, 1993; Chaudhary and Singh, 2007)
 - *Brassica oleracea* L. var. *gongylodes* - Manipur (Bijaya et al., 2001a)
 - *Brassica rapa* L. - Manipur (Bijaya et al., 2001b); Uttar Pradesh (Tiwari et al., 2024)
 - *Calendula* sp. - Bihar (Kumar, 2013)
 - *Duranta erecta* L. - Manipur (Singh and Singh, 1986b)
 - *Lantana camara* L. - West Bengal (Tamili, 1988)
 - *Rumex* sp. - Bihar (Kumar, 2013)
 - *Solanum lycopersicum* L. - Uttar Pradesh (Rafi et al., 2010; Tiwari et al., 2024)
 - *Solanum melongena* L. - Manipur (Subhrani et al., 2010)
 - *Solanum nigrum* L. - Uttar Pradesh (Rafi et al., 2010)
 - *Solanum tuberosum* L. - Bihar (Kumar, 2013); Himachal Pradesh (Trivedi and Rajagopal, 1988); Jammu and Kashmir (Khan and Shah, 2017); Manipur (Singh and Singh, 1986b; Subhrani et al., 2006)
 - Unknown plant - Meghalaya (Starý and Ghosh, 1983)
- *Neomyzus circumflexus* (Buckton, 1876)
 - *Urtica dioica* L. - Sikkim (Tamili, 1988)
- *Rhopalosiphum maidis* (Fitch, 1856)
 - *Bidens pilosa* L. - Mizoram (Sarkar, 1991)
 - *Nymphaea alba* L. - Jammu and Kashmir (Khan and Shah, 2017)
 - *Zea mays* L. - Manipur (Subhrani et al., 2010)
 - Unidentified plant - Karnataka (Viswanathan, 1972; Raychaudhuri et al., 1982)
- *Rhopalosiphum nymphaeae* (Linnaeus, 1761)
 - Unidentified plant - India (Starý, 1972)
- *Schizaphis* (*Schizaphis*) *graminum* (Rondani, 1852)
 - *Poa* sp. - Arunachal Pradesh (Samanta, 1986)

- *Sitobion (Sitobion) rosaeiformis* (Das, 1918)
 - *Rosa* sp. - Mizoram (Sarkar, 1991)
- 3.10 *Aphidius eglanteriae* Haliday, 1834
- *Aphis (Aphis) odinae* (van der Goot, 1917)
 - Unknown plant - Meghalaya (Samanta and Raychaudhuri, 1984a)
 - *Aphis* sp.
 - *Veronica persica* Poir. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Capitophorus formosartemisiae* (Takahashi, 1921)
 - *Artemisia* sp. - Uttarakhand (Das and Chakrabarti, 1990)
 - *Chaetosiphon (Pentatrachopus) glabrum* David *et al.*, 1970
 - *Rosa webbiana* Wall. ex Royle - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Chaetosiphon (Pentatrachopus) tetrarhodum* (Walker, 1849)
 - *Rosa macrophylla* Lindl. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Rosa webbiana* Wall. ex Royle - Jammu and Kashmir (Bhagat, 1987)
 - *Macrosiphoniella (Macrosiphoniella) pseudoartemisiae* Shinji, 1933
 - *Artemisia vulgaris* L. - Uttarakhand (Das and Chakrabarti, 1990)
 - *Myzaphis rosarum* (Kaltenbach, 1843)
 - *Rosa webbiana* Wall. ex Royle - Jammu and Kashmir (Bhagat, 1984; Saha, 1988)
 - *Myzus (Myzus) ornatus* Laing, 1932
 - Unknown plant - Meghalaya (Samanta and Raychaudhuri, 1984a)
 - *Myzus (Myzus) sorbi* Bhattacharya and Chakrabarti, 1982
 - *Sorbaria tomentosa* (Lindl.) Rehder - Uttarakhand (Das and Chakrabarti, 1990; Das and Chakrabarti, 2018)
 - Unidentified aphid
 - *Rosa* sp. - Meghalaya (Samanta, 1986); Mizoram (Sarkar, 1991); West Bengal (Tamili, 1988)
- 3.11 *Aphidius ervi* Haliday, 1834
- *Acyrtosiphon pisum* L.
 - *Pisum sativum* L. - Nagaland (Pramanik, 1986)
 - *Acyrtosiphon* sp.
 - *Medicago polymorpha* L. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Urtica dioica* L. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Vicia sativa* L. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843)
 - *Prunus* sp. - Sikkim (Tamili, 1988)
 - *Chaetosiphon (Pentatrachopus) tetrarhodum* (Walker, 1849)
 - *Rosa canina* L. - Jammu and Kashmir (Saha, 1988; Chakrabarti and Debnath, 2009)
 - *Microlophium carnosum* (Buckton, 1876)
 - *Urtica dioica* L. - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009)
 - *Myzus (Nectarosiphon) persicae* (Sulzer, 1776)
 - *Beta vulgaris* L. - Sikkim (Tamili, 1988)
 - *Capsicum annuum* L. - Himachal Pradesh (Gavkare *et al.*, 2014; Kumar *et al.*, 2020)
- 3.12 *Aphidius erysimi* (Starý, 1960) [synonym *Lysaphidus erysimi* Starý, 1960]
- *Lipaphis (Lipaphis) erysimi* (Kaltenbach, 1843)

- *Brassica* sp. - Mizoram (Sarkar, 1991)
 - *Emilia sonchifolia* L. (DC.) - Sikkim (Tamili, 1988); West Bengal (Tamili, 1988)
 - *Lipaphis* (*Lipaphis*) *pseudobrassicae* (Davis, 1914)
 - *Brassica juncea* (L.) Czern - Jammu and Kashmir (Khan and Shah, 2017)
 - *Brassica oleracea* L. var. *botrytis* - Jammu and Kashmir (Khan and Shah, 2017)
 - *Brassica oleracea* L. var. *capitata* - Jammu and Kashmir (Khan and Shah, 2017)
- 3.13 *Aphidius funebris* Mackauer, 1961
- Unidentified aphid
 - *Trifolium alexandrinum* L. - Uttar Pradesh (Rakhshani et al., 2012)
- 3.14 *Aphidius gifuensis* Ashmead, 1906
- *Aphis* (*Aphis*) *affinis* del Guercio, 1911
 - *Mentha longifolia* (L.) L. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Aphis* (*Aphis*) *fabae* Scopoli, 1763
 - *Capsella bursapastoris* (L.) Medik - Jammu and Kashmir (Bhagat, 1983; Saha, 1988)
 - *Aphis* (*Aphis*) *gossypii* Glover, 1877
 - *Capsicum frutescence* L. - Manipur (Subhrani et al., 2006)
 - *Aphis* (*Aphis*) *spiraecola* Patch, 1914
 - *Duranta* sp. - Meghalaya (Samanta, 1986);
 - *Solanum nigrum* L. - Sikkim (Tamili, 1988)
 - *Aphis* sp.
 - *Beta vulgaris* L. - Sikkim (Tamili, 1988)
 - *Mentha longifolia* (L.) L. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Nepeta leucolaena* Benth. ex Hook.f. - Jammu and Kashmir (Bhagat, 1984)
 - *Nepeta racemosa racemosa* Lam. - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009)
 - *Veronica persica* Poir. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Vicia sativa* L. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Myzus* (*Nectarosiphon*) *persicae* (Sulzer, 1776)
 - *Brassica oleracea* L. - Manipur (Subhrani et al., 2010)
 - *Cardamine debilis* Banks ex DC. - Manipur (Singh, 1987)
 - *Gynura bicolor* DC. - Manipur (Singh, 1987)
 - *Shinjia orientalis* (Mordvilko, 1929)
 - Unidentified fern - Manipur (Singh, 1987)
- 3.15 *Aphidius hieraciorum* Starý, 1962
- *Brevicoryne brassicae* (Linnaeus, 1758)
 - Unknown plant - Meghalaya (Samanta and Raychaudhuri, 1984a)
 - *Sitobion* (*Sitobion*) *takahashii* (Eastop, 1959)
 - Unknown plant - Meghalaya (Samanta and Raychaudhuri, 1984a)
- 3.16 *Aphidius hortensis* Marshall, 1896
- *Aphis* (*Aphis*) *gossypii* Glover, 1877
 - *Gynura bicolor* DC. - Manipur (Singh, 1987)
 - *Brachycaudus* (*Brachycaudus*) *helichrysi* (Kaltenbach, 1843)
 - *Chromolaena odorata* (L.) R.M.King and H.Rob. - Manipur (Singh, 1987)

- *Gynura bicolor* DC. - Manipur (Singh, 1987)
- *Liosomaphis atra* Hille Ris Lambers, 1966
 - *Berberis* sp. - Jammu and Kashmir (Saha, 1988)
- *Liosomaphis himalayensis* Basu, 1964
 - *Berberis pseudoumbellata* R. Parker - Jammu and Kashmir (Takada and Rishi, 1980; Chakrabarti and Debnath, 2009)
 - *Brassica napus* L. - Meghalaya (Samanta, 1986)
 - *Fagopyrum* sp. - Sikkim (Tamili, 1988)
 - Unknown plant - Mizoram (Raychaudhuri, 1990); West Bengal (Das and Chakrabarti, 2023a)
- *Lipaphis (Lipaphis) erysimi* (Kaltenbach, 1843)
 - *Brassica juncea* (L.) Czern. - Manipur (Singh, 1987; Subhrani et al., 2006)
 - Unknown plant - Mizoram (Raychaudhuri, 1990); West Bengal (Raychaudhuri, 1990)
- *Myzus (Myzus) dycei* Carver, 1961
 - *Brassica oleracea* L. - Manipur (Singh, 1987)
- *Myzus (Nectarosiphon) persicae* (Sulzer, 1776)
 - *Brassica oleracea* L. var. *capitata* - Manipur (Subhrani et al., 2006)

3.17 *Aphidius macrosiphoniella* (Tamili and Raychaudhuri, 1984)* [synonym *Lysaphidus macrosiphoniella* Tamili and Raychaudhuri, 1984]

- *Eulachnus thunbergii* (Wilson, 1919)
 - *Pinus kesiya* Royle ex Gordon - Manipur (Singh, 1987)
- *Macrosiphoniella (Macrosiphoniella) pseudoartemisiae* Shinji, 1933
 - *Artemisia vulgaris* L. - Manipur (Singh, 1987)
- *Macrosiphoniella (Macrosiphoniella) yomogifoliae* (Shinji, 1924)
 - *Artemisia* sp. - West Bengal (Tamili and Raychaudhuri, 1984)
- *Myzus (Myzus) cerasi* (Fabricius, 1775)
 - *Artemisia* sp. - Manipur (Singh, 1987)

3.18 *Aphidius matricariae* Haliday, 1834

- *Aphis (Aphis) craccivora* Koch, 1854
 - *Lablab purpureus* (L.) Sweet ssp. *purpureus* - Nagaland (Singh et al., 1991)
 - *Solanum nigrum* L. - Jammu and Kashmir (Bhagat and Ahmad, 1991)
- *Aphis (Aphis) fabae* Scopoli, 1763
 - *Rubus ellipticus* Sm. - Sikkim (Tamili, 1988)
 - *Rumex nepalensis* Spreng. - Himachal Pradesh (Saha et al., 1982; Das, 1983); Jammu and Kashmir (Bhagat and Ahmad, 1991)
- *Aphis (Aphis) gossypii* Glover, 1877
 - *Abelmoschus esculentus* (L.) Moench - Sikkim (Agarwala et al., 1980; Raychaudhuri et al., 1982)
 - *Ageratum conyzoides* L. - Manipur (Singh and Singh, 1986b)
 - *Brassica oleracea* L. var. *botrytis* - Bihar (Prakash and Rani, 2015); Manipur (Devjani and Singh, 1998)
 - *Callicarpa macrophylla* Vahl - Manipur (Singh, 1987)
 - *Chromolaena odorata* (L.) R.M.King and H.Rob. - Meghalaya (Samanta, 1986)
 - *Gynura bicolor* DC. - Manipur (Singh and Singh, 1986b); Nagaland (Singh et al., 1991)
 - *Gynura* sp. - Manipur (Singh, 1987)
 - *Hibiscus rosasinensis* L. - Sikkim (Tamili, 1988)

