

Annotated Checklist of Rhopalocera of Himachal Pradesh, India (Insecta: Lepidoptera)

Lovish Garlani

Abstract

The checklist includes all known Rhopalocera species ever recorded in the state of Himachal Pradesh. All previously published literature, research papers, and reference material were referred and a complete bibliographic reference of all the species mentioned in the checklist is incorporated. This checklist covers 437 species, belonging to 184 genera under 19 subfamilies and 6 families. Moreover, a list of doubtful or misidentified Rhopalocera species reported from Himachal Pradesh is also provided with relevant details in the discussion section. Comments on taxonomic insights and distribution are provided for some species and a list of expected Rhopalocera species is also provided in the discussion section.

Keywords: Lepidoptera, Rhopalocera, Checklist, Western Himalayas, Himachal Pradesh, India.

Lista comentada de Rhopalocera de Himachal Pradesh, India (Insecta: Lepidoptera)

Resumen

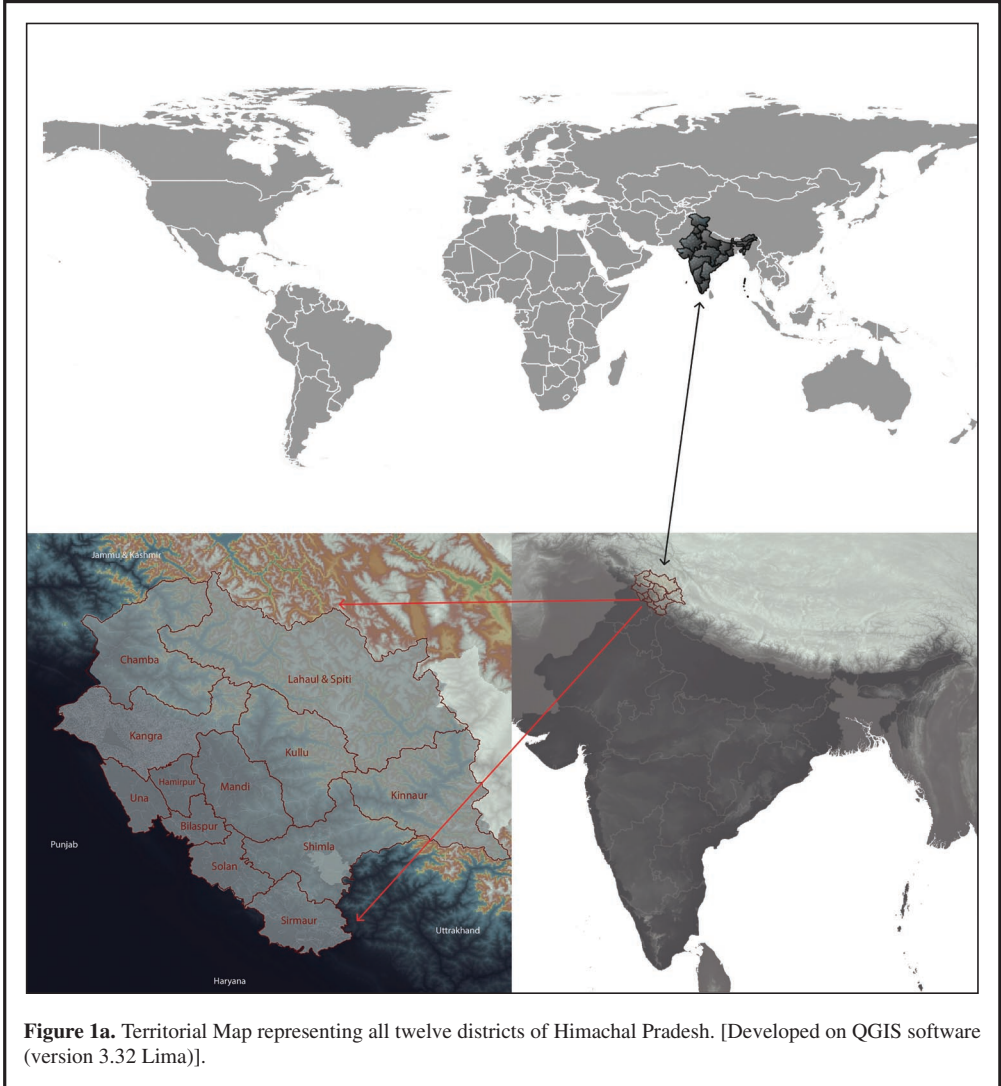
La lista comentada incluye todas las especies conocidas de Rhopalocera registradas en el estado de Himachal Pradesh. Se ha hecho referencia a toda la literatura, trabajos de investigación y material de referencia publicados con anterioridad y se ha incorporado una referencia bibliográfica completa de todas las especies mencionadas en la lista de comprobación. Esta lista abarca 437 especies, pertenecientes a 184 géneros de 19 subfamilias y 6 familias. Además, también se proporciona una lista de especies de Rhopalocera dudosas o mal identificadas citadas de Himachal Pradesh con los detalles pertinentes en la sección de discusión. Para algunas especies se ofrecen comentarios sobre la perspectiva taxonómica y la distribución y, en la sección de discusión, también se proporciona una lista de especies de Rhopalocera esperadas.

Palabras clave: Lepidoptera, Rhopalocera, lista de verificación, Himalaya occidental, Himachal Pradesh, India.

Introduction

Himachal Pradesh is a beautiful North-Indian state in the Western Himalayas; commonly referred to as Dev Bhoomi (The Land of Gods). It extends from the latitudes 30° 22' 40" N to 33° 12' 40" N and longitude 75° 45' 55" E to 79° 04' 20" E. The altitude zonation of Himachal Pradesh extends from 350 meters in Shiwaliks to 7000 meters in trans-Himalayas, supporting a vast diversity of flora and fauna. The Rhopalocera of Himachal Pradesh has been well-studied in the past. Many research workers have made collections of butterflies from the Himalayan region. The collections made by Lt. Colonel A. M. Lang from the North-West Himalayas and A. G. Young from the Kullu region were included by Major G. F. L. Marshal and L. de Niceville in "The Butterflies of India, Burma, and Ceylon" (1882-

1890). Moore (1882) included the collections made by J. H. Hocking from the Kangra region. Subsequently, Evans (1932) and Talbot (1939, 1947) included the previously done work on Rhopalocera from the western Himalayas in their publications.



De Rhe-Philippe (1931) was the first to publish a list of 246 Rhopalocera of Shimla Hills. Wynter-Blyth (1940-1946) listed as many as 294 species from Shimla Hills. Evans (1949) specifically focused on Hesperidae and included many species from Himachal Pradesh. Mani (1986) described 377 species from the Himalayas except Hesperidae species. Arora et al. (2009) published a “Handbook on Butterflies of Himachal Pradesh” comprising only 107 species.

Recently, many regional-based checklists were published but no efforts have been made to compile a complete “Checklist of Butterflies of Himachal Pradesh”. In January 2023, the author started

working on a comprehensive checklist of Rhopalocera of Himachal Pradesh. All the major publications from the 1840's to till date were carefully studied for compiling this checklist.

Materials and methods

The author started studying the Rhopalocera of Himachal Pradesh in 2009. In the past 14 years, hundreds of field visits have been conducted to photograph and study the state's Rhopalocera fauna. The author has observed about 70 percent of the Rhopalocera diversity recorded in Himachal Pradesh. Van Gasse (2018) has been used as baseline work for this study, as he clearly defined the distributional ranges of most of the Rhopalocera species found in Himachal Pradesh. Tshikolovets (2005), Varshney & Smetacek (2015), Kehimkar (2016), and Sondhi & Kunte (2018) have been valuable secondary references for distribution and identification. Some of the rare records of Rhopalocera of Himachal Pradesh from the "Indian Foundation for Butterflies" website (<http://www.ifoundbutterflies.org>) have been added to the checklist as well. This website is the largest online photographic database of Indian Rhopalocera. Many other e-databases related to Rhopalocera were also referred to understand the distribution pattern of species.

Results

TAXONOMIC ACCOUNT

Order Lepidoptera Linnaeus, 1758

PAPILIONOIDEA

HESPERIIDAE

COELIADINAE

Burara oedipodea belesis (Mabille, 1876)

Distribution: Himachal Pradesh (Kangra) (Evans, 1949; van Gasse, 2018).

Burara jaina (Moore, [1866])

Distribution: Himachal Pradesh (Solan and Mandi) (van Gasse, 2018).

Bibasis sena (Moore, [1866])

Distribution: Himachal Pradesh (van Gasse, 2018).

Remarks: Fairly Common in District Mandi.

Hasora chromus (Cramer, [1780])

Distribution: Himachal Pradesh (van Gasse, 2018).

Hasora taminatus bhavara (Fruhstorfer, 1911)

Distribution: Kangra (Evans, 1949; van Gasse, 2018).

Badamia exclamationis (Fabricius, 1775) (Figure 1)

Distribution: Himachal Pradesh (van Gasse, 2018).

Choaspes benjaminii japonica (Kollar, 1844)

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Choaspes xanthopogon (Kollar, [1844])

Distribution: Himachal Pradesh (van Gasse, 2018).

PYRGINAE
Celaenorrhini

Lobocla liliana ignatius (Ploetz, 1882)

Distribution: Himachal Pradesh (Swinhoe, 1912; Evans, 1927; Varshney & Smetacek, 2015; Kehimkar, 2016).

Celaenorrhinus pyrrha de Nicéville, 1889

Distribution: Himachal Pradesh (Kehimkar, 2016).

Celaenorrhinus ratna daphne (Evans, 1949) (Figure 2)

Distribution: Dharamshala, Himachal Pradesh (Evans, 1949; Garlani, 2022).

Celaenorrhinus pulomaya (Moore, [1866])

Distribution: Kangra (Evans, 1949; van Gasse, 2018).

Remarks: Commonly seen in Kalatop Wildlife Sanctuary, district Chamba].

Celaenorrhinus pero de Nicéville, 1889

Distribution: Kangra, Himachal Pradesh (van Gasse, 2018); McLeodGanj (Anonymous, 2023).

Celaenorrhinus leucocera (Kollar, [1844]) (Figure 3)

Distribution: Fairly common in Himachal Pradesh except for Lahaul-Spiti, (Varshney & Smetacek, 2015; Kehimkar, 2016, van Gasse, 2018).

Celaenorrhinus munda (Moore, 1884)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018).

Celaenorrhinus dhanada (Moore, [1866]) (Figure 4)

Distribution: Himachal Pradesh (Kangra) (Evans, 1932; Kehimkar, 2016; van Gasse, 2018).

Celaenorrhinus plagifera de Nicéville, 1889

Distribution: Great Himalayan National Park, Kullu (Anonymous, 2023-A).

Remarks: Only one photographic record from Himachal Pradesh. Evans (1949), Varshney & Smetacek (2015), and van Gasse (2018) mention its distribution only in the North-east Indian states. Sondhi & Kunte (2018) does not mention this species from Uttarakhand. This record needs verification.

Tagiadini

Sarangesa purendra (Moore, 1882)

Distribution: Kangra and Chamba, Himachal Pradesh (Kehimkar, 2016, van Gasse, 2018).

Sarangesa dasahara (Moore, [1866])

Distribution: Himachal Pradesh (Kangra), (Kehimkar, 2016, van Gasse, 2018).

Pseudocoladenia faith (Kollar, [1844]) (Figure 5)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Coladenia indrani (Moore, [1866]) (Figure 6)

Distribution: Kangra, Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Seseria dohertyi (Watson, 1893)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Tagiades litigiosa Möscher, 1878

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Tagiades menaka (Moore, [1866])

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Tagiades cohaerens cynthia (Evans, 1934)

Distribution: Himachal Pradesh. (Moore, 1874; Varshney & Smetacek, 2015; Chamba, (Anonymous, 2023-A2).

Gerosis phisara (Moore, 1884)

Distribution: Himachal Pradesh (Kehimkar, 2016).

Remarks: No recent published record from Himachal Pradesh. The distribution needs verification.

Odontoptilum angulata (C. Felder, 1862) (Figure 7)

Distribution: Kullu (Evans, 1927); Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Caprona ransonnetii potiphera (Hewitson, 1873) (Figure 8)

Distribution: Kangra (present study).

Caprona agama (Moore, [1858])

Distribution: Shimla and Sirmour, Himachal Pradesh (van Gasse, 2018); Majathal Wildlife Sanctuary (Bhardwaj et al. 2023).

Caprona alida yerburyi (Evans, 1949)

Distribution: Kangra and Chamba (Evans, 1949; van Gasse, 2018).

Erynnis pathan Evans, 1949

Distribution: Kinnaur (Bashahr) (Evans, 1949; van Gasse, 2018).

Gomalia elma albofasciata (Moore, 1879)

Distribution: Kangra and Kullu (Evans, 1949; van Gasse, 2018).

Carcharodus alceae gooraisa (Evans, 1949)

Distribution: Shimla (Evans, 1949; van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018); Chamba (Anonymous, 2023-B).

Pyrgini

Spialia galba (Fabricius, 1793)

Distribution: Himachal Pradesh (Evans, 1949; van Gasse, 2018).

Pyrgus cashmirensis Moore, 1874

Distribution: Himachal Pradesh (Moore, 1874; Evans, 1949; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

HESPERIINAE

Astictopterini

Pedesta masuriensis (Moore, 1878) (Figure 9)

Distribution: Kangra (Kehimkar, 2016; van Gasse, 2018).

