

Provisional Distributional Checklist of Hong Kong Sphecidae (Apoidea)

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ABSTRACT

A list of 14 species of Sphecidae recorded to date from Hong Kong in the subfamilies Ammophilinae, Sceliphrinae and Sphecinae is provided. Synonymies, generic revisions and species distribution along with literature references are included.

Key words: Sphecidae, Ammophilinae, Sceliphrinae, Sphecinae, *Ammophila*, *Chalybion*, *Sceliphron*, *Isodontia*, *Sphex*.

INTRODUCTION

Sphecid wasps are relatively well represented in Hong Kong, with 14 species recorded locally to date. However, no thorough attempt has yet been made to list these wasps in the territory. Consequently this work is exploratory in nature and I do not exclude the possibility of additional local species being recorded in the future.

The classification of these wasps has been considerably modified since the last century, however recent phylogenetic studies (Melo 1999; Brothers 1999) have demonstrated that Sphecidae *sensu stricto* is a monophyletic family amongst the Apoidea this classification is accepted here. There are over 730 species world wide in the family (Pulawski 2013), comprising four monophyletic subfamilies: Ammophilinae, Chloriontinae, Sceliphrinae and Sphecinae, of which only Chloriontinae is unrepresented in Hong Kong at the present time. Given the known distribution of the genus *Chlorion* in Asia, however, the occurrence of Chloriontinae in Hong Kong can be expected.

Sphecid wasps either dig simple burrows in soil or reuse pre-existing cavities for nesting sites. Generally speaking the nests consist of a succession of cells that are provisioned with prey items as food for larvae. In Hong Kong, species of the genera *Sphex* and *Isodontia* prey on representatives of the order Orthoptera, with the notable exception of *Isodontia diodon* which preys exclusively on members of the Blattellidae family (Barthélémy 2010). Representatives of the genus *Chalybion* and *Sceliphron* prey exclusively on spiders while *Ammophila* predated moth caterpillars.

In Hong Kong all sphecid wasps are solitary; however, it is very probable that *I. aurifrons* and *I. nigella* both rear multiple larvae in one cell (Barthélémy 2012).

The present species checklist was made based on specimens collected by the author in Hong Kong, which are deposited in my personal collection. Additional voucher specimens are also deposited in the Museum fuer Naturkunde, Berlin, Germany. Nomenclatural information was compiled by extracting the information from the checklists of Sphecidae uploaded on the

internet by Pulawski, W.J in 2014 (http://research.calacademy.org/ent/catalog_sphecidae) and using additional resources for distributional purposes (Hensen 1991; Zhou Qin & Wu Yanru 1992; Wu Yanru & Zhou Qin 1996).

While there are many subspecies in the Sphecidae, I have chosen here to refer only to the nominate species, in accordance with Nixon and Wheeler's (1990) argument that in a phylogenetic system a subspecies has no place.

The arrangement of the species in each genus is alphabetical and each name is accompanied by the original citation, followed by synonymies and generic changes (incorrect spellings are indicated by an exclamation mark in square brackets), which are listed chronologically. I also provide a distributional summary in which Hong Kong and Taiwan are treated independently of China for the sole purpose of reflecting the distributional records. The type depositories (as far as can be determined based on the literature) are also given. Abbreviations for the museums or institutions in which the type materials are deposited are as follows:

- BMNH: The Natural History Museum, formerly British Museum (Natural History), London, UK.
- DEI: Deutsches Entomologisches Institut, Eberswalde, Germany.
- HEC: Hope Entomological Collection, University Museum, Oxford, UK.
- MHNB: Muséum d'Histoire Naturelle de Bâle, Bâle (= Basel), Switzerland.
- MHNG: Musée d'Histoire Naturelle, Genève, Switzerland.
- MNHN: Muséum National d'Histoire Naturelle, Paris, France.
- MSNG: Museo Civico di Storia Naturale di Genova, Genova, Italy.
- NHMW: Naturhistorisches Museum, Wien, Austria.
- RMNH: Nationaal Natuurhistorisch Museum (formerly Rijksmuseum van Natuurlijke Historie), Leiden, the Netherlands.
- USNM: United States National Museum (= National Museum of Natural History, Smithsonian Institution), Washington, USA.
- ZMUC: Zoological Museum, University of Copenhagen, Copenhagen, Denmark.