- *Ocimum* sp. - Manipur (Singh, 1987)
- *Solanum melongena* L. - Manipur (Nonita et al., 2002; Subhrani et al., 2006)
- *Solanum tuberosum* L. - Manipur (Subhrani et al., 2010)
- *Aphis (Aphis) nasturtii* Kaltenbach, 1843
 - *Datura stramonium* L. - Himachal Pradesh (Chakrabarti and Debnath, 2009); Uttarakhand (Das and Chakrabarti, 1988; Das and Chakrabarti, 2018)
 - Unknown plant - Himachal Pradesh (Saha et al., 1982)
- *Aphis (Aphis) nerii* Boyer de Fonsc., 1841
 - Unidentified plant - Himachal Pradesh (Chakrabarti and Debnath, 2009)
- *Aphis (Aphis) odinae* (van der Goot, 1917)
 - *Duranta erecta* L. - Meghalaya (Samanta, 1986)
 - *Litsea monopetala* Pers. - West Bengal (Tamili, 1988)
- *Aphis (Aphis) solanella* Theobald, 1914
 - Unknown plant - Meghalaya (Starý and Ghosh, 1983)
- *Aphis (Aphis) spiraecola* Patch, 1914
 - *Ageratum conyzoides* L. - Manipur (Singh, 1987)
 - *Bidens pilosa* L. - Meghalaya (Agarwala, 1979); Sikkim (Agarwala et al., 1980; Raychaudhuri et al., 1982)
 - *Cucumis sativus* L. - Jammu and Kashmir (Khan and Shah, 2017)
 - *Gynura bicolor* DC. - Meghalaya (Agarwala, 1979); Sikkim (Agarwala et al., 1980; Raychaudhuri et al., 1982)
- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841
 - *Bougainvillea glabra* Choisy - Meghalaya (Samanta, 1986)
 - *Camellia sinensis* (L.) Kuntze - Assam (Hazarika et al., 2001)
 - *Citrus ×aurantium* L. - Mizoram (Sarkar, 1991)
- *Aphis (Toxoptera) citricidus* (Kirkaldy, 1907)
 - *Citrus* sp. - Mizoram (Sarkar, 1991)
- *Aphis* sp.
 - *Cynoglossum wallichii* G. Don - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
- *Aulacorthum (Aulacorthum) solani* (Kaltenbach, 1843)
 - *Brugmansia suaveolens* (Humb. and Bonpl. ex Willd.) Bercht. and Presl. - Karnataka (Chinnu et al., 2023)
- *Brachycaudus (Acaudus) cardui* (Linnaeus, 1758)
 - *Carduus edelbergii* Rech.f. - Jammu and Kashmir (Starý and Bhagat, 1978; Raychaudhuri et al., 1982)
- *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843)
 - *Brassica napus* L. - Mizoram (Sarkar, 1991)
 - *Chrysanthemum* sp. - Sikkim (Tamili, 1988)
 - *Gynura bicolor* DC. - Manipur (Singh, 1987)
 - *Gynura* sp. - Manipur (Singh, 1987)
 - *Helichrysum luteoalbum* (L.) Rchb. - Meghalaya (Samanta, 1986)
 - *Ageratum conyzoides* L. - Jammu and Kashmir (Bhagat and Ahmad, 1991); Nagaland (Singh et al., 1991); Sikkim (Agarwala et al., 1980; Raychaudhuri et al., 1982)

- *Brassica oleracea* L. var. *botrytis* - Jammu and Kashmir (Khan and Shah, 2017)
- *Brassica oleracea* L. var. *capitata* - Jammu and Kashmir (Khan and Shah, 2017)
- *Erigeron canadensis* L. - Jammu and Kashmir (Khan and Shah, 2017)
- *Kleinia grandiflora* (Wall. ex DC.) N.Rani - Jammu and Kashmir (Khan and Shah, 2017)
- *Lablab purpureus* (L.) Sweet ssp. *purpureus* - Uttarakhand (Das and Chakrabarti, 1988; Das and Chakrabarti, 2018)
- *Prunus amygdalus* Batsch - Uttarakhand (Das and Chakrabarti, 1990; Chakrabarti and Debnath, 2009)
- *Prunus persica* (L.) Batsch - Uttarakhand (Das and Chakrabarti, 1990; Sarkar, 2022)
- *Prunus* sp. - Meghalaya (Starý and Ghosh, 1975)
- *Brachycaudus (Prunaphis) cardui* (Linnaeus, 1758)
 - *Carduus edelbergii* Rech.f. - Jammu and Kashmir (Raychaudhuri et al., 1982)
- *Brachycaudus* sp.
 - *Carduus* sp. - Jammu and Kashmir (Starý and Bhagat, 1978; Raychaudhuri et al., 1982)
- *Brevicoryne brassicae* (Linnaeus, 1758)
 - *Brassica oleracea* L. var. *botrytis* - Bihar (Prakash and Rani, 2015); Jammu and Kashmir (Khan and Shah, 2017); Sikkim (Tamili, 1988)
 - *Brassica oleracea* L. var. *capitata* - Manipur (Bijaya et al., 1996; Devjani and Singh, 1998)
 - *Brassica* sp. - Meghalaya (Starý and Ghosh, 1975; Raychaudhuri et al., 1982)
 - *Descurainia* sp. - Jammu and Kashmir (Khan and Shah, 2017)
 - *Malus domestica* (Suckow) Borkh. - Jammu and Kashmir (Khan and Shah, 2017)
- *Capitophorus carduinus* (Walker, 1850)
 - *Cirsium wallichii* DC. - Uttarakhand (Das and Chakrabarti, 1988; Das and Chakrabarti, 1990)
 - Unidentified plant - Himachal Pradesh (Saha et al., 1982; Chakrabarti and Debnath, 2009)
- *Capitophorus elaeagni* (del Guercio, 1894)
 - *Carduus edelbergii* Rech.f. - Jammu and Kashmir (Bhagat, 1983; Saha, 1988)
- *Capitophorus formosartemisiae* (Takahashi, 1921)
 - *Artemisia* sp. - Himachal Pradesh (Saha et al., 1982)
- *Capitophorus hippophaes hippophaes* (Walker, 1852)
 - *Persicaria chinensis* (L.) H. Gross - Meghalaya (Starý and Ghosh, 1978)
- *Capitophorus mitegoni* Eastop, 1956
 - *Persicaria chinensis* (L.) H. Gross - Meghalaya (Raychaudhuri et al., 1982)
- *Chaitophorus indicus* Ghosh, Ghosh and Raychaudhuri, 1970
 - *Polygonum* sp. - Sikkim (Tamili, 1988)
- *Hyalopterus pruni* (Geoffroy, 1762)
 - *Prunus* sp. - West Bengal (Tamili, 1988)
 - *Rosa* sp. - Meghalaya (Samanta, 1986)
 - Unidentified plant - Mizoram (Sarkar, 1991)
- *Hysteroneura setariae* (Thomas, 1878)
 - *Saccharum officinarum* L. - West Bengal (Tamili, 1988)
- *Indoidiopterus geranii* (Chowdhuri, Basu, Chakrabarti and Raychaudhuri, 1969)
 - *Artemisia* sp. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
- *Lipaphis (Lipaphis) erysimi* (Kaltenbach, 1843)
 - *Brassica juncea* (L.) Czern. - Tripura (Datta, 2020)

- *Brassica napus* L. - Meghalaya (Starý and Ghosh, 1978; Raychaudhuri et al., 1982); Mizoram (Sarkar, 1991)
- *Brassica oleracea* L. var. *botrytis* - Bihar (Prakash and Rani, 2015)
- *Brassica oleracea* L. var. *capitata* - Manipur (Bijaya et al., 1996; Devjani and Singh, 1998)
- *Brassica rapa* L. - Uttarakhand (Bisht et al., 2001)
- *Solanum melongena* L. - West Bengal (Tamili, 1988)
- *Macrosiphoniella (Macrosiphoniella) pseudoartemisiae* Shinji, 1933
 - *Artemisia* sp. - Himachal Pradesh (Saha et al., 1982; Chakrabarti and Debnath, 2009)
- *Macrosiphum (Macrosiphum) rosae* (Linnaeus, 1758)
 - *Pyrus communis* L. - Meghalaya (Samanta, 1986)
 - *Rosa* sp. - Sikkim (Tamili, 1988)
- *Matsumuraja nuditerga* Hille Ris Lambers, 1965
 - *Boehmeria virgata* subsp. *macrophylla* (Hornem.) Friis and Wilmot-Dear - Manipur (Singh, 1987)
- *Melanaphis bambusae* (Fullaway, 1910)
 - *Bambusa* sp. - Meghalaya (Samanta, 1986)
- *Melanaphis donacis* (Passerini, 1862)
 - *Arundo donax* L. - Manipur (Singh, 1987)
- *Microlophium carnosum* (Buckton, 1876)
 - *Urtica dioica* L. - Jammu and Kashmir (Bhagat, 1984; Saha, 1988)
- *Microlophium* sp.
 - *Urtica dioica* L. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Myzocallis (Myzocallis) ulmifoliae* Shinji, 1954
 - *Rubia cordifolia* L. - Jammu and Kashmir (Bhagat and Ahmad, 1991)
- *Myzus (Myzus) cerasi* (Fabricius, 1775)
 - *Phlox drummondii* Hook. - Jammu and Kashmir (Bhagat and Ahmad, 1991)
 - *Rubia cordifolia* L. - India (Das and Chakrabarti, 2023a)
- *Myzus (Myzus) dycei* Carver, 1961
 - *Persicaria capitata* (Buch.-Ham. ex D. Don) H. Gross - Sikkim (Tamili, 1988)
 - *Urtica dioica* L. - Uttarakhand (Das and Chakrabarti, 1988; Das and Chakrabarti, 1990)
 - *Urtica* sp. - Himachal Pradesh (Saha et al., 1982; Chakrabarti and Debnath, 2009); Jammu and Kashmir (Chakrabarti and Debnath, 2009); Meghalaya (Samanta, 1986)
 - Unidentified plant - Meghalaya (Starý and Ghosh, 1975; Raychaudhuri et al., 1982)
- *Myzus (Myzus) ornatus* (Laing, 1932)
 - *Bidens pilosa* L. - Arunachal Pradesh (Samanta, 1986)
 - *Chromolaena odorata* (L.) R.M.King and H.Rob. - Sikkim (Tamili, 1988)
 - *Duranta erecta* L. - Manipur (Singh, 1987)
 - *Gynura bicolor* DC. - Manipur (Singh, 1987)
 - *Sonchus* sp. - Himachal Pradesh (Saha et al., 1982)
- *Myzus (Myzus) siegesbeckicola* Strand, 1929
 - *Urtica dioica* L. - Uttarakhand (Das and Chakrabarti, 1988; Das and Chakrabarti, 1990)
- *Myzus (Nectarosiphon) persicae* (Sulzer, 1776)
 - *Boehmeria* sp. - Manipur (Singh, 1987)
 - *Bougainvillea spectabilis* Willd. - Manipur (Singh, 1987)
 - *Brassica napus* L. - Sikkim (Agarwala et al., 1980; Raychaudhuri et al., 1982)

