



AN UPDATED CHECKLIST OF APHIDS (INSECTA: HOMOPTERA: APHIDIDAE) INFESTING PLANTS OF THE ORDERS CORNALES AND ERICALES (ASTERIDS: EUDICOTS: ANGIOSPERMS) IN INDIA

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Abstract: The present article provides an updated checklist of aphids (Homoptera: Aphididae) infesting plants belonging to two orders: Cornales and Ericales comprising 2 and 11 families, respectively, in India. Two families of Cornales, the Cornaceae and the Hydrangeaceae are associated with 4 and 9 species of aphids, respectively. Two species, *Prociphilus (Prociphilus) cornifoliae* Singh, Das and Raychaudhuri, 1977 and *Aulacorthum (Aulacorthum) cornaceae* Ghosh, 1969 are exclusively associated with Cornaceae while *Eumyzus hydrangi* Chakrabarti and Bhattacharya, 1985 and *Chakrabartiaphis hydrangeae* (Chakrabarti and Bhattacharya, 1982) are solely associated with Hydrangeaceae in India. Among the Ericales, plants belonging to 6 families, Balsaminaceae (17 species of aphids), Ericaceae (47 species of aphids), Pentaphragmaceae (14 species of aphids), Primulaceae (20 species of aphids), Symplocaceae (15 species of aphids) and Theaceae (20 species of aphids) are associated with several species of aphids and many of them are highly host specific infesting single species of plants. Total 50 species of plants belonging to these orders are colonised by 96 species of aphids belonging to 42 genera.

Keywords: Aphids, checklist, Balsaminaceae, Cornaceae, Ericaceae, Hydrangeaceae, Pentaphragmaceae, Polemoniaceae, Primulaceae, Symplocaceae, Theaceae.

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INTRODUCTION

In the Angiosperm Phylogeny Group IV (APG IV) system for the classification of flowering plants, the name asterids denotes a clade without giving a taxonomic rank (Chase *et al.*, 2016). The Asterids are a major group of eudicots, comprising about a third of the total flowering plants. The common features of all asteroids are the presence of iridoid

compounds, sympetalous corolla and unitegmic, tenuinucellate ovules. The clade is divided into 17 orders, among which 7 orders are grouped into campanulids and 8 orders into lamiids subclades, and both groups belong to euasterids clade. The remaining two orders are Cornales (sister to all asterids) and Ericales that are splitted from the base of the asterids.



The aphids (Hemiptera: Aphididae) are small, soft-bodied plant sap-sucking creatures belong to class Insecta; phylum Arthropoda, the largest phylum of Animalia (Verma and Prakash, 2020). Most of them are established crop pests. Small size, thelytokous parthenogenetic viviparity, complex life-cycles with alternation of sexual and asexual generations, host plant alternation, polymorphism, 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 high amount of honeydew that blocks stomata and promotes growth of black sooty moulds. They also transmit hundreds of viral diseases (Ghosh *et al.*, 2017; Singh and Singh, 2021). At present all true aphids belong to a single family Aphididae consistind of 23 subfamilies and 5109 species under 527 genera (Favret, 2022). In India, 794 species of aphids under 208 genera are known (Singh and Singh, 2019).

The cataloguing of aphid and its host plants is essential because of their pestiferous srtatus. Raychaudhuri (1983) was the first to catalogue the food plants of Indian aphids updated by Chakrabarti and Sarkar (2001). Later on, Singh and Singh (2016a, b, 2017a-h, 2018), and Singh *et al.* (2014, 2015, 2018) updated the food plant catalogue of Indian aphids in series of articles. The present paper deals with the association of aphids with the plants belonging to two orders Cornales and Ericales in India.

MATERIALS AND METHODS

The aphid and host plant records in this checklist are taken from a wide variety of resources such as books, journals, proceedings and a few authentic theses and websites up to October 10, 2022. It may unavoidably include some percentage of misidentifications, both of aphids and their host plants. Some aphid species may also be vagrant individuals on a given host plant (Singh and Khan, 2022). The names of aphids, as well as plants that were misspelt in the original records have been corrected where we logically ascertain the intended species (Singh and Agarawal, 2022). In the present checklist, attempts have been made to provide the valid scientific names of the aphids following Favret (2022), and of the plants, following (WFO, 2022). In the first inventory of plant names, their synonyms recorded in India are also provided. Only 1-2 references of each record were cited.

RESULTS AND DISCUSSION

Of the 24 species of Cornales and 806 species of Ericales grouped into 2 and 11 families, respectively, known in India, only 50 species of plants are colonised by 96 species of aphids belonging to 42 genera. Among them, the plants belonging to the family Ericaceae are more vulnerable to aphid attack (10 species of plants infested by 47 species of aphids), followed by Theaceae (9 species of plants infested by 20 species of aphids) and Primulaceae (7 species of plants infested by 20 species of aphids) (Table 1).

Table 1: Number of plant species belonging to different families of the orders Cornales and Ericales infested by aphids in India.

Orders	Families	Number of species		Number of host plant species infested by aphids		Number of aphid species infesting these host plants	
		Genera	Species	Genera	Species	Genera	Species
Cornales	Cornaceae	3	9	1	1	4	4
	Hydrangeaceae	4	15	2	4	7	9
Ericales	Actinidiaceae	2	7	2	2	2	7
	Balsaminaceae	1	259	1	6	6	17
	Ebenaceae	1	62	1	1	1	1
	Ericaceae	11	211	5	10	26	47
	Pentaphragaceae	5	16	1	2	9	14
	Polemoniaceae	3	4	1	1	1	2
	Primulaceae	8	196	3	7	11	20
	Sapotaceae	17	53	1	1	1	2
	Styracaceae	4	7	1	1	2	2
	Symplocaceae	1	33	1	5	9	15
	Theaceae	5	19	3	9	10	20
Total		65	830	23	50	42	96

The updated checklist of aphids infesting the plants belonging to the abovementioned orders and families are given below:

I. Order Cornales

The order Cornales includes 7 families and over 800 species in about 40 genera (WFO, 2022). However, in India, the aphids are associated with only two families, Cornaceae and Hydrangeaceae.