CHECKLIST OF SPHECIDAE OCCURRING IN HONG KONG

Subfamily *Ammophilinae* André, 1886

Genus *Ammophila* W. Kirby, 1798

Ammophila W. Kirby, 1798, Transactions of the Linnean Society 4:199

Type species: *Sphex sabulosus* Linnaeus, 1758.

Ammophylus [!] Latreille, 1802, in Histoire naturelle générale et particulière des Crustacés et des Insectes. Ouvrage faisant suite à l'Histoire Naturelle générale et particulière, composée par Leclercq de Buffon, et rédigée par C.S. Sonnini, membre de plusieurs Sociétés savantes. Vol. 3: 332.

Miscus Jurine, 1807, in Nouvelle méthode de classer les Hyménoptères et les Diptères. Hyménoptères. Tome premier: 130.

Type species: *Miscus campestris* (Latreille, 1809) [= *Ammophila campestris* Latreille, 1809].

Ammophilus [!] Latreille, in Cuvier, 1829, Le Règne Animal, distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux et d'introduction à l'anatomie comparée. Edition 2, p322. Lapsus or emendation of *Ammophila* W. Kirby, 1798.

Coloptera Latreille, 1845, in Lepeletier de Saint Fargeau, Histoire naturelle des Insectes. Hyménoptères. Vol. 3 : 387

Type species : *Coloptera barbara* Lepeletier de Saint Fargeau, 1845, by monotypy.

Argyrammophila Gussakovskij, 1928, Izvestiya Kursov Prkladnoy Zoologii i Fitopatologii 4 :7

Type species: *Ammophila induta* Kohl, 1901, by original designation.

Apycnemia Leclercq, 1961; Revista Española de Entomología 37: 211.

Type species: *Ammophila fallax* Kohl, 1884 [= *Ammophila hungarica* Mocsáry, 1883], by original designation.

clavus (Fabricius, 1775)

Sphex clavus Fabricius, 1775, Systema Entomologiae, sistens Insectorum classes, ordines, genera, species, adiectis synonymis, locis, descriptionibus, observationibus, p348 – “nova Hollandia” (Australia) (no specific locality), holotype or syntype female BMNH.

Ammophila atripes F. Smith, 1852, *The Annals and Magazine of Natural History* (Series 2) 9:46 - “Khandala; 1800 feet above the level of the sea” (India), holotype or syntype female BMNH. Synonymised with *Ammophila clavus* by Dollfuss,

2013, *Linzer Biologische Beiträge* 45:419.

Ammophila basalis F. Smith, 1856, Catalogue of hymenopterous insects in the collection of the British Museum. Part IV. Sphegidae, Larridae and Crabronidae, p214 – “India (N. India; Punjab)” (no specific locality), syntype female BMNH. Synonymised with *Ammophila clavus* by Dollfuss, 2013, *Linzer Biologische Beiträge* 45:419.

Ammophila nigripes F. Smith, 1856, Catalogue of hymenopterous insects in the collection of the British Museum. Part IV. Sphegidae, Larridae and Crabronidae, p215 – “Madras” (India), holotype or syntype male BMNH. Synonymised with *Ammophila basalis* by R. Turner, 1919, *The Annals and Magazine of Natural History* (Series 9) 3:396.

Ammophila dimidiata F. Smith, 1856, Catalogue of hymenopterous insects in the collection of the British Museum. Part IV. Sphegidae, Larridae and Crabronidae, p216 – “India (Bombay ; Madras; N. Bengal)”. junior primary homonym of *Ammophila dimidiata* (Christ, 1791). Syntype female BMNH. Synonymised with *Ammophila atripes* by Dollfuss, 2013, *Linzer Biologische Beiträge* 45:418.

Ammophila simillima F. Smith, 1856, Catalogue of hymenopterous insects in the collection of the British Museum. Part IV. Sphegidae, Larridae and Crabronidae, p217 - “China (Hong Kong)”, holotype or syntype female BMNH. Synonymised with *Ammophila atripes* by Bingham, 1897, Hymenoptera. – Vol. I. Wasps and bees, p229.