Aeromachus stigmata (Moore, 1878)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Ampittia dioscorides (Fabricius, 1793)

Distribution: Kangra, Himachal Pradesh (Evans, 1949; Kehimkar, 2016; van Gasse, 2018).

Actinor radians (Moore, 1878)

Distribution: Kangra (Evans, 1949); Himachal Pradesh (Varshney & Smetacek, 2015; van Gasse, 2018); Kullu (Evans, 1932; Anonymous, 2023-B2).

Ancistroidini

Notocrypta curvifascia (C. Felder & R. Felder, 1862)

Distribution: Himachal Pradesh (Sirmaur) (van Gasse, 2018; Sondhi & Kunte, 2018).

Notocrypta feisthamelii alysos (Moore, 1866) (Figure 10)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Notocrypta paralysos (Wood-Mason & de Nicéville, 1881)

Distribution: Himachal Pradesh (Kehimkar, 2016).

Remarks: No recent published record from Himachal Pradesh. The distribution needs verification.

Udaspes folus (Cramer, [1775])

Distribution: Kangra (van Gasse, 2018).

Plastingiini

Suastus gremius (Fabricius, 1798)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018).

Hyarotis adrastus praba (Moore, 1866)

Distribution: Kangra (Evans, 1949; van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016).

Remarks: Fairly common in district Mandi.

Gangara thyrasis (Fabricius, 1775)

Distribution: Kangra (Evans, 1949; van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Matapa aria (Moore, [1866])

Distribution: Kangra. (van Gasse, 2018; Sondhi & Kunte, 2018).

Erionota torus Evans, 1941

Distribution: Fairly Common in District Kangra (present study).

Hesperini

Hesperia comma dimila (Moore, 1875)

Distribution: Lahaul (Evans, 1949); Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Ochlodes brahma (Moore, 1878)

Distribution: Shimla (van Gasse, 2018), Himachal Pradesh (Sondhi & Kunte, 2018).

Taractrocerini

Taractrocera danna (Moore, 1865)

Distribution: Himachal Pradesh (Evans, 1949; Varshney & Smetacek, 2015; van Gasse, 2018).

Taractrocera maevius sagara (Moore, 1866)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; van Gasse, 2018).

Potanthus pallida (Evans, 1932)

Distribution: Shimla (Evans, 1932; van Gasse, 2018).

Potanthus pseudomaesa clio (Evans, 1932)

Distribution: Himachal Pradesh (Evans, 1949; Varshney & Smetacek, 2015; van Gasse, 2018).

Potanthus dara (Kollar, [1844])

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; van Gasse, 2018).

Telicota colon (Fabricius, 1775) (Figure 11)

Distribution: Hamirpur (van Gasse, 2018), Bhattiyat, district Chamba (present study).

Telicota bambusae (Moore, 1878)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; van Gasse, 2018).

Telicota ohara jix (Plötz, 1883)

Distribution: Doubtfully recorded from Sirmaur, Himachal Pradesh (van Gasse, 2018).

Oriens golooides (Moore, [1881])

Distribution: Datar, district Solan (Saji et al. 2023).

Gegenini

Parnara guttata mangala (Moore, 1866)

Distribution: Himachal Pradesh (Evans, 1949; Varshney & Smetacek, 2015; van Gasse, 2018).

Parnara ganga Evans, 1937 (Figure 12)

Distribution: Kangra (present study).

Parnara bada (Moore, 1878)

Distribution: Himachal Pradesh (Evans, 1949; Varshney & Smetacek, 2015).

Gegenes pumilio (Hoffmansegg, 1804)

Distribution: Himachal Pradesh (Evans, 1949; Varshney & Smetacek, 2015; van Gasse, 2018).

Gegenes nostradamus (Fabricius, 1793)

Distribution: Rarely north of Himachal Pradesh (Shimla) (Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Borbo cinnara (Wallace, 1866)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Borbo bevani (Moore, 1878)

Distribution: Himachal Pradesh (Evans, 1949; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Pelopidas sinensis (Mabille, 1877)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Pelopidas agna (Moore, [1866])

Distribution: Himachal Pradesh (Evans, 1949; Varshney & Smetacek, 2015; van Gasse, 2018).

Pelopidas subochracea (Moore, 1878)

Distribution: Himachal Pradesh (van Gasse, 2018).

Pelopidas mathias (Fabricius, 1798)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Pelopidas assamensis (de Nicéville, 1882)

Distribution: Solan and Mandi (van Gasse, 2018), Himachal Pradesh (Sondhi & Kunte, 2018).

Pelopidas conjuncta (Herrich-Schäffer, 1869)

Distribution: Kangra (van Gasse, 2018).

Polytremis discreta (Elwes & Edwards, 1897)

Distribution: Shimla (Evans, 1949); Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Polytremis eltola (Hewitson, 1869) (Figure 13)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Baoris farri (Moore, 1878) (Figure 14)

Distribution: Kangra (van Gasse, 2018); Bhattiyat (present study).

Caltoris kumara (Moore, 1878) (Figure 15)

Distribution: Kangra and Chamba district (present study).

PAPILIONOIDEA
PAPILIONIDAE
PAPILIONINAE
Leptocircini

Graphium cloanthus (Westwood, 1841) (Figure 16)

Distribution: Himachal Pradesh (Moore, 1874; Evans, 1932; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Graphium sarpedon sirkari (Page & Treadaway, 2013) (Figure 17)

Distribution: Himachal Pradesh (Moore, 1874; Evans, 1932; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Graphium doson axionides (Page & Treadaway, 2014) (Figure 18)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; van Gasse, 2018).

Graphium agamemnon (Linnaeus, 1758) (Figure 19)

Distribution: Sirmaur (van Gasse, 2018); Bhattiyat, district Chamba (present study).

Graphium eurous cashmirensis (Rothschild, 1895)

Distribution: Himachal Pradesh (Talbot, 1939; Evans, 1932; Varshney & Smetacek, 2015; van Gasse, 2018).

Graphium nomius (Esper, 1799)

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Papilionini

Papilio protenor (Cramer, [1775]) (Figure 20)

Distribution: Himachal Pradesh (Moore, 1874; Evans, 1932; Varshney & Smetacek, 2015; Kehimkar, 2016; Smetacek, 2018; van Gasse, 2018).

Papilio polyctor Boisduval, 1836 (Figure 21)

Distribution: Himachal Pradesh (Moore, 1874; Talbot, 1939; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Remarks: *Papilio polyctor* was considered a distinct species found in the Western Himalayas but for a short period of time it was considered a subspecies of *Papilio bianor* Cramer, [1777]. Recently, the detailed molecular phylogenetic analyses reinstated *P. polyctor* as a distinct species, and as per this arrangement, *P. bianor* does not occur in the Western Himalayas anymore (Condamine et al. 2023)].

Papilio arcturus arius (Rothschild, 1908)

Distribution: Himachal Pradesh (Evans, 1932; Varshney & Smetacek, 2015; Sondhi & Kunte, 2018).

Papilio paris Linnaeus, 1758

Distribution: Shimla Water Catchment Wildlife Sanctuary (Kumar et al. 2023).

Remarks: No photographic record of the species provided in the study. Sondhi & Kunte, (2018) mention the distribution of *P. paris* from Uttarakhand but not from Himachal Pradesh. The record needs verification].

Papilio krishna Moore, [1858]

Distribution: Great Himalayan Conservation Landscape (Kullu and Kinnaur) (Uniyal, 2007).

Remarks: *Papilio krishna* is mostly restricted to the North-eastern region. Only a couple of records from Uttarakhand. No photographic or specimen record from Himachal Pradesh. Distribution in Himachal Pradesh needs verification].

Papilio polytes Linnaeus, 1758 (Figure 22)

Distribution: Himachal Pradesh (Evans, 1932; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Papilio demoleus Linnaeus, 1758 (Figure 23)

Distribution: Himachal Pradesh (Evans, 1932; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Papilio machaon asiatica (Menetries, 1855) (Figure 24)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; van Gasse, 2018).

Papilio agestor govindra (Moore, 1864)

Distribution: Himachal Pradesh (Bingham, 1907; Evans, 1932; Talbot, 1939; Varshney & Smetacek, 2015; Kehimkar, 2016; Smetacek, 2018; van Gasse, 2018).

Remarks: Fairly common around Dharamshala in March (present study); also reported from Mandi.

Papilio clytia Linnaeus, 1758 (Figure 25)

Distribution: Himachal Pradesh (Moore, 1874; van Gasse, 2018).

Troidini

Pachliopta aristolochiae (Fabricius, 1775) (Figure 26)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Byasa polyeuctes letincius (Fruhstorfer, 1908) (Figure 27)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Byasa dasarada ravana (Moore, 1858) (Figure 28)

Distribution: Himachal Pradesh (Talbot, 1939; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Byasa latreillei (Donovan, 1826)

Distribution: Himachal Pradesh (Kehimkar, 2016).

PARNASSIINAE

Parnassini

Parnassius actius lahulensis (Weiss, 1990)

Distribution: Himachal Pradesh (NW Lahaul and Spiti at Baralacha Pass, 5300 m) (van Gasse, 2018).

Parnassius jacquemontii Boisduval, 1836 (Figure 29)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Parnassius ephaphus Oberthur, 1879

Distribution: Himachal Pradesh (Stichel, 1907; Fruhstorfer, 1909; Evans, 1927; Bryk, 1923; Smith, 1994; Kehimkar, 2016).

Parnassius hardwickii Gray, 1831 (Figure 30)

Distribution: Himachal Pradesh (Moore, 1874; Stichel, 1907; Fruhstorfer, 1909; Rothschild, 1909; Antram, 1924; Collins & Morris, 1985; Kehimkar, 2016; van Gasse, 2018).

Parnassius acco akico (Morita, 1997)

Distribution: Himachal Pradesh (van Gasse, 2018).

Parnassius staudingeri mamaievi (Avinoff, 1916)

Distribution: Himachal Pradesh (Lahaul and Spiti) (van Gasse, 2018).

Parnassius stenosemus atkinsoni (Moore, 1902)

Distribution: Chamba and Lahaul and Spiti (Collins & Morris, 1985; van Gasse, 2018).

Parnassius stoliczkanus C. Felder & R. Felder, [1865]

Distribution: Himachal Pradesh. (Collins & Morris, 1985; van Gasse, 2018).

Parnassius acdestis rupshuana (Avinoff, 1916)

Distribution: Lahaul and Spiti (Moore, 1874; Stichel, 1907a; Fruhstorfer, 1909; Rothschild, 1909; Antram, 1924; van Gasse, 2018).

Parnassius simo simoides (Bang-Haas, 1927)

Distribution: Himachal Pradesh (Bang-Haas, 1915; Bryk, 1923; Ackery, 1975; van Gasse, 2018).

Parnassius charltonius serenissimus (Bryk, 1932)

Distribution: Baralacha Pass, Lahul-Spiti, and Kullu district. (Stichel, 1907; Fruhstorfer, 1909; Evans, 1920; Collins & Morris, 1985; D'Abrera, 1990; Kehimkar, 2016).

PAPILIONOIDAE

PIERIDAE

PIERINAE

Pierini

Aporia nabellica (Boisduval, 1836)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Aporia agathon phryxe (Boisduval, 1836) (Figure 31)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Aporia leucodice soracta (Moore, 1858) (Figure 32)

Distribution: Himachal Pradesh Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Baltia butleri (Moore, 1882)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Pieris brassicae nepalensis (Gray, 1846) (Figure 33)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Pieris melete ajaka (Moore, 1865)

Distribution: Himachal Pradesh (Moore, 1874; Fruhstorfer, 1910; D'Abrera, 1990; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Pieris rapae (Linnaeus, 1758)

Himachal Pradesh (South, 1902; Antram, 1924; Talbot, 1939; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Pieris canidia indica (Evans, 1926) (Figure 34)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Pieris tadokoroi (Das, Eitschberger, Singh & Chandra, 2021)

Distribution: Himachal Pradesh (Das et al. 2021).

Remarks: *Pieris tadokoroi* described from Himachal Pradesh, closely similar to those of the *Pieris napi* group and can be identified by its smaller size and a broad apical forewing patch (Das et al. 2021).

Pontia callidice kalora (Moore, 1865) (Figure 35)

Distribution: Himachal Pradesh (Rober, 1907; Antram, 1924; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Pontia daplidice moorei (Rober, 1907) (Figure 36)

Distribution: Himachal Pradesh (Moore, 1874; Rober, 1907; Antram, 1924; Wynter-Blyth, 1957; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Remarks: As per the recent molecular studies, the species found in the Western Himalayas is *Pontia edusa* (Fabricius 1777) (Sing et al. 2019).

Pontia glauconome iranica (Bienert, 1870)

Distribution: Kashmir (Rober, 1907; van Gasse, 2018; Sondhi & Kunte, 2018).

Pontia chloridice (Hübner, [1813])

Distribution: Langza, Lahul-Spiti (Anonymous, 2023-C), Reported from Kibber Wildlife Sanctuary (present study).

Belenois aurota (Fabricius, 1793) (Figure 37)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Cepora nerissa phryne (Fabricius, 1775) (Figure 38)

Distribution: Himachal Pradesh (Moore, 1874; Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Prioneris thestylis (Doubleday, 1842)

Distribution: Great Himalayan National Park (Uniyal, 2007).

Delias sanaca (Moore, [1858])

Distribution: Kullu (Evans, 1927); Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018).