A. Family: Cornaceae: The Cornaceae, commonly known as dogwood family, contains about 130 species in three genera (WFO, 2022), mostly trees and shrubs, and distributed primarily in northern temperate regions and tropical Asia. In India, out of 10 species of the family known (Karthikeyan *et al.*, 2009; Chettri *et al.*, 2012; Tiwari *et al.*, 2014), only a single species and two unidentified species of this family are associated with 4 species of aphids as mentioned below.

1. ***Cornus oblonga* Wall.**
 - *Myzaphis rosarum* (Kaltenbach, 1843) (Chakrabarti, 1972)
2. ***Cornus* spp.**
 - *Anoecia (Anoecia) corni* (Fabricius, 1775) (Ghosh, 1977)
 - *Prociphilus (Prociphilus) cornifoliae* Singh, Das and Raychaudhuri, 1977 (Singh *et al.*, 1977)
3. **Unidentified sp.**
 - *Aulacorthum (Aulacorthum) cornaceae* Ghosh, 1969 (Ghosh, 1969; Raychaudhuri, 1980)

B. Family: Hydrangeaceae: The hydrangea family, Hydrangeaceae, comprises 8 genera and about 250 species (WFO, 2022) of woody ornamental trees, shrubs, vines, and herbs, mainly distributed in tropics, subtropics, and north temperate regions. Most of them are well-known garden ornamentals. In India, 15 species belonging to 4 genera are known (EOI, 2022), out of which 4 species are associated with 9 species of aphids as stated below.

1. ***Deutzia corymbosa* R.Br. ex G.Don**
 - *Acyrtosiphon (Acyrtosiphon) ignotum* Mordvilko, 1914 (Kar *et al.*, 1990)
 - *Myzus (Nectarosiphon) persicae* (Sulzer, 1776) (Chakrabarti and Sarkar, 2001)

2. ***Hydrangea macrophylla* (Thunb.) Ser. (= *Hydrangea hortensia* Siebold)**
 - *Neomyzus circumflexus* (Buckton, 1876) (Ghosh and Raychaudhuri, 1962)
3. ***Hydrangea paniculata* Siebold**
 - *Eumyzus darjeelingensis* Basu and Raychaudhuri, 1974 (Basu and Raychaudhuri, 1974)
4. ***Hydrangea scandens* (L.f.) Ser.**
 - *Eumyzus hydrangi* Chakrabarti and Bhattacharya, 1985 (Chakrabarti and Bhattacharya, 1985)
5. ***Hydrangea* spp.**
 - *Aphis (Aphis) gossypii* Glover, 1877 (Raychaudhuri, 1973)
 - *Aphis (Aphis) spiraecola* Patch, 1914 (Raychaudhuri, 1973)
 - *Aulacorthum (Aulacorthum) solani* (Kaltenbach, 1843) (Kar *et al.*, 1990)
 - *Eumyzus darjeelingensis* Basu and Raychaudhuri, 1974 (Chakrabarti and Bhattacharya, 1982)
 - *Eumyzus hydrangi* Chakrabarti and Bhattacharya, 1985 (Mandal *et al.*, 1986)
 - *Myzus (Nectarosiphon) persicae* (Sulzer, 1776) (Sharma and Bhalla, 1964)
 - *Chakrabartiaphis hydrangeae* (Chakrabarti and Bhattacharya, 1982) (Chakrabarti and Bhattacharya, 1982)

II. Order Ericales

The Ericales consists of 22 families and over 8000 species (WFO, 2022), distributed widely and have extensive economic importance as it includes tea, persimmon, blueberry, kiwifruit, Brazil nuts, argan, and azalea. In India, the aphids are associated with following 11 families: Actinidiaceae, Balsaminaceae, Ebenaceae, Ericaceae, Pentaphragmaceae, Polemoniaceae, Primulaceae, Sapotaceae, Styracaceae, Symplocaceae, and Theaceae.

A. Actinidiaceae: This is a very small family having only 3 genera and more than 400 species (WFO, 2022) mostly growing in temperate and subtropical region. It includes economically important fruit trees, e.g. kiwifruits. In India, only 15 species of 2 genera are known (BSI, 2022), only 2 species are infested by 2 species of aphids.

1. *Actinidia callosa* Lindl.
 - *Trichaitophorus recurvispinosus* Hille Ris Lambers and Basu, 1966 (Hille Ris Lambers and Basu, 1966)
2. *Saurauia napaulensis* DC.
 - *Aphis (Aphis) fabae* Scopoli, 1763 (Raha, 1979)

B. Balsaminaceae: The Balsaminaceae, commonly known as the balsam family (jewelweeds, busy lizzie) comprises only two genera, *Impatiens* L. having more than 1100 species, and *Hydrocera* Blume ex Wight and Arn. having a single species (WFO, 2022) and both are distributed throughout the temperate and tropical regions of the world. In India, out of 259 species of *Impatiens* L. recorded (BSI, 2022) only 6 species were found associated with 17 species of aphids belonging to 6 genera as given below.

1. *Impatiens balsamina* L.

- *Aphis (Aphis) craccivora* Koch, 1854 (Chakrabarti *et al.*, 2012)
- *Aphis (Aphis) fabae* Scopoli, 1763 (Kar *et al.*, 1990)
- *Aphis (Aphis) gossypii* Glover, 1877 (Raychaudhuri, 1973; Ahmad *et al.*, 2020)
- *Aphis (Aphis) nasturtii* Kaltenbach, 1843 (Rao and Kulkarni, 1977; Raychaudhuri, 1973)
- *Aphis (Aphis) solanella* Theobald, 1914 (Agrawal and Singh, 2005)
- *Aphis (Aphis) spiraecola* Patch, 1914 (Rao, 1969; Mall, 2013)
- *Impatientinum (Impatientinum) asiaticum dalhousiensis* Verma, 1969 (Chakrabarti, 1972)
- *Myzus (Myzus) formosanus* Takahashi, 1923 (Bhattacharya *et al.*, 1983)
- *Myzus (Nectarosiphon) persicae* (Sulzer, 1776) (Ghosh and Agarwala, 1985)

2. *Impatiens bicornuta* Wall.

- *Impatientinum (Impatientinum) impatiens* (Shinji, 1922) (Chakrabarti and Raychaudhuri, 1975)

3. *Impatiens falcifer* Hook.f.