- *Brassica oleracea* L. var. *botrytis* - Bihar (Prakash and Rani, 2015); Manipur (Bijaya et al., 2001a)
 - *Brassica oleracea* L. var. *capitata* - Manipur (Devjani and Singh, 1998; Subhrani et al., 2006)
 - *Brassica oleracea* L. var. *gongylodes* - Manipur (Devjani and Singh, 1998; Subhrani et al., 2006)
 - *Brassica rapa* L. - Manipur (Bijaya et al., 2001a, b)
 - *Capsicum annuum* L. - Himachal Pradesh (Gavkare et al., 2014)
 - *Cardamine debilis* Banks ex DC. - Manipur (Singh, 1987)
 - *Carica papaya* L. - Manipur (Subhrani et al., 2010)
 - *Descurainia sophia* (L.) Webb ex Prantl - Jammu and Kashmir (Takada and Rishi, 1980)
 - *Gynura* sp. - Manipur (Singh, 1987)
 - *Hibiscus rosasinensis* L. - Delhi (Dey and Akhtar, 2007; Akhtar, 2009); Manipur (Singh, 1987)
 - *Lablab purpureus* (L.) Sweet ssp. *purpureus* - Uttarakhand (Das and Chakrabarti, 1988; Das and Chakrabarti, 1990)
 - *Momordica charantia* L. - Bihar (Ahmad and Singh, 1997)
 - *Pisum sativum* L. - Manipur (Subhrani et al., 2010)
 - *Raphanus sativus* L. - Uttar Pradesh (Tiwari et al., 2024)
 - *Solanum lycopersicum* L. - Bihar (Ahmad and Singh, 1996a); Uttar Pradesh (Ahmad and Singh, 1993; Chaudhary and Singh, 2007)
 - *Solanum melongena* L. - Manipur (Nonita et al., 2002; Subhrani et al., 2010)
 - *Solanum* sp. - Nagaland (Singh et al., 1991)
 - *Solanum tuberosum* L. - Manipur (Subhrani et al., 2006)
 - *Sonchus* sp. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
 - *Triticum aestivum* L. - Uttar Pradesh (Ahmad and Singh, 1995a; Singh et al., 1999)
 - Unidentified plant - Meghalaya (Starý and Ghosh, 1975)
 - *Myzus* sp.
 - Unidentified Rubiaceae - Meghalaya (Starý and Ghosh, 1978)
 - *Phorodon (Diphorodon) cannabis* Passerini, 1860
 - *Cannabis sativa* L. - Himachal Pradesh (Das, 1983; Chakrabarti and Debnath, 2009); Jammu and Kashmir (Starý and Bhagat, 1978; Raychaudhuri et al., 1982; Khan and Shah, 2017); Manipur (Singh and Singh, 1986b); Uttarakhand (Das and Chakrabarti, 1988; Das and Chakrabarti, 1990); West Bengal (Raychaudhuri et al., 1982)
 - *Phorodon (Diphorodon)* sp.
 - *Cannabis sativa* L. - Jammu and Kashmir (Raychaudhuri et al., 1982; Starý and Bhagat, 1978)
 - *Pseudomegoura magnoliae* (Essig and Kuwana, 1918)
 - *Cucurbita* sp. - Meghalaya (Samanta, 1986)
 - *Magnolia* sp. - West Bengal (Tamili, 1988)
 - *Shinjia orientalis* (Mordvilko, 1929)
 - *Pteridium* sp. - Meghalaya (Starý and Ghosh, 1979)
 - *Sipha (Rungsia) burakowskii* (Holman and Szelegiewicz, 1974)
 - Grass - Himachal Pradesh (Saha et al., 1982)
- 3.19 *Aphidius matsuyamensis* (Takada, 1966) [synonym *Lysaphidus matsuyamensis* Takada, 1966]
- *Sinomegoura photiniae* (Takahashi, 1936)
 - *Photinia* sp. - Meghalaya (Samanta, 1986)
- 3.20 *Aphidius platensis* Brethes, 1913
- *Aphis (Aphis) gossypii* Glover, 1877

- *Cucurbita pepo* L. - Karnataka (Lokeshwari et al., 2015)
 - *Gossypium hirsutum* L. - Karnataka (Lokeshwari et al., 2015)
 - *Myzus (Nectarosiphon) persicae* (Sulzer, 1776)
 - *Capsicum frutescens* L. - Tamil Nadu (Rajagopal and Kareem, 1979)
 - *Solanum melongena* L. - Tamil Nadu (Easwaramoorthy et al., 1976)
- 3.21 *Aphidius pleotrichophori* (Takada, 1966) [synonym *Lysaphidus pleotrichophori* Takada, 1966]
- *Acutosiphon obliquoris* Basu, Ghosh and Raychaudhuri, 1970
 - *Poa* sp. - Meghalaya (Samanta, 1986; Das and Chakrabarti, 2023a); West Bengal (Tamili, 1988)
 - *Myzus (Nectarosiphon) persicae* (Sulzer, 1776)
 - *Persicaria chinensis* (L.) H. Gross - Manipur (Singh, 1987)
- 3.22 *Aphidius polycostulari* Das and Chakrabarti, 1991*
- *Schizaphis* sp.
 - *Bothriochloa* sp. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
 - *Sitobion (Sitobion) miscanthi* (Takahashi, 1921)
 - *Triticum aestivum* L. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
 - *Sitobion* sp.
 - *Cenchrus flaccidus* (Griseb.) Morrone - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Rosa* sp. - Uttarakhand (Das and Chakrabarti, 1991)
- 3.23 *Aphidius qadrii* (Shuja-Uddin, 1977)* [synonym *Lysaphidus qadrii* Shuja-Uddin, 1976]
- *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843)
 - *Anaphalis* sp. - Himachal Pradesh (Chakrabarti and Debnath, 2009); Uttarakhand (Das and Chakrabarti, 1991)
 - *Brachycaudus* sp.
 - *Gnaphalium* sp. - Uttarakhand (Das and Chakrabarti, 1991)
 - *Capitophorus* sp.
 - *Anaphalis cinnamomea* - Uttarakhand (Das and Chakrabarti, 1991)
 - *Anaphalis margaritacea* (L.) Benth. and Hook.f. - Uttarakhand (Das and Chakrabarti, 1991)
 - *Coloradoa rufomaculata* (Wilson, 1908)
 - *Chrysanthemum* sp. - Meghalaya (Samanta, 1986)
 - *Macrosiphoniella (Macrosiphoniella) sanborni* (Gillette, 1908)
 - *Chrysanthemum* sp. - Mizoram (Sarkar, 1991); Sikkim (Tamili, 1988); West Bengal (Tamili, 1988)
 - *Macrosiphoniella (Macrosiphoniella) yomogifoliae* (Shinji, 1922)
 - *Chromolaena odorata* (L.) R.M.King and H.Rob. - Manipur (Singh, 1987)
 - *Myzus (Myzus) ornatus* (Laing, 1932)
 - *Capsicum* sp. - Arunachal Pradesh (Samanta, 1986)
 - *Thysanolaena latifolia* (Roxb. ex Hornem.) Honda - Nagaland (Singh et al., 1991)
 - Unidentified plant - Himachal Pradesh (Das and Raychaudhuri, 1983; Starý and Ghosh, 1983); Uttarakhand (Das and Chakrabarti, 1991)
 - *Myzus (Nectarosiphon) persicae* (Sulzer, 1776)
 - *Carica papaya* L. - Uttar Pradesh (Rafi et al., 2010)
 - *Solanum lycopersicum* L. - Uttar Pradesh (Rafi et al., 2010)
 - Unidentified aphid
 - *Artocarpus heterophyllus* Lam. - Uttar Pradesh (Shuja-Uddin, 1976)

3.24 *Aphidius rhopalosiphi* de Stefani - Perez, 1902 [synonym *Aphidius equiseticola* Starý, 1963]

- *Impatientinum (Impatientinum) asiaticum dalhousiensis* Verma, 1969
- *Impatiens* sp. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Impatientinum (Impatientinum) impatiens* (Shinji, 1922)
- *Impatiens* sp. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Macrosiphoniella (Macrosiphoniella) pseudoartemisiae* Shinji, 1933
- *Artemisia* sp. - Meghalaya (Samanta, 1986)
- *Myzus (Myzus) mumecola* (Matsumura, 1917)
- *Prunus amygdalus* Batsch - Manipur (Subhrani et al., 2006)
- *Schizaphis* sp.
- *Bothriochloa* sp. - Uttarakhand (Chakrabarti et al., 2002; Sarkar, 2022)
- Grass - Uttarakhand (Chakrabarti and Debnath, 2009)
- *Sitobion (Sitobion) avenae* (Fabricius, 1775)
- *Cenchrus flaccidus* (Griseb.) Morrone - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Sorghum halepense* (L.) Pers. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Sitobion (Sitobion) himalayensis* (Ghosh, 1986)
- Grass - Himachal Pradesh (Chakrabarti and Debnath, 2009)
- *Sitobion (Sitobion) miscanthi* (Takahashi, 1921)
- *Bothriochloa* sp. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
- *Triticum aestivum* L. - Himachal Pradesh (Chakrabarti and Debnath, 2009); Uttarakhand (Das and Chakrabarti, 2018); West Bengal (Sarkar and Chakrabarti, 2004)
- *Sitobion (Sitobion) rosaeiformis* (Das, 1918)
- Grass - Uttarakhand (Chakrabarti and Debnath, 2009)

3.25 *Aphidius ribis* Haliday, 1834

- *Cryptomyzus (Cryptomyzus) taoi* Hille Ris Lambers, 1963
- *Artemisia* sp. - Nagaland (Raha, 1979; Das and Chakrabarti, 2023a)
- Unidentified plant - Meghalaya (Das and Chakrabarti, 2023a)

3.26 *Aphidius rosae* Haliday, 1833

- *Macrosiphum (Macrosiphum) rosae* (Linnaeus, 1758)
- *Rosa canina* L. - Sikkim (Agarwala, 1979)
- *Rosa indica* L. - Jammu and Kashmir (Khan and Shah, 2017)
- *Rosa* sp. - Himachal Pradesh (Chakrabarti and Debnath, 2009); Sikkim (Raychaudhuri et al., 1979); Uttar Pradesh (Raychaudhuri et al., 1979); Uttarakhand (Das and Chakrabarti, 2018); West Bengal (Agarwala and Raychaudhuri, 1981)
- *Macrosiphum* sp.
- *Rosa macrophylla* Lindl. - Jammu and Kashmir (Bhagat, 1987)
- *Myzaphis rosarum* (Kaltenbach, 1843)
- *Rosa webbiana* Wall. ex Royle - Jammu and Kashmir (Khan and Shah, 2017)
- *Sitobion (Sitobion) rosaeiformis* (Das, 1918)
- *Rosa ×centifolia* L. - Manipur (Singh and Singh, 1986b)
- *Rosa ×damascena* Mill. - Jammu and Kashmir (Khan and Shah, 2017)
- *Rosa* sp. - Manipur (Singh, 1987); Uttarakhand (Raychaudhuri et al., 1982; Akhtar et al., 2011b); West Bengal (Agarwala and Raychaudhuri, 1981)

3.27 *Aphidius salicis* Haliday, 1834

- *Aphis* sp.
 - *Dioscorea deltoidea* Wall. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Senecio chrysanthemoides* Schrank, 1789 - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Capitophorus elaeagni* (del Guercio, 1894)
 - *Carduus* sp. - Jammu and Kashmir (Saha, 1988; Chakrabarti and Debnath, 2009)
- *Cavariella (Cavariella) aegopodii* (Scopoli, 1763)
 - *Ferula jaeskeana* C.B.Clarke - Jammu and Kashmir (Saha, 1988)
 - *Salix* sp. - Sikkim (Tamili, 1988)
 - Unknown plant - Nagaland (Raychaudhuri, 1990)
- *Cavariella (Cavariella) biswasi* Ghosh, Basu and Raychaudhuri., 1969
 - *Ferula jaeskeana* C.B.Clarke - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Cavariella (Cavariella) himachali* Ghosh, 1986
 - *Ferula jaeskeana* C.B.Clarke - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Semiaphis heraclei* (Takahashi, 1921)
 - *Daucus carota* L. - Jammu and Kashmir (Bhagat, 1986)
- *Semiaphis* sp.
 - Unidentified plant - Jammu and Kashmir (Chakrabarti and Debnath, 2009)

3.28 *Aphidius schimitscheki* (Starý, 1960) [synonym *Lysaphidus schimitscheki* Starý, 1960]

- *Aphis (Aphis) craccivora* Koch, 1854
 - *Lablab purpureus* (L.) Sweet ssp. *purpureus* - West Bengal (Tamili, 1988)
- *Aphis (Aphis) gossypii* Glover, 1877
 - Unidentified plant - Sikkim (Das and Chakrabarti, 2023a)

3.29 *Aphidius setiger* (Mackauer, 1961)

- Unknown aphid
 - Unidentified plant - Jammu and Kashmir (Rishi and Bhagat, 1980; Chakrabarti and Debnath, 2009)

3.30 *Aphidius similis* Starý and Carver, 1980

- *Aphis (Aphis) gossypii* Glover, 1877
 - *Abelmoschus esculentus* (L.) Moench - Sikkim (Agarwala et al., 1980)
- *Aphis (Aphis) spiraecola* Patch, 1914
 - *Ageratum conyzoides* L. - Manipur (Singh, 1987)
 - *Bidens pilosa* L. - Sikkim (Agarwala et al., 1980; Raychaudhuri et al., 1982)
- *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843)
 - *Ageratum conyzoides* L. - Sikkim (Agarwala et al., 1980)
 - *Gynura bicolor* DC. - Sikkim (Agarwala, 1979; Raychaudhuri et al., 1982)
- *Myzus (Nectarosiphon) persicae* (Sulzer, 1776)
 - *Brassica napus* L. - Sikkim (Agarwala et al., 1980)
 - *Gynura bicolor* DC. - Sikkim (Raychaudhuri et al., 1982)
 - *Solanum lycopersicum* L. - Manipur (Subhrani et al., 2006)
 - *Solanum tuberosum* L. - Sikkim (Agarwala et al., 1980)