Remarks: Recently seen in district Shimla.

Delias belladonna horsfieldi (Gray, 1831)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Smetacek, 2018; van Gasse, 2018).

Delias eucharis (Drury, 1773) (Figure 39)

Distribution: Himachal Pradesh (Moore, 1874; van Gasse, 2018).

Delias acalis (Godart, 1819)

Distribution: Shimla (Evans, 1927); Himachal Pradesh (Kehimkar, 2016).

Remarks: No recent published record from Himachal Pradesh. The distribution needs verification.

Appias libythea (Fabricius, 1775)

Distribution: Shimla (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Appias lalage (Doubleday, 1842)

Distribution: Shimla (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Leptosia nina (Fabricius, 1793)

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Euchloe daphalis (Moore, 1865)

Distribution: Himachal Pradesh (Moore, 1874; Antram, 1924; Kehimkar, 2016); Chamba and Kinnaur (van Gasse, 2018).

Colotini

Ixias marianne (Cramer, [1779])

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018); Reported from Kangra (Lovish Garlani, present study).

Ixias pyrene kausala Moore, 1877

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Colotis etrida (Boisduval, 1836) (Figure 40)

Distribution: Himachal Pradesh (Butler, 1876; Talbot, 1939; van Gasse, 2018); Una (Lovish Garlani, Recent record).

Pareronia hippia (Fabricius, 1787)

Distribution: West to Solan (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

COLIADINAE

Catopsilia pomona (Fabricius, 1775) (Figure 41)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Catopsilia pyranthe (Linnaeus, 1758)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Gonepteryx rhamni nepalensis (Doubleday, 1847) (Figure 42)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Gonepteryx mahaguru Gistel, 1857

Distribution: Himachal Pradesh (Evans, 1927; Wynter-Blyth, 1957; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Eurema drona (Horsfield, [1829])

Distribution: Himachal Pradesh (Moore, 1874; van Gasse, 2018; Sondhi & Kunte, 2018).

Remarks: Earlier this species was considered as *Eurema brigitta* (Stoll, 1780), but recent molecular studies reveal that *Eurema brigitta* belong to Afrotropical region, whereas the population is replaced by *Eurema drona* in the Oriental-Australian region (Irungbam et al. 2023).

Eurema laeta (Boisduval, 1836)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Eurema blanda (Boisduval, 1836)

Distribution: Kangra (van Gasse, 2018).

Eurema hecabe (Linnaeus, 1758) (Figure 43)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Eurema andersonii (Moore, 1886)

Distribution: Bhagsu Nag, Dharamshala (Anonymous, 2023-C2); Renuka Wildlife Sanctuary, Sirmour (Singh, 2008).

Colias ladakensis C. Felder & R. Felder, 1865

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Colias erate (Esper, 1805) (Figure 44)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Colias eogene C. Felder & R. Felder, 1865

Distribution: Himachal Pradesh (Talbot, 1939; Varshney & Smetacek, 2015; van Gasse, 2018; Sondhi & Kunte, 2018).

Colias stoliczkana Moore, 1878

Distribution: Himachal Pradesh (van Gasse, 2018).

Colias fieldii Menetries, 1855 (Figure 45)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

PAPILIONOIDAE

RIODINIDAE

NEMEOBIINAE

Hamearini

Zemeros flegyas (Cramer, [1780]) (Figure 46)

Distribution: Dharamshala (present study).

Dodona durga (Kollar, [1844]) (Figure 47)

Distribution: Himachal Pradesh (Moore, 1874; Evans, 1932; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Dodona dipoea nostia (Fruhstorfer, 1912) (Figure 48)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018); Shimla (present study).

Dodona eugenes Bates, [1868] (Figure 49)

Distribution: Himachal Pradesh (Moore, 1901; Varshney & Smetacek, 2015; Kehimkar, 2016).

Remarks: Fairly Common around Summerhill, Shimla.

Dodona egeon (Westwood, [1851])

Distribution: Kullu, Himachal Pradesh (Bingham, 1905; van Gasse, 2018).

Abisara fylla (Westwood, [1851])

Distribution: Himachal Pradesh, (Fruhstorfer, 1914; Uniyal, 2007).

Riodinini

Abisara bifasciata suffusa (Moore, 1882) (Figure 50)

Distribution: Kangra (van Gasse, 2018; Sondhi & Kunte, 2018).

PAPILIONOIDEA

LYCAENIDAE

PORITIINAE

Poritiini

Poritia hewitsoni (Moore, [1866])

Distribution: Himachal Pradesh (van Gasse, 2018).

Remarks: Only reported from district Sirmaur.

CURETINAE

Curetis bulis (Westwood, [1851])

Distribution: Shimla, (van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016).

Curetis acuta Moore, 1877 (Figure 51)

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

LYCAENINAE

Polyommataini

Prosotas nora ardates (Moore, 1875)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Prosotas dubiosa indica (Evans, 1926)

Distribution: Reported from Kangra and Mandi (present study).

Petrelaea dana (de Nicéville, [1884])

Distribution: Datar, District Solan (Anonymous, 2023-D).

Jamides bochus (Stoll, [1782]) (Figure 52)

Distribution: Himachal Pradesh (van Gasse, 2018).

Remarks: Fairly common in Kangra and Mandi.

Jamides celeno (Cramer, [1775])

Distribution: Kangra (van Gasse, 2018).

Remarks: Rare in Himachal Pradesh.

Catochrysops strabo (Fabricius, 1793) (Figure 53)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Lampides boeticus (Linnaeus, 1767)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Leptotes plinius (Fabricius, 1793)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Castalius rosimon (Fabricius, 1775) (Figure 54)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Tarucus balkanica nigra (Bethune-Baker, 1918)

Distribution: Kullu and Shimla (van Gasse, 2018).

Tarucus nara (Kollar, 1844)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Tarucus indica Evans, 1932

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Tarucus callinara Butler, 1886

Distribution: Himachal Pradesh (Evans, 1955; van Gasse, 2018).

Tarucus venosus Moore, 1882 (Figure 55)

Distribution: Himachal Pradesh (Evans, 1955; van Gasse, 2018).

Tarucus hazara Evans, 1932

Distribution: Dharamshala, Himachal Pradesh (Anonymous, 2023-D2).

Zizeeria karsandra (Moore, 1865)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Pseudozizeeria maha (Kollar, [1844])

Distribution: Himachal Pradesh (Moore, 1874; de Niceville, 1890; Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Zizina otis indica (Murray, 1874)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Remarks: Fairly Common in Sugnara, Pong Dam Lake Wildlife Sanctuary.

Zizula hylax (Fabricius, 1775)

Distribution: Kangra (van Gasse, 2018).

Remarks: Rare in Himachal Pradesh.

Everes argiades diporides (Chapman, 1909)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Everes huegelii (Gistel, 1857)

Distribution: Himachal Pradesh (Moore, 1874; Seitz, 1923; Evans, 1925; Varshney & Smetacek, 2015).

Everes lacturnus assamica (Tytler, 1915)

Distribution: Himachal Pradesh (van Gasse, 2018).

Talicauda nyseus (Guerin-Meneville, 1843)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Azanus ubaldus (Stoll, [1782])

Distribution: Kangra and Shimla, Himachal Pradesh (van Gasse, 2018).

Azanus uranus Butler, 1886

Distribution: Existence in Himachal Pradesh is expected; Recorded from Jammu and Kashmir (Sheikh et al. 2021); and also reported from Uttarakhand (Sondhi & Kunte, 2018); There is an unpublished photographic record from the Una region; so, this species is doubtful but expected to be found in Himachal Pradesh.

Neopithecops zalmora (Butler, [1870])

Distribution: Himachal Pradesh (van Gasse, 2018); Renuka Wildlife Sanctuary, Sirmour (Singh, 2008).

Megisba malaya sikkima (Moore, 1884) (Figure 56)

Distribution: Reported from Kangra and Mandi (present study); Himachal Pradesh (Anonymous, 2023-E).

Celastrina argiolus kollari (Westwod, 1852)

Distribution: Himachal Pradesh (Moore, 1874; de Niceville, 1890; Bingham, 1907; Varshney & Smetacek 2015).

Celastrina gigas (Hemming, 1928)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Celastrina huegelii (Moore, 1882)

Distribution: Himachal Pradesh (Wynter-Blyth, 1957; Varshney & Smetacek 2015; Kehimkar, 2016; van Gasse, 2018).

Celastrina lavendularis limbata (Moore, 1879) (Figure 57)

Distribution: Kullu, Himachal Pradesh (van Gasse, 2018); Chamba (present study).

Celatoxia marginata (de Nicéville, [1884]) (Figure 58)

Distribution: Shimla, Mandi, and Kullu (present study); Himachal Pradesh (Anonymous, 2023-E2).

Acytolepis puspa gisca (Fruhstorfer, 1910)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Oreolyce vardhana (Moore, [1875])

Distribution: Himachal Pradesh (Evans, 1927; Wynter-Blyth, 1957; van Gasse, 2018).

Udara dilecta (Moore, 1879)

Distribution: Himachal Pradesh (van Gasse, 2018).

Udara albocaerulea (Moore, 1879)

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Pseudophilotes vicrama cashmirensis (Moore, 1874)

Distribution: Chamba to Kinnaur (van Gasse, 2018).

Euchrysops cnejus (Fabricius, 1798)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Polyommatus icarus chitralensis (Swinhoe, 1910)

Distribution: Chamba, Lahaul-Spiti, and Kinnaur (van Gasse, 2018).

Polyommatus pseuderos Moore, 1879

Distribution: Mandi, Kullu, and Shimla (van Gasse, 2018); Himachal Pradesh Sondhi & Kunte, 2018).

Polyommatus ariana Moore, 1865 (Figures 59)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Polyommatus stoliczkanus (C. Felder, [1865])

Distribution: Lahaul and Spiti (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Polyommatus dux Riley, 1926

Distribution: Kullu and Simla (van Gasse, 2018).

Polyommatus florenCIAE (Tytler, 1926)

Distribution: Chamba, Lahaul and Spiti, and Kinnaur (van Gasse, 2018).

Agriades jaloka ellisi (Moore, 1875)

Distribution: Himachal Pradesh (east to Kinnaur) (Evans, 1927; van Gasse, 2018).

Agriades lehanus (Moore, 1878)

Distribution: Himachal Pradesh (van Gasse, 2018).

Aricia agestis nazira (Moore, 1865) (Figure 60)

Distribution: Himachal Pradesh (de Niceville, 1890; Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Pamiria omphisa (Moore, [1875])

Distribution: Chamba, Lahaul-Spiti, and Kullu (van Gasse, 2018).

Pamiria metallica (C. Felder & R. Felder, [1865])

Distribution: Chamba to Kinnaur (van Gasse, 2018); Kokhsar, Himachal Pradesh (Anonymous, 2023-F).

Pamiria chrysopsis (Grum-Grshimailo, 1888)

Distribution: Kelong, Lahaul-Spiti (Anonymous, 2023-F2).

Pamiria galathea (Blanchard, [1844])

Distribution: Himachal Pradesh (Blanchard, 1844; van Gasse, 2018); Pin Valley National Park, Lahaul-Spiti (Anonymous, 2023-G).

Freyeria trochylus (Freyer, 1845)

Distribution: Shimla, Solan, and Sirmaur (van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Freyeria putli (Kollar, [1844])

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Luthrodes pandava (Horsefield, [1829])

Distribution: Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Chilades lajus (Stoll, [1780])

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Chilades parrhasius (Fabricius, 1793)

Distribution: Shimla (Wynter-Blyth, 1957; van Gasse, 2018).

Anthene emolus (Godart, 1824) (Figure 61)

Distribution: An old record from Kullu (van Gasse, 2018); Recently seen in Solan (present study).

Lycaenini

Lycaena panava (Kollar, 1844) (Figure 62)

Distribution: Himachal Pradesh (Evans, 1932; Wynter-Blyth, 1957; van Gasse, 2018).

Lycaena phlaeas flavens (Ford, 1924)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Lycaena kasyapa (Moore, 1865)

Distribution: Shimla (de Rhe-Philipe, 1931); Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018).

Remarks: Commonly seen in district Chamba.

Heliophorus sena (Kollar, [1844])

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Heliophorus bakeri Evans, 1927

Distribution: Himachal Pradesh (van Gasse, 2018); Dalhousie, district Chamba (Anonymous, 2023-G2).

Heliophorus oda (Hewitson, 1865)

Distribution: Kangra and Chamba (van Gasse, 2018); Himachal Pradesh; (Kehimkar, 2016; Sondhi & Kunte, 2018).

Heliophorus moorei coruscans (Moore, 1882) (Figure 63)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Heliophorus epicles (Godart, [1824])

Distribution: Shimla Water Catchment Wildlife Sanctuary (Kumar et al. 2023).

Remarks: No photographic record of the species provided in the study. Sondhi & Kunte, (2018) mention the distribution of *H. epicles* from Uttarakhand to East Himalayas but not from Himachal Pradesh. This record needs verification.

Heliophorus androcle (Westwood, 1851)

Distribution: Sirmaur, on the way to Churdhar Peak (Sidhu & Sharma, 2021); Sangla Valley, Kinnaur (Sidhu, 2023).

