**Table S3.** Inventory of insect pollinators and flower visitors associated with cruciferous crops

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl no.** | **Name of the Insect** | **Distribution** | **Foraging Purpose** | **References** |
| **ORDER-Coleoptera, FAMILY-Coccinellidae** |
| 1 | *Cheilomenes sexmaculata* (Fabricius, 1781) | Worldwide | Pollen | Negi and Negi 2021 |
| 2 | *Chilocorus* sp. | Worldwide | Pollen | Saeed et al. 2016 |
| 3 | *Coccinella hieroglyphica* Linnaeus, 1758 | Widespread in Europe & USA | Pollen | Saeed et al. 2016 |
| 4 | *Coccinella septempunctata* (Linnaeus, 1758) | Worldwide | Pollen  | Kunjwal et al. 2014; Shakeelet al. 2019; Hossain 2022 |
| 5 | *Coccinella undecimpunctata* Linnaeus, 1758 | Widespread in Europe; Localized in Southeast Australia, Newzealand; Sporadic in Middle East and Southeast Asia | Pollen | Hossain 2022 |
| 6 | *Cycloneda munda* (Say, 1835) | Widespread in USA | Pollen | Saeed et al. 2016 |
| 7 | *Illeis cincta* (Fabricius, 1798) | Localized in India | Pollen | Saeed et al. 2016 |
| 8 | *Propylea dissecta* (Mulsant, 1850) | Widespread in Southeast Asia; Localized in Europe | Pollen | Choi and Jung 2015 |
| **ORDER-Coleoptera, FAMILY-Scarabaeidae** |
| 9 | *Cotinis* sp. | Widespread in North America | Pollen | Dubey et al. 2020 |
| 10 | *Cyclocephala* sp. | Widespread in North and South America | Pollen | Dubey et al. 2020 |
| **ORDER-Diptera, FAMILY-Muscidae** |
| 11 | *Musca domestica* Linnaeus, 1758 | Worldwide | Nectar and Pollen | Goswami et al. 2014; Kunjwal et al*.* 2014; Giri et al. 2018; Shakeel et al. 2019; Subedi and Subedi 2019; Hossain 2022 |
| **ORDER-Diptera, FAMILY-Syrphidae** |
| 12 | *Episyrphus balteatus* (De Geer, 1776) | Widespread in Europe and Southeast Asia | Nectar and Pollen | Goswami et al. 2014; Kunjwal et al. 2014; Devi et al. 2017; Shakeel et al. 2019; Subedi and Subedi 2019; Negi and Negi 2021 |
| 13 | *Eristalinus aeneus* (Scopoli, 1763) | Widespread in Europe and USA; Localized in Australia, India, and Saudi Arabia | Nectar and Pollen | Shakeel et al. 2019 |
| 14 | *Eristalis arvorum* (Fabricius, 1787) | - | Nectar and Pollen | Devi et al. 2017 |
| 15 | *Eristalis tabanoides* (Jaennicke, 1867) | - | Nectar and Pollen | Devi et al. 2017 |
| 16 | *Eristalis tenax* (Linnaeus, 1758) | Worldwide | Nectar and Pollen | Goswami et al. 2013; Devi et al. 2017; Shakeel et al. 2019 |
| 17 | *Eristalis* sp. | Worldwide | Nectar and Pollen |  Devi et al. 2017; Subedi and Subedi 2019; Shrestha 2022 |
| 18 | *Eupeodes americanus* (Weidemann, 1830) | Widespread in USA | Nectar and Pollen | Devi et al. 2017 |
| 19 | *Melanostoma orientale* (Wiedemann, 1824) | Sporadic in India and Japan | Nectar and Pollen | Kunjwal et al. 2014 |
| 20 | *Melanostoma unibittatum* (Wiedemann, 1824) | Sporadic in Southeast Asia | Nectar and Pollen | Devi et al. 2017 |
| 21 | *Metasyrphus confrater* (Widdemann, 1930) | Localized in South Korea; sporadic in India | Nectar and Pollen | Devi et al. 2017 |
