

An updated checklist of Nepalese ants (Hymenoptera, Formicidae)

Indra Prasad Subedi¹, Prem Bahadur Budha¹, Himender Bharti², Leeanne Alonso³

1 Central Department of Zoology, Tribhuvan University, Kathmandu, Nepal **2** Department of Zoology and Environmental Sciences, Punjabi University, Patiala, India **3** Global Wildlife Conservation, Austin, USA

Corresponding author: Indra Prasad Subedi (ipsubedi@cdztu.edu.np)

Academic editor: M. Borowiec | Received 19 September 2020 | Accepted 30 November 2020 | Published 22 December 2020

<http://zoobank.org/A9C5018F-2597-40A6-97D4-067D5DF3C10E>

Citation: Subedi IP, Budha PB, Bharti H, Alonso L (2020) An updated checklist of Nepalese ants (Hymenoptera, Formicidae). ZooKeys 1006: 99–136. <https://doi.org/10.3897/zookeys.1006.58808>

Abstract

The location of Nepal in the Central Himalaya promotes high habitat and species diversity. Ant diversity is likely high, but there have been few studies of the diversity and distribution of ants in Nepal. Here we present an updated checklist list of Nepalese ants that includes 128 named species in 48 genera and eight subfamilies. Among these species, 21 species have a type locality from Nepal, nine species are endemic to Nepal, and three are introduced species. We add six new ant records for Nepal, namely *Harpegnathos venator*, *Monomorium pharaonis*, *Nylanderia bourbonica*, *Odontoponera denticulata*, *Polyrhachis tyrrannica* and *Pseudoneoponera bispinosa*. The checklist presents distribution records for Nepalese ant species and provides comparisons with the neighboring countries of China and India.

Keywords

Endemic, Himalaya, *Myrmica*, Nepal, *Strumigenys*, type locality

Introduction

Ants (family Formicidae) are one of the most successful groups of organisms on the planet (Hölldobler and Wilson 1990) and together with termites, have been found to make up 30% of animal biomass in the Amazon rain forest (Fittkau and Klinge 1973). Ants are present in almost all terrestrial ecosystems, with the peak of their diversity found within the tropical regions (Guénard 2013). Estimate of global ant species rich-

ness exceeds 20,000 species (Hölldobler and Wilson 1990). Seventeen valid subfamilies, 337 genera, and over 13,837 species of ants have been described (Bolton 2020). Over 87% of all described ant species belong to four main subfamilies: Myrmicinae, Formicinae, Ponerinae, and Dolichoderinae (Guénard 2013). Global Ant Biodiversity Informatics (GABI) is the first comprehensive global database with ant species records in available publications and existing databases (Guénard et al. 2017).

Nepal is a Himalayan country located in the Oriental region at the junction of the Palaearctic and Palaeotropic regions. Nepal covers an area of 147,516 km² and lies in the center of the Himalayas between latitudes 26°28.986'N to 29°50.4726'N and longitudes 80°19.9998'E to 88°5.6616'E. Its unique geographical and ecological diversity promote a high diversity of flora and fauna, including of ants. However, the study of ants in Nepal is still in its infancy. The diversity and distribution of ants in Nepal is little known and there are few published records of ants of Nepal.

Early compilations of the ants of the Indian region by Bingham (1903) and of Asia by Chapman and Capco (1951) did not include ants from Nepal. The first reports of Nepalese ants were *Aphaenogaster pachei* and *Myrmica pachei* by Forel (1906). The next record of Nepalese ants appeared in Menozzi (1939). Collingwood (1970) published the first list of 34 species of ants of Nepal from the collections of the 1954 British Museum expedition to east Nepal and from Professor H Janetshek's 1961 expedition to the Khumbu Himal region. Summaries of the insects of Nepal by Thapa (2000, 2015) listed 44 species (24 genera) of ants and 52 species (44 named species; 29 genera) of ants, respectively. The number of Nepalese ant species reported in online ant databases ranges from 57 named species (AntWeb 2020) to 86 species/subspecies (AntWiki 2020) to 141 species (antmaps.org 2020) but some of the records need verification of their occurrences in Nepal.

Thus, the information available on the diversity and distribution of Nepalese ants is scattered and incomplete. As a first step towards filling information gaps, this paper presents a thorough review of publications on the ants of Nepal to provide an up-to-date checklist of Nepalese ants. We also add additional species records and distribution information from collections done by the first author. This paper further compares the occurrence of the Nepalese ants in the neighboring countries of China and India. This checklist provides a baseline for Nepalese ant diversity and will hopefully stimulate additional research on the myrmecofauna of Nepal.

Materials and methods

The species list of the ants of Nepal has been synthesized from a literature review of articles, books and reports. Information was also extracted from the online ant databases, AntWeb (2020) and AntWiki (2020) and species distribution information from antmaps.org (Janicki et al. 2016; Guénard et al. 2017). Species described as morphospecies or unidentified species are not included in this checklist. The data

presented here are based mainly on existing literature and are thus dependent on the quality of the identification made by the authors at the time the record was published. New records and additional distribution localities of Nepalese ants were provided from the first author's collection, deposited at Central Department Zoology Museum of Tribhuvan University, Nepal, **CDZMTU**. Taxonomic changes made to some of the Nepalese ant taxa are also incorporated. The valid name, spelling and authority of ant species were updated from Bolton (2020).

The subfamilies, genera within a subfamily, and species within a genus are arranged alphabetically. For each genus, type species and type locality are also provided. The species list provides the distribution range within Nepal including district, specific locality, altitude, collectors' names, and depositories of ant specimens based upon the availability of data. Separate lists of the ant species first described from Nepal, endemic species of Nepal, and introduced species are also presented. A comparison of the occurrence of Nepalese ants in the neighboring countries of China and India is also included, which could aid in assessing the patterns of diversity and composition of Nepalese ants. Previously reported species if not substantiated by specimens or literature records, are marked as dubious/unverified. They have been excluded from the main species list and presented in a separate list.

The acronyms of depositories mentioned in this checklist are listed below:

ANIC	Australian National Insect Collection, Canberra, Australia;
AMNH	American Museum of Natural History, New York City, USA;
CASC	California Academy of Sciences, San Francisco, California;
CDZMTU	Central Department Zoology Museum of Tribhuvan University, Nepal;
ELMES	Collection of GW Elmes, UK;
JTLC	John T Longino personal collection, University of Utah, Utah, USA;
KGAC	Kiko Gómez Abal collection, Barcelona. Spain;
MARTENS	University of Mainz, Germany (Private Collection of Martens);
MCZC	Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA;
MHNG	Muséum d'Histoire Naturelle, Geneva, Switzerland;
MSNG	Museo Civico di Storia Naturale "Giacomo Doria", Genoa, Italy;
NHMB	Naturhistorisches Museum, Basel, Switzerland;
NHMUK	The Natural History Museum, London, United Kingdom;
NHMW	The Natural History Museum Vienna, Austria;
PSWC	Philip S Ward collection, California, USA;
SCHULZ	Ted Schulz private collection, Washington DC, USA;
SIZK	Schmalhausen Institute of Zoology of the Ukrainian National Academy of Sciences, Kiev;
UCDC	Bohart Museum of Entomology, University of California, Davis;
USNM	United States National Museum of Natural History, Washington DC.

Results and discussion

The checklist of the ants of Nepal includes 128 valid species. These ant species represent ca. 0.9% of the global ant diversity (Bolton 2020). The list includes nine ant species endemic to Nepal and three introduced species. Twenty-one ant species were first described from Nepalese specimens. A comparison of the Nepalese ant species to those of the surrounding countries of China and India is also presented.

Species and generic diversity within subfamily

The presented checklist is comprised of 128 named ant species belonging to 48 genera and eight subfamilies (see checklist below). The eight recorded subfamilies are Amblyoponinae, Dolichoderinae, Dorylinae, Formicinae, Leptanillinae, Myrmicinae, Ponerinae, and Pseudomyrmecinae. The ant species and genus level richness for each subfamily is given in Table 1.

Myrmicinae is the most diverse subfamily in the region with 19 genera and 63 species, followed by Formicinae (11 genera and 36 species), Ponerinae (8 genera and 13 species), Dolichoderinae (4 genera and 6 species), Dorylinae (3 genera and 4 species), Pseudomyrmecinae (1 genus and 4 species), Leptanillinae (1 genus and 1 species) and Amblyoponinae (1 genus and 1 species). Over 87% of all described ant species of the world are from four main subfamilies, Myrmicinae, Formicinae, Ponerinae and Dolichoderinae (Guénard 2013). These four subfamilies are also the most speciose subfamilies of ants in Nepal, with over 92% of all described Nepalese species.

In Nepal, the most diverse ant genus is *Myrmica* with 15 valid species, followed by *Camponotus* (8), *Strumigenys* (8), *Cardiocondyla* (7), *Prenolepis* (6), *Polyrhachis* (7), *Pheidole* (5) and *Tetraponera* (4), *Lasius* (4). Eighteen other genera contain two or three species: *Formica* (3), *Nylanderia* (2), *Lepisiota* (2), *Tetramorium* (3), *Aphaenogaster* (3), *Meranoplus* (3), *Carebara* (3), *Dorylus* (2), *Brachyponera* (2), *Leptogenys* (2), *Crematogaster* (3), *Lordomyrma* (2), *Technomyrmex* (2), *Dolichoderus* (2), *Monomorium* (3), *Diacamma* (2), *Odontoponera* (2) and *Pseudoneoponera* (2). Twenty-two genera are represented in Nepal by a single species. The most speciose ant genus in India is *Camponotus* with 83 species (Bharti et al. 2016a) while that in China is *Tetramorium* with 52 species (Guénard and Dunn 2012). *Myrmica* is also a highly speciose genus in India and China with 33 and 49 species respectively but its distribution is restricted to the Himalayan region (Guénard and Dunn 2012; Bharti et al. 2016a, b). About 44% of the ant species known from Nepal are included within the seven most diverse ant genera. Similar faunistic patterns are found in the neighboring countries of India and China. The 15 most diverse genera include nearly 60% of the ant species known from China (Guénard and Dunn 2012) while seven of the most diverse genera constitute above 37% of Indian ant species (Bharti et al. 2016a).

This paper adds 84 named ant species to the list of Nepalese ants since the publication of Thapa's 2015 "Insect diversity in Nepal" which listed 44 named ant species based upon bibliographic review. Further, this paper adds 79 named ant species to the AntWeb (2020) list and 46 named species to the AntWiki (2020) list. In light of the

Table 1. Number of named ant species per genus and subfamily from Nepal.