- *Aphis (Aphis) spiraecola* Patch, 1914 (Chakrabarti and Raychaudhuri, 1975)
- *Epipemphigus marginalis* Chakrabarti and Banerjee, 1993 (Chakrabarti and Banerjee, 1993)

4. *Impatiens glandulifera* Royle (= *Impatiens roylei* Walp.)

- *Eumyzus indicus* Medda and Chakrabarti, 1992 (Medda and Chakrabarti, 1992)

5. *Impatiens racemosa* DC.

- *Aulacorthum (Perillaphis) perillae* (Shinji, 1924) (Chakrabarti and Sarkar, 2001)

6. *Impatiens scabrida* DC.

- *Aphis (Aphis) fabae* Scopoli, 1763 (Kar *et al.*, 1990)
- *Eumyzus indicus* Medda and Chakrabarti, 1992 (Medda and Chakrabarti, 1992)
- *Impatientinum (Impatientinum) asiaticum dalhousiensis* Verma, 1969 (Ghosh, 1977)
- *Impatientinum (Impatientinum) asiaticum* Nevsky, 1929 (Chakrabarti and Sarkar, 2001)

7. *Impatiens* spp.

- *Aphis (Aphis) gossypii* Glover, 1877 (Behura, 1963)
- *Aphis (Aphis) spiraecola* Patch, 1914 (Raychaudhuri *et al.*, 1980)
- *Eumyzus impatiensae* (Shinji, 1924) (Chakrabarti and Bhattacharya, 1985)
- *Eumyzus indicus* Medda and Chakrabarti, 1992 (Medda and Chakrabarti, 1992)
- *Impatientinum (Impatientinum) asiaticum dalhousiensis* Verma, 1969 (Chakrabarti *et al.*, 1974)
- *Impatientinum (Impatientinum) asiaticum* Nevsky, 1929 (Chakrabarti and Sarkar, 2001)
- *Impatientinum (Impatientinum) balsamines* (Kaltenbach, 1862) (Chakrabarti and Sarkar, 2001)
- *Impatientinum (Impatientinum) impatiens* (Shinji, 1922) (Ghosh and Raychaudhuri, 1968; Maity *et al.*, 1980)

- *Myzus (Myzus) formosanus* Takahashi, 1923 (Kar *et al.*, 1990)

C. Ebenaceae: The Ebenaceae comprises 4 genera and 774 species including ebony and persimmon and is distributed in the tropics and warmer temperate regions of the world. In India, 62 species of a single genus *Diospyros* L. were recorded (BSI, 2022), however, only one species *Diospyros kaki* L.f. was found infested with a single species of aphid, *Aphis (Aphis) gossypii* Glover, 1877 (Basu and Patro, 2007).

D. Ericaceae: The Ericaceae, commonly known as the heath or heather family, distributed nearly worldwide most commonly in acidic and infertile soils. It comprises more than 4500 species under more than 240 genera (WFO, 2022). Several economically important plants such as the cranberry, blueberry, huckleberry, rhododendron, and various common heaths and heathers belong to this family. In India, 211 species of Ericaceae under 11 genera are known (BSI, 2022), among which only 10 species of 5 genera of plants are associated with 47 species of aphids belonging to 26 genera as stated below.

1. *Lyonia ovalifolia* (Wall.) Drude (= *Pieris ovalifolis* (Wall.) D. Don)

- *Aphis (Aphis) craccivora* Koch, 1854 (Raychaudhuri, 1973)
- *Aphis (Aphis) gossypii* Glover, 1877 (Raychaudhuri, 1973)
- *Aphis (Aphis) nerii* Boyer de Fonsc., 1841 (Chakrabarti and Raychaudhuri, 1975)
- *Aphis (Aphis) odinae* (van der Goot, 1917) (Raychaudhuri, 1973)
- *Aphis (Aphis) spiraecola* Patch, 1914 (Raychaudhuri, 1973)
- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Rao and Kulkarni, 1977)
- *Dysaphis (Cotoneasteria) microsiphon* (Nevsky, 1929) (Chakrabarti and Raychaudhuri, 1975)
- *Ericolophium taiheisanum ovalifolii* (Ghosh, Ghosh and Raychaudhuri, 1970) (Ghosh MR *et al.*, 1970)
- *Myzackaia kuwanis* (Ghosh, Basu and Raychaudhuri, 1970) (Raychaudhuri, 1973)

- *Myzus (Nectarosiphon) persicae* (Sulzer, 1776) (Raychaudhuri, 1973)
- *Schizaphis (Schizaphis) rotundiventris* (Signoret, 1860) (Rao, 1969)
- *Shinjia orientalis* (Mordvilko, 1929) (Chakrabarti and Raychaudhuri, 1975)
- *Thoracaphis quercifoliae* Ghosh, 1988 (Ghosh and Raychaudhuri, 1973; Ghosh, 1988)
- *Vesiculaphis pieridis* Basu, 1964 (Basu, 1964; Chakrabarti *et al.*, 1972b)
- *Vesiculaphis* sp. (Rao, 1969)

2. *Lyonia* sp.

- *Greenidea (Greenidea) ayyari* Raychaudhuri, Ghosh, Banerjee and Ghosh, 1973 (Raychaudhuri, 1978)

3. *Macleania cordifolia* Benth. (= *Macleania punctata* Hook.)

- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (David, 1957)

4. *Pentapterygium serpens* (Wight) Klotzsch

- *Indiaphis setosa* (Hille Ris Lambers and Basu, 1966) (Hille Ris Lambers and Basu, 1966)

5. *Rhododendron arboreum* Sm.