Remarks: Sidhu & Sharma (2021) described the distribution of *Heliophorus androcle* from Sirmaur based on the specimen collected dated 20-VI-2009. As per the species distribution given in Varshney & Smetacek (2015) and van Gasse (2018), *H. androcle* is restricted to the Eastern Himalayas and has never been reported from the Western Himalayas. Sondhi & Kunte (2018) did not report this species from Uttarakhand. This record is probably misidentified or confused with *Heliophorus tamu* (Kollar, 1844) the Powdery Green Sapphire, which is found in the Western Himalayas and is expected to be found in Himachal Pradesh.

Aphnaeini

Cigaritis lilacinus (Moore, 1884)

Distribution: Solan (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Cigaritis vulcanus (Fabricius, 1775) (Figure 64)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Cigaritis schistacea (Moore, [1881])

Distribution: Balh Valley, Mandi (Kumar et al. 2020).

Remarks: The picture provided in the study does not clearly suggest that the species is *Cigaritis schistacea*. Probably a case of misidentification, the record needs verification].

Cigaritis ictis (Hewitson, 1865)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Cigaritis elima uniformis (Moore, 1882)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Cigaritis nipalicus (Moore, 1884) (Figure 65)

Distribution: West to Solan and Kullu (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Cigaritis lohita (Horsfield, [1829])

Distribution: Mandi, Kullu, and Shimla (present study).

Remarks: The species given under the genus *Cigaritis* are sometimes also mentioned under the genus *Spindasis* and *Apharitis*.

Theclini

Chaetoprocta odata (Hewitson, 1865)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Euaspa milionia (Hewitson, [1869])

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Euaspa ziha (Hewitson, [1865]) (Figure 66)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018); Summerhill, Shimla (present study).

Esakiozephyrus icana (Moore, [1875])

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018);

Remarks: Commonly seen in district Kullu.

Esakiozephyrus mandara (Doherty, 1886)

Distribution: Himachal Pradesh (Kullu and Simla) (van Gasse, 2018).

Esakiozephyrus bieti (Oberthür, 1886)

Distribution: Kullu (Evans, 1927); Himachal Pradesh (Kehimkar, 2016).

Remarks: *bieti* is now treated as an extralimital subspecies of *Esakiozephyrus mandara*, or sometimes as a separate extralimital species (van Gasse, 2018)].

Esakiozephyrus dohertyi (de Niceville, 1889)

Distribution: Himachal Pradesh (Sondhi & Kunte, 2018).

Chrysozephyrus birupa Moore, 1877

Distribution: Kangra and Chamba (van Gasse, 2018), Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Remarks: More commonly seen in Shimla and Mandi.

Chrysozephyrus syla (Kollar, [1844]) (Figure 67)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Thermozephyrus ataxus (Westwood, [1851])

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Superflua deria (Moore, 1865)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Remarks: Mostly seen in Sissu, Udaipur, and Keylong regions of district Lahul-Spiti; Synonym: *Satyrium deria*.

Arhopala atrax (Hewitson, 1862)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Arhopala amantes apella (Swinhoe, 1886)

Distribution: Sirmaur, Himachal Pradesh (van Gasse, 2018).

Remarks: Also seen in district Kangra.

Arhopala rama (Kollar, [1844])

Distribution: Himachal Pradesh (Wynter-Blyth, 1957; Sondhi & Kunte, 2018).

Arhopala dodonaea (Moore, [1858])

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Arhopala ganesa (Moore, [1858])

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Surendra quercetorum (Moore, 1858) (Figure 68)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Iraota timoleon (Stoll, [1790])

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Catapaecilma major Druce, 1895

Distribution: Ner Chawk, Mandi (Kumar et al. 2020).

Loxura atymnus (Stoll, 1780)

Distribution: Kangra (van Gasse, 2018).

Horaga onyx (Moore, [1858])

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Horaga albimacula Moore, 1882 (Figure 69)

Distribution: Kangra (van Gasse, 2018), also reported from Mandi (present study).

Pratapa icetas (Hewitson, 1865)

Distribution: Kangra (Evans, 1927; van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016); McLeod Ganj, Dharamshala (Anonymous, 2023-H).

Pratapa deva lila (Moore, 1884)

Distribution: Himachal Pradesh (Kehimkar, 2016); Dharamshala, district Kangra (Sondhi, 2020).
Remarks: Recently reported from district Mandi.

Tajuria yajna (Doherty, 1886)

Distribution: Only reported from district Mandi (Unpublished record).

Tajuria diaeus (Hewitson, [1865])

Distribution: Shimla, Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Tajuria jehana Moore, [1884] (Figure 70)

Distribution: Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018); Dehra, district Kangra (present study).

Tajuria cippus (Fabricius, 1798)

Distribution: Himachal Pradesh (van Gasse, 2018); reported from Kangra and Mandi (present study).

Tajuria illurgioides de Nicéville, 1890

Distribution: Shimla, Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Creon cleobis (Godart, [1824])

Distribution: West to Solan and Shimla (van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016).

Deudorix epijarbas ancus (Fruhstorfer, 1912)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Virachola isocrates (Fabricius, 1793)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Virachola perse (Hewitson, [1863])

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Sinthusia chandrana (Moore, 1882)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Sinthusia nasaka (Horsfield, [1829])

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Rapala varuna (Horsfield, [1829])

Distribution: Kangra (Evans, 1927; van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016); Datar, Solan (Anonymous, 2023-H2).

Rapala manea schistacea (Moore, 1879)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018).

Rapala iarbus sorya (Kollar, 1844)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Rapala nissa (Kollar, [1844])

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Rapala selira (Moore, 1874)

Distribution: Himachal Pradesh (Evans, 1927; Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Remarks: Most commonly seen in district Kullu.

Rapala extensa Evans, 1926

Distribution: Spiti in district Lahaul-Spiti (Evans, 1927; van Gasse, 2018).

PAPILIONOIDAE

NYMPHALIDAE

SATYRINAE

Melanitis leda (Linnaeus, 1758)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018).

Melanitis phedima galkissa (Fruhstorfer, 1911)

Distribution: Himachal Pradesh (Evans, 1932; Talbot, 1947), Shimla (van Gasse, 2018).

Remarks: Fairly common in District Mandi and Kullu.

Melanitis zitenius (Herbst, 1796)

Distribution: Shimla, Himachal Pradesh (van Gasse, 2018).

Elymnias hypermnestra undularis (Drury, 1773)

Distribution: Himachal Pradesh (van Gasse, 2018).

Remarks: Mostly seen in district Sirmour and district Solan. Recently seen in district Kangra.

Lethe sidonis (Hewitson, 1863)

Distribution: Kangra and Chamba, Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Lethe kanjupkula Tytler, 1914

Distribution: Daranghati Wildlife Sanctuary, Shimla (Anonymous, 2023-I).

Remarks: Only one photographic record from the Western Himalayas. Varshney & Smetacek (2015) and van Gasse (2018) mention its distribution only in the North-east Indian states. Sondhi & Kunte (2018) do not mention this species from Uttarakhand. This record needs verification.

Lethe maitrya de Nicéville, [1881]

Distribution: Shimla (Evans, 1927); Kangra and Chamba (van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Lethe nicetas (Hewitson, 1863) (Figure 71)

Distribution: Kangra (Bingham, 1905; Evans, 1927; van Gasse, 2018); McLeod Ganj, Dharamshala (Anonymous, 2023-I2).

Remarks: Commonly seen in Shikari Devi Wildlife Sanctuary, Mandi.

Lethe jalaurida (de Nicéville, [1881])

Distribution: Kangra and Chamba (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Lethe goalpara (Moore, [1866])

Distribution: Kullu and Shimla (Evans, 1927; van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Lethe confusa Aurivillius, [1898]

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Lethe europa niladana (Fruhstorfer, 1911)

Distribution: Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Lethe rohria (Fabricius, 1787)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Lethe isana (Kollar, [1844]) (Figure 72)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Lethe verma (Kollar, [1844]) (Figure 73)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Neope pulaha (Moore, [1858])

Distribution: West to Chamba, Himachal Pradesh (Bingham, 1905; Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018).

Neope yama (Moore, [1858])

Distribution: Shimla and Kullu; (van Gasse, 2018); Himachal Pradesh (Bingham, 1905; Sondhi & Kunte, 2018).

Lasiommata menava Moore, 1865

Distribution: Chamba, Lahaul and Spiti, and Kinnaur (van Gasse, 2018).

Lasiommata schakra (Kollar, [1844])

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Lasiommata maerula C. Felder & R. Felder, [1867]

Distribution: Himachal Pradesh (Talbot, 1947; Varshney & Smetacek, 2015; van Gasse, 2018).

Kirinia eversmanni cashmirensis (Moore, 1874)

Distribution: Pangi Valley in Chamba (Bingham, 1905; van Gasse, 2018).

Rhaphicera moorei (Butler, 1867) (Figure 74)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Remarks: Common in Mahasu region of district Shimla and Kareri of district Kangra.

Orinoma damaris Gray, 1846

Distribution: Kangra (Evans, 1927; van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Mycalesis francisca sanatana (Moore, 1858)

Distribution: Kullu, Himachal Pradesh (Uniyal, 2007; van Gasse, 2018).

Mycalesis perseus blasius (Fabricius, 1798)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Mycalesis mineus (Linnaeus, 1753)

Distribution: Kangra and Chamba (van Gasse, 2018); Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Mycalesis visala Moore [1858] (Figure 75)

Distribution: Kangra (present study).

Mycalesis lepcha (Moore, 1880)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018); Majathal Wildlife Sanctuary (Bhardwaj et al. 2023).

Ypthimina

Ypthima inica Hewitson, [1865]

Distribution: Sirmaur, Himachal Pradesh (van Gasse, 2018).

Ypthima nareda Kollar, [1844]

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Ypthima asterope mahratta (Moore, 1884)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Ypthima huebneri Kirby, 1871

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Ypthima kasmira Moore, 1884

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Ypthima singala R. Felder, 1868

Distribution: West to Bilaspur (van Gasse, 2018).

Ypthima lisandra (Cramer, [1780])

Distribution: Himachal Pradesh (van Gasse, 2018).

Remarks: Given as *Y. avanta* in Evans, 1932, but now considered a different species.

Ypthima avanta Moore, [1875] (Figure 76)

Distribution: Hamirpur (Anonymous, 2023-J); Kangra (present study).

Remarks: Earlier considered as subspecies of *Ypthima lisandra*.

Ypthima indecora Moore, 1882

Distribution: Himachal Pradesh (Evans, 1932; van Gasse, 2018).

Ypthima baldus (Fabricius, 1775)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Ypthima nikaia Moore, [1875] (Figure 77)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Ypthima sakra Moore, [1858]

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Ypthima hannyingtoni Eliot, 1967 (Figure 78)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018); Mandi (present study).

Ypthima sarkaghatensis (Rose & Sharma, 1999)

Distribution: Reported from Mandi district of Himachal Pradesh (Rose & Sharma, 1999).

Ypthima newara Moore, [1875]

Distribution: Tissa, Chamba, Dharamshala and Shimla, Rampur (Sidhu et al. 2021).

Ypthima uemurai (Rose & Sharma, 1999)

Distribution: Kullu, Shimla and Solan (Sidhu et al. 2021).

Remarks: This species is not included in the Checklist of butterflies of India (Varshney & Smetacek, 2015; van Gasse, 2018). The species needs verification.

Ypthima hyagriva (Moore, [1858])

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Paralasa mani (de Nicéville, [1881])

Distribution: Lahaul and Spiti (Talbot, 1947; van Gasse, 2018).

Paralasa kalinda (Moore, 1865)

Distribution: Himachal Pradesh (Evans, 1932; van Gasse, 2018).

Paralasa shallada (Lang, 1881)

Distribution: Himachal Pradesh (Evans, 1932; Talbot, 1947; Varshney & Smetacek, 2015).

Callerebia nirmala (Moore, 1865)

Distribution: ssp. *scandina*: Kinnaur; ssp. *nirmala*: Kangra and Chamba (van Gasse, 2018).

Callerebia scanda (Kollar, [1844])

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Callerebia hybrida Butler, 1880

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Callerebia annada caeca (Watkins, 1925)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Maniolina

Hyponephele cheena (Moore, 1865)

Distribution: Chamba to Kinnaur (van Gasse, 2018); Tandi, Lahaul-Spiti (Anonymous, 2023-J2).

Hyponephele pulchella (C. & R. Felder, [1867])

Distribution: Lahaul and Spiti and Kinnaur (Evans, 1932; Talbot, 1947; van Gasse, 2018).

Hyponephele pulchra (C. Felder & R. Felder, [1867])

Distribution: Chamba, Lahaul-Spiti, Kullu, and Kinnaur (Varshney & Smetacek, 2015; van Gasse, 2018).

Hyponephele tenuistigma (Moore, [1896])

Distribution: Himachal Pradesh (Kehimkar, 2016).

Hyponephele davendra (Moore, 1865)

Distribution: Chamba, Lahaul-Spiti, and Kinnaur (van Gasse, 2018); Pin Valley National Park (Anonymous, 2023-K).

Satyrina

Aulocera brahminus (Blanchard, 1853)

Distribution: Himachal Pradesh (Tshikolovets, 2005; Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Aulocera padma (Kollar, [1844]) (Figure 79)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Aulocera swaha (Kollar, [1844]) (Fruhstorfer, 1911)

Distribution: Himachal Pradesh (Evans, 1927; Talbot 1947; Kehimkar, 2016; van Gasse, 2018).