Subfamily	Genus	Number of species
Amblyoponinae (1 genus, 1 species)	<i>Stigmatomma</i>	1
Dolichoderinae (4 genera, 6 species)	<i>Chronoxenus</i> <i>Dolichoderus</i> <i>Iridomyrmex</i> <i>Technomyrmex</i>	1 2 1 2
Dorylinae (3 genera, 4 species)	<i>Aenictus</i> <i>Dorylus</i> <i>Ooceraea</i>	1 2 1
Formicinae (11 genera, 36 species)	<i>Acropyga</i> <i>Camponotus</i> <i>Cataglyphis</i> <i>Formica</i> <i>Lasius</i> <i>Lepisiota</i> <i>Oecophylla</i> <i>Nylanderia</i> <i>Paratrechina</i> <i>Polyrhachis</i> <i>Prenolepis</i> <i>Leptanilla</i>	1 8 1 3 4 2 1 2 1 7 6 1
Leptanillinae (1 genus, 1 species)		
Myrmicinae (19 genera, 63 species)	<i>Aphaenogaster</i> <i>Cardiocondyla</i> <i>Carebara</i> <i>Cataulacus</i> <i>Crematogaster</i> <i>Lophomyrmex</i> <i>Lordomyrma</i> <i>Mayriella</i> <i>Meranoplus</i> <i>Monomorium</i> <i>Myrmica</i> <i>Perissomyrmex</i> <i>Pheidole</i> <i>Pristomyrmex</i> <i>Recurvidris</i> <i>Stenamma</i> <i>Strumigenys</i> <i>Tetramorium</i> <i>Trichomyrmex</i> <i>Brachyponera</i> <i>Diacamma</i> <i>Emeryopone</i> <i>Harpegnathos</i> <i>Leptogenys</i> <i>Odontomachus</i> <i>Odontoponera</i> <i>Pseudoneoponera</i> <i>Tetraponera</i>	3 7 3 1 2 1 1 1 3 15 1 5 1 1 1 1 2 2 1 2 1 2 2 4
Ponerinae (8 genera, 13 species)		
Pseudomyrmecinae (1 genus, 4 species)		
8 subfamilies	48 genera	128 species

ant species richness found in neighboring countries (e.g., China: Guénard and Dunn 2012; India: Bharti et al. 2016a) and the ecological diversity of Nepal, many more than the 128 ant species on this checklist can be expected from Nepal. The majority

of early ant collections on which the list is mainly based were done by direct hand collecting, which was not extensive. The checklist records show that the entire country is under sampled and that little sampling effort has been made in the western and southern regions in particular. To overcome this sampling bias and to establish a more thorough ant species list, we recommend that future investigations of ant diversity following standard ant sampling techniques (see Agosti and Alonso 2000) in all parts of the country. A more intensive and systematic collection of Nepalese ants would certainly add new species and new distribution records.

New ant records for Nepal

Six ant species, namely *Harpegnathos venator*, *Monomorium pharaonis*, *Nylanderia bourbonica*, *Odontoponera denticulata*, *Polyrhachis tyrrannica* and *Pseudoneoponera bispinosa* are new records for Nepal identified from the first author's collection. The ant genus *Harpegnathos* is recorded for the first time for Nepal.

Endemic ants of Nepal and the species described from Nepalese specimens

Of the 128 ant species recorded from Nepal, 21 species were described from Nepalese specimens and nine species are considered endemic to Nepal (Table 2). No ant genera are known to be endemic to Nepal. However, voucher specimens from previous records from Nepal were not found to be deposited in the country. Three ant species, namely *Paratrechina longicornis*, *Trichomyrmex destructor* and *Monomorium pharaonis* are globally distributed ant species that have been introduced into Nepal.

Occurrence of Nepalese ant fauna in neighboring countries

A comparison of occurrence of Nepalese ants (128 species, 48 genera – this list) in the neighboring countries of China (939 species, 103 genera – Guénard and Dunn 2012) and India (828 species, 100 genera – Bharti et al. 2016a) revealed that Nepal shares 94 species with India (ca. 73% of Nepal's fauna) and 67 species (ca. 52%) with

Table 2. Ant species first described from Nepal and species endemic to Nepal (*endemic).

<i>Prenolepis darlensi</i> Williams & LaPolla, 2016	<i>Myrmica weberi</i> Elmes & Radchenko, 2009
* <i>Prenolepis nepalensis</i> Williams & LaPolla, 2018	* <i>Stenamma gurkhale</i> DuBois, 1998
* <i>Leptanilla buddhista</i> Baroni Urbani, 1977	* <i>Strumigenys buddhista</i> De Andrade, 2007
<i>Aphaenogaster pachei</i> (Forel, 1906)	<i>Strumigenys exilirhina</i> Bolton, 2000
<i>Mayriella transfuga</i> Baroni Urbani, 1977	<i>Strumigenys hemisobek</i> (Bolton, 2000)
* <i>Meranoplus nepalensis</i> Schödl, 1998	* <i>Strumigenys hindu</i> De Andrade, 2007
<i>Myrmica alperti</i> Elmes & Radchenko, 2009	<i>Strumigenys nepalensis</i> De Andrade, 1994
* <i>Myrmica boltoni</i> Radchenko & Elmes, 1998	<i>Strumigenys podarge</i> (Bolton, 2000)
<i>Myrmica brancuccii</i> Radchenko, Elmes & Collingwood, 1999	<i>Tetramorium difficile</i> Bolton, 1977
* <i>Myrmica martensi</i> Radchenko & Elmes, 1998	* <i>Emeryopone franzi</i> (Baroni Urbani, 1975)
<i>Myrmica pachei</i> Forel, 1906	

China. Fifty-nine species are found in all three countries and 26 species are unique to Nepal. Almost half of the genera recorded from India (100) and China (103) are also recorded from Nepal (48). In terms of named and recorded species, Nepal harbors approximately 15% of the species from India and nearly 14% of the species from China. Interestingly, 47 ant species recorded from Nepal have India as the type locality while only six species have China as the type locality.

Conclusions

An updated checklist of the ants of Nepal contains 128 valid ant species belonging to 48 genera and eight subfamilies. Six ant species (*Harpegnathos venator*, *Monomorium pharaonis*, *Nylanderia bourbonica*, *Odontoponera denticulata*, *Polyrhachis tyrannica* and *Pseudoneoponera bispinosa*) are new records for Nepal. The ant genus *Harpegnathos* is recorded for the first time for Nepal. The most speciose subfamily and genus in Nepal are Myrmicinae and *Myrmica* respectively. Overall, 21 species were first described from Nepalese specimens, nine species are endemic to Nepal, and three ant species are introduced species. No ant genera are known to be endemic to Nepal. Nepal shares over half of the listed ant species with its neighboring countries.

Despite an extensive literature review, the checklist remains incomplete because it is based on limited sampling efforts and on inadequate taxonomic knowledge of the ants of Nepal. Many regions of Nepal are clearly under sampled, such that future exploration should reveal additional species. The insufficient collections and limited published information present challenges to determining and evaluating distribution patterns of Nepalese ants (Subedi and Budha 2020). However, the checklist presented here provides a waypoint for further studies of diversity and distribution of Nepalese ants.

Checklist

AMBLYOPONINAE Forel, 1893

Stigmatomma Roger, 1859: 1 species

Type-species. *Stigmatomma denticulatum* Roger, 1859: 251, **Type locality.** Island of Zante, Mount Scapo (Greece).

Stigmatomma pertinax (Baroni Urbani, 1978)

Distribution in Nepal. Taplejung: Maewakhola (= Maiwakhola), Sanghu, KH Hyatt leg., NHMUK (AntWeb 2020).

DOLICHODERINAE Forel, 1878***Chronoxenus* Santschi, 1919: 1 species**

Type-species. *Bothriomyrmex myops* Forel, 1895: 471, **Type locality.** Kolaba, South Konkan, Maharashtra, India.

***Chronoxenus dalyi* (Forel, 1895)**

Distribution in Nepal. Solukhumbu: Tate, 2900 m (Collingwood 1970); Nepal (Saroj et al. 2018).

***Dolichoderus* Lund, 1831: 2 species**

Type-species. *Formica attelaboides* Fabricius, 1775: 394, **Type locality.** Braflia, Brazil.

***Dolichoderus affinis* Emery, 1889**

Distribution in Nepal. Specific locality unknown, NHMUK (Dill 2002).

***Dolichoderus taprobanae* (Smith, 1858)**

Distribution in Nepal. Sankhuwasabha: 16 km NE Tumlingtar, 740 m, C Carpenter leg., PSWC (AntWeb 2020).

***Iridomyrmex* Mayr, 1862: 1 species**

Type-species. *Formica detecta* Smith, 1858: 36, **Type locality.** Hunter river, Australia.

***Iridomyrmex anceps* (Roger, 1863)**

Distribution in Nepal. Gorkha, AR Sthapit leg. (Thapa 2015).

***Technomyrmex* Mayr, 1872: 2 species**

Type-species. *Technomyrmex strenua* Mayr, 1872: 147, **Type locality.** Sarawak, Borneo.

***Technomyrmex elatior* Forel, 1902**

Distribution in Nepal. Kaski: Pokhara, 760 m, PS Ward leg., PSWC (Bolton 2007; AntWeb 2020).

***Technomyrmex obscurior* Wheeler, 1928**

Distribution in Nepal. Kaski: 4 km SSW Pokhara, 900 m, PS Ward leg., PSWC (Bolton 2007; AntWeb 2020).

DORYLINAЕ Leach, 1815***Aenictus* Shuckard, 1840: 1 species**

Type-species. *Aenictus ambiguus* Shuckard, 1840: 268, **Type locality.** Punah, Bombay, India.

***Aenictus sagei* Forel, 1901**

Distribution in Nepal. Specific locality unknown (Jaitrong and Ruangsittichai 2018).

***Dorylus* Fabricius, 1793: 2 species**

Type-species. *Vespa helvola* Linnaeus, 1764: 412, **Type locality.** South Africa.

***Dorylus labiatus* Schuckard, 1840**

Distribution in Nepal. Lalitpur: Khumaltar, DR Sharma leg. (Thapa 2000, 2015).

***Dorylus orientalis* Westwood, 1835**

Distribution in Nepal. Kathmandu, N Kumar leg.; Kavre: near Banepa, 1420 m; Dolakha: Namdu, 1400 m, Sikris, 2250 m (Collingwood 1970; Thapa 2015).

***Ooceraea* Roger, 1862: 1 species**

Type-species. *Ooceraea fragosa* Roger, 1862: 249, **Type locality.** Sri Lanka (“Ceylon”).

***Ooceraea biroi* (Forel, 1907)**

Distribution in Nepal. Bara: Amlekhgunj, EI Coher leg (Wilson and Taylor 1967 as *Syscia sylvestrii*); Nepal (Ogata 1983; Wetterer et al. 2012; Bharti and Akbar 2013a).

FORMICINAE Latreille, 1809***Acropyga* Roger, 1862: 1 species**

Type-species. *Acropyga acutiventris* Roger, 1862: 243, **Type locality.** Sri Lanka.

***Acropyga yaeyamensis* Terayama & Hashimoto, 1996**

Distribution in Nepal. Lalitpur: Godavari (= Godawari), C Baroni Urbani leg., MCZC, NHMB (LaPolla 2004).

***Camponotus* Mayr, 1861: 8 species**

Type-species. *Formica ligniperda* Latreille, 1802: 88, **Type locality.** Vitrac-sur-Montane, France.

***Camponotus angusticollis* (Jerdon, 1851)**

Distribution in Nepal. Dolakha: Jarsa, 2000 m (Collingwood 1970; Thapa 2015).

***Camponotus compressus* (Fabricius, 1787)**

Distribution in Nepal. Kavrepalanchok: Chyaubas, 2000 m; Dolakha: Sikris, 2300 m, J Quinlan leg.; Kaski: Phewa lake, Pokhara, 830 m., J Quinlan leg. (Collingwood 1970; Thapa 2015); Nepal (Sheikh et al. 2017).

***Camponotus dolendus* Forel, 1892**

Distribution in Nepal. Dolakha: Namdu, 1450 m; Kavrepalanchok: Cha Khola, 900–1000 m, Hoxe valley; Kaski: Phewa lake, Pokhara, 830 m, J Quinlan leg. (Collingwood 1970; Thapa 2015).

***Camponotus himalayanus* Forel, 1893**

Distribution in Nepal. Solukhumbu: Thansindu, 3500 m (Collingwood 1970; Thapa 2015).

***Camponotus lamarckii* Forel, 1892**

Distribution in Nepal. Kaski: Pokhara, 1000 m, J Quinlan leg. (Collingwood 1970).

***Camponotus rufoglaucus* (Jerdon, 1851)**

Distribution in Nepal. Kaski: Pokhara, 1000 m, J Quinlan leg. (Collingwood 1970; Thapa 2015).

***Camponotus singularis* (Smith, 1858)**

Distribution in Nepal. Kaski: Phewa lake, Pokhara, 830 m, J Quinlan leg. (Collingwood 1970; Thapa 2015).