- *Aphis (Aphis) gossypii* Glover, 1877 (Raychaudhuri, 1973)
- *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843) (Raychaudhuri, 1973)
- *Chaetomyzus rhododendri* Ghosh and Raychaudhuri, 1962 (Chakrabarti *et al.*, 1983)
- *Ericolophium holsti* (Takahashi, 1935) (Chakrabarti *et al.*, 1983; Dutta and Gautam, 1993)
- *Ericolophium rhododendri* Ghosh, Ghosh and Raychaudhuri, 1970 (Ghosh MR *et al.*, 1970)
- *Ericolophium takahashii* Ghosh, 1969 (Chakrabarti *et al.*, 1983)
- *Indiaphis crassicornis* Basu, 1969 (Chakrabarti *et al.*, 1972b)
- *Macrosiphoniella (Chosoniella) spinipes* Basu, 1968 (Basu and Raychaudhuri, 1976b)

- *Myzus (Myzus) ornatus* Laing, 1932 (Raychaudhuri, 1973)
 - *Sinomegoura rhododendri* (Takahashi, 1937) (Ghosh *et al.*, 1970)
- 6. *Rhododendron campanulatum* D. Don**
- *Myzus (Myzus) formosanus* Takahashi, 1923 (Raychaudhuri, 1973)
- 7. *Rhododendron campestris*?**
- *Ericolophium takahashii* Ghosh, 1969 (Chakrabarti and Sarkar, 2001)
 - *Indomasonaphis anaphalidis* (Basu, 1964) (Chakrabarti *et al.*, 1983)
- 8. *Rhododendron campylocarpum* Hook. f.**
- *Aulacorthum (Perillaphis) perillae* (Shinji, 1924) (Basu and Raychaudhuri, 1980)
 - *Ericolophium takahashii* Ghosh, 1969 (Chakrabarti *et al.*, 1972a)
 - *Myzus (Myzus) formosanus* Takahashi, 1923 (Basu and Raychaudhuri, 1976a)
 - *Myzus (Nectarosiphon) persicae* (Sulzer, 1776) (Basu and Raychaudhuri, 1976a)
- 9. *Rhododendron* spp.**
- *Acyrtosiphon (Acyrtosiphon) rubi* (Narzikulov, 1957) (Ghosh, 1977)
 - *Aphis (Aphis) gossypii* Glover, 1877 (Chakrabarti, 1972)
 - *Aphis (Aphis) kurosawai* Takahashi, 1921 (Ghosh, 1977)
 - *Aphis (Aphis) spiraecola* Patch, 1914 (David and Rajasingh, 1969)
 - *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843) (Chakrabarti, 1972)
 - *Chaetomyzus rhododendri* Ghosh and Raychaudhuri, 1962 (Ghosh, 1980)
 - *Ericolophium taiheisanum* (Takahashi, 1935) (David and Rajasingh, 1969)
 - *Ericolophium holsti* (Takahashi, 1935) (Ghosh *et al.*, 1971b; Chakrabarti and Sarkar, 2001)
 - *Ericolophium rhododendri* Ghosh, Ghosh and Raychaudhuri, 1970 (Ghosh, 1980)
 - *Ericolophium taiheisanum ovalifolii* Ghosh, Ghosh and Raychaudhuri, 1970 (Ghosh, 1982)
- *Ericolophium takahashii* Ghosh, 1969 (Chakrabarti *et al.*, 1983)
 - *Eulachnus thunbergii* (Wilson, 1919) (Raychaudhuri, 1980)
 - *Eutrichosiphum* sp. (Ghosh and Raychaudhuri, 1963)
 - *Hillerislambertia darjeelingi* Basu, 1968 (Raychaudhuri, 1980)
 - *Indiaphis crassicornis* Basu, 1969 (Chakrabarti *et al.*, 1972b)
 - *Indiaphis indica* (Ghosh, Verma and Raychaudhuri, 1976) (Ghosh, 1977)
 - *Indiaphis rostrata* Ghosh and Raychaudhuri, 1972 (Ghosh, 1980)
 - *Indomasonaphis anaphalidis* (Basu, 1964) (Behura, 1963)
 - *Indomasonaphis inulae* (Ghosh and Raychaudhuri, 1972) (Chakrabarti and Sarkar, 2001)
 - *Lipaphis (Lipaphis) erysimi* (Kaltenbach, 1843) (Raychaudhuri, 1973)
 - *Rhopalosiphum rufiabdominalis* (Sasaki, 1899) (Rao and Kulkarni, 1975)
 - *Sinomegoura rhododendri* (Takahashi, 1937) (Basu *et al.*, 1973)
 - *Trichaitophorus aceris* Takahashi, 1937 (Chakrabarti and Raychaudhuri, 1975)
 - *Uroleucon (Uroleucon) sonchi* (Linnaeus, 1767) (Raychaudhuri, 1973)
 - *Vesiculaphis grandis* Basu, 1964 (Ghosh, 1980)
 - *Vesiculaphis rhododendri* Ghosh and Raychaudhuri, 1972 (Ghosh, 1980)
- 10. *Vaccinium griffithianum* Wight**
- *Aphis (Aphis) nasturtii* Kaltenbach, 1843 (Rao and Kulkarni, 1977)
 - *Sitobion (Sitobion)* sp. (Raychaudhuri, 1983)
- 11. *Vaccinium* sp.**
- *Sitobion (Sitobion)* sp. (Basu and Raychaudhuri, 1980)
- 12. Unidentified sp.**
- *Ericolophium sikkimensis* Agarwala and Mahapatra, 1986 (Agarwala and Mahapatra, 1986)

E. Pentaphylacaceae: The family consists of more than 500 species under 9 genera (WFO, 2022). However, in India, out of 16 species of 5 genera known (BSI, 2022), only two species of the genus *Eurya* Thunb. are used as host plant by 14 species of aphids described under 9 genera as mentioned below.

1. *Eurya acuminata* L.

- *Ericolophium euryae* (Takahashi, 1937) (Ghosh and Agarwala, 1985)

2. *Eurya japonica* Thunb.

- *Aphis (Aphis) gossypii* Glover, 1877 (Raychaudhuri, 1973)
- *Aphis (Aphis) spiraecola* Patch, 1914 (Raychaudhuri, 1973)
- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Mondal *et al.*, 1976)
- *Aphis (Toxoptera) citricidus* (Kirkaldy, 1907) (Raychaudhuri, 1973)
- *Ericolophium euryae* (Takahashi, 1937) (Ghosh, 1974)
- *Indomasonaphis anaphalidis* (Basu, 1964) (Ghosh *et al.*, 1971a)
- *Macrosiphoniella (Macrosiphoniella) formosartemisiae* Takahashi, 1921 (Raychaudhuri, 1980)
- *Macrosiphoniella (Phalangomyzus) grandicauda* Takahashi and Moritsu, 1963 (Ghosh *et al.*, 1971a)
- *Sinomegoura citricola* (van der Goot, 1917) (Raychaudhuri, 1973)

3. *Eurya* spp.

- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Mondal *et al.*, 1976)
- *Aulacorthum (Aulacorthum) rhamnii* Ghosh, Ghosh and Raychaudhuri, 1970 (Basu *et al.*, 1974)
- *Elatobium* sp. (Kar *et al.*, 1990)
- *Greenidea (Paragreenidea) symplocosis* Ghosh, Basu and Raychaudhuri, 1969 (Ghosh *et al.*, 1971b)
- *Macrosiphoniella (Phalangomyzus) oblonga* (Mordvilko, 1901) (Raychaudhuri, 1980)
- *Neomyzus circumflexus* (Buckton, 1876) (Raychaudhuri, 1973)

- *Sinomegoura citricola* (van der Goot, 1917) (Raychaudhuri, 1973)

F. Polemoniaceae: The Polemoniaceae is Jacob's-ladder or phlox family including about 25 genera with more than 350 species (WFO, 2022) distributed primarily in Northern Hemisphere and South America. Some species of this family (*Phlox* spp.) are widely grown as ornamental plants. In India, 4 species under 3 genera of this family are known (BSI, 2022) while only one identified species is associated with two species of aphids as mentioned below.

1. *Phlox drummondii* Hook.

- *Myzus (Myzus) cerasi* (Fabricius, 1775) (Bhagat and Ahmad 1991)
- *Myzus (Nectarosiphon) persicae* (Sulzer, 1776) (Behura, 1965)

2. *Phlox* sp.

- *Myzus (Nectarosiphon) persicae* (Sulzer, 1776) (Ghulam-Ullah, 1940)

G. Primulaceae: The Primulaceae, commonly known as the primrose family, is a herbaceous and woody plants comprising 58 genera and over 2600 species found mainly in temperate region of the world. It includes several ornamental species. In India, 196 species under 8 genera are known (BSI, 2022), out of which only 7 species under 3 genera are associated with 20 species of aphids belonging to 11 genera as stated below.

1. *Ardisia* sp.

- *Aphis (Aphis) spiraecola* Patch, 1914 (Ghosh and Ghosh, 2006)
- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Mondal *et al.*, 1976)
- *Myzus (Myzus) ornatus* Laing, 1932 (Raychaudhuri, 1973)
- *Sinomegoura citricola* (van der Goot, 1917) (Raychaudhuri, 1973)
- *Sinomegoura pyri* (Ghosh and Raychaudhuri, 1968) (Raychaudhuri, 1973)
- *Tinocalloides montanus* Basu, 1969 (Raychaudhuri, 1973)

2. *Maesa chisia* Buch.-Ham. ex D. Don

- *Aphis (Aphis) gossypii* Glover, 1877 (Raychaudhuri, 1973)

- *Aphis (Aphis) odinae* (van der Goot, 1917) (Mondal *et al.*, 1976)
 - *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Mondal *et al.*, 1976)
 - *Aphis (Toxoptera) citricidus* (Kirkaldy, 1907) (Mondal *et al.*, 1976)
 - *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843) (Agarwala, 1979)
 - *Greenidea (Trichosiphum) psidii* van der Goot, 1917 (Agarwala, 1979)
 - *Takecallis arundinariae* (Essig, 1917) (Raychaudhuri, 1973)
- 3. *Maesa indica* (Roxb.) A. DC.**
- *Aphis (Aphis) gossypii* Glover, 1877 (Raychaudhuri, 1973)
 - *Aphis (Aphis) spiraecola* Patch, 1914 (Agarwala, 1979)
 - *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Mondal *et al.*, 1976)
 - *Capitophorus formosartemisiae* (Takahashi, 1921) (Basu *et al.*, 1972)
 - *Eutrichosiphum pseudopasaniae* Szelegiewicz, 1968 (Ghosh and Agarwala, 1993)
 - *Mollitrichosiphum (Mollitrichosiphum) tenuicorpus* (Okajima, 1908) (Basu and Raychaudhuri, 1980)
- 4. *Maesa lanceolata* Forssk. syn. *Maesa angustifolia* A. DC.)**
- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Mondal *et al.*, 1976)
- 5. *Maesa macrophylla* Wall ex F.D. Clarke**
- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Mondal *et al.*, 1976)
- 6. *Maesa* sp.**
- *Aphis (Aphis) solanella* Theobald, 1914 (Stary and Ghosh 1975)
 - *Aphis (Aphis) spiraecola* Patch, 1914 (Raychaudhuri, 1973)
 - *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Raychaudhuri *et al.*, 1981)
 - *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843) (Raychaudhuri, 1973)
 - *Eutrichosiphum tapatii* Mandal, Chatterjee and Raychaudhuri, 1979 (Agarwala, 1979)
- *Greenidea (Greenidea) ficicola* Takahashi, 1921 (Agarwala, 1979)
 - *Mollitrichosiphum (Mollitrichosiphum) tenuicorpus* (Okajima, 1908) (Ghosh, 1976)
- 7. *Primula* sp.**
- *Eutrichosiphum pseudopasaniae* Szelegiewicz, 1968 (Ghosh *et al.*, 1971c)
 - *Myzus (Nectarosiphon) ascalonicus* Doncaster, 1946 (Basu and Raychaudhuri, 1976a)
 - *Neomyzus primulum* (Ghosh, Banerjee and Raychaudhuri, 1971) (Ghosh *et al.*, 1971b)
- H. Sapotaceae:** The Sapotaceae comprises over 800 species of evergreen trees and shrubs under around 75 genera (WFO, 2022) and distributed pantropically. Several members of the family produce edible fruits (e.g. chiku) while some are used in cleaning dirt. Although, 53 species under 17 genera of Sapotaceae are known in India (BSI, 2022), only one species *Manilkara zapota* (L.) P. Royen (syn. *Achras zapota* L.) (chiku or sapodilla) is associated with two species of aphids *Aphis (Aphis) gossypii* Glover, 1877 (David, 1958a) and *Aphis (Aphis) odinae* (van der Goot, 1917) (David, 1958a).
- I. Styracaceae:** The Styracaceae is a small family including 12 genera and about 180 species (WFO, 2022) of trees and shrubs distributed in warm temperate and subtropical regions of the Northern Hemisphere. In India, only 7 species under 4 genera are known (BSI, 2022), out of which only a single species, *Styrax serrulatus* Roxb. and an unidentified species of this genus are associated with *Aphis (Aphis) fabae* Scopoli, 1763 (Kar *et al.*, 1990) and *Eutrichosiphum* sp. (Basu and Raychaudhuri, 1980), respectively.
- J. Symplocaceae:** Symplocaceae, sweetleaf family, is a monotypic family consisting of type genus *Symplocos* Jacq. having more than 400 species (WFO, 2022) and distributed widely. In India, 33 species are reported (BSI, 2022) out of which 5 species are associated with 15 species of aphids belonging to 9 genera as mentioned below.
- 1. *Symplocos cratigeoides* Buch.-Ham. ex D. Don**
- *Aphis (Aphis) spiraecola* Patch, 1914 (Rao, 1969; Raychaudhuri, 1973)

- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Rao and Kulkarni, 1977)
 - *Brachycaudus (Brachycaudus) helichrysi* (Kaltenbach, 1843) (Raychaudhuri, 1973)
 - *Greenidea (Paragreenidea) symplocosis* Ghosh, Basu and Raychaudhuri, 1969 (Raychaudhuri, 1973)
 - *Neomyzus circumflexus* (Buckton, 1876) (Raychaudhuri, 1973)
 - *Rhopalosiphum rufiabdominalis* (Sasaki, 1899) (Rao and Kulkarni, 1975)
 - *Sinomegoura citricola* (van der Goot, 1917) (Raychaudhuri, 1973)
 - *Sinomegoura rhododendri* (Takahashi, 1937) (Raychaudhuri, 1973)
- 2. *Symplocos laurina* Wall. ex G. Don**
- *Greenidea (Paragreenidea) symplocosis* Ghosh, Basu and Raychaudhuri, 1969 (Ghosh *et al.*, 1969)
- 3. *Symplocos lucida* (Thunb.) Siebold and Zucc. (= *Symplocos theifolia* D. Don)**
- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Mondal *et al.*, 1976)
 - *Greenidea (Trichosiphum) anonae* (Pergande, 1906) (Raha and Raychaudhuri, 1981)
- 4. *Symplocos paniculata* (Thunb.) Miq.**
- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Kar *et al.*, 1990)
- 5. *Symplocos spicata* Roxb.**
- *Aphis (Aphis) odinae* (van der Goot, 1917) (Mondal *et al.*, 1976)
 - *Aphis (Aphis) gossypii* Glover, 1877 (Raychaudhuri, 1973)
 - *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Mondal *et al.*, 1976)
 - *Greenidea (Paragreenidea) symplocosis* Ghosh, Basu and Raychaudhuri, 1969 (Ghosh, 1978)
 - *Sinomegoura citricola* (van der Goot, 1917) (Raychaudhuri, 1973)
- 6. *Symplocos* sp.**
- *Aphis (Aphis) spiraecola* Patch, 1914 (Raychaudhuri, 1973)
 - *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Raychaudhuri *et al.*, 1981)
 - *Greenidea (Paragreenidea) symplocosis* Ghosh, Basu and Raychaudhuri, 1969 (Ghosh *et al.*, 1971b)
 - *Micromyzus* sp. (Basu and Raychaudhuri, 1980)
 - *Neomyzus primulum* (Ghosh, Banerjee and Raychaudhuri, 1971) (Basu *et al.*, 1973)
 - *Sinomegoura symplocois* (van der Goot, 1917) (Raychaudhuri, 1973)
 - *Tinocalloides montanus* Basu, 1969 (Basu *et al.*, 1974)
- K. Theaceae:** Theaceae, the tea family, comprising 14 genera and over 350 species (WFO, 2022) includes the economically important tea plant and the ornamentals. The most speciose genus is *Camellia* L. whose leaves are used to produce tea. In India, 19 species under 5 genera are reported (BSI, 2022), out of which 9 species of 3 genera are associated with 20 species of aphids belonging to 10 genera as mentioned below.
- 1. *Camellia japonica* L.**
- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Mondal *et al.*, 1976)
- 2. *Camellia sikkimensis* ?**
- *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Basu and Banerjee, 1958; Rao and Kulkarni, 1977)
- 3. *Camellia sinensis* (L.) Kuntze (syn. *Camellia thea* Link)**
- *Aphis (Aphis) gossypii* Glover, 1877 (Ghosh and Raychaudhuri, 1963)
 - *Aphis (Aphis) odinae* (van der Goot, 1917) (Mondal *et al.*, 1976)
 - *Aphis (Toxoptera) aurantii* Boyer de Fonsc., 1841 (Basu and Banerjee, 1958; Mondal *et al.*, 1976)