| 22 | *Scaeva* sp. | Worldwide | Nectar and Pollen | Devi et al. 2017 |
| 23 | *Spherophoria indiana* Bigot, 1884 | - | Nectar and Pollen | Devi et al. 2017 |
| 24 | *Spherophoria* sp.  | Sporadic in Africa and India  | Nectar and Pollen | Kunjwal et al. 2014 |
| 25 | *Syrphus corollae* Fabricius, 1794 | Widespread in India; sporadic in Europe | Nectar and Pollen | Goswami et al. 2013; Kunjwal et al. 2014 |
| 26 | *Syrphus ribesii* (Linnaeus, 1758) | Worldwide | Nectar and Pollen | Shakeel et al. 2019 |
| **ORDER-Hemiptera, FAMILY-Pentatomidae** |
| 27 | *Eurydema ornata* (Linnaeus, 1758) | Widespread in Europe; Localized in Southeast Asia | Nectar and Pollen | Subedi and Subedi 2019 |
| **ORDER-Hymenoptera, FAMILY-Andrenidae** |
| 28 | *Andrena laena* Caremon, 1907 | Worldwide | Nectar and Pollen | Devi et al. 2017 |
| 29 | *Andrena pilipes* Fabricius, 1781 | Localized in Europe; sporadic in India | Nectar and Pollen | Shakeel et al. 2019 |
| 30 | *Andrena* sp. | Worldwide | Nectar and Pollen | Kunjwal et al*.* 2014; Shakeel et al. 2019 |
| **ORDER-Hymenoptera, FAMILY-Apidae** |
| 31 | *Amegilla violacea* (Lepeletier, 1841) | Widespread in India | Nectar and Pollen | Kunjwal et al*.* 2014 |
| 32 | *Amegilla zonata* (Linnaeus, 1758) | Localized in Eastern Asia; sporadic in Southeast Asia | Nectar and Pollen | Kunjwal et al*.* 2014 |
| 33 | *Anthophora* sp. | Worldwide | Nectar and Pollen | Goswami et al. 2013; Kunjwal et al*.* 2014 |
| 34 | *Anthophora urbana* Cresson, 1878 | Widespread in USA; localized in Southeast Asia | Nectar and Pollen | Kunjwal et al. 2014 |
| 35 | *Apis cerana* Fabricius, 1793 | Widespread in Southeast Asia | Nectar and Pollen | Goswami, 2013; Kunjwal et al*.* 2014; Devi et al. 2017; Shakeel et al. 2019; Subedi and Subedi 2019; Hossain 2022 |
| 36 | *Apis dorsata* Fabricius, 1793 | Worldwide | Nectar and Pollen |  Goswami 2013; Kunjwal et al*.* 2014; Devi et al. 2017; Shakeel et al. 2018; Subedi and Subedi 2019; Hossain 2022 |
| 37 | *Apis mellifera* Linnaeus, 1758 | Worldwide | Nectar and Pollen | Goswami 2013; Kunjwal et al*.* 2014; Devi et al. 2017; Shakeel et al. 2018; Hossain 2022 |
| 38 | *Apis florea* Fabricius, 1787 | Widespread in East coast of Africa and Southeast Asia | Nectar and Pollen | Goswami 2013; Kunjwal et al*.* 2014; Devi et al. 2017; Shakeel et al*.* 2018; Hossain 2022 |
| 39 | *Bombus haemorrhoidalis* Smith, 1852 | Localized in Eastern Asia | Nectar and Pollen | Devi et al. 2017 |
| 40 | *Bombus* sp. | Worldwide | Nectar and Pollen | Choi and Jung 2015; Subedi and Subedi 2019; Gautam 2022 |
| 41 | *Ceratina hieroglyphica* Smith, 1854 | Sporadic in Central and Southeast Asia | Nectar and Pollen | Devi et al. 2017 |
| 42 | *Ceratina smaragdula* (Fabricius, 1787) | Widespread in Southeast Asia | Nectar and Pollen | Kunjwal et al*.* 2014; Shakeel et al. 2019 |
| 43 | *Ceratina viridissima* Dalla Torre, 1896 | - | Nectar and Pollen | Devi et al. 2017 |