***Camponotus wroughtonii* Forel, 1893**

Distribution in Nepal. Ramechhap: Likhu Khola, 1690 m; Solukhumbu: Yaral, 3900 m, Pangboche, 4000 m, Thangpoche, 3500 m; Kavrepalanchok: Cha Khola, 900–1000 m, Hoxe, 1200 m (Collingwood 1970; Thapa 2015).

***Cataglyphis* Foerster, 1850: 1 species**

Type-species. *Cataglyphis fairmairei* Foerster, 1850: 93, **Type locality.** Algeria.

***Cataglyphis emeryi* (Karavaiev, 1911)**

Distribution in Nepal. Specific locality unknown (Latibari et al. 2017).

***Formica* Linnaeus, 1758: 3 species**

Type-species. *Formica rufa* Linnaeus, 1761: 426, **Type locality.** Sweden.

***Formica candida* Smith, 1878**

Distribution in Nepal. Ghyaru, 3700 m, M Granados leg., KGAC (AntWeb 2020).

***Formica fusca* Linnaeus, 1758**

Distribution in Nepal. Gurjakhani, 2830 m, KM Hyatt leg. (Collingwood 1970).

***Formica picea* Nylander, 1846**

Distribution in Nepal. Mustag (= Mustang), 4800 m (Mani and Singh 1862).

***Lasius Fabricius, 1804:* 4 species**

Type-species. *Formica nigra* Linnaeus, 1758: 580, **Type locality.** Europe.

***Lasius alienoflavus* Bingham, 1903**

Distribution in Nepal. Jumla: Talphi, H Franz leg., NHMB (Collingwood 1982).

***Lasius crinitus* (Smith, 1858)**

Distribution in Nepal. Solukhumbu: Junbesi, 2700 m (Collingwood 1970; Thapa 2015); Arun river valley, Duna, NHMB; Bdota, 3000 m, Lay leg., NHMB (Collingwood 1982).

***Lasius magnus* Seifert, 1992**

Distribution in Nepal. Induwa, Kola valley, 2000 m; Simigau, Dugong Kharka, 2100 m (Seifert 2020).

***Lasius niger* (Linnaeus, 1758)**

Distribution in Nepal. Myagdi: Bakhri Kharka, 1830 m, J Quinlan leg. (Collingwood 1970; Thapa 2015); Arun River Valley, Duna, 2400 m, Lay leg. (Collingwood 1982).

***Lepisiota Santschi, 1926:* 2 species**

Type-species. *Plagiolepis rothneyi* Forel, 1894: 415, **Type locality.** India.

***Lepisiota lunaris* (Emery, 1893)**

Distribution in Nepal. Dolakha: Jiri Khola valley, 1900 m; Solukhumbu: Ringmo-Junbesi, 2800 m; Ghai, 2700 m; Tate, 2900 m; Nare Ghat, 2700 m; Ramechhap, Likhu Khola, 1690 m (Collingwood 1970; Thapa 2015).

***Lepisiota watsonii* (Forel, 1894)**

Distribution in Nepal. Dolakha: Jiri Khola Valley, 1900 m; Solukhumbu: Ringmo-Junbesi, 2800 m (Collingwood 1970; Thapa 2015).

***Oecophylla* Smith, 1860: 1 species**

Type-species. *Formica virescens* Fabricius, 1775: 392, **Type locality.** Australia.

***Oecophylla smaragdina* (Fabricius, 1775)**

Distribution in Nepal. Kavrepalanchok/Sindhupalanchok: Charnawati/Zharange Khola to Kiratechap, 1160–1800 m, Bhotekoshi, 1150 m; Tamba Kosi, 1150–1450 m, Dhading: Dhunibesi, KC Sharma, J Hanstek and others leg. (Collingwood 1970); Gandaki zone, Turture to Phalenksangu, Marsyangdi Valley, 716 m, J Balderson leg. ANIC (AntWeb 2020); Solukhumbu: Namche bazar, 3800 m, AP Kapoor leg. (Kapoor 1961); Nepal (Wetterer 2017).

***Nylanderia* Emery, 1906: 2 species**

Type-species. *Formica vividula* Nylander, 1846: 900, **Type locality.** Finland.

***Nylanderia bourbonica* (Forel, 1886)**

Distribution in Nepal. Nagarjun forest, Shivapuri-Nagarjun National Park, 1660 m, IP Subedi leg., CDZMTU.

***Nylanderia indica* (Forel, 1894)**

Distribution in Nepal. Solukhumbu: Thaksindhu, 3500 m, Ringmo–Junbesi, 2800 m, Tate, 2900 m; Ramechhap: Likhu khola, 1690 m (Collingwood 1970).

***Paratrechina* Motschoulsky, 1863: 1 species**

Type-species. *Paratrechina currens* Motschoulsky, 1863: 14, **Type locality.** Russia.

***Paratrechina longicornis* (Latreille, 1802)**

Distribution in Nepal. Region del Terai: Ratnanagar, 200 m, M Granados leg., KGAC (AntWeb 2020); Bara: Amlekhganj (= Amlekhgunj), EI Coher leg., MCZ (Wetterer 2008).

***Polyrhachis* Smith, 1857: 6 species**

Type-species. *Formica bihamata* Fabricius, 1775: 394, **Type locality.** Insula St. Iohannis Indiae.

Polyrhachis dives Smith, 1857

Distribution in Nepal. Arun valley, 2134 m, L Swan leg., CASC (AntWeb 2020).

Polyrhachis illaudata Walker, 1859

Distribution in Nepal. Kaski: Phewa lake, Pokhara, 830 m, J Quinlan leg. (Collingwood 1970).

Polyrhachis lacteipennis Smith, 1858

Distribution in Nepal. Kaski: Pokhara, 1000 m, J Quinlan leg. (Collingwood 1970); 16 km NE Baglung, 1620 m, PS Ward leg., PSWC (AntWeb 2020); Kathmandu: Basundhara, 1340 m, IP Subedi leg.; Nagarjun forest, Shivapuri-Nagarjun National Park, 1600 m, IP Subedi leg., CDZMTU.

Polyrhachis rastellata (Latreille, 1802)

Distribution in Nepal. Nagarjun forest, Shivapuri-Nagarjun National Park, 1650 m, IP Subedi leg., CDZMTU.

Polyrhachis thompsoni Bingham, 1903

Distribution in Nepal. Makawanpur: 14.5 km W. Hetauda, 400 m, ES Ross and DQ Cavagnaro leg., CASC (AntWeb 2020).

Polyrhachis tibialis Smith, 1858

Distribution in Nepal. Kathmandu (Thapa 2015); Nagarjun forest, Shivapuri-Nagarjun National Park, 1400 m, IP Subedi leg., CDZMTU.

Polyrhachis tyrannica Smith, 1858

Distribution in Nepal. Tanahun: Jamune, 530 m, IP Subedi leg., S Yamane det., CDZMTU.

Prenolepis Mayr, 1861: 6 species

Type-species. *Tapinoma nitens* Mayr, 1853a: 144, **Type locality.** Siska, Slovenia.

***Prenolepis darlena* Williams & LaPolla, 2016**

Distribution in Nepal. 16 km ENE Baglung, 1100 m, PS Ward leg., USNM (Williams and LaPolla 2016).

***Prenolepis fisheri* Bharti & Wachkoo, 2012**

Distribution in Nepal. Kaski: 4 km SSW Pokhara, 900 m, PS Ward leg., PSWC (AntWeb 2020).

***Prenolepis fustinoda* Williams & LaPolla, 2016**

Distribution in Nepal. Specific locality unknown (Williams and LaPolla 2018).

***Prenolepis naoroji* Forel, 1902**

Distribution in Nepal. Dolakha: Jiri Khola; Kavrepalanchok: Cha Khola, Hokse valley, 1000 m; Kaski: Pokhara, 830 m, Bakhri Kharka, 1800 m, J Quinlan leg. (Collingwood 1970; Thapa 2015).

***Prenolepis nepalensis* Williams & LaPolla, 2018**

Distribution in Nepal. Kaski: 4 km SSW Pokhara, 900 m, PS Ward leg., USNM (Williams and LaPolla 2018).

***Prenolepis shanialena* Williams & LaPolla, 2016**

Distribution in Nepal. Mustang: Jomsom, 2300 m, PS Ward leg. (Williams and LaPolla 2016).

LEPTANILLINAE Emery, 1910***Leptanilla* Emery, 1870: 1 species**

Type-species. *Leptanilla revelierii* Emery, 1870: 196, **Type locality.** Corsica, France.

***Leptanilla buddhista* Baroni Urbani, 1977**

Distribution in Nepal. Bakhri Kharka, 1676 m, KH Hyatt leg., NHMUK; Lalitpur: Godawari (valle di Kathmandu), 1450 m, C Baroni Urbani, leg., NHMB (Baroni Urbani 1977a), Nepal (Wong and Guénard 2016).

MYRMICINAE Lepeletier de Saint-Fargeau, 1835***Aphaenogaster* Mayr, 1853: 3 species**

Type-species. *Aphaenogaster sardous* Mayr, 1853b: 107, **Type locality.** Italy.

***Aphaenogaster pachei* (Forel, 1906)**

Distribution in Nepal. Taplejung: Tseram, NE Nepal, 3600 m, Pache leg., MHNG (Forel 1906), Thorung Pedi, 4400 m (AntWeb 2020); Solukhumbu: Pangboche, 3950 m, Yaral and Taboche (Mingbo Valley), 3900–4800 m; Ramechhap: Likhu-Khola, 1690 m (Collingwood 1970; Thapa 2015).

***Aphaenogaster prudens* (Forel, 1902)**

Distribution in Nepal. Solukhumbu: Tate, 2900 m, Sikris, 2333 m, KM Hyatt leg. (Collingwood 1970; Thapa 2015).

***Aphaenogaster smythiesii* (Forel, 1902)**

Distribution in Nepal. Dolakha: Sikris – Jarsa, 1950–2300 m; Bakhri Kharka, 1833 m, J Quinlan leg. (Collingwood 1970; Thapa 2015).

***Cardiocondyla* Emery, 1869: 7 species**

Type-species. *Cardiocondyla elegans* Emery, 1869: 21, **Type locality.** Italy.

***Cardiocondyla emeryi* Forel, 1881**

Distribution in Nepal. Kathmandu (Seifert 2003; Wetterer 2012a).

***Cardiocondyla itsukii* Seifert, Okita & Heinze, 2017**

Distribution in Nepal. Kaski: Pokhara, 27 km NW (Seifert et al. 2017).

***Cardiocondyla kagutsuchi* Terayama, 1999**

Distribution in Nepal. Kaski: Pokhara vic., 27 km NW (Seifert 2003); Nagarjun forest, Shivapuri-Nagarjun National Park, 1400 m, IP Subedi leg., CDZMTU.

***Cardiocondyla mauritanica* Forel, 1890**

Distribution in Nepal. Mustang: Thak, Jomsom (Seifert 2003); Nepal (Wetterer 2012b).

***Cardiocondyla minutior* Forel, 1899**

Distribution in Nepal. Kathmandu, MG Allen leg., Kathmandu, Sangu (Seifert 2003; Wetterer 2014).

***Cardiocondyla obscurior* Wheeler, 1929**

Distribution in Nepal. Kaski: Pokhara (Seifert 2003).

***Cardiocondyla wroughtonii* (Forel, 1890)**

Distribution in Nepal. Specific locality unknown (Seifert 2003).

***Carebara* Westwood, 1840: 3 species**

Type-species. *Carebara lignata* Westwood, 1840: 86, **Type locality.** Java, Indonesia.

***Carebara bengalensis* (Forel, 1902)**

Distribution in Nepal. Bhaktapur (Thapa 2015).

***Carebara diversa* (Jerdon, 1851)**

Distribution in Nepal. Kaski: Lumle (Thapa 2015).

***Carebara lignata* Westwood, 1840**

Distribution in Nepal. Makawanpur: Hetauda, 330 m, W Peters leg. (Collingwood 1970).