3.31 *Aphidius smithi* Sharma and Subba Rao, 1959*

- *Acyrtosiphon (Acyrtosiphon) pisum* (Harris, 1776)
 - *Lathyrus aphaca* L. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)

- *Lathyrus odoratus* L. - Haryana (Sharma and Subba Rao, 1959); Himachal Pradesh (Starý and Ghosh, 1983; Chakrabarti and Debnath, 2009); Jammu and Kashmir (Starý and Ghosh, 1983); Punjab (Sharma and Subba Rao, 1959; Raychaudhuri et al., 1982); Uttar Pradesh (Rao et al., 1969; Ahmad and Singh, 1995a)
 - *Medicago sativa* L. - Uttar Pradesh (Singh et al., 1999)
 - *Phaseolus* sp. - Jammu and Kashmir (Khan and Shah, 2017)
 - *Pisum sativum* L. - Delhi (Sharma and Subba Rao, 1959); Jammu and Kashmir (Khan and Shah, 2017); Karnataka (Rao et al., 1969); Punjab (Raychaudhuri et al., 1982); Uttar Pradesh (Ahmad and Singh, 1995a; Ahmad and Singh, 2007); Uttarakhand (Raychaudhuri et al., 1982); West Bengal (Raychaudhuri et al., 1982)
 - *Vicia faba* L. - Sikkim (Tamili, 1988); Uttar Pradesh (Ahmad and Singh, 1995a; Tiwari et al., 2024)
 - *Vicia lens* (L.) Coss. and Germ. - Uttar Pradesh (Ahmad and Singh, 1995a)
 - *Acyrtosiphon* sp.
 - *Centaurea cineraria* L. - Uttar Pradesh (Rakhshani et al., 2012)
 - *Medicago sativa* L. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Ranunculus muricatus* L. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Amphorophora* (*Amphorophora*) *ampullata bengalensis* Hille Ris Lamb. and Basu, 1966
 - Unidentified fern - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Myzackaia polygonicola* Basu, 1969
 - *Rubus ellipticus* Sm. - Meghalaya (Samanta, 1986); Sikkim (Tamili, 1988)
 - Unknown aphid
 - *Sinapis arvensis* L. - Uttar Pradesh (Rakhshani et al., 2012)
- 3.32 *Aphidius sonchi* Marshall, 1896
- *Hyperomyzus* (*Hyperomyzus*) *carduellinus* (Theobald, 1915)
 - *Ageratum conyzoides* L. - Arunachal Pradesh (Samanta, 1986)
 - *Sonchus oleraceus* L. - Jammu and Kashmir (Saha, 1988); Nagaland (Pramanik, 1986); West Bengal (Tamili, 1988)
 - *Sonchus* sp. - Mizoram (Sarkar, 1991)
- 3.33 *Aphidius staryi* Das and Chakrabarti, 1990*
- *Myzus* (*Myzus*) *cornutus* Medda and Chakrabarti, 1986
 - *Prunus cornuta* (Wall. ex Royle) Steud. - Uttarakhand (Das and Chakrabarti, 1990; Sarkar, 2022)
- 3.34 *Aphidius transcaspicus* Telenga, 1958
- *Aphis* sp.
 - *Prunus domestica* L. - Jammu and Kashmir (Bhagat and Ahmad, 1991)
 - *Rhopalosiphum maidis* (Fitch, 1856)
 - *Coffea arabica* L. - Karnataka (Kashiviswanathan, 1972)
 - *Zea mays* L. - Karnataka (Kashiviswanathan, 1972)
 - Unknown aphid
 - Unidentified grass - Jammu and Kashmir (Rakhshani et al., 2012)
- 3.35 *Aphidius tuberculatus* Samanta and Raychaudhuri, 1990*
- *Periphyllus* sp.
 - *Rhododendron* sp. - Meghalaya (Samanta, 1986)

- *Coloradoa rufomaculata* (Wilson, 1908)
 - *Chrysanthemum* sp. - West Bengal (Raychaudhuri, 1990)
- 3.36 *Aphidius urticae* Haliday, 1834 [synonym *Aphidius aulacorthi* Starý, 1963]
- *Acyrtosiphon* (*Acyrtosiphon*) *pisum* (Harris, 1776)
 - *Pisum sativum* L. - Mizoram (Pramanik, 1986; Sarkar, 1991); Nagaland (Pramanik, 1986)
 - *Solanum* sp. - Meghalaya (Samanta, 1986)
 - *Acyrtosiphon* sp.
 - *Euphorbia pilosa* L. - Uttarakhand (Chakrabarti and Debnath, 2009; Sarkar, 2022)
 - *Amphorophora* (*Amphorophora*) *ampullata bengalensis* Hille Ris Lamb. and Basu, 1966
 - Unidentified fern - Manipur (Pramanik, 1986; Singh and Singh, 1986a)
 - *Aphis* (*Aphis*) *gossypii* Glover, 1877
 - *Gynura bicolor* DC. - Manipur (Singh, 1987)
 - *Rhus* sp. - Manipur (Singh, 1987)
 - *Ericolophium holsti* (Takahashi, 1935)
 - *Rhododendron* sp. - West Bengal (Agarwala et al., 1981a)
 - *Myzus* (*Myzus*) *dycei* Carver, 1961
 - *Urtica dioica* L. - Manipur (Singh, 1987)
 - *Myzus* (*Nectarosiphon*) *persicae* (Sulzer, 1776)
 - *Solanum melongena* L. - Manipur (Subhrani et al., 2010)
 - *Urtica dioica* L. - Manipur (Singh and Singh, 1986a)
 - *Sitobion* (*Sitobion*) *miscanthi* (Takahashi, 1921)
 - *Erigeron* sp. - Meghalaya (Samanta, 1986); West Bengal (Tamili, 1988)
 - *Triticum aestivum* L. - Manipur (Subhrani et al., 2010)
 - Unidentified aphid
 - *Pteridium aquilinum* subsp. *aquilinum* L. - West Bengal (Starý and Ghosh, 1983)
- 3.37 *Aphidius uzbekistanicus* Luzhetzki, 1960
- *Aphis* (*Aphis*) *gossypii* Glover, 1877
 - *Bougainvillea spectabilis* Willd. - Manipur (Singh, 1987)
 - *Citrus* sp. - Sikkim (Tamili, 1988)
 - *Duranta erecta* L. - Manipur (Singh, 1987)
 - *Aphis* (*Aphis*) *longisetosa* Basu, 1970
 - *Rubus ellipticus* Sm. - Sikkim (Tamili, 1988)
 - *Impatiens* (*Impatiens*) *asiaticum dalhousiensis* Verma, 1969
 - *Cenchrus flaccidus* (Griseb.) Morrone - Jammu and Kashmir (Bhagat, 1983)
 - *Impatiens* sp. - Jammu and Kashmir (Bhagat, 1983; Saha, 1988)
 - *Myzus* (*Myzus*) *mumecola* (Matsumura, 1917)
 - *Prunus amygdalus* Batsch - Manipur (Singh and Singh, 1986a; Singh, 1987)
 - *Myzus* (*Nectarosiphon*) *persicae* (Sulzer, 1776)
 - *Solanum melongena* L. - Nagaland (Singh et al., 1991)
 - *Pseudomegoura magnoliae* (Essig and Kuwana, 1918)
 - *Magnolia* sp. - Sikkim (Tamili, 1988)
 - *Rhopalosiphum maidis* (Fitch, 1856)
 - *Cenchrus americanus* (L.) Morrone - Uttar Pradesh (Ahmad and Singh, 1994; Tiwari et al., 2024)
 - *Hordeum vulgare* L. - Sikkim (Agarwala et al., 1980; Raychaudhuri et al., 1982); Uttar Pradesh

- (Ahmad and Singh, 1993; Tiwari et al., 2024)
- *Saccharum officinarum* L. - Uttar Pradesh (Tiwari et al., 2024)
 - *Sorghum bicolor* (L.) Moench - Uttar Pradesh (Tiwari et al., 2024)
 - *Triticum aestivum* L. - Uttar Pradesh (Tiwari et al., 2024)
 - *Zea mays* L. - Uttar Pradesh (Ahmad and Singh, 1994)
 - *Rhopalosiphum nymphaeae* (Linnaeus, 1761)
 - Unidentified plant - West Bengal ? (Das and Chakrabarti, 2023a)
 - *Rhopalosiphum padi* (Linnaeus, 1758)
 - *Canna* sp. - Mizoram (Sarkar, 1991)
 - *Schizaphis* sp.
 - Grass - Uttarakhand (Das and Chakrabarti, 1989a)
 - *Shinjia orientalis* (Mordvilko, 1929)
 - *Triticum aestivum* L. - West Bengal ? (Das and Chakrabarti, 2023a)
 - Unidentified fern - Manipur (Singh and Singh, 1986a; Singh, 1987)
 - *Sitobion (Sitobion) alopecuri* (Takahashi, 1921)
 - Unidentified grass - Himachal Pradesh (Saha et al., 1982)
 - *Sitobion (Sitobion) avenae* (Fabricius, 1775)
 - *Cenchrus flaccidus* (Griseb.) Morrone - Jammu and Kashmir (Bhagat, 1983)
 - *Hordeum vulgare* L. - Uttar Pradesh (Singh and Tripathi, 1988a)
 - *Sorghum halepense* (L.) Pers. - Jammu and Kashmir (Bhagat, 1983)
 - *Triticum aestivum* L. - Uttar Pradesh (Singh and Tripathi, 1987; Singh and Tripathi, 1988a)
 - *Sitobion (Sitobion) indicum* Basu, 1964
 - Unidentified grass - Himachal Pradesh (Saha et al., 1982; Das, 1983)
 - *Sitobion (Sitobion) miscanthi* (Takahashi, 1921)
 - *Avena sativa* L. - Uttarakhand (Akhtar et al., 2011b)
 - *Bothriochloa* sp. - Uttarakhand (Das and Chakrabarti, 1989a)
 - *Cenchrus flaccidus* (Griseb.) Morrone - Uttar Pradesh (Akhtar et al., 2011b)
 - *Hordeum vulgare* L. - Bihar (Ahmad and Singh, 1996a); Uttar Pradesh (Ahmad and Singh, 1995b)
 - *Triticum aestivum* L. - Bihar (Ahmad and Singh, 1996a); Sikkim (Agarwala et al., 1980); Uttar Pradesh (Ahmad and Singh, 1993; Srivastava et al., 2009); Uttarakhand (Das and Chakrabarti, 1989a; Chakraborty and Chakrabarty, 1994)
 - Unidentified grass - Himachal Pradesh (Saha et al., 1982)
 - *Sitobion (Sitobion) rosaeiformis* (Das, 1918)
 - *Rosa ×damascena* Mill. - Jammu and Kashmir (Khan and Shah, 2017)
 - *Sitobion* sp.
 - *Cenchrus flaccidus* (Griseb.) Morrone - Jammu and Kashmir (Starý and Ghosh, 1978; Raychaudhuri et al., 1982); Uttarakhand (Das and Chakrabarti, 1989a)
 - *Triticum aestivum* L. - Uttar Pradesh (Shuja-Uddin, 1975a)
 - Unidentified aphid
 - Unidentified grass - Meghalaya (Samanta, 1986)

3.38 *Aphidius* sp.