Aulocera saraswati (Kollar, [1844])

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Hipparchia parisatis shiva (Le Cerf, 1913)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Pseudochazara baldiva (Moore, 1865) (Figure 80)

Distribution: Lahaul and Spiti and Kinnaur (Moore, 1865; Talbot, 1947; van Gasse, 2018).

Remarks: Recently described from Spiti Valley and Pin Valley National Park (present study). The species is given as *Eumenis mniszechii* in Evans (1932) and as *Hipparchia mniszechii* in Talbot (1947), later placed in the genus *Pseudochazara* by de Lesse, 1951 (van Gasse, 2018).

Pseudochazara thelephassa (Geyer, 1827)

Distribution: Described from Sangnam, Hikkim, Kaza, and many other parts of Spiti Valley based on the material examined (Sidhu & Sharma, 2021).

Remarks: van Gasse (2018) mentioned the distribution of *thelephassa* from NWFP through Waziristan to Safed Koh. Moreover, *Pseudochazara baldiva* predominantly occurs in the Spiti and Pin Valley. Hence the record of *Pseudochazara thelephassa* from Himachal Pradesh needs verification.

Karanasa modesta gemina Avinoff & Sweadner, 1951

Distribution: Lahaul and Spiti (Avinoff & Sweadner, 1951; van Gasse, 2018).

Karanasa huebneri (C. Felder & R. Felder, [1867])

Distribution: East to Lahaul and Spiti (Avinoff & Sweadner, 1951; van Gasse, 2018).

Karanasa rohtanga Avinoff & Sweadner, 1951

Distribution: Rohtang Pass in Lahaul-Spiti (Avinoff & Sweadner, 1951; van Gasse, 2018).

Karanasa cadesia (Moore, [1875])

Distribution: Felder describes this species from Lahaul (Avinoff & Sweadner, 1951).

Remarks: Treated as a synonym of *K. huebneri* (Evans, 1932). Staudinger also placed *cadesia* as a synonym of *huebneri* without having seen a specimen. Avinoff & Sweadner (1951) suggest that *cadesia* probably should be merged as a synonym of *huebneri* because the specimens described as *cadesia* belong to the typical *huebneri* form.

Paroeneis pumilus (C. Felder & R. Felder, [1867])

Distribution: Himachal Pradesh (Sondhi & Kunte, 2018).

Remarks: Only seen in district Lahaul-Spiti.

CALINAGINAE

Calinaga buddha Moore, [1858]

Distribution: Dalhousie (Bingham, 1905); Himachal Pradesh (Varshney & Smetacek, 2018; van Gasse, 2015); Kullu (Anonymous, 2023-K2).

DANAINAE

Parantica aglea melanoides (Moore, 1883)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Parantica sita (Kollar, [1844]) (Figure 81)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Parantica melaneus plataniston (Fruhstorfer, 1910)

Distribution: Reported from Jammu-Kashmir (Sheikh et al. 2021); and from Uttarakhand as well (Sondhi & Kunte, 2018); an unpublished photographic record from Shimla region; so, doubtful but expected to be found in Himachal Pradesh.

Tirumala limniace exotica (Gmelin, 1790)

Distribution: Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Tirumala septentrionis (Butler, 1874) (Figure 82)

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Remarks: Commonly seen in Khaniyara Valley, Dharamshala.

Danaus genutia (Cramer, [1779])

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Danaus chrysippus (Linnaeus, 1758)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Euploea mulciber (Cramer, [1777])

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Euploea core (Cramer, [1780])

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Euploea midamus rogenhoferi (C. Ferder & R. Felder, 1865)

Distribution: Shimla (Wynter-Blyth, 1957); Himachal Pradesh (Kehimkar, 2016).

NYMPHALINAE

Biblidini

Ariadne ariadne (Linnaeus, 1763)

Distribution: Sirmaur, Himachal Pradesh (van Gasse, 2018).

Ariadne merione tapestrina (Moore, 1884)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Argynnina

Argynnis hyperbius (Linnaeus, 1763) (Figure 83)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016).

Argynnis childreni sakontala (Kollar, 1848) (Figure 84)

Distribution: Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Remarks: Commonly seen in District Shimla.

Argynnis kamala [Moore, 1858]

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Argynnis jainadeva (Moore, 1864) (Figure 85)

Distribution: Lahaul-Spiti (Tshikolovets, 2005); Himachal Pradesh (Fruhstorfer, 1912; Sondhi & Kunte, 2018).

Remarks: Fairly Common in Kelang, Kaza, and Kibber Wildlife Sanctuary.

Argynnis clara Blanchard, [1844]

Distribution: Kinnaur (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Remarks: Recently reported from Rakcham Chitkul Wildlife Sanctuary, Kinnaur.

Issoria issaea (Doherty, 1886)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Issoria eugenia (Eversmann 1847)

Distribution: Kinnaur (Bingham, 1905; van Gasse, 2018).

Issoria mackinnonii (de Niceville, 1891)

Distribution: Bushair, Shimla (de Niceville, 1891); Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Boloria sipora (Moore, [1875])

Distribution: Himachal Pradesh (Bingham, 1905; Varshney & Smetacek, 2015; van Gasse, 2018).

Remarks: Given as *Argynnis pales* in Evans, (1927) and Evans, (1932).

Heliconiini

Phalanta phalantha (Drury, [1773])

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Phalanta alcippe (Stoll, [1782])

Distribution: Recorded from Simbalbara National Park in Sirmaur district but the record requires confirmation (van Gasse, 2018).

Cupha erymanthis (Drury, [1773])

Distribution: Sirmaur (van Gasse, 2018).

Remarks: Fairly Common in district Mandi and district Sirmaur.

Vagrans egista sinha (Kollar, 1844)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Nymphalini
Melitaeina

Melitaea arcesia sindura (Moore, 1865)

Distribution: West to Chamba (van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Nymphalina

Symbrenthia lilaea khasiana (Moore, 1875)

Distribution: Himachal Pradesh (Moore, 1874; Kehimkar, 2016; Sondhi & Kunte, 2018).

Symbrenthia hypselis (Godart, [1824])

Distribution: Himachal Pradesh (Sondhi & Kunte, 2018).

Symbrenthia niphanda hysudra (Moore, 1874) (Figure 87)

Distribution: Himachal Pradesh (Evans, 1932; Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Symbrenthia brabira Moore, 1872

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016; Sondhi & Kunte, 2018).

Nymphalis xanthomelas ferveescens (Stichel, 1908)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016).

Aglais ladakensis (Moore, 1878) (Figure 88)

Distribution: Himachal Pradesh (van Gasse, 2018).

Remarks: Fairly Common around Langza region near Kaza, Lahaul-Spiti district.

Aglais rizana (Moore, 1872)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; van Gasse, 2018).

Aglais caschmirensis aesis (Fruhstorfer, 1912)

Distribution: Shimla (van Gasse, 2018); Dharamshala (Garlani, 2023); Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Kaniska canace (Linnaeus, 1763)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Polygonia c-album kashmira (Evans, 1932) (Figure 89)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Vanessa cardui (Linnaeus, 1758)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Vanessa indica (Herbst, 1794)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016).

Junonia hierta (Fabricius, 1798)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016).

Junonia lemonias persicaria (Fruhstorfer, 1912)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Junonia atlites (Linnaeus, 1763)

Distribution: Kangra and Chamba (van Gasse, 2018); Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Junonia orithya swinhoei (Butler, 1885)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Junonia almana (Linnaeus, 1758) (Figure 90)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016).

Junonia iphita siccata (Fruhstorfer, 1900)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Hypolimnina

Hypolimnas bolina jacintha (Drury, 1773)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015).

Hypolimnas misippus (Linnaeus, 1764)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016).

Kallima inachus (Doyère, [1840])

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Marpesiini

Cyrestis thyodamas ganescha Kollar, 1848

Distribution: Himachal Pradesh (Moore, 1874; Wynter-Blyth, 1957; Varshney & Smetacek, 2015; Kehimkar, 2016).

Limenitidini

Neptis hylas kamarupa (Moore, 1875)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Neptis sappho astola (Moore, 1872)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016).

Neptis clinia praedicta Smetacek, 2011 (Figure 91)

Distribution: Kangra, Chamba, Mandi, and Kullu (present study).

Neptis soma butleri (Eliot, 1969)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Neptis nata yerburii (Butler, 1886) (Figure 92)

Distribution: Himachal Pradesh (Moore, 1898; Evans, 1924; Peile, 1937; Wynter-Blyth, 1957); Kangra (present study).

Neptis mahendra Moore, 1872

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Neptis jumbah Moore, [1858]

Distribution: Existence in Himachal Pradesh is expected; Recorded from Kashmir (Moore, 1874; Sheikh et al. 2021); and also reported from Uttarakhand (van Gasse, 2018; Sondhi & Kunte, 2018); doubtful but expected to be found in Himachal Pradesh due to its geographical location.

Neptis sankara (Kollar, [1844]) (Figure 93)

Distribution: Himachal Pradesh (Moore, 1899; Bingham, 1905; Fruhstorfer, 1912; Evans, 1932).

Neptis ananta Moore, [1858] (Figure 94)

Distribution: Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Remarks: Common in Barot Valley.

Neptis zaida Doubleday, [1848]

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Neptis narayana Moore, 1858

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016); Dal Lake, McLeodganj (Anonymous, 2023-L).

Phaedyma columella (Cramer, [1780])

Distribution: Solan, Himachal Pradesh (Anonymous, 2023-L2).

Pantoporia hordonia (Stoll, [1790]) (Figure 95)

Distribution: Sirmaur (van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Limnitiidina

Athyma perius (Linnaeus, 1758)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Athyma asura Moore, [1858] (Figure 96)

Distribution: Kangra and Chamba (van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016); Dharamshala (present study).

Athyma opalina (Kollar, [1844])

Distribution: Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Athyma selenophora (Kollar, [1844])

Distribution: Shimla (van Gasse, 2018); Himachal Pradesh (Kehimkar, 2016; Sondhi & Kunte, 2018).

Athyma cama Moore, [1858]

Distribution: Sirmaur (van Gasse, 2018).

Limenitis trivena Moore, 1864

Distribution: West to Kullu (van Gasse, 2018); Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016); Dalhousie (Anonymous, 2023-M).

Remarks: Commonly seen in Great Himalayan National Park.

Limenitis ligyes Hewitson, 1864

Distribution: Only reported from Roghi, Kinnaur (Anonymous, 2023-M2).

Moduza procris (Cramer, [1777]) (Figure 97)

Distribution: Sirmaur (van Gasse, 2018), Himachal Pradesh (Sondhi & Kunte, 2018); Kangra (present study).

Auzakia danava (Moore, [1858]) (Figure 98)

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015); Shimla (present study).

Adoliadina

Tanaecia lepidea (Butler, 1868)

Distribution: Sirmaur (Singh, 2008; van Gasse, 2018).

Symphaedra nais (Forster, 1771)

Distribution: Kangra (van Gasse, 2018).

Remarks: Commonly seen in district Sirmaur.

Euthalia aconthea (Cramer, [1777])

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Euthalia lubentina (Cramer, [1777])

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Remarks: Fairly common in district Sirmaur.

Euthalia patala (Kollar, [1844]) (Figure 99)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018); McLeod Ganj, Dharamshala (present study).

Pseudergolini

Pseudergolis wedah (Kollar, [1844]) (Figure 100)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Stibochiona nicea (Gray, 1846)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018).

Dichorragia nesimachus (Doyère, [1840])

Distribution: West to Kullu and Mandi (van Gasse, 2018); Himachal Pradesh (Bingham, 1905; Kehimkar, 2016).

Apaturini

Mimathyma ambica (Kollar, [1844])

Distribution: Himachal Pradesh (Moore, 1874; Kehimkar, 2016; van Gasse, 2018).

Dilipa morgiana (Westwood, [1851]) (Figure 101)

Distribution: Himachal Pradesh (Moore, 1874; Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Remarks: Fairly Common in Shimla town.

Sephisa dichroa (Kollar, [1844]) (Figure 102)

Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Hestina persimilis zella (Butler, 1869)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Hestina nicevillei (Moore, [1895])

Distribution: Chamba and Shimla (van Gasse, 2018); Daranghati Wildlife Sanctuary, district Shimla (Anonymous, 2023-N).

Hestinalis nama (Doubleday, 1844)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Remarks: Commonly seen in district Solan and Shimla.

Euripus consimilis (Westwood, [1851])

Distribution: Existence in Himachal Pradesh is expected; Recorded from Kashmir (Moore, 1874; Sheikh et al. 2021); and also reported from Uttarakhand (van Gasse, 2018; Sondhi & Kunte, 2018); so, doubtful but expected to be found in Himachal Pradesh due to its geographical location.

CHARAXINAE

Charaxini

Remarks: Genus *Charaxes* is sometimes also referred to as Genus *Polyura*.

Charaxes bharata C. Felder & R. Felder, [1867]

Distribution: Himachal Pradesh (Moore, 1874; Varshney & Smetacek, 2015; Kehimkar, 2016).

Remarks: The species was earlier known as *Charaxes athamas* (Drury, 1770). Recent molecular studies suggest that *athamas* and *bharata* are two different species (Toussaint et al. 2015).

Charaxes agraria Swinhoe, [1887] (Figure 103)

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Charaxes dolon Westwood, [1848]

Distribution: Kullu (Evans, 1927); Himachal Pradesh (van Gasse, 2018; Sondhi & Kunte, 2018).

Remarks: Recently reported from Shimla Water Catchment Wildlife Sanctuary (unpublished record).