| 44 | *Thyreus ramosa* (Lepeletier, 1841) | - | Nectar and Pollen | Devi et al. 2017 |
| 45 | *Xylocopa aestunas* (Linnaeus, 1758) | Widespread in Southeast Asia; sporadic in Saudi Arabia | Nectar and Pollen | Kunjwal et al*.* 2014 |
| 46 | *Xylocopa amethystina* (Fabricius, 1793) | Localized in India | Nectar and Pollen | Kunjwal et al*.* 2014 |
| 47 | *Xylocopa fenestrata* (Fabricius, 1798) | Widespread in Indian subcontinent | Nectar and Pollen | Shakeel et al. 2019 |
| 48 | *Xylocopa iridipennis* Lepeletier, 1841 | Sporadic in Southeast Asia | Nectar and Pollen | Goswami et al. 2013; Kunjwal et al*.* 2014 |
| 49 | *Xylocopa* *latipes* (Drury, 1773) | Widespread in Southeast Asia | Nectar and Pollen | Kunjwal et al*.* 2014 |
| 50 | *Xylocopa pubescens* Spinola, 1838 | - | Nectar and Pollen | Kunjwal et al*.* 2014 |
| **ORDER-Hymenoptera, FAMILY-Halictidae** |
| 51 | *Halictus gutturosus* (Vachal, 1894) | Worldwide | Nectar and Pollen | Kunjwal et al*.* 2014 |
| 52 | *Halictus lucidipennis* Smith, 1853 | Sporadic in Africa, Central, and Southeast Asia | Nectar and Pollen | Devi et al. 2017 |
| 53 | *Halictus* sp. | Worldwide | Nectar and Pollen | Goswami et al. 2013; Kunjwal et al*.* 2014; Hossain 2022 |
| 54 | *Lasioglossum* sp. | Worldwide | Nectar and Pollen | Shakeel et al. 2019; Hossain 2022 |
| 55 | *Nomia iridipennis* (Lepe.) | Localized in Southeast Asia  | Nectar and Pollen | Kunjwal et al*.* 2014 |
| 56 | *Nomia* sp. | Worldwide | Nectar and Pollen | Goswami et al. 2013; Kunjwal et al*.* 2014 |
| 57 | *Sphecodes albifrons* Smith, 1879 | - | Nectar and Pollen | Devi et al. 2017 |
| 58 | *Sphecodes ambuensis* Nurse, 1903 | - | Nectar and Pollen | Devi et al. 2017 |
| 59 | *Sphecodes* sp. | Worldwide | Nectar and Pollen | Devi et al. 2017 |
| **ORDER-Hymenoptera, FAMILY-Megachilidae** |
| 60 | *Megachile bicolor* (Fabricius, 1781) | Localized in Southeast Asia | Nectar and Pollen | Kunjwal et al*.* 2014 |
| 61 | *Megachile disjuncta* (Fabricius, 1781) | Localized in Southeast Asia | Nectar and Pollen | Goswami et al. 2013; Kunjwal et al*.* 2014 |
| 62 | *Megachile fenestrate* (Smith, 1873) | Worldwide | Nectar and Pollen | Devi et al. 2017 |
| 63 | *Megachile flavipes* Spinola, 1838 | Sporadic in Africa and Saudi Arabia | Nectar and Pollen | Devi et al. 2017 |
| 64 | *Megachile hera* Bingham, 1897 | Localized in Southeast Asia | Nectar and Pollen | Kunjwal et al*.* 2014 |
| 65 | *Megachile lanata* (Fabricius, 1775) | Widespread in Southeast Asia | Nectar and Pollen | Kunjwal et al*.* 2014 |
| **ORDER-Hymenoptera, FAMILY-Pompillidae** |
| 66 | *Anoplius* sp. | Worldwide | Nectar and Pollen | Devi et al. 2017 |
| **ORDER-Hymenoptera, FAMILY-Scoliidae** |
| 67 | *Campsomeriella annulata* (Fabricius, 1793) | Localized in Eastern Asia | Nectar and Pollen | Goswami et al*.* 2013 |
| 68 | *Campsomeriella collaris* (Fabricius, 1775) | Localized in Southeast Asia | Nectar and Pollen | Goswami et al. 2013 |