- *Acyrtosiphon (Acyrtosiphon) pisum* (Harris, 1776)
 - *Pisum sativum* L. - Karnataka (Rao et al., 1969)
- *Aphis (Aphis) craccivora* Koch, 1854

- *Cestrum nocturnum* L. - Uttarakhand (Chakrabarti and Debnath, 2009)
- *Lablab purpureus* (L.) Sweet ssp. *purpureus* - Karnataka (Dharmadhikari and Ramaseshiah 1970)
- *Moringa oleifera* Lam. - Kerala (Thamilvel, 2009)
- *Psophocarpus tetragonolobus* (L.) DC. - Kerala (Thamilvel, 2009)
- *Vigna unguiculata* (L.) Walp. - Kerala (Thamilvel, 2009)
- *Aphis (Aphis) farinosa* Gmelin, 1790
 - *Salix aegyptiaca* L. - Jammu and Kashmir (Bhagat, 1983; Bhagat, 1984); Uttarakhand (Chakrabarti and Debnath, 2009)
 - *Salix alba* L. - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009)
- *Aphis (Aphis) gossypii* Glover, 1877
 - *Dactyloctenium aegyptium* (L.) Willd. - Kerala (Thamilvel, 2009)
 - *Abelmoschus esculentus* (L.) Moench - Karnataka (Raja Rau, 1954); Kerala (Thamilvel, 2009)
 - *Ageratum conyzoides* L. - Sikkim (Agarwala, 1979)
 - *Artemisia vulgaris* L. - Sikkim (Starý and Ghosh, 1983)
 - *Boehmeria virgata* subsp. *macrophylla* (Hornem.) Friis and Wilmot-Dear - Manipur (Singh, 1987)
 - *Calotropis gigantea* (L.) W.T.Aiton - Kerala (Thamilvel, 2009)
 - *Capsicum annuum* L. - Kerala (Thamilvel, 2009)
 - *Catharanthus roseus* (L.) G.Don - Kerala (Thamilvel, 2009)
 - *Cestrum nocturnum* L. - Uttarakhand (Chakrabarti and Debnath, 2009)
 - *Chloris barbata* Sw. - Kerala (Thamilvel, 2009)
 - *Cucumis sativus* L. - Kerala (Thamilvel, 2009)
 - *Hibiscus rosasinensis* L. - India (Ghosh and Agarwala, 1982)
 - *Lantana camara* L. - India (Ghosh and Agarwala, 1982)
 - *Leucoscepttrum canum* Sm. - Karnataka (Rao, 1969)
 - *Malvaviscus arboreus* Dill. ex Cav. - Karnataka (Rao, 1969)
 - *Momordica charantia* L. - Kerala (Thamilvel, 2009)
 - *Psidium guajava* L. - Uttarakhand (Bisht et al., 2001)
 - *Ruellia tuberosa* L. - Kerala (Thamilvel, 2009)
 - *Solanum betaceum* Cav. - West Bengal (Raychaudhuri, 1973)
 - *Solanum melongena* L. - Kerala (Thamilvel, 2009)
 - *Solanum melongena* L. - Maharashtra (Raja Rau, 1954)
 - *Solanum nigrum* L. - Kerala (Thamilvel, 2009)
- *Aphis (Aphis) longisetosa* Basu, 1970
 - Unknown plant - Meghalaya (Starý and Ghosh, 1983)
- *Aphis (Aphis) nerii* Boyer de Fonscolombe, 1841
 - *Calotropis gigantea* (L.) W.T.Aiton - Kerala (Thamilvel, 2009)
- *Aphis (Aphis) pomi* De Geer, 1773
 - *Malus domestica* (Suckow) Borkh. - Jammu and Kashmir (Khan and Shah, 2018)
- *Aphis (Aphis) punicae* Passerini, 1863
 - *Punica granatum* L. - Karnataka (Mani and Krishnamoorthy, 1995)
- *Aphis (Aphis) solanella* Theobald, 1914
 - Unknown plant - Meghalaya (Starý and Ghosh, 1983)
- *Aphis (Aphis) spiraeicola* Patch, 1914
 - *Eupatorium riparium* Sch.Bip. ex Schnittsp. - Karnataka (Rao, 1969)

- *Bidens bipinnata* L. - Karnataka (Rao, 1969)
- *Bidens biternata* (Lour.) Merr. and Sherff - Karnataka (Rao, 1969)
- *Chromolaena odorata* (L.) R.M.King and H.Rob. - India (Ghosh and Agarwala, 1982)
- *Chrysanthemum indicum* L. - Bihar (Ahmad et al., 2020)
- Unidentified plant - Meghalaya (Starý and Ghosh, 1975)
- *Aulacorthum (Aulacorthum) solani* (Kaltenbach, 1843)
 - *Abelmoschus esculentus* (L.) Moench - Jammu and Kashmir (Khan and Shah, 2017)
- *Aulacorthum* sp.
 - Unknown plant - Meghalaya (Starý and Ghosh, 1983)
- *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843)
 - *Rosa webbiana* Wall. ex Royle - Sikkim (Raychaudhuri et al., 1979);
 - Unidentified plant - Nagaland (Raychaudhuri et al., 1979)
- *Brevicoryne brassicae* (Linnaeus, 1758)
 - *Brassica oleracea* L. var. *botrytis* - Himachal Pradesh (Kotwal et al., 1984; Thakur et al., 1989); Sikkim (Joshi and Sangma, 2015)
 - *Brassica oleracea* L. var. *capitata* - Chhattisgarh (Singh, 2014)
- *Capitophorus* sp.
 - *Artemisia vulgaris* L. - (Ghosh and Agarwala, 1982)
 - *Carduus* sp. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
- *Capitophorus tricholepidis* Chakrabarti, 1976
 - *Carduus* sp. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Chaetosiphon (Chaetosiphon) gracilicorne* David et al., 1970
 - *Rosa webbiana* Wall. ex Royle - Jammu and Kashmir (Takada and Rishi, 1980; Chakrabarti and Debnath, 2009)
- *Chaetosiphon (Pentatrachopus) tetrarhodum* (Walker, 1849)
 - *Rosa canina* L. - Jammu and Kashmir (Bhagat, 1987)
 - *Rosa* sp. - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009)
- *Chaetosiphon* sp.
 - *Rosa* sp. - Jammu and Kashmir (Bhagat, 1983; Bhagat, 1987)
- *Hyadaphis coriandri* (Das, 1918)
 - *Coriandrum sativum* L. - Rajasthan (Kant et al., 2019)
- *Hyalopterus pruni* (Geoffroy, 1762)
 - *Prunus cerasus* L. - Nagaland (Raychaudhuri et al., 1979); Sikkim (Raychaudhuri et al., 1979)
- *Hysteroneura setariae* (Thomas, 1878)
 - *Chloris barbata* Sw. - Kerala (Thamilvel, 2009)
 - *Dactyloctenium aegyptium* (L.) Willd. - Kerala (Thamilvel, 2009)
- *Lachnus tropicalis* (van der Goot, 1916)
 - *Pinus wallichiana* A.B. Jacks. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Prunus cerasus* L. - Sikkim (Raychaudhuri et al., 1979)
 - Unidentified plant - Nagaland (Raychaudhuri et al., 1979)
- *Lipaphis (Lipaphis) erysimi* (Kaltenbach, 1843)
 - *Eruca vesicaria* (L.) Cav. - Punjab (Bakhetia and Sharma, 1979)
 - *Brassica oleracea* L. var. *capitata* - Chhattisgarh (Singh, 2014)

- *Lipaphis* (*Lipaphis*) *pseudobrassicae* (Davis, 1914)
 - *Brassica oleracea* L. var. *capitata* - Karnataka (Chinnu et al., 2023)
- *Macrosiphoniella* (*Macrosiphoniella*) *sanborni* (Gillette, 1908)
 - *Chrysanthemum indicum* L. - Karnataka (Chinnu et al., 2023)
- *Macrosiphoniella* (*Macrosiphoniella*) *sanborni* (Gillette, 1908)
 - *Chrysanthemum* sp. - Uttarakhand (Chakrabarti and Debnath, 2009)
 - *Chrysanthemum* sp. - Jammu and Kashmir (Bhagat and Ahmad, 1991)
- *Macrosiphum* (*Macrosiphum*) *rosae* (Linnaeus, 1758)
 - *Rosa* sp. - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009); Karnataka (Chinnu et al., 2023)
 - Unknown plant - Sikkim (Starý and Ghosh, 1983)
- *Macrosiphum* sp.
 - *Rosa brunonii* Lindl. - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009)
 - *Rosa indica* L. - Jammu and Kashmir (Bhagat, 1987)
 - *Triticum* sp. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Myzaphis rosarum* (Kaltenbach, 1843)
 - *Rosa webbiana* Wall. ex Royle - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009)
- *Myzus* (*Myzus*) *dycei* Carver, 1961
 - *Urtica dioica* L. - Manipur (Singh, 1987)
- *Myzus* (*Myzus*) *ornatus* Laing, 1932
 - *Duranta* sp. - (Starý and Ghosh, 1983)
- *Myzus* (*Myzus*) *sorbi* Bhattacharya and Chakrabarti, 1982
 - *Sorbaria tomentosa* (Lindl.) Rehder - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Myzus* (*Nectarosiphon*) *persicae* (Sulzer, 1776)
 - *Brassica juncea* (L.) Czern - Karnataka (Chinnu et al., 2023)
 - *Capsicum annuum* L. - Karnataka (Mani and Krishnamoorthy, 1994)
 - *Eruca vesicaria* (L.) Cav. - Punjab (Bakhetia and Sharma, 1979)
 - *Solanum betaceum* Cav. - West Bengal (Starý and Ghosh, 1983)
 - *Solanum nigrum* L. - Kerala (Thamilvel, 2009)
 - *Solanum tuberosum* L. - Himachal Pradesh (Thakur and Chandla, 2013)
- *Myzus* (*Nectarosiphon*) *persicae nicotianae* Blackman, 1987
 - *Nicotiana tabacum* L. - Andhra Pradesh (Rao et al., 1984; Rao et al., 2007)
- *Neomyzus circumflexus* (Buckton, 1876)
 - Unidentified plant - Sikkim (Agarwala, 1979; Starý and Ghosh, 1983)
- *Ovatus* (*Ovatus*) *crataegarius* (Walker, 1850)
 - *Mentha longifolia* (L.) L. - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009)
- *Rhopalosiphum maidis* (Fitch, 1856)
 - *Hordeum vulgare* L. - (Raychaudhuri et al., 1982)
 - *Zea mays* L. - Rajasthan (Singh et al., 2023)
- *Rhopalosiphum nymphaeae* (Linnaeus, 1761)
 - *Nymphaea alba* L. - Jammu and Kashmir (Bhagat, 1984)
 - on snow - Himachal Pradesh (Chakrabarti and Debnath, 2009)
- *Schizaphis* (*Schizaphis*) *rotundiventris* (Signoret, 1860)

- *Pyrus communis* L. - Meghalaya (Starý and Ghosh, 1978)
 - *Sitobion (Sitobion) rosaeiformis* (Das, 1918)
 - *Rosa* sp. - Himachal Pradesh (Starý and Ghosh, 1983); Meghalaya (Starý and Ghosh, 1975; Agarwala, 1979); Uttarakhand (Chakrabarti and Debnath, 2009)
 - *Sitobion* sp.
 - *Avena sativa* L. - Jammu and Kashmir (Raychaudhuri et al., 1982)
 - *Cenchrus flaccidus* (Griseb.) Morrone - Jammu and Kashmir (Raychaudhuri et al., 1982)
 - *Triticum aestivum* L. - Jammu and Kashmir (Raychaudhuri et al., 1982)
 - *Uroleucon (Uroleucon) achilleae* (Koch, 1855)
 - *Lactuca* spp. - India (Ghosh and Agarwala, 1982)
 - *Uroleucon (Uroleucon) sonchi* (Linnaeus, 1767)
 - *Sonchus* sp. - Jammu and Kashmir (Bhagat, 1983; Chakrabarti and Debnath, 2009)
 - Unidentified aphid
 - *Mentha longifolia* (L.) L. - Jammu and Kashmir (Bhat, 2008)
 - *Rumex nepalensis* Spreng. - Jammu and Kashmir (Bhat, 2008)
- 3.39 *Archaphidus greenideae* Starý and Schlinger, 1967
- *Eutrichosiphum dubium* (van der Goot, 1917)
 - *Lithocarpus dealbatus* (Hook.f. and Thomson ex Miq.) Rehder - Manipur (Singh and Singh, 1986c)
 - *Eutrichosiphum pseudopasaniae* Szelegiewicz, 1968
 - *Lithocarpus dealbatus* (Hook.f. and Thomson ex Miq.) Rehder - Manipur (Singh and Singh, 1986c)
 - *Eutrichosiphum* sp.
 - *Quercus* sp. - Uttarakhand (Chakrabarti and Debnath, 2009)
 - *Greenidea (Greenidea) ficicola* Takahashi, 1921
 - *Psidium guajava* L. - Uttar Pradesh (Ahmad and Singh, 1995a, c)
 - *Greenidea (Trichosiphum) psidii* van der Goot, 1917
 - *Eugenia* sp. - Manipur (Singh, 1987)
 - *Psidium guajava* L. - Uttar Pradesh (Singh et al., 1999)
 - *Greenidea* sp.
 - *Justicia adhatoda* L. - Manipur (Singh, 1987)
 - *Calophyllum inophyllum* L. - Manipur (Singh and Singh, 1986c)
 - *Viburnum* sp. - Manipur (Singh and Singh, 1986c)
 - *Holotrichosiphon dubium* (van der Goot, 1917)
 - *Lithocarpus dealbatus* (Hook.f. and Thomson ex Miq.) Rehder - Manipur (Singh and Singh, 1986c)
- 3.40 *Diaeretellus palustris* Starý, 1971
- *Rhopalosiphum nymphaeae* (Linnaeus, 1761)
 - *Vallisneria* sp. - Meghalaya (Samanta, 1986)
- 3.41 *Diaeretiella rapae* (McIntosh, 1855)
- *Aphis (Aphis) craccivora* Koch, 1854
 - *Cajanus cajan* (L.) Millsp. - Gujarat (Kavad and Korat, 2013a)
 - *Lablab purpureus* (L.) Sweet ssp. *purpureus* - Uttar Pradesh (Halder et al., 2014)
 - *Solanum* sp. - West Bengal (Tamili, 1988)