Charaxes bernardus (Fabricius, 1793) (Figure 104)

Distribution: Mandi and Dharamshala (present study).

Charaxes solon (Fabricius, 1793)

Distribution: Kangra (van Gasse, 2018); Himachal Pradesh (Sondhi & Kunte, 2018).

Remarks: Mostly seen in district Sirmaur but also reported from district Mandi.

ACRAEINAE

Acraea issoria (Hübner, [1819])

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Acraea terpsicore (Fabricius, 1793)

Distribution: Shimla and Sirmaur (van Gasse, 2018).

LIBYTHEINAE

Libythea lepita Moore, [1858]

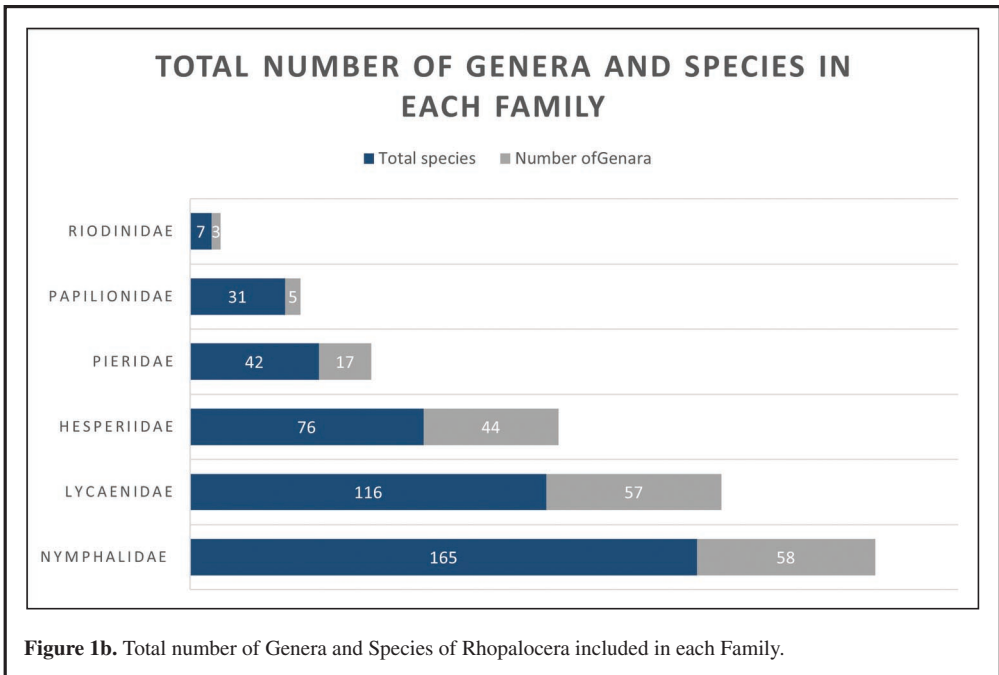
Distribution: Himachal Pradesh (Varshney & Smetacek, 2015; Kehimkar, 2016).

Libythea myrrha Godart, 1819

Distribution: Himachal Pradesh (Kehimkar, 2016; van Gasse, 2018; Sondhi & Kunte, 2018).

Discussions

This checklist provides a complete account of all the species ever recorded in Himachal Pradesh with relevant references for every species provided. Some of the records that are new for the state but missing in the old literature have been added to the checklist. Similarly, some records were in the old literature but missing in recent publications, Varshney & Smetacek, (2015) and van Gasse, (2018), are also included in this checklist.



Nymphalidae is the largest family of Rhopalocera in Himachal Pradesh comprising 165 species belonging to 58 genera, followed by Lycaenidae with 116 species under 57 genera. Riodinidae is the smallest family with only 7 species belonging to 3 genera. Moreover, 10 species have been described for the first time from Himachal Pradesh in this checklist.

In several recent scientific reports and checklists covering the area of Himachal Pradesh, many species have been misidentified or their existence in Himachal Pradesh is doubtful as there is no photographic or specimen evidence provided in those research papers. Moreover, some of the North-east Indian and Southern species have been mentioned from Himachal Pradesh which suggests a clear case of misidentification.

Bingham (1905) reported *Stibochiona coresia* (Hübner, 1826) from the Kullu region. There is no recent published record of this species from the Indian region. Neither is included in the "Checklist of Rhopalocera of India" by Varshney & Smetacek, (2015) and van Gasse, (2018). Possibly misidentified. The record needs verification.

Chandel et al. (2014) reported *Abisara echerius* (Stoll, [1790]) from Kangra and Hamirpur. As per Kunte et al. (2023), *A. echerius* is restricted to Southern India while the species found in the Western Himalayas is *A. bifasciata*.

Gangotia & Kumar (2018) reported *Tanaecia jahnu* (Moore, [1858]) from Chail Wildlife Sanctuary. This species is restricted to the Eastern Himalayas (van Gasse, 2018). A definite case of misidentification.

Kumar (2021) reported *Pseudocoladenia dan* (Fabricius, 1787) from Himachal Pradesh. A possible case of misidentification as all the specimens studied from Himachal Pradesh belong to the *Pseudocoladenia faithi*.

Kumar et al. (2023) reported some Rhopalocera species of Eastern Himalayas and Nepal from the Shimla Water Catchment area. Moreover, no photographic evidence is provided in the research. These species include *Celaenorrhinus aurivittatus* (Moore 1878); *Neozephyrus duma* (Hewitson, 1869); *Prosotus bhutea* (de Nicéville, 1884); *Athyma jina* (Moore, 1858); *Lethe naga* (Doherty, 1889). Most of these records were also reported from Chail Wildlife Sanctuary, Shimla (Gangotia & Kumar; 2018). All these species are misidentified records from Himachal Pradesh.

Uniyal (2007) reported some southern Indian and East Himalayan species from the Great Himalayan Conservation Landscape (Kullu and Kinnaur). No photographic/specimen records were provided in the study hence the following records are misidentified/ doubtful; *Pieris dubernardi chumbiensis* (de Nicéville, 1897); *Vindula erota* (Fabricius, 1793).

However, there is a record of *Iolana gigantea* (Grum-Grshimailo, 1885) from Kurith near Tabo Village, Lahul-Spiti (Anonymous, 2023-N2). This record needs verification as the genus *Iolana* has never been reported from Himachal Pradesh. The species was seen near its host plant i.e. *Colutea* sp. (Bladder sena). Further field studies of the mentioned area are required to confirm the status of species and its distribution range.

Some of the species that occur in the adjoining states of Uttarakhand, Punjab, and in the UTs of Jammu & Kashmir and Ladakh are also expected to be found in Himachal Pradesh in the future. These species include: *Burara anadi* (de Nicéville, 1884), *Carterocephalus avanti* (de Nicéville, 1886), *Baoris pagana* (de Nicéville, 1887), *Caltois plebeia* (de Nicéville, 1887), *Celaenorrhinus patula* (de Nicéville, 1889), *Heliophorus brahma* (Moore, 1858), *Heliophorus tamu* (Kollar, 1844), *Spalgis epius* (Westwood, 1851), *Hypolycaena othona* (Hewitson, 1865), *Hypolycaena kina* (Hewitson, 1869), *Rapala pheretima* (Hewitson, 1863), *Neptis melba* (Evans, 1912), *Elymnias malelas* (Hewitson, 1863), *Aulocera loha* (Doherty, 1886), *Argynnis aglaja vitatha* (Moore, 1875), *Lethe baladeva* (Moore, 1866).

Conclusion

It is expected that the present list containing 437 species will grow in the future if more extensive field surveys are carried out in remote and high-altitude areas of Himachal Pradesh as many parts of

Himachal Pradesh are still unexplored. This checklist will serve the purpose of baseline reference for future studies related to Rhopalocera of Himachal Pradesh. It will help the researchers to understand the diversity and distribution of species. Though, all care has been given while compiling this checklist the chances of human error cannot be ruled out.

Acknowledgments

The author would like to thank Himachal Pradesh State Forest Department for providing permits to conduct the studies in the state. The author acknowledges the cooperation offered by local people and communities during the research period. It took more than ten months to compile this checklist, which could not have been possible without the immense support of my parents, teachers, and friends.

References

- Ackery, P. R. (1975) A Guide to the genera and species of Parnassiinae (Lepidoptera: Papilionidae). *Bulletin of the British Museum Natural History*, 31, 71-105. <https://doi.org/10.5962/bhl.part.29484>
- Anonymous (2023). *Celaenorrhinus pero* de Nicéville, 1889 - Yellow-bordered Spotted Flat. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/celaenorrhinus-pero>.
- Anonymous (2023-A). *Celaenorrhinus plagifera* de Nicéville, 1889 - Large-spotted Flat. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/celaenorrhinus-plagifera>
- Anonymous (2023-A2). *Tagiades cohaerens* Mabille, 1814 - White-striped Snow Flat. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/tagiades-cohaerens>
- Anonymous (2023-B). *Carcharodus alceae* (Esper, 1780) - Plain Marbled Skipper. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/carcharodus-alceae>
- Anonymous (2023-B2). *Actinoradians* (Moore, 1878) - Veined Dart. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/actinor-radians>
- Anonymous (2023-C). *Pontia chloridice* (Hübner, [1813]) - Small Bath White. In Kunte, K., S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/pontia-chloridice>
- Anonymous (2023-C2). *Eurema andersoni* - One-spot Grass Yellow. iNaturalist record. <https://www.inaturalist.org/observations/58507708>
- Anonymous (2023-D). *Petrelaea dana* (de Nicéville, [1884]) - Dingy Lineblue. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/petrelaea-dana>
- Anonymous (2023-D2). *Tarucus hazara* Evans, 1932 - Dark Violet Pierrot. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/tarucus-hazara>
- Anonymous (2023-E). *Megisba malaya* (Horsfield, [1828]) - Malayan. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/megisba-malaya>
- Anonymous (2023-E2). *Celatoxia marginata* (de Nicéville, [1884]) - Margined Hedge Blue. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/celatoxia-marginata>
- Anonymous (2023-F). *Albulina metallica* (C. & R. Felder, [1865]) - Metallic Green-underwing. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/Albulina-metallica>
- Anonymous (2023-F2). *Albulina chrysoptis* (Grum-Grshimařlo, 1888) - Bright Green-underwing. In K. Kunte, S.

- Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/albulina-chrysopsis>
- Anonymous (2023-G). *Albulina galathea* (Blanchard, [1844]) - Large Green-underwing. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/albulina-galathea>
- Anonymous (2023-G2). *Heliophorus bakeri* Evans, 1927 - Western Blue Sapphire. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/heliophorus-bakeri>
- Anonymous (2023-H). *Pratapa icetas* (Hewitson, [1865]) - Dark Blue Royal. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/pratapa-icetas>
- Anonymous (2023-H2). *Rapala varuna* (Horsfield, [1829]) - Indigo Flash. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/rapala-varuna>
- Anonymous (2023-I). *Lethe kanjupkula* Tytler, 1914 - Broken Woodbrown. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/lethe-kanjupkula>
- Anonymous (2023-I2). *Lethe nicetas* (Hewitson, 1863) - Yellow Woodbrown. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/lethe-nicetas>
- Anonymous (2023-J). *Ypthima avanta* Moore, [1875] - Jewel Five-ring. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/ypthima-avanta>
- Anonymous (2023-J2). *Hyponephele cheena* (Moore, 1865) - Cheena Meadowbrown. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/Hyponephele-cheena>
- Anonymous (2023-K). *Hyponephele davedra* (Moore, 1865) - White-ringed Meadowbrown. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/hyponephele-davedra>
- Anonymous (2023-K2). *Calinaga buddha* Moore, [1858] - Orange-breasted Freak. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/calinaga-buddha>
- Anonymous (2023-L). *Neptis narayana* Moore, 1858 - Broadstick Sailer. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/neptis-narayana>
- Anonymous (2023-L2). *Phaedyra columella*-Short Banded Sailer. iNaturalist record. <https://www.inaturalist.org/observations/134194376>
- Anonymous (2023-M). *Limenitis trivena* Moore, 1864 - Indian White Admiral. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/limenitis-trivena>
- Anonymous (2023-M2). *Limenitis ligyes* Hewitson, 1864 - Brown-bordered Admiral. In Kunte, K., S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/limenitis-ligyes>
- Anonymous (2023-N). *Hestina nicevillei* (Moore, [1895]) - Scarce Siren. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/hestina-nicevillei>
- Anonymous (2023-N2). *Iolana gigantea* (Grum-Grshimailo, 1885). iNaturalist record. <https://www.inaturalist.org/observations/117958385>
- Antram, C. B. (1924). *Butterflies of India*. Thacker, Spink & Co.
- Arora, G. S., Mehta, H. S., & Walia, V. K. (2009) *Handbook on Butterflies of Himachal Pradesh*. Zoological Survey of India.
- Avinoff, A., & Swadner, W. R. (1951). The *Karanasa* Butterflies, A Study in evolution. *Annals of the Carnegie Museum*, 32(1), 1-250, pl. 1-17. <https://doi.org/10.5962/p.215236>
- Bang-Haas, O. (1915) Zur Kenntnis von *Parnassius delphius* Eversmann und verwandte Arten. *Deutsche Entomologische Zeitschrift, Iris*, 29, 1-170.