Ammophila pulchella F. Smith, 1856, Catalogue of hymenopterous insects in the collection of the British Museum. Part IV. Sphegidae, Larridae and Crabronidae, p218 - “Hong Kong; North China (Shanghai)”, syntypes male BMNH. Synonymised with *Ammophila atripes* by Bingham, 1897, Hymenoptera. – Vol. I. Wasps and bees, p229.

Ammophila longiventris de Saussure, 1867, *Zoologischer Theil* Vol. 2: 24 - “Ceylon”, lectotype male MHNG. Synonymised with *Ammophila atripes* by Bingham, 1897, Hymenoptera. – Vol. I. Wasps and bees, p229.

Ammophila humberiana de Saussure, 1867, *Zoologischer Theil* Vol. 2: 25 - “Ceylon”, lectotype female MHNG, designated by Menke in Bohart and Menke, 1976, Sphecid wasps of the world. A generic revision, p151. Synonymized with *Ammophila atripes* by W. Schulz, 1911, *Zoologische Annalen* 4:161.

Ammophila spinosa F. Smith, 1873, *The Annals and Magazine of Natural History* (Series 4) 12: 259 - “Hong Kong”, holotype or syntype female BMNH. Synonymised with *Ammophila atripes* by Bingham, 1897, Hymenoptera. – Vol. I. Wasps and bees, p229.

Ammophila orientalis Cameron, 1889, *Memoirs and Proceedings of the Manchester Literary & Philosophical Society* (Series 4) 2:6, syntype female OXUM. Synonymised with *Ammophila*

basalis by Bingham, 1897, Hymenoptera. – Vol. I. Wasps and bees, p231.

Ammophila buddha Cameron, 1889, *Memoirs and Proceedings of the Manchester Literary & Philosophical Society* (Series 4) 2:3; - "Calcutta district...", syntype (sex not indicated) OXUM. Synonymised with *Ammophila atripes* by Bingham, 1897, Hymenoptera. – Vol. I. Wasps and bees, p229.

Distribution: Bangladesh. India. Sri Lanka. Nepal. West Malaysia. Singapore. Thailand. China: Hunan, Hebei, Shaanxi, Shandong, Zhejiang, Fujian, Guangdong, Guangxi, Sichuan, Guizhou, Yunan. **Hong Kong.** Japan. North Korea.

Subfamily Sceliphrinae Ashmead, 1899

Tribe Sceliphriini Ashmead, 1899

Genus *Chalybion* Dahlbom, 1843

Chalybion Dahlbom, 1843, Hymenoptera Europaea praecipue borealia; formis typicis nonnullis Specierum Generumve Exoticorum aut Extraneorum propter nexum systematicus associatis; per Familias, Genera, Species et Varietates disposita atque descripta. Tomus: *Sphex* in sensu Linneano, p21.

Type species: «*Chalybion caeruleum*» [= *Sphex caeruleus* of Linnaeus, 1767:941 = *Sphex caeruleus* Linnaeus, 1763 = *Sphex cyaneus* Fabricius, 1775 = *Pelopeus* (sic) *californicus* de Saussure, 1867].

Chalybium Agassiz, 1846, Nomenclator zoologicus, p77.

Chalybium W. Schulz, 1906, Spolia Hymenopterologica, p192. Junior homonym of *Chalybium* Agassiz, 1846, Nomenclator zoologicus, p77.

Hemichalybion Kohl, 1918, *Annalen des k.k. Naturhistorischen Hofmuseums* 32:79.

Type species: *Pelopoeus eckloni* Dahlbom, 1845.

bengalense (Dahlbom, 1845)

Sphex violaceus Fabricius, 1775, Systema Entomologiae, p346 – "...in terra sabulosa Europae...", lectotype ZMUC. Junior primary homonym of *Sphex violaceus* Scopoli, 1763, Entomologia Carniolica exhibens Insecta Carnioliae indigena et distributa in ordines, genera, species, varietates. Methodo Linnaeana. Typis Ioannis Thomae Trattner, Vindobonae p298.