- *Sinomegoura citricola* (van der Goot, 1917) (Raychaudhuri, 1973)
- 4. *Camellia sinensis* var. *assamica* (J.W. Mast.) Kitam. (syn. *Camellia theifera* Griff.)**
- *Aphis* (*Aphis*) *craccivora* Koch, 1854 (Behura, 1965)
- *Aphis* (*Toxoptera*) *aurantii* Boyer de Fonsc., 1841 (Krishnamurti, 1948; Sharma and Bisht, 2011)
- 5. *Camellia* spp.**
- *Aphis* (*Toxoptera*) *aurantii* Boyer de Fonsc., 1841 (George, 1927; Mondal *et al.*, 1976)
- *Greenidea* (*Trichosiphum*) *bucktonis* Ghosh, Basu and Raychaudhuri, 1970 (Ghosh, 1976)
- *Greenidea* (*Trichosiphum*) *camelliae* Agarwala and Ghosh, 1993 (Ghosh and Agarwala, 1993)
- 6. *Gordonia obtusa* Wall. ex Wight and Arn.**
- *Aphis* (*Toxoptera*) *aurantii* Boyer de Fonsc., 1841 (David, 1957)
- 7. *Schima nervosum* ?**
- *Tetraneura* (*Tetraneurella*) *nigriabdominalis* (Sasaki, 1899) (David, 1958b)
- 8. *Schima wallichii* (DC.) Korth.**
- *Aphis* (*Aphis*) *fabae* Scopoli, 1763 (Raychaudhuri, 1973)
- *Aphis* (*Aphis*) *gossypii* Glover, 1877 (Raychaudhuri, 1973)
- *Aphis* (*Aphis*) *nasturtii* Kaltenbach, 1843 (Raychaudhuri, 1978)
- *Aphis* (*Aphis*) *odinae* (van der Goot, 1917) (Raychaudhuri, 1973)
- *Aphis* (*Aphis*) *spiraecola* Patch, 1914 (Raychaudhuri, 1978)
- *Aphis* (*Toxoptera*) *aurantii* Boyer de Fonsc., 1841 (Basu and Banerjee, 1958; Mondal *et al.*, 1976)
- *Aphis* (*Toxoptera*) *citricidus* (Kirkaldy, 1907) (Mondal *et al.*, 1976)
- *Brachycaudus* (*Brachycaudus*) *helichrysi* (Kaltenbach, 1843) (Raychaudhuri, 1973)
- *Eutrichosiphum pseudopasaniae* Szelegiewicz, 1968 (Raychaudhuri, 1980)
- *Greenidea* (*Greenidea*) *longicornis* Ghosh, Ghosh and Raychaudhuri, 1970 (Basu *et al.*, 1973)
- *Greenidea* (*Greenidea*) *longirostris* Basu, 1969 (Basu *et al.*, 1974; Raha and Raychaudhuri, 1981)
- *Hyperomyzus* (*Hyperomyzus*) *carduellinus* (Theobald, 1915) (Raychaudhuri, 1973)
- *Myzus* (*Myzus*) *ornatus* Laing, 1932 (Raychaudhuri, 1973)
- *Myzus* (*Nectarosiphon*) *persicae* (Sulzer, 1776) (Raychaudhuri, 1973)
- *Neomyzus circumflexus* (Buckton, 1876) (Raychaudhuri, 1973)
- *Subovatomyzus leucosceptri* Basu, 1964 (Raychaudhuri, 1980)
- 9. *Schima* sp.**
- *Aphis* (*Toxoptera*) *aurantii* Boyer de Fonsc., 1841 (Agarwala, 1979)

Analysis of Table 2 demonstrates that out of 96 species of the aphids recorded on Cornales and Ericales orders, 15 species of aphids (13 Aphidinae, 1 each of Eriosomatinae and Greenideinae) are highly host specific and strictly monophagous infesting single species of plants of these two orders. Among remaining species, 23 species of aphids are also almost monophagous infesting 1-2 families, 1-4 genera and 2-5 species of plants while 11 species are oligophagous and infest upto 5 species of plants belonging to 3 families. Other species are polyphagous infesting plants belonging to 4-110 families and 5-513 species of plants (Table 2).

Table 2: Number of orders, families, genera and species of plants belonging to the orders Cornales and Ericales infested by different species of aphids and total number of plants infested by them (references are given against each subfamily) in India.

Subfamily/Aphid species	Plants of order Cornales and Ericales infested by aphids in India				Total number of plant species recorded in India		
	Orders	Families	Genera	Species	Families	Genera	Species
A. Subfamily Anoeciinae (Singh and Singh, 2016a)							
1. <i>Anoecia corni</i>	1	1	1	1	3	3	3
B. Subfamily: Aphidinae (Singh <i>et al.</i> , 2014, 2015; Singh and Singh, 2016b, 2017a-e)							
2. <i>Acyrtosiphon ignotum</i>	1	1	1	1	3	3	3
3. <i>Acyrtosiphon rubi</i>	1	1	1	1	4	11	16
4. <i>Aphis aurantii</i>	1	5	9	23	55	110	146
5. <i>Aphis citricidus</i>	1	3	3	3	25	34	43
6. <i>Aphis craccivora</i>	1	3	3	3	49	138	200
7. <i>Aphis fabae</i>	1	4	4	5	40	92	120
8. <i>Aphis gossypii</i>	2	9	11	12	110	354	513
9. <i>Aphis kurosawai</i>	1	1	1	1	4	9	13
10. <i>Aphis nasturtii</i>	1	3	3	3	38	75	86
11. <i>Aphis nerii</i>	1	1	1	1	12	25	28
12. <i>Aphis odinae</i>	1	5	6	6	29	53	56
13. <i>Aphis solanella</i>	1	2	2	2	7	11	15
14. <i>Aphis spiraecola</i>	2	7	10	13	68	190	278
15. <i>Aulacorthum cornaceae</i>	1	1	1	1	1	1	1
16. <i>Aulacorthum perillae</i>	1	2	2	2	8	8	8
17. <i>Aulacorthum rhamnii</i>	1	1	1	1	6	6	6
18. <i>Aulacorthum solani</i>	1	1	1	1	21	37	41
19. <i>Brachycaudus helichrysi</i>	1	4	4	6	49	126	186
20. <i>Capitophorus formosartemisiae</i>	1	1	1	1	4	11	15
21. <i>Chaetomyzus rhododendri</i>	1	1	1	1	1	1	1
22. <i>Chakrabartiaphis hydrangeae</i>	1	1	1	1	1	1	1
23. <i>Dysaphis microsiphon</i>	1	1	1	1	14	20	21
24. <i>Elatobium</i> sp.	1	1	1	1	1	1	1
25. <i>Ericolophium euryae</i>	1	1	1	2	1	1	2
26. <i>Ericolophium holsti</i>	1	1	1	2	1	1	2
27. <i>Ericolophium rhododendri</i>	1	1	1	2	2	2	3
28. <i>Ericolophium sikkimensis</i>	1	1	1	1	1	1	1
29. <i>Ericolophium taiheisanum</i>	1	1	1	1	1	1	1
30. <i>Ericolophium taiheisanum ovalifolii</i>	1	1	2	2	1	2	2
31. <i>Ericolophium takahashii</i>	1	1	1	4	2	2	5
32. <i>Eumyzus darjeelingensis</i>	1	1	1	2	1	2	3