- Bhardwaj, V. K., Kapoor, R., Kumar, K., & Garlani, L. (2023) A preliminary checklist of the Rhopalocera of Majathal Wildlife Sanctuary, Himachal Pradesh, India (Insecta: Lepidoptera). *SHILAP Revista de lepidopterología*, 51(203), 503-514. <https://doi.org/10.57065/shilap.536>
- Bingham, C. T. (1905). Butterflies. (Nymphalidae, Nemeobidae). In *The Fauna of British India, including Ceylon and Burma* (Vol. 1). Taylor and Francis. <https://doi.org/10.5962/bhl.title.100748>
- Bingham, C. T. (1907). Butterflies. (Papilionidae, Pieridae, Lycaenidae, Hesperidae). In *The Fauna of British India, including Ceylon and Burma* (Vol. 2). Taylor and Francis.
- Bryk, F. (1923) Baroniidae, Teinopalpidae, Parnasiidae. *Lepidopterorum Catalogus*, 27, 1-247.
- Butler, A. G. (1876) Revision of the Lepidopterous genus *Teracolus* with a description of the new species. *Proceedings of Zoological Society London*, 1876(1), 126-165. <https://doi.org/10.1111/j.1096-3642.1876.tb02549.x>
- Chandel, S., Kumar, V., Sharma, B. P., & Patiyal, R. (2014). Butterfly fauna of Shivalik hills areas of Kangra and Hamirpur districts of Himachal Pradesh in India. *Life Sciences Leaflets*, 55, 25-38.
- Collins, N. M., & Morris, M. G. (1985). *Threatened Swallowtail Butterflies of the World*. The IUCN Red Data Book. IUCN.
- Condamine, F. L., Allio, R., Reboud, E. L., Dupuis, J. R., Toussaint, E. F. A., Mazet, N., Hue, S.-J., Lewis, D. S., Kunte, K., Cotton, A. M., & Sperling, F. A. H. (2023). A comprehensive phylogeny and revised taxonomy illuminate the origin and diversification of the global radiation of *Papilio* (Lepidoptera: Papilionidae). *Molecular Phylogenetics and Evolution*, 183, 107758. <https://doi.org/10.1016/j.ympev.2023.107758> PMID: 36907224
- D'Abrera, B. (1990). *Butterflies of the Holarctic region. Part I (Papilionidae, Pieridae, Danaidae & Satyridae (partim))*. Hill House.
- Das, G. N., Eitschberger, U., Singh, N., & Chandra, K. (2021). A new species of the genus *Pieris* Schrank, 1801 (Lepidoptera: Pieridae: Pierinae) with taxonomic notes on the *Pieris napi* group from India. *Zootaxa*, 5004(4), 501-520. <https://doi.org/10.11646/zootaxa.5004.4.1> PMID:34811292
- de Niceville, L. (1890). Lycaenidae. In *The Butterflies of India, Burmah and Ceylon. A descriptive handbook of all the known species of rhopaloceros Lepidoptera inhabiting that region, with notice of allied species occurring in the neighbouring countries along the border; with numerous illustrations*. Calcutta Central Press Co.
- de Niceville, L. (1891). On new and little-known butterflies from the Indo-Malayan region. *Journal of the Bombay Natural History Society*, 6, 341-398, plates F-G.
- De Rhe-Philipe, G. W. V. (1931). The Butterflies of the Simla Hills. *The Journal of the Bombay Natural History Society*, 35, 620-631.
- Evans, W. H. (1920). Notes on Indian butterflies. *Journal Bombay Natural History Society*, 27(1), 85-95.
- Evans, W. H. (1927). *The identification of Indian Butterflies*. The Bombay Natural History Society.
- Evans, W. H. (1932). *The identification of Indian Butterflies*. (Second edition revised). The Bombay Natural History Society.
- Evans, W. H. (1949). *A Catalog of the Hesperidae from Europe, Asia, and Australia in the British Museum (Natural History)*. Jarrold & Sons Ltd. <https://doi.org/10.5962/bhl.title.105941>
- Evans, W. H. (1955). A revision of the genus *Tarucus* (Lepidoptera: Lycaenidae) of Europe, North Africa and Asia. *Entomologist*, 88, 179-187.
- Fruhstorfer, H. (1909). *Parnassius* Latr. In A. Seitz. *Die Groß-Schmetterlinge der Erde. Die Indo-Australische Tagfalter* (Vol. 9). Lehmann Verlag.
- Fruhstorfer, H. (1910). *Anaphaeis* Hbn.; *Baltia* Moore; *Aporia* Hb.; *Pieris* Schrk.; *Parapieris* Nicev.; *Pontia* F.; *Synchlœ* Hbn. In A. Seitz. *Die Groß-Schmetterlinge der Erde. Die Indo-Australische Tagfalter* (Vol. 9). Lehmann Verlag.
- Fruhstorfer, H. (1912). *Melitaea* F.; *Boloria* Moore; *Argynnis* F.; *Precis* Hbn.; *Vanessa* F.; *Polygonia* Hbn.; *Kallima* Dbl.; *Stibochiona* Btlr.; *Neptis* F.; *Limenitis* F.; *Euthalia* Hbn.; *Apatura* F. In A. Seitz. *Die Groß-Schmetterlinge der Erde. Die Indo-Australische Tagfalter* (Vol. 9). Lehmann Verlag.
- Fruhstorfer, H. (1914). *Libythea* F.; *Abisara* Fldr. In A. Seitz. *Die Groß-Schmetterlinge der Erde. Die Indo-Australische Tagfalter* (Vol. 9). Lehmann Verlag.
- Gangotia, R., & Kumar, P. (2018). Preliminary Studies on Butterfly Fauna of Chail Wildlife Sanctuary, Shimla, Himachal Pradesh. *International Journal of Science and Research (IJSR)* 7(9),1648-1651.
- Garlani, L. (2022). First record of *Celaenorhinus ratna daphne* Evans, 1949 from Himachal Pradesh and its first photographic record from the Western Himalayas (Lepidoptera: Hesperidae, Pyrginae). *SHILAP Revista de lepidopterología*, 50(200), 705-708. <https://doi.org/10.57065/shilap.262>

- Garlani, L. (2023). A detailed study of the variations found in the chrysalises of *Aglais caschmirensis* Kollar, 1844 (Lepidoptera: Papilionoidea, Nymphalidae). *SHILAP Revista de lepidopterologia*, 51(201), 21-26. <https://doi.org/10.57065/shilap.431>
- Gasse, P. V. (2018). *Butterflies of the Indian Sub-Continent - Annotated Checklist*. http://www.biodiversityofindia.org/images/2/2c/Butterflies_of_India.pdf
- Irungbam, M., Irungbam, J. S., Rindos, M., Maresova, J. P., & Fric, Z. F. (2023). Phylogeography of the small grass yellow *Eurema brigitta* (Stoll, 1780) (Lepidoptera: Pieridae) unveils the existence of distinct taxa within the Palaetropics. *Austral Entomology*, 2023, 1-7. <https://doi.org/10.1111/aen.12665>
- Kehimkar, I. (2016). *BNHS Field Guides: Butterflies of India*. Bombay Natural History Society.
- Kumar, P., Kumar, R., & Kumar, J. (2020). *Spindasis schistacea* (Moore, 1881) Plumbeous Silverline: A new butterfly record from Himachal Pradesh, India. *Journal on New Biological Reports*, 9(3), 309-311.
- Kumar, P., Kumar, J., & Kumar, R. (2020). First record of the Common Tinsel from the hilly state of Himachal Pradesh, India. *Bugs R All #190. Zoo's Print*, 35(12), 38-40.
- Kumar, P. (2021). Butterfly Diversity from the Foothill Region of Dauladhar Ranges Kangra Valley, North-West Himalaya, India. *Environment and Ecology*, 39(4A), 1257-1265.
- Kumar, P., Verma, A., Gangotia, R., & Kumar Thakur, P. (2023). Studies on threat status and food habits of butterflies (Lepidoptera) of Shimla Water Catchment Wildlife Sanctuary, Himachal Pradesh, India. *Journal of Insect Biodiversity and Systematics*, 9(3), 483-498. <https://doi.org/10.52547/jibs.9.3.483>
- Mani, M. S. (1986). *Butterflies of the Himalayas. Series Entomologica* (Vol. 36). Dr. W. Junk Publishers.
- Marshall, G. F. L., & de Niceville, L. (1883). *The Butterflies of India, Burma and Ceylon*. Taylor & Francis.
- Moore, F. (1865). List of Diurnal Lepidoptera collected by Capt. A. M. Lang in the N. W. Himalayas. *Proceedings of Zoological Society London*, 1865. 499-500.
- Moore, F. (1874). List of Diurnal Lepidoptera collected in Cashmere Territory by Capt. R. B. Reed, 12th Regt. with Descriptions of new Species. *Proceedings of Zoological Society London*, 1874(4), 264-274. <https://doi.org/10.1111/j.1096-3642.1874.tb02482.x>
- Moore, F. (1882). List of the Lepidoptera collected by the Rev. J. H. Hocking chiefly in the Kangra district, N. W. Himalayas with description of new genera and species. *Proceedings of Zoological Society London*, 1882, 234-263.
- Moore, F. (1899-1900). Rhopalocera. Family Nymphalidae. Sub-Family Nymphalinae (continued), Groups Limenitina, Nymphalina, and Argynnia. *Lepidoptera Indica* (Vol. 4). Lovell Reeve & Co.
- Moore, F. (1901-1903). Rhopalocera. Family Nymphalidae. Sub-Family Nymphalinae (continued), Groups Melitaena and Eurytelina. Sub-Families Acraeinae, Pseudergolinae, Calinaginae, and Libytheinae. Family Riodinidae. Sub-Family Nemeobinae. Family Papilionidae. Sub-Families Parnassiinae, Thaidinae, Leptocircinae, and Papilioninae. *Lepidoptera Indica* (Vol. 5). Lovell Reeve & Co.
- Peile, H. D. (1937). *A guide to collecting butterflies of India*. Staples Press ltd.
- Roher, J. (1907). Pieridae. In A. Seitz. *Die Groß-Schmetterlinge der Erde. Die Groß-Schmetterlinge des Paläarktischen Faunengebietes. Die Paläarktischen Tagfalter* (Vol. 1). Lehmann Verlag.
- Rose, H. S., & Sharma, N. (1999). Butterflies of the genus *Ypthima* Hübner (Lepidoptera: Rhopalocera) from North-Western India. *Zoos'Print*, 14(9), 97-115. <https://doi.org/10.11609/JoTT.ZPJ.14.9.97-115>
- Rothschild, W. (1909). Catalogue of the collection of Parnassiinae in the Tring-museum with systematic notes. *Novitates Zoologicae*, 16(1), 1-120. <https://doi.org/10.5962/bhl.part.21959>
- Saji, K., Ogale, H., & Prashanth, S. N. (2023). *Oriens goloides* (Moore, [1881]) - Smaller Dartlet. In K. Kunte, S. Sondhi, and P. Roy (Chief Editors). *Butterflies of India* (Vol. 4.12). Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/oriens-goloides>
- Seitz, A. (1907). Danaidae. In A. Seitz. *Die Groß-Schmetterlinge der Erde. Die Großschmetterlinge des Paläarktischen Faunengebietes. Die Paläarktischen Tagfalter* (Vol. 1). Lehmann Verlag. <https://doi.org/10.5962/bhl.title.149324>
- Seitz, A. (1923). *Catochrysops* Bsd.; *Everes* Hbn.; *Lycaena* F. *Chrysophanus* Hbn.; *Illerda* Dbl. In A. Seitz. *Die Groß-Schmetterlinge der Erde. Die Indo-Australische Tagfalter* (Vol. 9). Lehmann Verlag.
- Sheikh, T., Muhammed, A. A., & Parey, S. H. (2021). Checklist of Butterflies (Lepidoptera: Rhopalocera) of Union Territory Jammu and Kashmir, India. *Records of the Zoological Survey of India*, 121(1), 127-171.
- Sidhu, A. K., & Sharma, N. (2021). Fauna of Himachal Pradesh, State Fauna Series, *Zoological Survey of India*, 26, 93-109.
- Sidhu, A. K., Pathania, P. C., & Sharma, N. (2021) Fauna of Himachal Pradesh, State Fauna Series, *Zoological Survey of India*, 26, 111-132.
- Sidhu, A. K. (2023). An assessment and distribution of butterflies (Lepidoptera: Papilionoidea) in Sangla Valley