? *Sphex ferus* Drury, 1782, *Illustrations of natural history*, Vol 3: 57 - "...from China".

? *Sphex niditulus* Christ, 1791, Naturgeschichte, Klassifikation und Nomenclatur der Insekten vom Bienen, Wespen und Ameisengeschlecht.

? *Sphex smaragdinus* Christ, 1791, Naturgeschichte, Klassifikation und Nomenclatur der Insekten vom Bienen, Wespen und Ameisengeschlecht, p310. Replacement name for *Sphex ferus* Drury.

? *Sphex ferox* Westwood, 1837

Pelopoeus bengalensis Dahlbom, 1845, Hymenoptera Europaea praecipue borealia; formis typicis nonnullis Specierum Generumve Exoticorum aut Extraneorum propter nexum systematicus associatis; per Familias, Genera, Species et Varietates disposita atque descripta. Tomus: *Sphex* in sensu Linneano, p433 - "Bengalia" (Bengal). Synonymised with *Pelopaeus violaceus* by Bingham, 1896, *Proceedings of the General Meetings for Scientific Business of the Zoological Society of London* 1896, p439.

Pelopoeus convexus F. Smith, 1876, *The Annals and Magazine of Natural History* (Series 4) 17:449 – "Mascarenes- Rodriguez", syntype female BMNH. Synonymised with *Chalybion bengalense* by Hensen, 1988, *Tijdschrift voor Entomologie* 131: 51.

Distribution: Africa: Red Sea Coast (Harkeko, Massowah), Tanzania: Zanzibar, Ethiopia (Bale Province). Eritrea, Mozambique, South Africa. Madagascar. Maldives. Seychelles Islands. Mascarenes Islands. Chagos Archipelago. Sinai Peninsula (Wadi Feiran). Yemen: Aden, Socotra. Egypt. Iraq. India: West Bengal, Malaya, Tamil Nadu, Uttar Pradesh. Nepal. Sri Lanka. Bangladesh. Myanmar. Thailand. Peninsular Malaysia. Philippines: Luzon, Palawan. China. **Hong Kong.** Singapore. Indonesia: Java, Sulawesi, Kalimantan (Samarinda), Moluccas (Ternate), Papua (Misool), Timor, Lesser Sunda Islands, Sumbawa. Japan: Hokkaido, Honshu, Ogasawara, Ryukyu Islands, Iwo Jima. Taiwan. Micronesia: Guam Island. Hawaiian Islands.

japonicum (Gribodo, 1883)

Chalybion curvatum Ritsema, 1880, *Notes from the Leyden Museum* 2:226 - "...from Japan...", lectotype female RMNH, designated by Hensen, 1988, *Tijdschrift voor Entomologie* 131: 54. Junior secondary homonym of *Chalybion curvatum* (F. Smith, 1870).

Pelopaeus japonicus Gribodo, 1883, *Annali del Museo Civico di Storia Naturale di Genova* 18: 264 - "Giappone" (Japan), lectotype female MSNG (no specific locality). Designated by Hensen, 1988, *Tijdschrift voor Entomologie* 131:54. Synonymised with *Sceliphron curvatum* by Kohl, 1906. Mathematisch-Naturwissenschaftliche Klasse 71:193.

Pelopoeus punctatus Kohl, 1888, *Verhandlungen der kaiserlich-königlichen Zoologisch-Botanischen Gesellschaft in Wien* 38: 155 - "Zanzibar", holotype female ZMHU (probably mislabeled (Hensen, 1988)). Synonymised with *Chalybion japonicum* by Hensen, 1988, *Tijdschrift voor Entomologie* 131:53

Sceliphron inflexum Sickmann, 1894, *Zoologische Jahrbücher, Abtheilung für Systematik, Geographie und Biologie der Thiere* 8: 220 - "... caught in the vicinity of Tientsin", syntypes female & male. Synonymised with *Chalybion japonicum* by Hensen, 1988, *Tijdschrift voor Entomologie* 131: 53.