***Cataulacus* Smith, 1853: 1 species**

Type-species. *Cataulacus taprobanae* Smith, 1853: 225, **Type locality.** Sri Lanka.

***Cataulacus granulatus* (Latreille, 1802)**

Distribution in Nepal. Baredamar, EI Coher leg (Bolton 1974).

***Crematogaster* Lund, 1831: 3 species**

Type-species. *Formica scutellaris* Olivier, 1792: 497, **Type locality.** France.

***Crematogaster binghamii* Forel, 1904**

Distribution in Nepal. Kavrepalanchok: Zharanje Khola, 1800 m (Collingwood 1970); Kathmandu, 1350 m, MG Allen leg. (Hosoishi and Ogata 2016).

***Crematogaster flava* Forel, 1886**

Distribution in Nepal. Specific locality unknown (Tiwari et al. 1999, 2003).

***Crematogaster himalayana* Forel, 1902**

Distribution in Nepal. Specific locality unknown (Tiwari et al. 1999, 2003).

***Lophomyrmex* Emery, 1892: 1 species**

Type-species. *Oecodoma quadrispinosa* Jerdon, 1851: 111, **Type locality.** India.

***Lophomyrmex ambiguus* Rigato, 1994**

Distribution in Nepal. 16 km ENE Baglung, 1100 m, PS Ward leg. (Rigato 1994; Bharti and Kumar 2012).

***Lordomyrma* Emery, 1897: 2 species**

Type-species. *Lordomyrma furcifera* Emery, 1897: 591, **Type locality.** New Guinea.

***Lordomyrma bhutanensis* (Baroni Urbani, 1977)**

Distribution in Nepal. Specific locality unknown, MCZC (Branstetter 2009).

***Lordomyrma sinensis* (Ma, Xu, Makio & DuBois, 2007)**

Distribution in Nepal. Specific locality unknown, MCZC (Branstetter 2009).

***Mayriella* Forel, 1902: 1 species**

Type-species. *Mayriella abstinens* Forel, 1902: 402, **Type locality.** Australia.

***Mayriella transfuga* Baroni Urbani, 1977**

Distribution in Nepal. Nawalparasi: 6 km NW Narainghat (= Narayanghat), 250 m, C Baroni Urbani leg., NHMB, NHMUK (Baroni Urbani 1977b; Shattuck and Barnett 2007; Bharti et al. 2017).

***Meranoplus* Smith, 1853: 3 species**

Type-species. *Cryptocerus bicolor* Guérin-Méneville, 1844: 425, **Type locality.** Pondicherry, India.

***Meranoplus bicolor* (Guérin-Méneville, 1844)**

Distribution in Nepal. Kathmandu, 1350 m, Allen leg., NHMUK; Makawanpur: Hetaura (= Hetauda), Franz leg., NHMB; 9 miles (= 14.5 km) W Hitaura (= Hetauda), 400 m, Ross and Cavagnaro leg., CASC, Bara: Amlekhang, Franz leg.; Goropani, W Pokhara, NHMB (Schödl 1998); Kabre (= Kavrepalanchok), 1750 m (Collingwood 1970; Thapa 2015).

***Meranoplus nepalensis* Schödl, 1998**

Distribution in Nepal. Kathmandu: Gokarnaban, Gokarna Forest Reserve, 1350 m, W Wittmer and C Baroni Urbani leg., NHMB, NHMB, NHMW, MHNG, NHMUK, MCZ, Lalitpur: Godawari, 1450 m, W Wittmer and C Baroni Urbani leg., NHMB; Sankhuwasabha: Tumlingtar, 950 m, I Lobi and A Smetana leg., CASC, NHMW (Schödl 1998).

***Meranoplus rothneyi* Forel, 1902**

Distribution in Nepal. Sankhuwasabha: NE Kuwapani, 2250 m, Lobi and Smetana leg.; Arun Valley, 3500 m, Swan leg. (Schödl 1998).

***Monomorium* Mayr, 1855: 2 species**

Type-species. *Monomorium monomorium* Bolton, 1987: 287 (replacement name for *Monomorium minutum* Mayr, 1855).

***Monomorium dichroum* Forel, 1902**

Distribution in Nepal. Makawanpur: 9 miles (= 14.5 km) W Hitura (= Hetauda), 400 m, ES Ross and DQ Cavagnaro leg., CASC (AntWeb 2020).

***Monomorium pharaonis* (Linnaeus, 1758)**

Distribution in Nepal. Tanahun: Jamune, 530 m, IP Subedi leg., S Yamane det., CDZMTU.

***Monomorium sahlbergi* Emery, 1898**

Distribution in Nepal. Makawanpur: 9 mi (= 14.5 km) W Hitura (= Hetauda), 400 m, ES Ross and DQ Canvagnaro leg., CASC (AntWeb 2020).

***Myrmica* Latreille, 1804: 15 species**

Type-species. *Formica rubra* Linnaeus, 1758: 580, **Type locality.** Europe.

***Myrmica aimonissabaudiae* Menozzi, 1939**

Distribution in Nepal. Mustang: Lumleek, Ghasa-Tukhe, 16 km SW Jomsom, 2550 m (Bharti et al. 2016b).

***Myrmica alperti* Elmes & Radchenko, 2009**

Distribution in Nepal. Solukhumbu: Thodung, 3200 m, J Martens leg., NHMB, Jiri–Thodung, W Wittmer and C Baroni Urbani leg; Shiralaybis, Jiri ghat, 2200 m, J Martens leg., NHMB, SIZK, ELMES (Elmes and Radchenko 2009; Bharti et al. 2016b).

***Myrmica bactriana* Ruzsky, 1915**

Distribution in Nepal. Solukhumbu: Ringmo–Junbesi, 2800 m, Yaral (Pangboche), 3900 m, Tate, 2900 m; Sindhupalchok: Hoxe (= Hokse), 1000–2000 m (Collingwood 1970; Thapa 2015).

***Myrmica boltoni* Radchenko & Elmes, 1998**

Distribution in Nepal. Baglung: Dhorpatan, 3000 m, T Martens leg., Goropani, W Pokhara, H Franz leg.; 18 km NNE Baglung, 2540 m, PS Ward leg., PSWC; Sankhuwasabha: vallee d'Induwa Koa, 2000 m, Lobl and Smetana leg.; Manang: Marsyangdi, 2550 m, Mustang: Lethe, 2450–2600 m, J Martens and Ausobsky leg.; Gorkha: Chuing

Khola, Meme Kharka, 3300–3400 m, J Martens and W Schwaller leg.; NHMUK, SIZK, ELMES, WARD, MARTENS, SCHULZ (Radchenko and Elmes 1998; Bharti et al. 2016b), 2 miles (= 3.2 km) SE Sikha, 2286 m, J Quinlan leg., NHMUK (AntWeb 2020).

***Myrmica brancuccii* Radchenko, Elmes & Collingwood, 1999**

Distribution in Nepal. Utrot, M Brancucci leg., NHMUK; Lawarai, M Brancucci leg.; Kaski: Lumle, Collingwood leg., NHMUK, NHMB, CASC, SIZK (Radchenko and Elmes 1999; Bharti et al. 2016b).

***Myrmica becate* Weber, 1947**

Distribution in Nepal. Kaski: Lumle, Baira Bali von Kathmandu, Makwanpur: Daman, 2400 m (Bharti et al. 2016b).

***Myrmica indica* Weber, 1950**

Distribution in Nepal. Lalitpur: Phulchoki, 2600 m, W Wittmer and C Baroni Urbani leg.; Dolakha: Chordung, Jiri, 2900 m, J Martens leg.; Taplejung: Simbua Khola, vic. Lassetham, 3000–3150 m, J Martens and W Schwaller leg.; Dorhar Kharka, 2700 m, J Martens and W Schwaller leg.; Rasuwa: Thare (= Tare) Pati, Gosaikunda, H Franz leg.; Sankhuwasabha: Maghang Kharka, Makalu Barun Conservation Area, 2548 m, D Emmett and Subedi leg. Sankhuwasabha: Maghang Kharka, Makalu Barun Conservation Area, 2634 m, Alpert, Alonso and Subedi leg., NHMB, SIZK, ELMES (Elmes and Radchenko 2009; Bharti et al. 2016b); Taplejung: Maiwakhola, Sanghu, PS Ward leg., NHMUK; Sankhuwasabha: vic. Pahakhola, 2700 m, J Martens and Schwaller leg., PSAS (AntWeb 2020).

***Myrmica kozlovi* Ruzsky, 1915**

Distribution in Nepal. Solukhumbu: Mingbo, Mandusuwa, 4000 m (Collingwood 1970); Taplejung: Sikha, 2660 m; Sindhupalchok: Phedikhola, 1500 m; Kavrepalanchok: near Banepa, 1420 m, Resangu, 1900 m (Thapa 2015); Nepal (Radchenko and Elmes 2003).

***Myrmica martensi* Radchenko & Elmes, 1998**

Distribution in Nepal. Rasuwa: Gosainkunda, Sing Gyang, 3200 m, J Martens leg., NHMB (Radchenko and Elmes 1998).

***Myrmica pachei* Forel, 1906**

Distribution in Nepal. Taplejung: Tseram, NE Nepal, 3600 m, M Pache leg., NHMG, MCZ, Himalaya, 3600 m, MSNG, Taplejung: upper Simbu Khola valley, vic. Tseram,

3250–3350 m; Dhara und Alm Lasea, 3000–3300 m, MSNG, MHNG (Forel 1906; Bharti et al. 2016b).

Myrmica ritae Emery, 1889

Distribution in Nepal. Kaski: Ulleri, 2000 m, J Quinlan leg. (Collingwood 1970; Thapa 2015).

Myrmica rugosa Mayr, 1865

Distribution in Nepal. Mustang: Thakkhola, Alt-Marsa, 3100–3200 m (Bharti et al. 2016b).

Myrmica rupestris Forel, 1902

Distribution in Nepal. Dolakha: Sikris, 2330 m, Myagdi: Gurjakhani, 2833 m, KM Hyatt leg.; Kaski: Ulleri, 2650 m, J Quinlan leg. (Collingwood 1970; Thapa 2015); Thodung via Those, 3100 m, Lalitpur: Phulchoki, 2600 m, Makawanpur: Daman, 2400 m, W Wittmer and Baroni Urbani leg.; Taplejung: Omje Kharka, NW Yamputh, 2300–2500 m, Martens and Schawaller leg., PSWC (Radchenko and Elmes 2002); Mustang: 16 km SW Jomsom, 2550 m, PS Ward leg., PSWC; Timang, 2400 m, Than-chok, 2500 m, M Granados leg., KGAC (AntWeb 2020).

Myrmica smythiesii Forel, 1902

Distribution in Nepal. Gompa, bei Tarahot, 3400 m (Bharti et al. 2016b).

Myrmica weberi Elmes & Radchenko, 2009

Distribution in Nepal. Sankhuwasabha: Maghang Kharka, Makalu Barun Conservation Area, 2634 m, Alpert, Alonso and Subedi leg., 2548 m, D Emmett and Subedi leg., SIZK, NHMB, ELMES; Sankhuwasabha: Chauki, 2000–3000 m, NHMB (Elmes and Radchenko 2009).

Perissomyrmex Smith, 1947: 1 species

Type-species. *Perissomyrmex snyderi* Smith, 1947: 282, **Type locality.** Guatemala (specific locality unknown).

Perissomyrmex monticola Baroni Urbani & De Andrade, 1993

Distribution in Nepal. Kosi, Chauki, 2600–3000 m, NHMB (Radchenko 2003), Nepal (Zhou and Huang 2006; Ogata and Okido 2007; Zheng-Hui and Cheng-Lin 2012).

***Pheidole* Westwood, 1839: 5 species**

Type-species. *Atta providens* Sykes, 1835: 103, **Type locality.** Orientali circa Poona, India.