Subfamily/Aphid species	Plants of order Cornales and Ericales infested by aphids in India				Total number of plant species recorded in India		
	Orders	Families	Genera	Species	Families	Genera	Species
33. <i>Eumyzus hydrangi</i>	1	1	1	2	1	1	2
34. <i>Eumyzus impatiensae</i>	1	1	1	1	1	1	1
35. <i>Eumyzus indicus</i>	1	1	1	3	1	1	3
36. <i>Hillerislambersia darjeelingi</i>	1	1	1	1	3	3	3
37. <i>Hyperomyzus carduellinus</i>	1	1	1	1	5	12	17
38. <i>Impatientinum asiaticum</i>	1	1	1	2	2	2	3
39. <i>Impatientinum asiaticum dalhousiensis</i>	1	1	1	3	4	6	9
40. <i>Impatientinum balsamines</i>	1	1	1	1	2	2	2
41. <i>Impatientinum impatiens</i>	1	1	1	2	3	3	4
42. <i>Indiaphis crassicornis</i>	1	1	1	2	1	1	2
43. <i>Indiaphis indica</i>	1	1	1	1	1	1	1
44. <i>Indiaphis rostrata</i>	1	1	1	1	1	1	1
45. <i>Indiaphis setosa</i>	1	1	1	1	1	1	1
46. <i>Indomasonaphis anaphialidis</i>	1	2	2	2	4	10	13
47. <i>Indomasonaphis inulae</i>	1	1	1	1	3	3	4
48. <i>Lipaphis erysimi</i>	1	1	1	1	17	37	51
49. <i>Macrosiphoniella formosartemisiae</i>	1	1	1	1	2	4	4
50. <i>Macrosiphoniella grandicauda</i>	1	1	1	1	2	3	3
51. <i>Macrosiphoniella oblonga</i>	1	1	1	1	2	2	2
52. <i>Macrosiphoniella spinipes</i>	1	1	1	1	2	3	4
53. <i>Micromyzus</i> sp.	1	1	1	1	-	-	-
54. <i>Myzackaia kuwanis</i>	1	1	1	1	1	1	1
55. <i>Myzaphis rosarum</i>	1	1	1	1	2	2	4
56. <i>Myzus ascalonicus</i>	1	1	1	1	8	13	14
57. <i>Myzus cerasi</i>	1	1	1	1	7	10	15
58. <i>Myzus formosanus</i>	1	2	2	4	2	3	4
59. <i>Myzus ornatus</i>	1	3	3	3	54	134	181
60. <i>Myzus persicae</i>	2	5	6	8	64	191	293
61. <i>Neomyzus circumflexus</i>	2	4	4	4	35	56	72
62. <i>Neomyzus primulum</i>	1	2	2	2	2	2	2
63. <i>Rhopalosiphum rufiabdominalis</i>	1	2	2	2	18	41	55
64. <i>Schizaphis rotundiventris</i>	1	1	1	1	6	9	16
65. <i>Shinjia orientalis</i>	1	1	1	1	6	10	10
66. <i>Sinomegoura citricola</i>	1	4	4	6	22	32	38
67. <i>Sinomegoura pyri</i>	1	1	1	1	2	2	2
68. <i>Sinomegoura rhododendri</i>	1	2	2	3	5	6	7

Subfamily/Aphid species	Plants of order Cornales and Ericales infested by aphids in India				Total number of plant species recorded in India		
	Orders	Families	Genera	Species	Families	Genera	Species
69. <i>Sinomegoura symplocois</i>	1	1	1	1	2	2	2
70. <i>Sitobion</i> sp.	1	1	1	2	-	-	-
71. <i>Subovatomyzus leucosceptri</i>	1	1	1	1	7	10	11
72. <i>Uroleucon sonchi</i>	1	1	1	1	3	11	14
73. <i>Vesiculaphis grandis</i>	1	1	1	1	1	1	1
74. <i>Vesiculaphis pieridis</i>	1	1	1	1	2	2	2
75. <i>Vesiculaphis rhododendri</i>	1	1	1	1	1	1	1
B. Subfamily: Calaphidinae (Singh and Singh, 2017f)							
76. <i>Takecallis arundinariae</i>	1	1	1	1	3	7	7
77. <i>Tinocalloides montanus</i>	1	2	2	2	4	4	7
C. Subfamily: Chaitophorinae (Singh and Singh, 2016a)							
78. <i>Trichaitophorus aceris</i>	1	1	1	1	3	3	4
79. <i>Trichaitophorus recurvispinosus</i>	1	1	1	1	2	2	2
Subfamily: Eriosomatinae (Singh and Singh, 2017g)							
80. <i>Epipemphigus marginalis</i>	1	1	1	1	2	2	2
81. <i>Prociphilus cornifoliae</i>	1	1	1	1	1	1	1
82. <i>Tetraneura nigriabdominalis</i>	1	1	1	1	9	43	57
Subfamily: Lachninae (Singh <i>et al.</i> , 2018)							
83. <i>Eulachnus thunbergii</i>	1	1	1	1	3	3	5
Subfamily: Greenideinae (Singh and Singh, 2017h)							
84. <i>Eutrichosiphum pseudopasaniae</i>	1	2	3	3	10	12	15
85. <i>Eutrichosiphum tapatii</i>	1	1	1	1	3	3	4
86. <i>Greenidea ficicola</i>	1	1	1	1	13	14	25
87. <i>Greenidea anonae</i>	1	1	1	1	8	9	10
88. <i>Greenidea ayyari</i>	1	1	1	1	3	3	3
89. <i>Greenidea bucktonis</i>	1	1	1	1	6	7	9
90. <i>Greenidea camelliae</i>	1	1	1	1	1	1	1
91. <i>Greenidea longicornis</i>	1	1	1	1	5	5	6
92. <i>Greenidea longirostris</i>	1	1	1	1	3	3	3
93. <i>Greenidea psidii</i>	1	1	1	1	12	17	24
94. <i>Greenidea symplocosis</i>	1	2	2	5	3	3	5
95. <i>Mollitrichosiphum tenuicarpus</i>	1	1	1	2	5	5	6
Subfamily: Hormaphidinae (Singh and Singh, 2018)							
96. <i>Thoracaphis quercifoliae</i>	1	1	1	1	4	5	5

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