Sceliphron ritsemae Dalla Torre, 1897, *Catalogus Hymenopterorum hucusque descriptorum systematicus et synonymicus, Volumen VIII: Fossores (Sphegidae)*, p389 - "Japonia" (Japan). Substitute name for *Sceliphron curvatum* (Ritsema, 1880).

Chalybion Japonicum [!] (= *japonicum*) Pérez, 1905, *Bulletin du Muséum d'Histoire Naturelle*, p152. Incorrect capitalisation. Junior secondary homonym of *Chalybion japonicum* (Gribodo, 1883), holotype or syntypes female MNHN. Synonymised with *Chalybion japonicum* Gribodo by van der Vecht in Bohart & Menke, 1976, *Sphecid wasps of the world. A generic revision*, p102.

Sceliphron degenerans Kohl, 1918, *Annalen des k.k. Naturhistorischen Hofmuseums* 32: 79, - "... stammt aus dem paläarktischen China... (= ... is from Palearctic China)", holotype female ZMHU. Synonymised with *Chalybion japonicum punctatum* by van der Vecht in Bohart & Menke, 1976, *Sphecid wasps of the world. A generic revision*, p103.

Distribution: Japan: Ryukyu archipelago, Hachijo-Jima Island, Honshu, Ogasawara, Goto Islands, Yakushima Island, Sado Island, Tsushima Island. China: Hunan, Fujian, Zhejiang, Hubei, Shanxi, Hebei, Heilongjiang, Liaoning, Zhejiang, Jianxi, Jiangsu, Shandong, Guangdong, Hainan, Guangxi, Sichuan, Yunan, Beijing, Manchuria. **Hong Kong.** Taiwan. Russian Far East. Thailand. Vietnam. Korea. India.

sumatranum (Kohl, 1884)

Pelopoeus sumatranus Kohl, 1884, *Verhandlungen der kaiserlich-königlichen Zoologisch-Botanischen Gesellschaft in Wien* 33: 375, - "Sumatra", holotype or syntype female NHMW.

Distribution: Indonesia: Sumatra. China: Hainan. **Hong Kong.** Vietnam.

Genus *Sceliphron* Klug, 1801

Sceliphron Klug, 1801, *Neue Schriften der Gesellschaft Naturforschender Freunde zu Berlin* 3: 561.

Type species: *Sphex spirifex* Linnaeus, 1758, designated by Bingham, 1897 in *Fauna of British India, including Ceylon and Burma, Hymenoptera*. – Vol. I. Wasps and bees, p235.

Pelopoeus Latreille, 1802, *Histoire naturelle générale et particulière des Crustacés et des Insectes*. Ouvrage faisant suite à l'Histoire

Naturelle générale et particulière, composée par Leclercq de Buffon, et rédigée par C.S. Sonnini, membre de plusieurs Sociétés savantes. Vol. 3: 334.

Type species: *Pelopoeus spirifex*, Fab. [= *Pelopoeus spirifex* of Fabricius, 1804 = *Sphex spirifex* Linnaeus, 1758], designated by Latreille, 1810, *Considérations générales sur l'ordre naturel des animaux composant les classes des Crustacés, des Arachnides, et des Insectes*, avec un tableau méthodique de leurs genres, disposés en familles, p438.

Pelopaeus [!] (= *Pelopoeus*) Latreille, 1804, *Tableau méthodique des insectes in Société de Naturalistes et d'Agriculteurs. Nouveau dictionnaire d'histoire naturelle*, p80.

Sceliphron W. Schulz, 1906, *Spolia Hymenopterologica*, p192. Unnecessary emandation of *Sceliphron* Klug, 1801.

Prosceliphron van der Vecht, 1968, *Tijdschrift voor Entomologie* 111:192, [= *Pelopoeus coromandelicus* Lepeletier de Saint Fargeau, 1845], by original designation. Junior homonym of *Prosceliphron* Frenguelli, 1946.

Type species: *Sceliphron coromandelicum* (Lepeletier de Saint Fargeau, 1845).