***Pheidole indica* Mayr, 1879**

Distribution in Nepal. Tamba Koshi, 1150 m; Zarangje Khola, 1800 m; Rishengu (Collingwood 1970); Dolakha: Jiri Khola valley, 1900 m, Jiri, 1950 m, Sikris, 2000 m; Ramechhap: Likhu Khola, 1690 m; Kathmandu (Collingwood 1970; Thapa 2015).

***Pheidole jucunda* Forel, 1885**

Distribution in Nepal. Taplejung: Sangu, 1890 m, RL Coe leg., NHMUK (AntWeb 2020).

***Pheidole parva* Mayr, 1865**

Distribution in Nepal. Sankhuwasabha: 16 km NE Tumlingtar, 670 m, C Carpenter leg. (Eguchi 2008).

***Pheidole sagei* Forel, 1902**

Distribution in Nepal. Dolakha: Jiri, 1900 m; Solukhumbu: Taboche, 4550 m, Kavrepalanchok: Cha Khola, 900–1000 m (Collingwood 1970; Thapa 2015).

***Pheidole smythiesii* Forel, 1902**

Distribution in Nepal. Kaski: Pokhara, 1000 m, J Quinlan leg. (Collingwood 1970).

***Pristomyrmex* Mayr, 1866: 1 species**

Type-species. *Pristomyrmex pungens* Mayr, 1866: 904 (junior synonym of *Myrmica punctata* Smith, F. 1860), **Type locality.** Malakka, West Malaysia.

***Pristomyrmex sulcatus* Emery, 1895**

Distribution in Nepal. Likhu Khola, 1700 m; Tate, 2900 m (Collingwood 1970); Sankhuwasabha: Khandbari, Arun river, 1500–1600 m, A and Z Smetana leg. (Wang 2003).

***Recurvidris* Bolton, 1992: 1 species**

Type-species. *Trigonogaster recurvispinosus* Forel 1890: cix.

***Recurvidris recurvispinosa* (Forel, 1890)**

Distribution in Nepal. Kathmandu, MG Allen leg. (Bolton 1992; Jaitrong and Wiwatwitaya 2015).

***Stenamma* Westwood, 1839: 1 species**

Type-species. *Stenamma westwoodii* Westwood, 1839: 219, **Type locality.** Great Britain.

***Stenamma gurkhale* DuBois, 1998**

Distribution in Nepal. Lalitpur: Phulchoki, 2743 m, M Brendell leg., MCZ (Dubois 1998; Bharti et al. 2012).

***Strumigenys* Smith, 1860: 8 species**

Type-species. *Strumigenys mandibularis* Smith, 1860a: 72, **Type locality.** St. Paul, Brazil.

***Strumigenys buddhista* De Andrade, 2007**

Distribution in Nepal. Kaski: Pokhara, 820 m, Wittmer and Baroni Urbani leg., NHMB (De Andrade 2007; Baroni Urbani and De Andrade 2007).

***Strumigenys caniophanoides* De Andrade, 2007**

Distribution in Nepal. Sankhuwasabha: vallee d’Arun, vic. Num, 1100 m, L Lobi and A Smetana leg., MHNG (Baroni Urbani and De Andrade 2007).

***Strumigenys exilirhina* Bolton, 2000**

Distribution in Nepal. Taplejung: Sanghu, KH Hyatt leg., NHMUK, MCZ, MHNG, OMNH (Bolton 2000; Bharti et al. 2017; AntWeb 2020); Kathmandu, M Brendell leg., PSWC (AntWeb 2020).

***Strumigenys hemisobek* (Bolton, 2000)**

Distribution in Nepal. Taplejung: Maiwa Khola, Sanghu, 1981 m, KH Hyatt leg., NHMUK (Bolton 2000); Nepal (Bharti and Akbar 2013b).

***Strumigenys hindu* De Andrade, 2007**

Distribution in Nepal. Kaski: Pokhara, 820 m, W Wittmer and C Baroni Urbani leg., NHMB (Baroni Urbani and De Andrade 2007).

***Strumigenys membranifera* Emery, 1869**

Distribution in Nepal. Specific locality unknown (Wetterer 2011; Bolton 2020).

***Strumigenys nepalensis* Baroni Urbani & De Andrade, 1994**

Distribution in Nepal. Chitwan: 6 km NW of Narainghat (= Narayanghat), 250 m, 5 km E of Manhari, 350 m, NHMB Nepal Exped., NHMB (De Andrade 1994; Baroni Urbani and De Andrade 1994; Bharti et al. 2017).

***Strumigenys podarge* (Bolton, 2000)**

Distribution in Nepal. Lalitpur: Godawari, 1700 m, M Brendell, NHMUK, MCZ (AntWeb 2020).

***Tetramorium* Mayr, 1855: 3 species**

Type-species. *Formica caespitum* Linnaeus, 1758: 581, **Type locality.** Europe.

***Tetramorium bicarinatum* (Nylander, 1846)**

Distribution in Nepal. Kathmandu, MG Allen leg., NHMUK (Wetterer 2009b).

***Tetramorium difficile* Bolton, 1977**

Distribution in Nepal. Tamur River, Dobhan, K Hyatt leg., NHMUK, MCZ (Bolton 1977).

***Tetramorium lanuginosum* Mayr, 1870**

Distribution in Nepal. Bara: Amlekhgunj, EI Coher leg., MCZ (Wetterer 2010).

***Trichomyrmex* Mayr, 1865: 1 species**

Type-species. *Trichomyrmex rogeri* Mayr, 1865: 19, **Type locality.** Sri Lanka.

***Trichomyrmex destructor* (Jerdon, 1851)**

Distribution in Nepal. Taplejung, RL Coe leg., NHMUK (Wetterer 2009a); Chitwan: Ratnanagar, 200 m, M Granados leg., KGAC (AntWeb 2020).

PONERINAE Lepeletier de Saint-Fargeau, 1835***Brachyponera* Emery, 1900: 2 species**

Type-species. *Euponera (Brachyponera) luteipes croceicornis* Emery, 1900: 315, **Type locality.** New Guinea.

***Brachyponera chinensis* (Emery, 1895)**

Distribution in Nepal. Sankhuwasabha: Makalu Barun National Park, 2400 m, G Alpert et al. leg., MCZ (Guénard et al. 2018); Nepal (Nelder et al. 2006; Ying 2013); Nagarjun forest, Shivapuri-Nagarjun National Park, 1400–1900 m, IP Subedi leg., CDZMTU.

***Brachyponera nigrita* (Emery, 1895)**

Distribution in Nepal. Dolakha: Jiri Khola, 1900 m; Kavrepalanchok, 1750 m (Collingwood 1970; Thapa 2015).

***Diacamma* Mayr, 1862: 1 species**

Type-species. *Ponera rugosa* Le Guillou, 1842: 318, **Type locality.** Borneo.

***Diacamma rugosum* (Le Guillou, 1842)**

Distribution in Nepal. Specific locality unknown (Tiwari et al. 2003).

***Diacamma vagans* (Smith, 1860)**

Distribution in Nepal. Specific locality unknown (Tiwari et al. 1999).

***Emeryopone* Forel, 1912: 1 species**

Type-species. *Emeryopone buttelreepeni* Forel, 1912: 318, Type species: Borneo.

***Emeryopone franzi* (Baroni Urbani, 1975)**

Distribution in Nepal. Kaski: Pokhara e Goropani, H Franz leg., NHMB (Baroni Urbani 1975).

***Harpegnathos* Jerdon, 1851: 1 species**

Type-species. *Harpegnathus saltator* Smith, 1858: 117, **Type locality.** Tellicherry, India.

***Harpegnathos venator* (Smith, 1858)**

Distribution in Nepal. Tanahun: Jamune, 530 m, IP Subedi leg., S Yamane det., CDZMTU.

***Leptogenys* Roger, 1861: 2 species**

Type-species. *Leptogenys falcigera* Roger, 1861: 42, **Type locality.** Sri Lanka.

***Leptogenys diminuta* (Smith, 1857)**

Distribution in Nepal. Locality unknown, 830–1900 m (Thapa 2015); Tanahun: Jamune, 530 m, IP Subedi leg., CDZMTU.

***Leptogenys sarasinorum* Forel, 1900**

Distribution in Nepal. Dolakha: Tamba Koshi (Namdu), 1400 m; Kaski: Phewa lake (Pokhara), 830 m, J Quinlan leg. (Collingwood 1970); Sindhupalchok: Bhotekoshi, 1900 m (Thapa 2015).

***Odontomachus* Latreille, 1804: 1 species**

Type-species. *Formica haematoda* Linnaeus, 1758: 582, **Type locality.** America Meridionali.

***Odontomachus monticola* Emery, 1892**

Distribution in Nepal. Kaski: 4 km SSW Pokhara, 900 m, PS Ward leg. (AntWeb 2020); Kathmandu: Basundhara, 1340 m; Nagarjun forest, Shivapuri-Nagarjun National Park, 1450 m, IP Subedi leg., CDZMTU.

***Odontoponera* Mayr, 1862: 2 species**

Type-species. *Ponera denticulata* Smith, 1858: 90, **Type locality.** Singapore.

***Odontoponera denticulata* (Smith, 1858)**

Distribution in Nepal. Tanahun: Jamune, 530 m, IP Subedi leg., S Yamane det., CDZMTU.

***Odontoponera transversa* (Smith, 1857)**

Distribution in Nepal. Kaski: Pokhara, 800 m, D Little leg. (AntWeb 2020).

***Pseudoneoponera* Donisthorpe, 1943: 1 species**

Type-species. *Pseudoneoponera verecundae* Donisthorpe, 1943: 439, Type species: Wai-geu, Camp Nok, 2500 ft (= 762 m), New Guinea.

***Pseudoneoponera bispinosa* (Smith, 1858)**

Distribution in Nepal. Tanahun: Jamune, 530 m, IP Subedi leg., CDZMTU.

***Pseudoneoponera rufipes* (Jerdon, 1851)**

Distribution in Nepal. Dolakha: Namdu, 1450 m, Jarsa, 2000 m, Kavrepalanchok, 1750 m (Collingwood 1970; Thapa 2015); Kaski: Pokhara, 840 m, IP Subedi leg., CDZMTU.

PSEUDOMYRMECINAE Smith, 1952***Tetraponera* Smith, 1852: 4 species**

Type-species. *Tetraponera atrata* Smith, 1852: 44 (junior synonym of *Eciton nigrum* Jerdon, 1851), **Type locality.** Maharashtra, India.

Tetraponera allaborans (Walker, 1859)

Distribution in Nepal. Dolakha: Namdu, 1450 m (Collingwood 1970), Baglung: 18 km N Baglung, 1020 m, PS Ward leg., Kathmandu: Gokarnaban, Kathmandu, W Wittmer and C Baroni Urbani leg., PSWC (AntWeb 2020); Lalitpur: Godawari, 1450 m, Bajra Barahi, Kaski: Pokhara, 820 m, W Wittmer and C Baroni Urbani leg.; Iwa Khola u. Sablako Pass, near Taplejung, 940–1200 m, Martens and Schawaller leg. (Ward 2001).

Tetraponera binghami (Forel, 1902)

Distribution in Nepal. Bara: Amlekhgunj, 520 m, EI Coher leg., PSWC (Ward 2001, Zheng-Hui and Zheng-Qun 2004, AntWeb 2020).

Tetraponera nigra (Jerdon, 1851)

Distribution in Nepal. Bara: Amlekhgunj, 520 m, EI Coher leg. (Ward 2001).

Tetraponera rufonigra (Jerdon, 1851)

Distribution in Nepal. Kavrepalanchok: Cha Khola valley, 1000 m; Kaski: Pokhara, 1000 m; J Quinlan leg. (Collingwood 1970), Bagmati, Jyamira; Chitwan: Chumlingtar, JK Wetterer leg., UCDC, Janakpur, Sunkoshi river, near Khurko, L Morrison leg., PSWC, Kosi, 12 km ENE Tumlingtar, 1150 m, C Carpenter leg., Chitwan National Park, 600 m, A Highlander leg., PSWC, Kosi, Arun valley, 610 m, L Swan leg, CASC (AntWeb 2020). Tanahun: Jamune, 530 m, IP Subedi leg., CDZMTU.