| 69 | *Scolia binolata* Fabricius, 1804 | Sporadic in Central and East Asia | Nectar and Pollen | Goswami et al. 2013 |
| **ORDER-Hymenoptera, FAMILY-Vespidae** |
| 70 | *Delta conoideum* (Gmelin, 1790) | Localized in Southeast Asia | Nectar and Pollen | Thapa 2015 |
| 71 | *Polistes carnifex* (Fabricius, 1775) | Widespread in Mexico; Localized in South America and Southeast Asia | Nectar and Pollen | Thapa 2015 |
| 72 | *Polistes olivaceus* DeGeer, 1773 | Widespread in Southeast Asia | Nectar and Pollen | Shakeel et al. 2019 |
| 73 | *Vespa* sp. | Worldwide | Nectar and Pollen | Thapa 2015 |
| **ORDER-Lepidoptera, FAMILY-Lycaenidae** |
| 74 | *Heliophorous sena* (Kollar, 1844) | Localized in Central and Southeast Asia | Nectar | Greeshma 2010 |
| 75 | *Lampides boeticus* (Linnaeus, 1767) | Worldwide | Nectar | Subedi and Subedi 2019 |
| **ORDER-Lepidoptera, FAMILY-Nymphalidae** |
| 76 | *Aglais cashmiriensis* (Kollar, 1848) | Widespread in Kashmir Hills | Nectar and Pollen | Devi et al. 2017; Subedi and Subedi 2019 |
| 77 | *Danaus chrysippus* (Linnaeus, 1758) | Widespread in Africa, Australia, and Southeast Asia | Nectar | Duara and Borah 2020;  |
| 78 | *Junonia almana* (Linnaeus, 1758) | Widespread in Southeast Asia | Nectar | Kunjwal et al. 2014 |
| 79 | *Junonia atlites* (Linnaeus, 1763) | Widespread in Southeast Asia | Nectar  | Devi et al. 2017 |
| 80 | *Junonia lemonias* (Linnaeus, 1758) | Widespread in Southeast Asia | Nectar | Subedi and Subedi 2019 |
| 81 | *Melanitis* sp. | Worldwide | Nectar | Zapanta et al. 2016 |
| 82 | *Moduza* sp. | Localized in Southeast Asia | Nectar | Singh et al. 2020 |
| 83 | *Parantica aglea* (Stoll, 1782) | Localized in Indomalayan realm | Nectar | Singh et al. 2020 |
| 84 | *Vanessa cardui* (Linnaeus, 1758) | Worldwide | Nectar | Shakeel et al. 2019; Subedi and Subedi 2019 |
| **ORDER-Lepidoptera, Family-Papillionidae** |
| 85 | *Papilio demoleus* Linnaeus, 1758 | Worldwide | Nectar | Shakeel et al. 2019 |
| **ORDER-Lepidoptera, Family-Pieridae** |
| 86 | *Colias erate* (Esper, 1805) | Widespread in Europe, North Africa, Southeast Asia | Nectar | Shakeel et al. 2019 |
| 87 | *Eurema hecabe* (Linnaeus, 1758) | Widespread in Africa and Southeast Asia  | Nectar | Shakeel et al. 2019 |
| 88 | *Eurema simulatrix* (Semper, 1891) | Widespread in Southeast Asia | Nectar | Hossain 2022 |
| 89 | *Gandaca harina* (Horsfield, 1829) | Widespread in Southeast Asia | Nectar | Zapanta et al. 2016 |
| 90 | *Pieris brassicae* (Linnaeus, 1758) | Worldwide | Nectar | Kunjwal et al. 2014; Devi et al. 2017 |
| 91 | *Pieris canidia* (Sparrman, 1768) | Widespread in Southeast Asia | Nectar | Subedi and Subedi 2019 |
| 92 | *Pieris oleracea* Harris, 1829 | Widespread in Mexico and USA | Nectar | Duara and Borah 2020 |
| 93 | *Pieris rapae* (Linnaeus, 1758) | Worldwide | Nectar | Choi and Jung 2015; Hossain 2022 |

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