Hensenia Pagliano and Scaramozzino, 1990, *Elenco dei generi di Hymenoptera del Mondo. Memorie della Società Entomologica Italiana* 68: 5. Substitute name for *Prosceliphron* van der Vecht, 1968.

deforme (F. Smith, 1856)

Pelopoeus deformatis F. Smith, 1856, *Catalogue of hymenopterous insects in the collection of the British Museum. Part IV. Sphegidae, Larridae and Crabronidae*, p231, - "North China", lectotype BMNH, designated by Hensen, 1987, *Tijdschrift voor Entomologie* 129: 238.

Sceliphron deforme taiwanum Tsuneki, 1971, *Etizenia* 53: 6 – "Taiwan: Taitung Prefecture: Chulu", holotype female USNM. Synonymised with *Sceliphron deforme deforme* by Hensen, 1987, *Tijdschrift voor Entomologie* 129: 238.

Distribution: Japan: Hokkaido island (Hakodade), Kyushu island, Honshu Island (Yamagata Prefecture, Nagano Prefecture, Yamanashi Prefecture, Niigata Prefecture, Fukui Prefecture, Saitama Prefecture, Chiba Prefecture), Shikoku Island, Ryukyu Islands. China: Tibet, North East China, Hebei, Shandong, NE Szechuan, Jiangsu, Beijing, Dongbei, Zhejiang, Gansu, Hunan. **Hong Kong.** Taiwan. Russia: Western Siberia, Primorskiy Kray, Krasnoyarskiy Kray, Western Siberia, Mordovian Republic, Nizhniy Novgorod Oblast. Tajikistan: Zevar, Hissar Range. Southeast Kazakhstan. Philippines: Basilan Island. Vietnam. Korea. India. Montenegro: Ulcinj County.

javanum (Lepeletier, 1845)

Pelopaeus Javanus [!] (= *javanus*) Lepeletier de Saint Fargeau, 1845, Histoire naturelle des Insectes. Hyménoptères. Vol. 3: 309, - “Java”, holotype female (no specific locality). Incorrect original capitalisation.

Distribution: Indonesia: Java. Malaysia: Sarawak, Penang. Thailand. Cambodia. China: Heibei, Hainan, Yunan, Zhejiang. **Hong Kong**. India. Sri Lanka.

Subfamily **Sphecinae** Latreille, 1802

Tribe Sphecini Latreille, 1802

Genus *Isodontia* Patton, 1880

Isodontia Patton, 1880, Proceedings of the Boston Society of Natural History 20:380.

Type species: *Isodontia philadelphica* (Lepeletier, 1845) [= *Sphegophiladelphicus* Lepeletier, 1845], by original designation.

Leontosphex Arnold, 1945, The Sphecidae of Madagascar, p90.

Type species: *Sphegophiladelphicus* de Saussure, 1890, by original designation.

Murrayella R. Bohart and Menke, 1963, University of California Publications in Entomology 30:137.

Type species: *Sphegophiladelphicus* F. Smith, 1856, by original designation.

aurifrons (F. Smith, 1859)

Sphegophiladelphicus aurifrons F. Smith, 1859, *Journal of the Proceedings of the Linnean Society, Zoology* 3:157, - “Indonesia, Aru (= Aru Island, Moluccas)”, lectotype female HEC, designated by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 13.

Sphegophiladelphicus morosa [!] (= *morosus*) F. Smith, 1860, *Journal of the Proceedings of the Linnean Society, Zoology* 5:122, - “Bachian” (Moluccas), holotype or syntypes male HEC. Incorrect original termination. Synonymised with *Isodontia aurifrons* by Hensen, 1991, *Tijdschrift voor Entomologie* 134:13.

Sphegophiladelphicus volatilis F. Smith, 1860, *Journal of the Proceedings of the Linnean Society, Zoology* 5:122, - “Bachian” (Moluccas), holotype female HEC. Synonymised with *Isodontia morosa* [!] by van der Vecht in Bohart and Menke, 1976, Sphecids wasps of the world. A generic revision, p123.

Sphegophiladelphicus triodon Kohl, 1890, *Annalen des k.k. Naturhistorischen Hofmuseums* 5:377, - “Java”, lectotype male NHMW. Synonymised with *Isodontia aurifrons* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 13.