- *Solanum tuberosum* L. - Jammu and Kashmir (Bhagat and Ahmad, 1991)
- *Vigna unguiculata* (L.) Walp. - Chhattisgarh (Gauraha, 2021; Gauraha and Ganguli, 2021)
- Unidentified plant - Punjab (Atwal et al., 1969)
- *Aphis (Aphis) fabae* Scopoli, 1763
 - *Cestrum fasciculatum* (Schltdl.) Miers - Karnataka (Rao et al., 1969)
 - *Hibiscus rosasinensis* L. - Meghalaya (Samanta, 1986)
 - *Rubus ellipticus* Sm. - Sikkim (Tamili, 1988)
- *Aphis (Aphis) gossypii* Glover, 1877
 - *Ageratum conyzoides* L. - West Bengal (Tamili, 1988)
 - *Brassica oleracea* L. var. *botrytis* - Bihar (Prakash and Rani, 2015); Manipur (Devjani and Singh, 1998)
 - *Brassica* sp. - Punjab (Sethumadhavan and Dharmadhikari, 1969)
 - *Leucas aspera* (Willd.) Link - Assam (Sethumadhavan and Dharmadhikari, 1969)
 - *Polygonum* sp. - Arunachal Pradesh (Samanta, 1986)
 - *Solanum melongena* L. - Punjab (Shankar and Tripathi, 2021)
- *Aphis (Aphis) longisetosa* Basu, 1970
 - *Punica granatum* L. - Himachal Pradesh (Saha et al., 1982)
- *Aphis (Aphis) solanella* Theobald, 1854
 - *Cestrum fasciculatum* (Schltdl.) Miers - India (Ghosh and Agarwala, 1982)
- *Aphis (Aphis) spiraeicola* Patch, 1914
 - *Solanum melongena* L. - Uttar Pradesh (Halder et al., 2014)
- *Aphis (Aphis) nr. Salviae* Walker, 1852
 - *Punica granatum* L. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
- *Brachycaudus (Acaudus) cardui* (Linnaeus, 1758)
 - *Cirsium wallichii* DC. - Jammu and Kashmir (Saha, 1988)
- *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843)
 - *Anaphalis* sp. - Meghalaya (Samanta, 1986)
 - *Bidens pilosa* L. - Mizoram (Sarkar, 1991)
 - *Chromolaena odorata* (L.) R.M.King and H.Rob. - Sikkim (Tamili, 1988)
 - *Prunus amygdalus* Batsch - Uttar Pradesh (Akhtar et al., 2011b); Uttarakhand (Das and Chakrabarti, 1990; Sarkar, 2022)
 - *Prunus persica* (L.) Stokes - Jammu and Kashmir (Arora et al., 2009)
- *Brevicoryne brassicae* (Linnaeus, 1758)
 - *Brassica juncea* (L.) Czern. - Himachal Pradesh (Akhtar, 2009; Soni et al., 2021); Uttarakhand (Das and Chakrabarti, 2018; Verma et al., 2023a)
 - *Brassica nigra* (L.) W.D.J.Koch - Himachal Pradesh (Saha et al., 1982)
 - *Brassica oleracea* L. - Gujarat (Kavad and Korat, 2013b); Himachal Pradesh (Batra and Wadhi, 1962; Thakur et al., 1989); Jammu and Kashmir (Bhagat, 1983; Bhagat, 1984; Bhagat and Ahmad, 1991); Sikkim (Tamili, 1988; Joshi and Sangma, 2015); Uttar Pradesh (Ahmad and Singh, 1995b; Chaudhary and Singh, 2007)
 - *Brassica oleracea* L. var. *acephala* - Jammu and Kashmir (Bhagat, 1986; Bhat, 2008)
 - *Brassica oleracea* L. var. *botrytis* - Bihar (Ahmad and Singh, 2007; Prakash and Rani, 2015); Gujarat (Kavad and Korat, 2013b); Himachal Pradesh (Verma et al., 2023b); Jammu and Kashmir (Bhat, 2008); - Rajasthan (Saranya et al., 2022); Uttar Pradesh (Ahmad and Singh, 1995b; Tiwari

- et al., 2024)
- *Brassica oleracea* L. var. *capitata* - Bihar (Ahmad and Singh, 1996a); Chhattisgarh (Gauraha, 2021; Gauraha and Ganguli, 2021); Gujarat (Kavad and Korat, 2013b); Himachal Pradesh (Sharma et al., 2023); Jammu and Kashmir (Bhat, 2008); Manipur (Bijaya et al., 1996; Gazmer et al., 2015); Nagaland (Waluniba et al., 2016); Uttar Pradesh (Ahmad and Singh, 1996b; Pal and Singh, 2012)
 - *Brassica oleracea* L. var. *gongylodes* - Jammu and Kashmir (Bhat, 2008)
 - *Brassica napus* L. - Himachal Pradesh (Raj and Chand, 1998)
 - *Brassica rapa rapa* L. - Himachal Pradesh (Kumar et al., 2020; Soni et al., 2022); Uttar Pradesh (Ahmad and Singh, 1996a; Rafi et al., 2010)
 - *Brassica* sp. - Himachal Pradesh (Batra and Wadhi, 1962; Sethumadhavan and Dharmadhikari, 1969); Jammu and Kashmir (Takada and Rishi, 1980; Bhagat and Ahmad, 1991); Meghalaya (Ghosh and Raychaudhuri, 1982; Starý and Ghosh, 1975); Punjab (Sethumadhavan and Dharmadhikari, 1969); Uttar Pradesh (Ahmad and Singh, 1995a); Uttarakhand (Das and Chakrabarti, 1990); West Bengal (Rao et al., 1969)
 - *Descurainia sophia* (L.) Webb ex Prantl - Jammu and Kashmir (Takada and Rishi, 1980)
 - *Raphanus sativus* L. - Himachal Pradesh (Saha et al., 1982); Uttar Pradesh (Singh et al., 1999; Rafi et al., 2010); Uttarakhand (Bisht et al., 2001; Chakrabarti and Debnath, 2009)
 - *Ceratovacuna lanigera* Zehntner, 1897
 - *Saccharum officinarum* L. - Nagaland (Tripathi, 1995)
 - *Hayhurstia atriplicis* (Linnaeus, 1761)
 - *Chenopodium album* L. - Himachal Pradesh (Chakrabarti and Debnath, 2009); Punjab (Sethumadhavan and Dharmadhikari, 1969); Uttar Pradesh (Akhtar et al., 2011b); Uttarakhand (Das and Chakrabarti, 1990; Sethumadhavan and Dharmadhikari, 1969)
 - *Lipaphis (Lipaphis) erysimi* (Kaltenbach, 1843)
 - *Arivela viscosa* (L.) Raf. – Kerala (Thamilvel, 2009)
 - *Beta vulgaris* L. - West Bengal (Tamil, 1988)
 - *Brassica carinata* A. Braun - Punjab (Kumar, 2015); Uttarakhand (Varshney et al., 2017)
 - *Brassica juncea* (L.) Czern - Assam (Pradhan et al., 2020); Chhattisgarh (Kashyap et al., 2018; Gauraha and Ganguli, 2021); Delhi (Akhtar et al., 2011c; Pramanik, 2011); Gujarat (Kulkarni and Patel, 2001; Kavad and Korat, 2013b); Haryana (Singh and Singh, 1994; Ahmed et al., 2020); Himachal Pradesh (Dogra et al., 2003; Soni et al., 2021); Madhya Pradesh (Singh and Rawat, 1981; Lal et al., 2018); Maharashtra (Awchar et al., 1995; Ade et al., 2024); Manipur (Subhrani et al., 2006; Rajeshwari and Singh, 2022); Meghalaya (Firake et al., 2013); Punjab (Kumar, 2015); Tripura (Datta, 2020); Uttar Pradesh (Halder et al., 2018); Uttarakhand (Varshney et al., 2017; Verma et al., 2023a)
 - *Brassica napus* L. - Himachal Pradesh (Raj and Chand, 1998); Meghalaya (Starý and Ghosh, 1978); Rajasthan (Meena et al., 2013); Uttarakhand (Varshney et al., 2017)
 - *Brassica nigra* (L.) W.D.J.Koch - Karnataka (Rao et al., 1969); Manipur (Singh and Singh, 1986b; Singh and Singh, 1986b); Meghalaya (Starý and Ghosh, 1978); Nagaland (Singh et al., 1991); Punjab (Atwal et al., 1969); Uttarakhand (Varshney et al., 2017)
 - *Brassica oleracea* L. - Assam (Rao et al., 1970); Manipur (Devjani and Singh, 1998; Subhrani et al., 2010); Sikkim (Agarwala et al., 1980); Uttar Pradesh (Ahmad and Singh, 1995b; Rafi et al., 2010); Uttarakhand (Akhtar et al., 2011b)

- *Brassica oleracea* L. var. *botrytis* - Bihar (Ahmad and Singh, 1996a; Ahmad and Singh, 2007; Prakash and Rani, 2015); Rajasthan (Saranya et al., 2022); Uttar Pradesh (Ahmad and Singh, 1995b; Halder et al., 2023)
- *Brassica oleracea* L. var. *capitata* - Bihar (Ahmad and Singh, 1996a; Ahmad and Singh, 1997); Chhattisgarh (Gauraha, 2021); Manipur (Bijaya et al., 1996); Nagaland (Waluniba et al., 2016); Uttar Pradesh (Yadav et al., 2015; Halder et al., 2023)
- *Brassica rapa* L. - Delhi (Akhtar, 2009; Akhtar et al., 2011b); Gujarat (Kavad and Korat, 2013b); Himachal Pradesh (Nayak et al., 1982; Raj and Sharma, 1993); Jammu and Kashmir (Bhagat, 1983; Ahmad and Ahmad, 2013); Madhya Pradesh (Singh and Rawat, 1981; Veda and Shaw, 1988); Maharashtra (Men and Kandalkar, 1997; Biradar and Dhanorkar, 2004); Manipur (Bijaya et al., 2001a); Meghalaya (Firake et al., 2013); Punjab (Atwal et al., 1969, 1971); Rajasthan (Chandra and Kushwaha, 1987); Sikkim (Agarwala et al., 1980); Uttar Pradesh (Pandey et al., 1985; Rafi et al., 2010); Uttarakhand (Rafi et al., 2010; Varshney et al., 2017); West Bengal (Kundu et al., 1966)
- *Brassica* sp. - Himachal Pradesh (Saha et al., 1982); Jammu and Kashmir (Saha, 1988); Karnataka (Rao et al., 1969); Manipur (Singh and Singh, 1986b); Meghalaya (Ghosh and Raychaudhuri, 1982; Starý and Ghosh, 1975); Mizoram (Sarkar, 1991); Punjab (Atwal et al., 1969); Uttarakhand (Chakrabarti and Debnath, 2009)
- *Eruca vesicaria* (L.) Cav. - Punjab (Kumar, 2015); Uttarakhand (Varshney et al., 2017)
- *Raphanus sativus* L. - Kerala (Thamilvel, 2009)
- *Raphanus sativus* L. - Uttar Pradesh (Rafi et al., 2010)
- *Sieruela rutidosperma* var. *burmanni* (Wight and Arn.) Roalson and J.C.Hall - Kerala (Thamilvel, 2009)
- *Sinapis alba* L. - Uttarakhand (Varshney et al., 2017)
- *Sinapis arvensis* L. - Jammu and Kashmir (Rakhshani et al., 2012)
- *Trifolium alexandrinum* L. - Uttar Pradesh (Rakhshani et al., 2012)
- *Zea mays* L. - Jammu and Kashmir (Rakhshani et al., 2012)
- *Lipaphis* (*Lipaphis*) *pseudobrassicae* (Davis, 1914)
 - *Brassica juncea* (L.) Czern. - Punjab (Kumar et al., 1989)
- *Macrosiphoniella* (*Macrosiphoniella*) *pseudoartemisiae* Shinji, 1933
 - *Brassica* sp. - Himachal Pradesh (Saha et al., 1982)
- *Macrosiphoniella* (*Macrosiphoniella*) *sanborni* (Gillette, 1908)
 - *Artemisia* sp. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
- *Metopolophium* (*Metopolophium*) *dirhodum* (Walker, 1849)
 - Unidentified grass - Himachal Pradesh (Saha et al., 1982); Uttar Pradesh (Akhtar et al., 2011b)
- *Metopolophium* (*Metopolophium*) *graminum* Raychaudhuri, Ghosh and Das, 1980
 - Unidentified grass - Himachal Pradesh (Chakrabarti and Debnath, 2009)
- *Myzus* (*Myzus*) *mumecola* (Matsumura, 1917)
 - *Cardamine debilis* Banks ex DC. - Manipur (Singh, 1987)
- *Myzus* (*Nectarosiphon*) *persicae* (Sulzer, 1776)
 - *Brassica napus* L. - Himachal Pradesh (Raj and Chand, 1998); Manipur (Singh, 1987)
 - *Brassica juncea* (L.) Czern. - Himachal Pradesh (Soni et al., 2021; Soni et al., 2023)
 - *Brassica oleracea* L. - Himachal Pradesh (Sharma et al., 2020); Madhya Pradesh (Veda et al., 1994); Manipur (Devjani and Singh, 1998; Devi et al., 1999)