Dubious and unverified records of ants in Nepal

Thirty-seven ant species reported in AntWiki (2020) and/or AntWeb (2020) and/or antmaps.org are not substantiated by specimens, or literature records and/or are with references unverified. These species are marked as dubious and have been excluded from the main species list. We present them below with explanation of their exclusion (Table 3).

Table 3. Dubious and unverified records of ants in Nepal.

Species	Reference	Explanation
<i>Formicinae</i>		
<i>Camponotus aethiops cachmirensis</i> Emery, 1925	antmaps.org (2020)	Reference unverified
<i>Camponotus buddhae</i> Forel, 1892	antmaps.org (2020)	Reference unverified
<i>Camponotus siemsseni</i> Forel, 1901	antmaps.org (2020)	Reference unverified
<i>Camponotus socrates</i> Forel, 1904	antmaps.org (2020)	Reference unverified
<i>Camponotus sylvaticus basalis</i> Smith, 1878	antmaps.org (2020)	Reference unverified
<i>Camponotus sylvaticus paradichroous</i> Emery, 1925	AntWeb (2020)	No specimen or literature records
<i>Cataglyphis cugiae</i> Menozzi, 1939	antmaps.org (2020)	Reference unverified
<i>Formica sentschouensis</i> Ruzsky, 1915	AntWeb (2020)	No specimen or literature records
<i>Formica sanguinea</i> Latreille, 1798	antmaps.org (2020)	Reference unverified
<i>Formica truncorum</i> Fabricius, 1804	antmaps.org (2020)	Reference unverified
<i>Lepisiota rothneyi wroughtonii</i> (Forel, 1902)	AntWiki (2020)	No literature records

Species	Reference	Explanation
<i>Lepisiota sericea</i> (Forel, 1892)	antmaps.org (2020)	Reference unverified
<i>Plagiolepis baledrierii</i> Menozzi, 1939	AntWeb (2020)	No specimen or literature records
<i>Plagiolepis moelleri</i> Bingham, 1903	AntWeb (2020)	No specimen or literature records
<i>Plagiolepis poneti</i> Menozzi, 1939	AntWeb (2020)	No specimen or literature records
<i>Polyrhachis menelas</i> Forel, 1904	antmaps.org (2020)	Reference unverified
<i>Polyrhachis striata</i> Mayr, 1862	antmaps.org (2020)	Reference unverified
Myrmicinae		
<i>Aphaenogaster cristata</i> (Forel, 1902)	antmaps.org (2020)	Reference unverified
<i>Aphaenogaster sagei</i> (Forel, 1902)	antmaps.org (2020)	Specimen record unverified
<i>Aphaenogaster rothneyi</i> (Forel, 1902)	antmaps.org (2020)	Reference unverified
<i>Crematogaster afghanica</i> Pisarski, 1967	antmaps.org (2020)	Reference unverified
<i>Crematogaster buddhae</i> Forel, 1902	antmaps.org (2020)	Reference unverified
<i>Crematogaster sagei</i> Forel, 1903	antmaps.org (2020)	Reference unverified
<i>Crematogaster subdentata kaschgariensis</i> Forel, 1901	antmaps.org (2020)	Reference unverified
<i>Myrmica cashmirensis</i> Forel, 1904	antmaps.org (2020)	Reference unverified
<i>Myrmica urbanii</i> Radchenko & Elmes, 1998	AntWiki (2020)	Reference unverified
<i>Pheidole rogersi</i> Forel, 1902	AntWeb (2020)	Reference unverified
<i>Pheidole templaria</i> Forel, 1902	antmaps.org (2020)	Reference unverified
<i>Pheidole woodmasoni</i> Forel, 1885	antmaps.org (2020)	Reference unverified
<i>Tennothorax desioi</i> (Menozzi, 1939)	antmaps.org (2020)	Reference unverified
<i>Tennothorax pamiricus</i> (Ruzsky, 1902)	antmaps.org (2020)	Reference unverified
<i>Tennothorax wroughtonii</i> (Forel, 1904)	antmaps.org (2020)	Reference unverified
<i>Trichomyrmex criniceps</i> (Mayr, 1879)	antmaps.org (2020)	Reference unverified
<i>Tetramorium elisabethae</i> Forel, 1904	antmaps.org (2020)	Reference unverified
<i>Tetramorium narsei</i> Bingham, 1903	antmaps.org (2020)	Reference unverified
<i>Tetramorium salvatum</i> Forel, 1902	antmaps.org (2020)	Reference unverified
Ponerinae		
<i>Diacamma rugosum sculptum</i> (Jerdon, 1851)	AntWiki (2020), AntWeb (2020)	No specimen or literature records

Acknowledgements

We thank Seiki Yamane for species level identification of some specimens and Gary Alpert for constructive advice for initiating the work. We also appreciate the AntWeb (www.antweb.org), AntWiki (www.antwiki.org), AntCat (www.antcat.org), and antmaps (www.antmaps.org) teams for their valuable work. We are thankful to anonymous reviewers and the subject editor for providing insightful comments.

References

- Agosti D, Alonso LE (2000) The ALL protocol: A standard protocol for the collection of ground-dwelling ants. In: Agosti D, Majer JD, Alonso LE, Schultz T (Eds) *Ants: Standard methods for measuring and monitoring biodiversity*, Smithsonian Institution Press, Washington DC, 204–206.
- Antmaps.org (2020) Antmaps.org. <https://antmaps.org/> [accessed 24 November 2020]
- AntWeb (2020) AntWeb V8.45.1. California Academy of Science. <https://www.antweb.org/taxonomicPage.do?rank=species&countryName=Nepal> [accessed 24 November 2020]
- AntWiki (2020) Nepal ants. <https://www.antwiki.org/wiki/Nepal> [accessed 27 August 2020]
- Baroni Urbani C (1975) Contributo alla conoscenza dei generi *Belonopelta* Mayr e *Leiopelta* gen. n. (Hymenoptera: Formicidae). Mitteilungen der Schweizerischen Entomologischen Gesellschaft 48: 295–310.

- Baroni Urbani C (1977a) Materiali per una revisione della sottofamiglia Leptanillinae Emery (Hymenoptera: Formicidae). *Entomologica Basiliensis* 2: 427–488.
- Baroni Urbani C (1977b) Ergebnisse der Bhutan-Expedition 1972 des Naturhistorischen Museums in Basel. Hymenoptera: Fam. Formicidae Genus *Mayriella*. *Entomologica Basilien-sia* 2: 411–414.
- Baroni Urbani C, De Andrade ML (1994) First description of fossil Dacetini ants with a critical analysis of the current classification of the tribe (Amber Collection Stuttgart: Hymenop-tera: Formicidae. VI: Dacetini). *Stuttgarter Beiträge zur Naturkunde Serie B (Geologie und Paläontologie)* 198: 1–65.
- Baroni Urbani C, De Andrade ML (2007) The ant tribe Dacetini: limits and constituent genera, with descriptions of new species (Hymenoptera: Formicidae). *Annali del Museo Civi-co di Storia Naturale “Giacomo Doria”* 99: 1–191.
- Bharti H, Akbar SA (2013a) Taxonomic studies on the ant genus *Cerapachys* Smith (Hyme-noptera: Formicidae) from India. *ZooKeys* 336: 79–103. <https://doi.org/10.3897/zook-eyes.336.5719>
- Bharti H, Akbar SA (2013b) Taxonomic studies on the ant genus *Strumigenys* Smith, 1860 (Hymenoptera: Formicidae) with report of two new species and five new records includ-ing a tramp species from India. *Sociobiology* 60(4): 387–396. <https://doi.org/10.13102/sociobiology.v60i4.387-396>
- Bharti H, Guénard B, Bharti M, Ecomono EP (2016a) An updated checklist of the ants of In-dia with their specific distributions in Indian states (Hymenoptera: Formicidae). *ZooKeys* 551: 1–83. <https://doi.org/10.3897/zookeys.551.6767>
- Bharti H, Gul I, Sharma YP (2012) Two new species of *Stenamma* (Hymenoptera: Formicidae) from Indian Himalaya with a revised key to the Palaearctic and Oriental species. *Sociobiol-ogy* 59(2): 317–330. <https://doi.org/10.13102/sociobiology.v59i2.593>
- Bharti H, Kumar R (2012) *Lophomyrmex terraceensis*, a new ant species (Hymenoptera: For-micidae) in the bedoti group with a revised key. *Journal of Asia-Pacific Entomology* 15: 265–267. <https://doi.org/10.1016/j.aspen.2012.01.003>
- Bharti H, Sasi S, Radchenko AG (2016b) Biogeography and ecology of *Myrmica* species (For-micidae: Myrmicinae) in Himalayan regions. *Sociobiology* 63(3): 956–975. <https://doi.org/10.13102/sociobiology.v63i3.1145>
- Bharti H, Wachkoo AA, Kumar R (2017) First inventory of ants (Hymenoptera: Formicidae) in Northwestern Shivalik, India. *Halteres* 8: 33–68.
- Bingham CT (1903) The fauna of British India including Ceylon and Burma, Hymenoptera Vol II, ants and cuckoo wasps. Taylor and Francis, London, 508 pp.
- Bolton B (1974) A revision of the Palaeotropical arboreal ant genus *Cataulacus* F Smith (Hy-menoptera: Formicidae). *Bulletin of the British Museum (Natural History). Entomology* 30: 1–105. <https://doi.org/10.5962/bhl.part.24939>
- Bolton B (1977) The ant tribe Tetramoriini (Hymenoptera: Formicidae). The genus *Tetra-monium* Mayr in the Oriental and Indo-Australian regions, and in Australia. *Bulletin of the British Museum (Natural History) Entomology series* 36(2): 67–151.
- Bolton B (1987) A review of the *Solenopsis* genus-group and revision of Afrotropical *Monomori-um* Mayr (Hymenoptera: Formicidae). *Bulletin of the British Museum (Natural History). Entomology* 54: 263–452.