- (District Kinnaur: Himachal Pradesh). *Journal of Agriculture and Ecology*, 15(15), 36-44. <https://doi.org/10.58628/JAE-2315-106>
- Sing, K. W., Luo, J., Wang, W., Jaturas, N., Yang, X., Dong, H., & Wilson, J.-J. (2019). Ring roads and urban biodiversity: distribution of butterflies in urban parks in Beijing city and correlations with other indicator species. *Scientific Reports*, (2019)9, 7653. <https://doi.org/10.1038/s41598-019-43997-8> PMID:31113976
- Singh, A. P. (2008). Butterflies of Renuka Wildlife Sanctuary, Sirmaur District, Himachal Pradesh, India. *The Indian Forester*, 134(10), 1126-1138.
- Smith, C. (1994). *Butterflies of Nepal* (Revised Edition). Tecpress Service L. P.
- Sondhi, S., & Kunte, K. (2018). *Butterflies of Uttarakhand: A Field Guide*. Bishen Singh Mahendra Pal Singh, Titli Trust, National Centre for Biological Sciences and Indian Foundation for Butterflies.
- Sondhi, S. (2020). The first record of the White Tufted Royal *Pratapa deva lila* Moore, [1884] (Lepidoptera: Lycaenidae: Theclinae) from Himachal Pradesh, extending its known range westwards. *Journal of Threatened Taxa*, 12, 16177-16179. <https://doi.org/10.11609/jott.4223.12.9.16177-16179>
- South, R. (1902). *Catalogue of the collection of Palaearctic butterflies formed by late John Henry Leech and presented to the trustees of the British Museum by his mother Mrs. Eliza Leech*. Trustees British Museum.
- Swinhoe, C. (1911-1912). Rhopalocera. Family Lycaenidae (Continued) Sub-families Horaginae, Deudorixinae, Hypolycaeninae, Zesiusinae, Aphnaeinae, Biduandinae, Cherittrinae, Loxurinae. Family Hesperidae. Subfamilies Ismeneinae, Achalarinae. *Lepidoptera Indica* (Vol. 9). Lovell Reeve & Co.
- Swinhoe, C. (1913). Rhopalocera. Family Hesperidae. Sub-families Celaenorrhinae, Hesperinae, Pamphilinae, Astictopterinae, Suastinae. Erionotinae, Matapinae, Notocryptinae, Plastingiinae, Erynninae. *Lepidoptera Indica* (Vol. 10). Lovell Reeve & Co.
- Talbot, G. (1939). Butterflies (Papilionidae, Pieridae). *The Fauna of British India including Ceylon and Burma* (Vol. 1). Today and Tomorrow's Printers and Publishers.
- Talbot, G. (1947). Butterflies (Danaiidae, Satyridae, Amathusidae, Acraeidae). *The Fauna of British India including Ceylon and Burma* (Vol. 2). Today and Tomorrow's Printers and Publishers.
- Toussaint, E. F. A., Morinière, J., Müller, C. J., Kunte, K., Turlin, B., Hausmann, A., & Balke, M. (2015). Comparative molecular species delimitation in the charismatic Nawab butterflies (Nymphalidae, Charaxinae, *Polyura*). *Molecular Phylogenetic and Evolution*, 91, 194-209. <https://doi.org/10.1016/j.ympev.2015.05.015> PMID:26021440
- Tshikolovets, V. (2005). *The Butterflies of Ladakh*. Kyiv-Bruno. V. Tshikolovets.
- Uniyal, V. P. (2007). Butterflies in the Great Himalayan Conservation Landscape, Himachal Pradesh, Western Himalayas. *Entomon*, 32(2), 119-127.
- Varshney, R. K., & Smetacek, P. (2015). *A Synoptic Catalogue of the Butterflies of India*. Butterfly Research Centre, Bhimtal & Indinov Publishing. <https://doi.org/10.13140/RG.2.1.3966.2164>
- Wynter-Blyth, M. A. (1940-1946). A list of the butterflies of the Shimla hills. *Journal of the Bombay Natural History Society*, 41, 716-741; (1945), 45: 256-257; (1946), 46: 735-736.
- Wynter-Blyth, M. A. (1957). *Butterflies of the Indian Region*. Bombay Natural History Society.

Lovish Garlani
Himachal Pradesh University
Summerhill
Shimla Himachal Pradesh 171005
INDIA / INDIA
E-mail: lovishgarlani.natgeo123@gmail.com
<https://orcid.org/0000-0002-0663-9775>

(Recibido para publicación / Received for publication 3-I-2024)
(Revisado y aceptado / Revised and accepted 26-II-2024)
(Publicado / Published 30-XII-2024)

Derechos de autor: El autor(es). Este es un artículo de acceso abierto distribuido bajo los términos de la Licencia de Reconocimiento 4.0 Internacional de Creative Commons (CC BY 4.0), que permite el uso, distribución y reproducción sin restricciones en cualquier medio, siempre que se cite al autor original y la fuente. / **Copyright:** The author(s). This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.



Figures 1-8. 1. *Badamia exclamationis*. 2. *Celaenorrhinus ratna daphne*. 3. *Celaenorrhinus leucocera*; 4. *Celaenorrhinus dhanada*. 5. *Pseudocoladenia faithi*. 6. *Coladenia indrani*. 7. *Odontoptilum angulate*. 8. *Caprona ransonnietii potiphera*. [Pictures © Lovish Garlani].

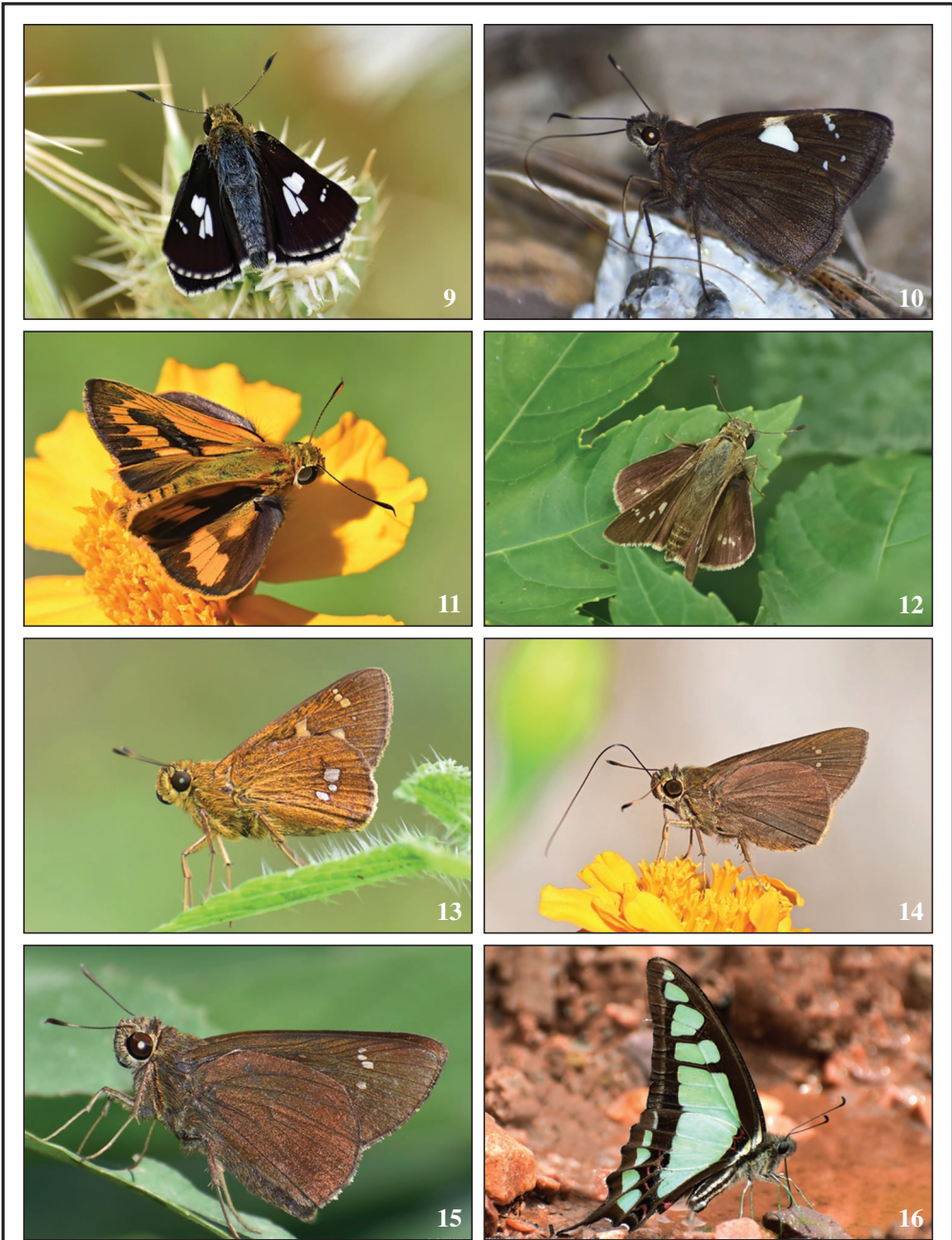
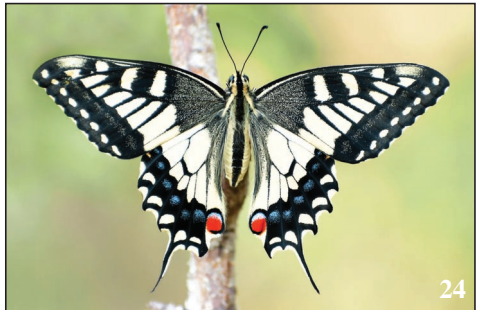
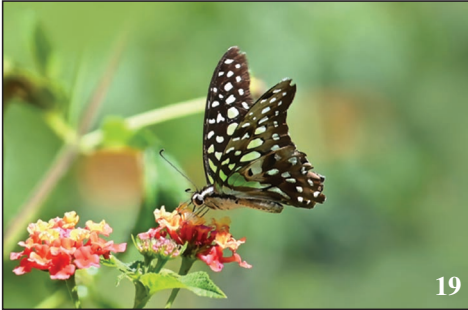
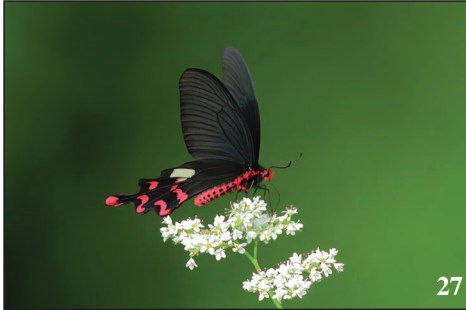


Figure 9-16. 9. *Pedesta masuriensis*. 10. *Notocrypta feisthamelii alysos*. 11. *Telicota colon*. 12. *Parnara ganga*. 13. *Polytremsis eltola*. 14. *Baoris farri*. 15. *Caltoris kumara*. 16. *Graphium cloanthus*. [Pictures © Lovish Garlani].



Figures 17-24. 17. *Graphium sarpedon*. 18. *Graphium doson*. 19. *Graphium agamemnon*. 20. *Papilio protenor*. 21. *Papilio polyctor*. 22. *Papilio polytes*. 23. *Papilio demoleus*. 24. *Papilio machaon*. [Pictures © Lovish Garlani].



Figures 25-32. 25. *Papilio clytia*. 26. *Pachliopta aristolochiae*. 27. *Byasa polyeuctes*. 28. *Byasa dasarada*. 29. *Parnassius jacquemontii*. 30. *Parnassius hardwickii*. 31. *Aporia agathon*. 32. *Aporia leucodice*. [Pictures © Lovish Garlani].



Figures 33-40. 33. *Pieris brassicae*. 34. *Pieris canidia*. 35. *Pontia callidice*. 36. *Pontia daplidice*. 37. *Belenois aurota*. 38. *Cepora nerissa*. 39. *Delias eucharis*. 40. *Colotis etrida*. [Pictures © Lovish Garlani].





Figures 49-56. 49. *Dodona eugenes*. 50. *Abisara bifasciata*. 51. *Curetis acuta*. 52. *Jamides bochus*. 53. *Catochrysops strabo*. 54. *Castalius rosimon*. 55. *Tarucus venosus*. 56. *Megisba malaya sikkima*. [Pictures © Lovish Garlani].



Figures 57-64. 57. *Celastrina lavendularis limbata*. 58. *Celatoxia marginata*. 59. *Polyommatus ariana*. 60. *Aricia agestis nazira*. 61. *Anthene emolus*. 62. *Lycaena panava*. 63. *Heliophorus moorei coruscans*. 64. *Cigaritis vulcanus*. [Pictures © Lovish Garlani].



Figures 65-72. 65. *Cigaritis nipalicus*. 66. *Euaspa ziha*. 67. *Chrysozephyrus syla*. 68. *Surendra quercetorum*. 69. *Horaga albimacula*. 70. *Tajuria jehana*. 71. *Lethe nicetas*. 72. *Lethe isana*. [Pictures © Lovish Garlani].



Figures 73-80. 73. *Letho verma*. 74. *Rhaiphicera moorei*. 75. *Mycalesis visala*. 76. *Ypthima avanta*. 77. *Ypthima nikaia*. 78. *Ypthima hannyingtoni*. 79. *Aulocera padma*. 80. *Pseudochazara baldiva*. [Pictures © Lovish Garlani].



81



82



83



84



85



86



87



88

Figures 81-88. 81. *Parantica sita*. 82. *Tirumala septentrionis*. 83. *Argynnis hyperbius*. 84. *Argynnis childreni sakontala*. 85. *Argynnis jainadeva*. 86. *Issoria lathonia issaea*. 87. *Symbrenthia niphanda hysudra*. 88. *Aglais ladakensis* [Pictures © Lovish Garlani].



Figures 89-96. 89. *Polygonia c-album kashmira*. 90. *Junonia almanac*. 91. *Neptis clinia praedicta*. 92. *Neptis nata*. 93. *Neptis sankara*. 94. *Neptis ananta*. 95. *Pantoporia hordonia*. 96. *Athyma asura*. [Pictures © Lovish Garlani].



Figures 97-104. 97. *Moduza procris*. 98. *Auzakia danava*. 99. *Euthalia patala*. 100. *Pseudergolis wedah*. 101. *Dilipa morgiana*. 102. *Sephisia dichroa*. 103. *Charaxes agrarian*. 104. *Charaxes bernardus*. [Pictures © Lovish Garlani].