- *Brassica oleracea* L. var. *botrytis* - Bihar (Prakash and Rani, 2015); Chhattisgarh (Gauraha and Ganguli, 2021); Rajasthan (Chandra and Kushwaha, 1987; Saranya et al., 2022); Uttar Pradesh (Halder et al., 2014; Halder et al., 2023)
- *Brassica oleracea* L. var. *capitata* - Chhattisgarh (Gauraha, 2021; Gauraha et al., 2023); Delhi (Akhtar et al., 2011c); Manipur (Singh and Singh, 1986b; Bijaya et al., 2001a); Uttar Pradesh (Halder et al., 2023)
- *Brassica oleracea* L. var. *gongylodes* - Manipur (Singh and Singh, 1986a)
- *Brassica rapa* L. - Bihar (Parween et al., 2023); Madhya Pradesh (Veda et al., 1994)
- *Brassica* sp. - Assam (Sethumadhavan and Dharmadhikari, 1969); Himachal Pradesh (Raj and Lakhanpal, 1998); Karnataka (Sethumadhavan and Dharmadhikari, 1969); Punjab (Atwal et al., 1969); Uttar Pradesh (Akhtar et al., 2011b); West Bengal (Rao et al., 1970)
- *Capsicum annuum* L. - Himachal Pradesh (Kumar et al., 2020; Soni et al., 2022)
- *Cardamine debilis* Banks ex DC. - Jammu and Kashmir (Rao et al., 1969; Sethumadhavan and Dharmadhikari, 1969); Manipur (Singh and Singh, 1986b); Punjab (Atwal et al., 1969)
- *Descurainia sophia* (L.) Webb ex Prantl - Jammu and Kashmir (Takada and Rishi, 1980)
- *Mirabilis jalapa* L. - Himachal Pradesh (Saha et al., 1982; Chakrabarti and Debnath, 2009)
- *Papaver somniferum* L. - Madhya Pradesh (Veda et al., 1994)
- *Raphanus sativus* L. - Himachal Pradesh (Saha et al., 1982)
- *Solanum betaceum* Cav. - Jammu and Kashmir (Rao et al., 1969; Sethumadhavan and Dharmadhikari, 1969); Punjab (Atwal et al., 1969)
- *Solanum nigrum* L. - Kerala (Thamilvel, 2009)
- *Solanum tuberosum* L. Gujarat (Kavad and Korat, 2013a)
- *Myzus (Nectarosiphon) persicae nicotianae* Blackman, 1987
 - *Nicotiana tabacum* L. - Punjab (Sethumadhavan and Dharmadhikari, 1969)
- *Rhopalosiphum padi* (Linnaeus, 1758)
 - *Triticum aestivum* L. - Himachal Pradesh (Dixit et al., 2019)
- *Schizaphis (Schizaphis) graminum* (Rondani, 1852)
 - *Poa* sp. - Meghalaya (Samanta, 1986)
- *Sitobion (Sitobion) avenae* (Fabricius, 1775)
 - *Rosa* sp. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
 - *Triticum aestivum* L. - Punjab (Atwal et al., 1969); Uttar Pradesh (Atwal et al., 1969)
- *Sitobion (Sitobion) rosaeiformis* (Das, 1918)
 - *Rosa* sp. - Himachal Pradesh (Saha et al., 1982)
- *Uroleucon (Uroleucon) sonchi* (Linnaeus, 1767)
 - *Sonchus arvensis* L. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Sonchus oleraceus* L. - Himachal Pradesh (Chakrabarti and Debnath, 2009); Jammu and Kashmir (Bhagat, 1984)

3.42 *Diaeretus leucopterus* (Haliday, 1834)

- *Eulachnus thunbergii* (Wilson, 1919)
 - *Pinus kesiya* Royle ex Gordon - Manipur (Singh and Singh, 1986b; Singh, 1987); Meghalaya (Samanta, 1986); Nagaland (Singh et al., 1991); Sikkim (Tamili, 1988); West Bengal (Tamili, 1988)
 - *Pinus* sp. - Meghalaya (Starý and Ghosh, 1975); Mizoram (Sarkar, 1991)

3.43 *Eoaphidius longicaudatus* Samanta and Raychaudhuri, 1990*

- *Greenidea (Greenidea) ficicola* Takahashi, 1921
 - *Ficus* sp. - Meghalaya (Samanta, 1986; Das and Chakrabarti, 2023a)
- 3.44 *Indaphidius curvicaudatus* Starý, 1979*
- *Greenidea (Greenidea) ficicola* Takahashi, 1921
 - *Psidium guajava* L. - Meghalaya (Samanta, 1986)
 - *Macrosiphum (Macrosiphum) rosae* (Linnaeus, 1758)
 - *Rosa* sp. - West Bengal (Starý, 1979)
 - *Mollitrichosiphum (Metatrachosiphon) nandii* Basu, 1964
 - *Alnus nepalensis* D. Don - Sikkim (Agarwala, 1979; Raychaudhuri et al., 1979); West Bengal (Raychaudhuri et al., 1979)
 - *Mollitrichosiphum montanum* (van der Goot, 1917)
 - *Alnus nepalensis* D. Don - West Bengal (Agarwala, 1983)
 - *Mollitrichosiphum* sp.
 - *Alnus nepalensis* D. Don - West Bengal (Starý, 1979)
 - *Psidium guajava* L. - Uttar Pradesh (Rakhshani et al., 2012)
- 3.45 *Kashmiria aphidis* Starý and Bhagat, 1978*
- *Myzus* sp.
 - *Lonicera quinquelocularis* Hardw. - Jammu and Kashmir (Starý and Bhagat, 1978)
 - *Prociphilus (Stagona) himalayaensis* Chakrabarti, 1976
 - *Lonicera quinquelocularis* Hardw. - Uttarakhand (Chakrabarti et al., 2002; Das and Chakrabarti, 2018)
 - *Prociphilus* sp.
 - *Lonicera quinquelocularis* Hardw. - Himachal Pradesh (Chakrabarti and Debnath, 2009); Jammu and Kashmir (Bhagat, 1982); Uttarakhand (Das and Chakrabarti, 1990)
- 3.46 *Lysiphlebia japonica* (Ashmead, 1906) [synonym *Lysiphlebia mirzai* Shuja-Uddin, 1975]
- *Aphis (Aphis) craccivora* Koch, 1854
 - *Cicer arietinum* L. - Uttar Pradesh (Rakhshani et al., 2012)
 - *Aphis (Aphis) gossypii* Glover, 1877
 - *Jasminum* sp. - Manipur (Singh, 1987)
 - *Solanum melongena* L. - Uttar Pradesh (Rakhshani et al., 2012)
 - Unidentified plant - Jammu and Kashmir (Ferrer-Suay et al., 2013)
 - *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843)
 - *Prunus* sp. - Nagaland (Singh et al., 1991)
 - *Hyalopterus pruni* (Geoffroy, 1762)
 - *Phragmites karka* (Retz.) Trin. ex Steud. - Uttar Pradesh (Devi and Singh, 1987; Singh and Tripathi, 1988a)
 - *Melanaphis sacchari* (Zehntner, 1897)
 - *Cenchrus americanus* (L.) Morrone - Bihar (Chaudhary et al., 2003); Uttar Pradesh (Ahmad and Singh, 1993; Tripathi and Singh, 1995)
 - *Saccharum officinarum* L. - Bihar (Chaudhary et al., 2003); Uttar Pradesh (Tripathi and Singh, 1995); Uttarakhand (Chakrabarti and Debnath, 2009)
 - *Sorghum bicolor* (L.) Moench - Bihar (Chaudhary et al., 2003); Delhi (Dey and Akhtar, 2007; Akhtar, 2009); Uttar Pradesh (Tripathi and Singh, 1995)

- *Sorghum* sp. - Delhi (Rakhshani et al., 2012)
 - *Zea mays* L. - Bihar (Chaudhary et al., 2003); Uttar Pradesh (Tripathi and Singh, 1995; Tiwari et al., 2024)
 - *Melanaphis sacchari sacchari* (Zehntner, 1897)
 - *Saccharum officinarum* L. - Uttar Pradesh (Shuja-Uddin, 1975b)
 - *Micromyzodium dasi* Verma, 1970
 - *Saccharum officinarum* L. - Himachal Pradesh (Chakrabarti and Debnath, 2009)
 - *Rhopalosiphum maidis* (Fitch, 1856)
 - *Cenchrus americanus* (L.) Morrone - Uttar Pradesh (Singh and Tripathi, 1988a; Ahmad and Singh, 1995a)
 - *Hordeum vulgare* L. - Uttar Pradesh (Tripathi and Singh, 1995)
 - *Sorghum bicolor* (L.) Moench - Uttar Pradesh (Tripathi and Singh, 1995)
 - *Triticum aestivum* L. - Uttar Pradesh (Tripathi and Singh, 1995)
 - *Zea mays* L. - Uttar Pradesh (Tripathi and Singh, 1995)
 - *Schizaphis (Schizaphis) graminum* (Rondani, 1852)
 - *Cenchrus americanus* (L.) Morrone - Uttar Pradesh (Singh et al., 1999)
 - *Hordeum vulgare* L. - Uttar Pradesh (Tripathi and Singh, 1995; Tiwari et al., 2024)
 - *Triticum aestivum* L. - Uttar Pradesh (Tripathi and Singh, 1995; Tiwari et al., 2024)
 - *Zea mays* L. - Uttar Pradesh (Singh and Tripathi, 1988b; Singh et al., 1999)
 - *Sitobion (Sitobion) miscanthi* (Takahashi, 1921)
 - *Hordeum vulgare* L. - Uttar Pradesh (Tripathi and Singh, 1995)
 - *Triticum aestivum* L. - Uttar Pradesh (Tripathi and Singh, 1995; Tiwari et al., 2024)
 - Unknown aphid
 - Unidentified grass - Jammu and Kashmir (Rakhshani et al., 2012)
- 3.47 *Lysiphlebia rugosa* Starý and Schlinger, 1967
- *Aphis (Aphis) gossypii* Glover, 1877
 - *Chromolaena odorata* (L.) R.M.King and H.Rob. - Manipur (Singh, 1987)
 - *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843)
 - *Gnaphalium* sp - Himachal Pradesh (Saha et al., 1982; Chakrabarti and Debnath, 2009)
- 3.48 *Lysiphlebia* sp.
- *Aphis (Aphis) gossypii* Glover, 1877
 - *Colocasia esculenta* (L.) Schott - Manipur (Singh, 1987)
 - *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843)
 - *Gnaphalium* sp - Manipur (Subhrani et al., 2006)
- 3.49 *Lysiphlebus confusus* Tremblay and Eady, 1978
- *Acyrtosiphon (Acyrtosiphon) rubi* (Narzikulov, 1957)
 - *Rubus fruticosus* Lour. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Aphis (Aphis) intybi* Koch, 1855 ?
 - *Cichorium intybus* L. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Aphis* sp.
 - *Verbascum* sp. - Uttarakhand (Chakrabarti and Debnath, 2009)
 - *Chaitophorus salijaponicus niger* Mordvilko, 1929
 - *Populus caspica* Bornm. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)