- Bolton B (1992) A review of the ant genus *Recurvidris* (Hymenoptera: Formicidae), a new name for *Trigonogaster* Forel. *Psyche* (Cambridge) 99: 35–48. <https://doi.org/10.1155/1992/58186>
- Bolton B (2000) The ant tribe Dacetini. Memoire of the American Entomological Institute 65: 1–1028.
- Bolton B (2007) Taxonomy of the dolichoderine ant genus *Technomyrmex* Mayr (Hymenoptera: Formicidae) based on the worker caste. Contributions of the American Entomological Institute 35(1): 1–150.
- Bolton B (2020) An online catalog of the ants of the world. <https://www.antcat.org> [accessed 11 September 2020]
- Branstetter MG (2009) The ant genus *Stenamma* Westwood (Hymenoptera: Formicidae) redefined, with a description of a new genus *Propodilobus*. *Zootaxa* 2221: 41–57. <https://doi.org/10.11646/zootaxa.2221.1.3>
- Chapman JW, Capco SR (1951) Checklist of the ants (Hymenoptera: Formicidae) of Asia. Institute of Science and Technology, Manila, 327 pp.
- Collingwood CA (1970) Formicidae (Hymenoptera: Aculeata) from Nepal. Khumbu Himal 3(3): 371–387.
- Collingwood CA (1982) Himalayan ants of genus *Lasius* (Hymenoptera: Formicidae). Systematic Entomology 7: 283–296. <https://doi.org/10.1111/j.1365-3113.1982.tb00446.x>
- De Andrade ML (1994) Untitled. Descriptions of new taxa: *Rhopalothrix inopinata* de Andrade n. sp.; *Strumigenys nepalensis* de Andrade n. sp.; *Strumigenys assamensis* de Andrade n. sp. In: Baroni Urbani C, De Andrade ML (Eds) First description of fossil Dacetini ants with a critical analysis of the current classification of the tribe (Amber Collection Stuttgart: Hymenoptera: Formicidae. VI: Dacetini). Stuttgarter Beiträge zur Naturkunde. Serie B (Geologie und Paläontologie) 198: 54–64.
- De Andrade ML (2007) [Untitled. *Strumigenys buddhista* de Andrade n. sp.]. In: Baroni Urbani C, De Andrade ML (Eds) The ant tribe Dacetini: limits and constituent genera, with descriptions of new species (Hymenoptera: Formicidae). Annali del Museo Civico di Storia Naturale “Giacomo Doria” 99: 159–162.
- Dill M (2002) Taxonomy of the migrating herdsman species of the genus *Dolichoderus* Lund, 1831, with remarks on the systematics of other Southeast Asian *Dolichoderus*. In: Dill M, Williams DJ, Maschwitz U (Eds) Herdsmen ants and their mealybug partners. Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft Frankfurt am Main 557: 17–113.
- Donisthorpe H (1943) The ants (Hymenoptera: Formicidae) of Waigeu Island, North Dutch New Guinea. *Annals and Magazine of Natural History* (11)10: 433–475. <https://doi.org/10.1080/00222934308527363>
- DuBois MB (1998) A revision of the ant genus *Stenamma* in the Palaearctic and Oriental regions (Hymenoptera: Formicidae: Myrmicinae). *Sociobiology* 32: 193–403.
- Eguchi K (2008) A revision of Northern Vietnamese species of the ant genus *Pheidole* (Insecta: Hymenoptera: Formicidae: Myrmicinae). *Zootaxa* 1902: 1–118. <https://doi.org/10.11646/zootaxa.1902.1.1>
- Elmes GW, Radchenko AG (2009) Two new Himalayan ant species (Hymenoptera: Formicidae) related to *Myrmica indica*. *Vestnik Zoologii* 43(2): 107–119. <https://doi.org/10.2478/v10058-009-0006-x>

- Emery C (1869) Enumerazione dei formicidi che rinvengansi nei contorni di Napoli con descrizioni di specie nuove o meno conosciute. Annali dell'Accademia degli Aspiranti Naturalisti. Seconda Era 2: 1–26.
- Emery C (1870) Studi mirmecologici. Bullettino della Società Entomologica Italiana 2: 193–201.
- Emery C (1897) Formicidarum species novae vel minus cognitae in collectione Musaei Nationalis Hungarici quas in Nova-Guinea, colonia germanica, collegit L. Biró. Természetrájzi Füzetek 20: 571–599.
- Emery C (1900) Formicidarum species novae vel minus cognitae in collectione Musaei Nationalis Hungarici quas in Nova-Guinea, colonia germanica, collegit L. Biró. Publicatio secunda. Természetrájzi Füzetek 23: 310–338.
- Fabricius JC (1775) Systema entomologiae, sistens insectorum classes, ordines, genera, species adiectis synonymis, locis, descriptionibus, observationibus. Korte, Flensburgi et Lipsiae [= Flensburg and Leipzig], 832 pp. <https://doi.org/10.5962/bhl.title.36510>
- Fabricius JC (1793) Entomologia systematica emendata et aucta. Secundum classes, ordines, genera, species, adiectis synonymis, locis observationibus, descriptionibus. Tome 2. CG Proft, Hafniae [= Copenhagen], 519 pp. <https://doi.org/10.5962/bhl.title.122153>
- Fittkau EJ, Klinge H (1973) On biomass and trophic structure of the Central Amazonian rain forest ecosystem. Biotropica 5(1): 2–14. <https://doi.org/10.2307/2989676>
- Foerster A (1850) Eine Centurie neuer Hymenopteren. Zweite Dekade. Verhandlungen des Naturhistorischen Vereins der Preussischen Rheinlande und Westfalens 7: 485–500. <https://doi.org/10.5962/bhl.title.66967>
- Forel A (1890) *Aenictus-Typhlatta* découverte de M. Wroughton. Nouveaux genres de Formicides. Annales de la Société Entomologique de Belgique 34: cii–cxiv.
- Forel A (1894) Les Formicides de l'Empire des Indes et de Ceylan. Part IV. Journal of the Bombay Natural History Society 8: 396–420.
- Forel A (1895) Les Formicides de l'Empire des Indes et de Ceylan. Part V. Journal of the Bombay Natural History Society 9: 453–472.
- Forel A (1902) Fourmis nouvelles d'Australie. Revue Suisse de Zoologie 10: 405–548. <https://doi.org/10.5962/bhl.part.13793>
- Forel A (1906) Les fourmis de l'Himalaya. Bulletin de la Société Vaudoise des Sciences Naturelles 42: 79–94.
- Forel A (1912) Descriptions provisoires de genres, sous-genres, et espèces de Formicides des Indes orientales. Revue Suisse de Zoologie 20: 761–774. <https://doi.org/10.5962/bhl.part.19251>
- Guénard B (2013) An overview of the species and ecological diversity of ants. John Wiley and Sons, Ltd., Chichester. <https://doi.org/10.1002/9780470015902.a0023598>
- Guénard B, Weiser MD, Gomez K, Narula N, Economo EP (2017) The Global Ant Biodiversity Informatics (GABI) database: synthesizing data on the geographic distribution of ant species (Hymenoptera: Formicidae). Myrmecological News 24: 83–89. https://doi.org/10.25849/myrmecol.news_024:083
- Guénard B, Dunn RR (2012) A checklist of the ants of China. Zootaxa 3558: 1–77. <https://doi.org/10.11646/zootaxa.3558.1.1>

- Guénard B, Wetterer JK, MacGown JA (2018) Global and temporal spread of a taxonomically challenging invasive ant, *Brachyponera chinensis* (Hymenoptera: Formicidae), Florida Entomologist 101(4): 649–656. <https://doi.org/10.1653/024.101.0402>
- Guérin-Méneville FE (1844) Iconographie du règne animal de G. Cuvier, ou représentation d'après nature de l'une des espèces les plus remarquables, et souvent non encore figurées, de chaque genre d'animaux. Insectes. JB Baillière, Paris, 576 pp.
- Hölldobler B, Wilson EO (1990) The ant. Harvard University Press, Cambridge, [xii +] 732 pp.
- Hosoishi S, Ogata K (2016) Systematics and biogeography of the ant genus *Crematogaster* Lund subgenus *Orthocrema* Santschi in Asia (Hymenoptera: Formicidae). The Linnean Society of London, Zoological Journal of the Linnean Society 176: 547–606. <https://doi.org/10.1111/zoj.12330>
- Jaitrong W, Ruangsittichai J (2018) Two new species of the *Aenictus wroughtonii* species group (Hymenoptera: Formicidae, Dorylinae) from Thailand. ZooKeys 775: 103–115. <https://doi.org/10.3897/zookeys.775.26893>
- Jaitrong W, Wiwatwitaya D (2015) The species of the ant genus *Recurvidris* Bolton, 1992 (Hymenoptera: Formicidae: Myrmicinae) in Thailand. Halteres 6: 104–112. <https://doi.org/10.1155/1992/58186>
- Janicki J, Narula N, Ziegler M, Guénard B, Ecomono EP (2016) Visualizing and interacting with large-volume biodiversity data using client-server web-mapping applications: The design and implementation of antmaps.org. Ecological Informatics 32: 185–193. <https://doi.org/10.1016/j.ecoinf.2016.02.006>
- Kapoor AP (1961) Zoological results of the Indian Cho-oyu Expedition (1958) in Nepal. Records of the Indian Museum 59: 269–303.
- LaPolla JS (2004) *Acropyga* of the world. Contributions of the American Entomological Institute 33(3): 1–130.
- Latibari MH, Khormizi MZ, Moravvej G, Namaghi SH (2017) Survey on ants (Hymenoptera: Formicidae) and their aphid partners (Homoptera: Aphididae) in Northeast and Center of Iran. Band 38, Heft 17: 369–376.
- Latreille PA (1802) Histoire naturelle des fourmis, et recueil de mémoires et d'observations sur les abeilles, les araignées, les faucheurs, et autres insectes. Impr. Craplet (chez T. Barrois), Paris, [xvi +] 445 pp. <https://doi.org/10.5962/bhl.title.11138>
- Le Guillou EJF (1842) [“1841”] Catalogue raisonné des insectes hyménoptères recueillis dans le voyage de circumnavigation des corvettes l'Astrolabe et la Zélée. Annales de la Société Entomologique de France 10: 311–324.
- Linnaeus C (1758) *Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis*. Tomus I Editio decima, reformata. L. Salvii, Holmiae [= Stockholm], 824 pp. <https://doi.org/10.5962/bhl.title.542>
- Linnaeus C (1764) *Museum S:ae R:ae M:tis Ludovicæ Ulricæ Reginae Svecorum, Gothorum, Vandalorumque, &c. In quo animalia rariora, exotica, imprimis. Insecta & Conchilia describuntur & determinantur Prodromi instar*. Salvius Holmiae [= Stockholm], 8 + 720 pp. <https://doi.org/10.5962/bhl.title.119811>
- Mani MS, Singh S (1962) Entomological survey of Himalaya. Journal of the Bombay Natural History Society 59(1): 84–85.

- Mayr G (1865) Formicidae. In: Novara Expedition (1865) Reise der Österreichischen Fregatte "Novara" um die Erde in den Jahren 1857, 1858, 1859. Zoologischer Theil. Bd. II. Abt. 1. K. Gerold's Sohn, Wien, 119 pp.
- Mayr G (1853a) Einige neue Ameisen. Verhandlungen der Zoologisch-Botanischen Vereins in Wien 2: 143–150.
- Mayr G (1853b) Beiträge zur Kenntniss der Ameisen. Verhandlungen der Zoologisch-Botanischen Vereins in Wien 3: 101–114.
- Mayr G (1866) Diagnosen neuer und wenig gekannter Formiciden. Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien 16: 885–908.
- Mayr G (1872) Formicidae Borneenses collectae a J. Doria et O. Beccari in territorio Sarawak annis 1865–1867. Annali del Museo Civico di Storia Naturale 2: 133–155.
- Menozzi C (1939) Formiche dell'Himalaya e del Karakorum raccolte dalla Spedizione italiana comandata da S. A. R. il Duca di Spoleto (1929). Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano 78: 285–345.
- Motschoulsky V de (1863) Essai d'un catalogue des insectes de l'île Ceylan (suite). Bulletin de la Société Impériale des Naturalistes de Moscou 36(3): 1–153.
- Nelder MP, Paysen ES, Zungoli PA, Benson EP (2006) Emergence of the introduced ant *Pachycondyla chinensis* (Formicidae: Ponerinae) as a public health threat in the South-eastern United States. Journal of Medical Entomology 43(5): 1094–1098. <https://doi.org/10.1093/jmedent/43.5.1094>
- Nylander W (1846) Adnotationes in monographiam formicarum borealium Europae. Acta Societatis Scientiarum Fennicae 2: 875–944. <https://doi.org/10.5962/bhl.title.66897>
- Ogata K (1983) The ant genus *Cerapachys* F Smith of Japan, with description of a new species (Hymenoptera: Formicidae). Esakir 20: 131–137.
- Ogata K, Okido H (2007) Revision of the ant genus *Perissomyrmex* with notes on the phylogeny of the tribe Myrmecinini. In: Snelling RR, Fisher BL, Ward PS (Eds) Advances in ant systematics (Hymenoptera: Formicidae): homage to EO Wilson – 50 years of contributions. Memoirs of the American Entomological Institute 80: 352–369.
- Olivier AG (1792) Encyclopédie méthodique. Histoire naturelle. Insectes. Tome 6. (pt. 2). Panckoucke, Paris, 369–704.
- Radchenko AG (2003) *Perissomyrmex nepalensis* sp. nov. – new evidence of Old-World origins for the genus. Entomologica Basiliensia 25: 13–22.
- Radchenko AG, Elmes GW (1998) Taxonomic revision of the *ritae* species-group of the genus *Myrmica* (Hymenoptera: Formicidae). Vestnik Zoologii 32(4): 3–27.
- Radchenko AG, Elmes GW (1999) Ten new species of *Myrmica* (Hymenoptera: Formicidae) from the Himalaya. Vestnik Zoologii 33(3): 27–46.
- Radchenko AG, Elmes GW (2002) First descriptions of the sexual forms of seven Himalayan *Myrmica* species (Hymenoptera: Formicidae). Vestnik Zoologii 36(5): 35–46.
- Radchenko AG, Elmes GW (2003) *Myrmica afghanica* (Hymenoptera: Formicidae), a new ant species from Afghanistan. Zootaxa 375: 1–8. <https://doi.org/10.11646/zootaxa.375.1.1>
- Rigato F (1994) Revision of the Myrmicine ant genus *Lophomyrmex*, with a review of its taxonomic position (Hymenoptera: Formicidae). Systematic Entomology 19: 47–60. <https://doi.org/10.1111/j.1365-3113.1994.tb00578.x>

- Roger J (1859) Beiträge zur Kenntniss der Ameisenfauna der Mittelmeerländer. I. Berliner Entomologische Zeitschrift 3: 225–259. <https://doi.org/10.1002/mmnd.18590030209>
- Roger J (1861) Die Ponera-artigen Ameisen (Schluss). Berliner Entomologische Zeitschrift 5: 1–54.
- Roger J (1862) Einige neue exotische Ameisen-Gattungen und Arten. Berliner Entomologische Zeitschrift 6: 233–254. <https://doi.org/10.1002/mmnd.47918620118>
- Saroj S, Ghosh D, Hegde V (2018) First record of *Mesomorphus latiusculus* Chatanay (Coleoptera: Tenebrionidae) from India and its association with the ant *Chronoxenus dalyi* Forel (Hymenoptera: Formicidae). Journal of Entomology and Zoology Studies 6(3): 236–238.
- Schödl S (1998) Taxonomic revision of Oriental *Meranoplus* F Smith, 1853 (Insecta: Hymenoptera: Formicidae: Myrmicinae). Annalen des Naturhistorischen Museums in Wien 100 B: 361–394. <https://www.jstor.org/stable/41767115>
- Seifert B (2003) The ant genus *Cardiocondyla* (Insecta: Hymenoptera: Formicidae) – a taxonomic revision of the *C. elegans*, *C. bulgarica*, *C. batesii*, *C. nuda*, *C. shuckardi*, *C. stambuloffii*, *C. wroughtonii*, *C. emeryi*, and *C. minutior* species groups. Annalen des Naturhistorischen Museums in Wien 104 B: 203–338. <https://www.jstor.org/stable/41767253>
- Seifert B (2020) A taxonomic revision of the Palearctic members of the subgenus *Lasius* s. str. (Hymenoptera: Formicidae). Soil Organisms 92(1): 15–86. <https://doi.org/10.25674/so92iss1pp15>
- Shattuck SO, Barnett NJ (2007) Revision of the ant genus *Mayriella*. In: Snelling RR, Fisher BL, Ward PS (Eds) Advances in ant systematics (Hymenoptera: Formicidae): homage to EO Wilson – 50 years of contributions. Memoirs of the American Entomological Institute 80: 437–458.
- Sheikh AH, Iqbal J, Azad Z (2017) Study of ant (Formicidae: Formicinae: *Camponotus*) fauna of Medical Hills Jabalpur, Madhya Pradesh. National Journal of Advanced Research 3(3): 44–46.
- Shuckard WE (1840) Monograph of the Dorylidae, a family of the Hymenoptera Heterogyna. (Continued from p. 201.). Annals of Natural History 5: 258–271. <https://doi.org/10.1080/00222934009496821>
- Seifert B, Okita I, Heinze J (2017) A taxonomic revision of the *Cardiocondyla nuda* group (Hymenoptera: Formicidae). Zootaxa 4290: 324–356. <https://doi.org/10.11646/zootaxa.4290.2.4>
- Smith F (1852) Descriptions of some hymenopterous insects captured in India, with notes on their economy, by Ezra T Downes, Esq., who presented them to the Honourable the East India Company. Annals and Magazine of Natural History (2)9: 44–50.
- Smith F (1853) [“1854”] Monograph of the genus *Cryptocerus*, belonging to the group Cryptoceridae – family Myrmicidae – division Hymenoptera, Heterogyna. Transactions of the Entomological Society of London (2)2: 213–228. <https://doi.org/10.1111/j.1365-2311.1854.tb02221.x>
- Smith F (1857) Catalogue of the hymenopterous insects collected at Sarawak, Borneo; Mount Ophir, Malacca; and at Singapore, by AR Wallace. [part]. Journal and Proceedings of the Linnean Society of London. Zoology 2: 42–88. <https://doi.org/10.1111/j.1096-3642.1857.tb01759.x>
- Smith F (1858) Catalogue of hymenopterous insects in the collection of the British Museum. Part VI. Formicidae. British Museum, London, 216 pp.
- Smith F (1860) Descriptions of new genera and species of exotic Hymenoptera. Journal of Entomology 1: 65–84. <https://doi.org/10.1111/j.1365-2311.1869.tb01106.x>

- Smith MR (1947) A new genus and species of ant from Guatemala (Hymenoptera: Formicidae). *Journal of the New York Entomological Society* 55: 281–284. <https://www.jstor.org/stable/25005235>
- Subedi IP, Budha PB (2020) Diversity and distribution patterns of ants along elevational gradients. *Nepalese Journal of Zoology* 4(1): 44–49. <https://doi.org/10.3126/njz.v4i1.30672>
- Sykes WH (1835) Descriptions of new species of Indian ants. *Transactions of the Entomological Society of London* 1: 99–107. <https://doi.org/10.1111/j.1365-2311.1838.tb00149.x>
- Thapa VK (2000) An inventory of Nepal's insects (Vol. III). IUCN Nepal, Kathmandu, [xi +] 475 pp.
- Thapa VK (2015) Insect diversity in Nepal. Kathmandu, 1097 pp.
- Tiwari RN, Kundu BG, Roychowdhary S, Ghosh SN (1999) Insecta: Hymenoptera: Formicidae. In: Director, Zoological survey of India (Ed.) *Fauna of West Bengal, Part 8. Insecta (Trichoptera, Thysanoptera, Neuroptera, Hymenoptera and Anoplecta)*. Zoological Survey of India, Calcutta [iv + 442 pp.], 211–294.
- Tiwari RN, Kundu BG, Roychowdhary S, Ghosh SN (2003) Insecta: Hymenoptera: Formicidae. In: Editor-Director (2003) *State Fauna Series 9, Fauna of Sikkim (Part 4)*, [512 pp.], 467–506.
- Wang M (2003) A monographic revision of the ant genus *Pristomyrmex* (Hymenoptera: Formicidae). *Bulletin of the Museum of Comparative Zoology* 157: 383–542.
- Ward PS (2001) Taxonomy, phylogeny and biogeography of the ant genus *Tetraponera* (Hymenoptera: Formicidae) in the Oriental and Australian regions. *Invertebrate Taxonomy* 15: 589–665. <https://doi.org/10.1071/IT01001>
- Westwood JO (1839) An introduction to the modern classification of insects; founded on the natural habits and corresponding organisation of the different families. Volume 2. Part XI. Longman, Orme, Brown, Green and Longmans, London, 193–224. <https://doi.org/10.5962/bhl.title.12455>
- Westwood JO (1840) Observations on the genus *Typhlopone*, with descriptions of several exotic species of ants. *Annals and Magazine of Natural History* 6: 81–89. <https://doi.org/10.1080/03745484009443610>
- Wetterer JK (2008) Worldwide spread of the longhorn crazy ant, *Paratrechina longicornis* (Hymenoptera: Formicidae). *Myrmecological News* 11: 137–149.
- Wetterer JK (2009a) Worldwide spread of the destroyer ant, *Monomorium destructor* (Hymenoptera: Formicidae). *Myrmecological News* 12: 97–108.
- Wetterer JK (2009b) Worldwide spread of the Penny Ant, *Tetramorium bicarinatum* (Hymenoptera: Formicidae). *Sociobiology* 54(3): 1–20.
- Wetterer JK (2010) Worldwide spread of the wooly ant, *Tetramorium lanuginosum* (Hymenoptera: Formicidae). *Myrmecological News* 13: 81–88.
- Wetterer JK (2011) Worldwide spread of the membraniferous dacetime ant, *Strumigenys membranifera* (Hymenoptera: Formicidae). *Myrmecological News* 14: 129–135.
- Wetterer JK (2012a) Worldwide spread of Emery's sneaking ant, *Cardiocondyla emeryi* (Hymenoptera: Formicidae). *Myrmecological News* 17: 13–20.
- Wetterer JK (2012b) Worldwide spread of the Moorish sneaking Ant, *Cardiocondyla mauritanica* (Hymenoptera: Formicidae). *Sociobiology* 59(3): 985–997.

- Wetterer JK (2014) Worldwide spread of the Lesser sneaking ant, *Cardiocondyla minutior* (Hymenoptera: Formicidae). The Florida Entomologist 97(2): 567–574. <https://doi.org/10.1653/024.097.0231>
- Wetterer JK (2017) Geographic distribution of the weaver ant *Oecophylla smaragdina*. Asian Myrmecology 9: e009004. <https://doi.org/10.20362/am.009004>
- Wetterer JK, Kronauer DJC, Borowiec ML (2012) Worldwide spread of *Cerapachys biroi* (Hymenoptera: Formicidae: Cerapachyinae). Myrmecological News 17: 1–4.
- Williams JL, Lapolla JS (2016) Taxonomic revision and phylogeny of the ant genus *Prenolepis* (Hymenoptera: Formicidae). Zootaxa 4200(2): 201–258. <https://doi.org/10.11646/zootaxa.4200.2.1>
- Williams JL, Lapolla JS (2018) Two new *Prenolepis* species (Hymenoptera: Formicidae) from Indomalaya and Australasia, with a redescription of *P. dugasi* from Vietnam. Zootaxa 4441(1): 171–180. <https://doi.org/10.11646/zootaxa.4441.1.10>
- Wilson EO, Taylor RW (1967) Ants of Polynesia (Hymenoptera: Formicidae). Pacific Insects Monograph 14: 1–109.
- Wong MKL, Guénard B (2016) *Leptanilla hypodracos* sp. n., a new species of the cryptic ant genus *Leptanilla* (Hymenoptera: Formicidae) from Singapore, with new distribution data and an updated key to Oriental *Leptanilla* species. ZooKeys 551: 129–144. <https://doi.org/10.3897/zookeys.551.6686>
- Ying M (2013) Temporal food preference and effectiveness of selected bait products against *Pachycondyla chinensis* (Emery) (Hymenoptera: Formicidae). All Theses: 1650. https://tigerprints.clemson.edu/all_theses/1650
- Zheng-Hui X, Cheng-Lin Z (2012) Review of the Myrmicine ant genus *Perissomyrmex* MR Smith, 1947 (Hymenoptera: Formicidae) with description of a new species from Tibet, China. Myrmecological News 17: 147–154.
- Zheng-Hui X, Zheng-Qun C (2004) Systematic study on the ant genus *Tetraponera* F Smith (Hymenoptera: Formicidae) of China. Acta Zootaxonomica Sinica 29(1): 63–76.
- Zhou S, Huang J (2006) Two new species of the ant genus *Perissomyrmex* Smith (Hymenoptera: Formicidae) from China. Entomological News 117(2): 189–196. [https://doi.org/10.3157/0013-872X\(2006\)117\[189:TNSOTA\]2.0.CO;2](https://doi.org/10.3157/0013-872X(2006)117[189:TNSOTA]2.0.CO;2)