- *Myzus (Myzus) dycei* Carver, 1961
 - *Urtica* sp. - Himachal Pradesh (Saha et al., 1982; Chakrabarti and Debnath, 2009)
 - *Sipha (Rungsia) maydis* Passerini, 1860
 - *Cynodon dactylon* (L.) Pers. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Sorghum halepense* (L.) Pers. - Himachal Pradesh (Chakrabarti and Debnath, 2009); Jammu and Kashmir (Bhagat, 1984)
- 3.50 *Lysiphlebus fabarum* (Marshall, 1896)
- *Acyrtosiphon (Acyrtosiphon) rubi* (Narzikulov, 1957)
 - *Rubus fruticosus* Lour. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Aphis (Aphis) craccivora* Koch, 1854
 - *Robinia pseudoacacia* L. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Vigna unguiculata* (L.) Walp. - Karnataka (Udayakumar et al., 2024)
 - *Aphis (Aphis) kurosawai* Takahashi, 1921
 - *Cichorium intybus* L. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Aphis (Aphis) nr. salviae* Walker, 1852
 - *Salvia moorcroftiana* Wall. ex Benth. - Jammu and Kashmir (Bhagat, 1984)
 - *Aphis (Aphis) solanella* Theobald, 1854
 - *Rumex nepalensis* Spreng. - Jammu and Kashmir (Bhagat, 1984; Chakrabarti and Debnath, 2009)
 - *Aphis (Aphis) spiraeicola* Patch, 1914
 - *Salvia moorcroftiana* Wall. ex Benth. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- 3.51 *Lysiphlebus testaceipes* (Cresson, 1880)
- *Aphis (Aphis) craccivora* Koch, 1854
 - *Gliricidia maculata* (Kunth) Walp. - Andhra Pradesh (Ramaseshiah et al., 1969)
 - *Lablab purpureus* (L.) Sweet - Karnataka (Ramaseshiah et al., 1969)
 - *Lipaphis (Lipaphis) erysimi* (Kaltenbach, 1843)
 - *Brassica* sp. - Karnataka (Ramaseshiah et al., 1969)
 - *Melanaphis sacchari sacchari* (Zehntner, 1897)
 - *Saccharum officinarum* L. - Delhi (Narayanan et al., 1958)
- 3.52 *Lysiphlebus* sp.
- *Aphis (Aphis) craccivora* Koch, 1854
 - *Arachis hypogaea* L. - Karnataka (Chinnu et al., 2023)
 - *Cajanus cajan* (L.) Millsp. - Punjab (Rao, 1969)
 - *Aphis (Aphis) gossypii* Glover, 1877
 - *Hibiscus rosasinensis* L. - Assam (Dharmadhikari and Ramaseshiah, 1970)
 - *Melanaphis sacchari* (Zehntner, 1897)
 - *Saccharum officinarum* L. - Uttar Pradesh (Singh and Shukla, 1966)
 - *Rhopalosiphum maidis* (Fitch, 1856)
 - *Triticum aestivum* L. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- 3.53 *Neopauesia manipurensis* Singh and Singh, 1988*
- *Lachnus tropicalis* (van der Goot, 1916)
 - *Salix tetrasperma* Roxb. - Manipur (Singh and Singh, 1988)
- 3.54 *Pauesia antennata* (Mukerji, 1950) [syn. *Aphidius antennatus* Mukerji, 1950; *Pauesia (Paraphidius) antennata* (Mukerji, 1950); *Paraphidius antennata* (Mukerji, 1950)]

- *Rhopalosiphum nymphaeae* (Linnaeus, 1761)
 - Unidentified plant - NE India (Agarwala et al., 1981b)
- 3.55 *Pauesia arcuata* Starý and Raychaudhuri, 1982*
 - *Cinara* (*Cinara*) *atrotibialis* David and Rajasingh, 1968
 - *Pinus* sp. - Meghalaya (Samanta and Raychaudhuri, 1984b; Samanta, 1986); Mizoram (Sarkar, 1991); Sikkim (Tamili, 1988); West Bengal (Tamili, 1988)
 - *Cinara* (*Cinara*) *eastopi* Pintera, 1965
 - *Cedrus deodara* (Lamb.) G.Don - Jammu and Kashmir (Saha, 1988)
 - *Cinara* (*Cinara*) *tenuipes* Chakrabarti and Ghosh, 1974
 - *Pinus* sp. - Himachal Pradesh (Starý and Raychaudhuri, 1982; Chakrabarti and Debnath, 2009)
 - *Myzaphis rosarum* (Kaltenbach, 1843)
 - *Rosa* sp. - Jammu and Kashmir (Saha, 1988)
- 3.56 *Pauesia bazarrii* Samanta and Raychaudhuri, 1984*
 - *Cinara* (*Cinara*) *atrotibialis* David and Rajasingh, 1968
 - *Pinus* sp. - Meghalaya (Samanta and Raychaudhuri, 1984b)
- 3.57 *Pauesia confusa* Samanta and Raychaudhuri, 1984*
 - *Cinara* (*Cinara*) *atrotibialis* David and Rajasingh, 1968
 - *Pinus* sp. - Meghalaya (Samanta and Raychaudhuri, 1984b)
- 3.58 *Pauesia gulmargensis* Bhagat, 1981*
 - *Cinara* sp.
 - *Abies pindrow* (Royle ex D.Don) Royle - Jammu and Kashmir (Bhagat, 1981; Saha, 1988)
 - *Cedrus deodara* (Lamb.) G.Don - Jammu and Kashmir (Saha, 1988)
- 3.59 *Pauesia hazratbalensis* Bhagat, 1981*
 - *Lachnus* sp.
 - *Platycladus orientalis* (L.) Franco - Jammu and Kashmir (Bhagat, 1981; Saha, 1988)
- 3.60 *Pauesia himalayensis* Bhagat, 1981*
 - *Lachnus tropicalis* (van der Goot, 1916)
 - *Pinus wallichiana* A.B. Jacks. - Jammu and Kashmir (Bhagat, 1981; Saha, 1988)
- 3.61 *Pauesia hundungensis* Singh and Singh, 1986*
 - *Cinara* (*Schizolachnus*) *orientalis* (Takahashi, 1924)
 - *Pinus kesiya* Royle ex Gordon - Manipur (Singh and Singh, 1986d)
- 3.62 *Pauesia indica* Starý, 1977*
 - *Lachnus tropicalis* (van der Goot, 1916)
 - *Lithocarpus dealbatus* (Hook.f. and Thomson ex Miq.) Rehder - Manipur (Singh and Singh, 1986b)
 - *Litsea glutinosa* (Lour.) C.B. Rob. - Manipur (Raychaudhuri et al., 1978)
 - *Pinus kesiya* Royle ex Gordon - Meghalaya (Samanta, 1986); Sikkim (Tamili, 1988)
 - *Quercus* sp. - Mizoram (Sarkar, 1991)
- 3.63 *Pauesia labanensis* Samanta, Pramanik and Raychaudhuri, 1983*
 - *Pyrolachnus pyri* (Buckton, 1899)
 - Unidentified plant - Meghalaya (Samanta et al., 1983; Das and Chakrabarti, 2023a)

- 3.64 *Pauesia lachniella* Das and Chakrabarti, 1989*
- *Cinara (Cupressobium) tujafilina* (del Guercio, 1909)
- *Thuja* sp. - Uttarakhand (Bisht et al., 2001)
 - *Lachnus tropicalis* (van der Goot, 1916)
- *Lithocarpus dealbatus* (Hook.f. and Thomson ex Miq.) Rehder - Uttarakhand (Das and Chakrabarti, 1989b, 2018)
- 3.65 *Pauesia laricis* (Haliday, 1834)
- *Cinara (Cinara) atrotibialis* David and Rajasingh, 1968
- *Pinus* sp. - Meghalaya (Starý and Ghosh, 1975; Ghosh and Raychaudhuri, 1982); Sikkim (Tamili, 1988); West Bengal (Das and Chakrabarti, 2023a)
- 3.66 *Pauesia mashobrica* Starý and Raychaudhuri, 1982*
- *Cinara (Cinara) atrotibialis* David and Rajasingh, 1968
- *Pinus kesiya* Royle ex Gordon - Sikkim (Tamili, 1988); West Bengal (Tamili, 1988)
- *Pinus* sp. - Jammu and Kashmir (Saha, 1988)
 - *Cinara (Cinara) tenuipes* Chakrabarti and Ghosh, 1974
- *Pinus* sp. - Himachal Pradesh (Starý and Raychaudhuri, 1982; Chakrabarti and Debnath, 2009)
- 3.67 *Pauesia orientalis* Das and Chakrabarti, 1989*
- *Cinara (Cinara) maculipes* Hille Ris Lamb., 1966
- *Pinus wallichiana* A.B. Jacks. - Jammu and Kashmir (Bhagat, 1981); Uttarakhand (Das and Chakrabarti, 1989b; Das and Chakrabarti, 2018)
- 3.68 *Pauesia picta* (Haliday, 1834)
- *Cinara (Cinara) atrotibialis* David and Rajasingh, 1968
- *Pinus* sp. - Meghalaya (Samanta and Raychaudhuri, 1984b); Sikkim (Tamili, 1988)
 - *Cinara (Schizolachnus) orientalis* (Takahashi, 1924)
- *Pinus kesiya* Royle ex Gordon - Manipur (Singh and Singh, 1989)
 - *Eulachnus thunbergii* (Wilson, 1919)
- *Pinus kesiya* Royle ex Gordon - Manipur (Singh and Singh, 1989)
- 3.69 *Pauesia pini* (Haliday, 1834)
- *Cinara (Cinara) lachnirostris* Hille Ris Lamb., 1966
- *Picea abies* (L.) H.Karst. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
- *Pinus wallichiana* A.B. Jacks. - Jammu and Kashmir (Rishi and Bhagat, 1980; Bhagat, 1981)
 - *Cinara* sp.
- *Pinus* sp. - Jammu and Kashmir (Bhagat, 1981)
- 3.70 *Pauesia pseudosilana* Samanta and Raychaudhuri, 1984*
- *Cinara (Cinara) atrotibialis* David and Rajasingh, 1968
- *Pinus* sp. - Meghalaya (Samanta and Raychaudhuri, 1984b)
- 3.71 *Pauesia salignae* (Watanabe, 1939) [synonym *Aphidius salignae* Watanabe, 1939]
- *Cinara (Cinara) atrotibialis* David and Rajasingh, 1968
- *Pinus* sp. - Meghalaya (Samanta, 1986)
 - *Pyrolachnus pyri* (Buckton, 1899)
- *Pinus* sp. - Meghalaya (Samanta and Raychaudhuri, 1984b)
- *Salix* sp. - Meghalaya (Samanta, 1986); Sikkim (Tamili, 1988); West Bengal (Tamili, 1988)

- *Tuberolachnus (Tuberolachnus) salignus* (Gmelin, 1790)
- *Salix alba* L. - Jammu and Kashmir (Bhagat and Ahmad, 1991)
- 3.72 *Pauesia unilachni* (Gahan, 1926)
- *Eulachnus thunbergii* (Wilson, 1919)
- *Pinus kesiya* Royle ex Gordon - Manipur (Singh and Singh, 1986c; Singh and Singh, 1989)
- 3.73 *Pauesia* sp.
- *Cinara (Cinara) maculipes* Hille Ris Lamb., 1966
- *Pinus* sp. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)
 - *Lachnus* sp.
- *Ilex* sp. - Jammu and Kashmir (Chakrabarti and Debnath, 2009)

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