Sphegophiladelphicus abditus Kohl, 1895, *Annalen des k.k. Naturhistorischen Hofmuseums* 10:51, - “Sikkim”, holotype NHMW. Synonymised with *Isodontia aurifrons* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 13.

Sphegophiladelphicus abditus st. *nugenti* R. Turner, 1910, *Proceedings of the General Meetings for Scientific Business of the Zoological Society of London* 1910: 345, - “Cairns, Q.”, holotype or syntypes female BMNH. Synonymised with *Isodontia aurifrons* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 13.

Distribution: Indonesia: Java, Moluccas, Papua. Philippines: Luzon, Palawan. China. **Hong Kong**. Malaysia. India. Sri Lanka. Australia: Queensland.

diodon (Kohl, 1890)

Sphegophiladelphicus diodon Kohl, 1890 *Annalen des k.k. Naturhistorischen Hofmuseums* 5:377, - “Celebes, Sumatra”, lectotype male NHMW, designated by Hensen, 1991, *Tijdschrift voor Entomologie* 134:17.

Sphegophiladelphicus maia Bingham, 1893, *The Journal of the Bombay Natural History Society* 8:379, - “Tenasserim”, syntypes males & female BMNH.

Distribution: Indonesia: Sulawesi, Sumatra, Java. India: Sikkim. Nepal. Thailand. Myanmar. Thailand. Cambodia. Laos. Vietnam. China. **Hong Kong**. Singapore. Peninsular Malaysia.

nigella (Smith, 1856)

Sphegophiladelphicus nigellus [!] (= *nigella*) F. Smith, 1856, in Catalogue of hymenopterous insects in the collection of the British Museum. Part IV. Sphegidae, Larridae and Crabronidae, p255, - “Shanghai”, syntypes male & female BMNH. Incorrect original termination.

Sphegophiladelphicus xanthognathus Pérez, 1905, *Bulletin du Muséum d’Histoire Naturelle* 11:151, - “Yokohama”, holotype or syntypes male & female MNHN. Synonymised with *Sphegophiladelphicus nigellus* by Berland, 1926, *Bulletin du Muséum National d’Histoire Naturelle* 32: 283.

Distribution: Indonesia: Papua. India : Uttar Pradesh. China: Heilongjiang, Heibei, Jiangxi, Sichuan, Beijing, Shanghai, Jiangsu, Dongbei, Zhejiang. North East China (Manchuria). **Hong Kong**. Taiwan. Korea. Japan: Kyushu (Goto Islands, Yakushima Island), Sado Island, Ryukyu Archipelago, Amami-Oshima Islands, Honshu, Shikoku, Hachijo-Jima Island. Russia: Primorskiy Krai. Australia: Adelaide, Queensland.

ochroptera (Kohl, 1890)

Sphegophiladelphicus ochropterus Kohl, 1890, *Annalen des k.k. Naturhistorischen Hofmuseums* 5:378, - “Australische Region : Celebes – Batimoerang”. (Type specimen destroyed).

Distribution: India. Myanmar. Bangladesh. Thailand. Laos. Malaysia. Indonesia: Sumatra, Kalimantan, Java, Moluccas (Aru, Halmahera), Sulawesi. **Hong Kong**. Philippines: Palawan, Samar.

Genus *Sphex* Linnaeus, 1758

Sphex Linnaeus, 1758, *Systema Naturae Per Regna Tria Naturae, Secundum Classes, Ordines, Genera, Species, Cum characteribus, differentiis, synonymis, locis*. Tomus I, p569.

Type species: *Sphex flavipennis* Fabricius, 1793.

Sphaex [!] (= *Sphex*) Scopoli, 1772, *Annus V. Historico-naturalis. V. Observationes zoologicae*: 122.

Ammobia Billberg, 1820, *Enumeratio Insectorum in museo Gust. Joh. Billberg*, p105.

Type species *Pepsis argentata* (Fabricius, 1804) [= *Sphex argentatus* Fabricius, 1787], designated by Rohwer, 1911, *Psyche* 18: 153.

Proterosphex Fernald, 1905, *Entomological News* 16:163.

Type species: *Sphex maxillosus* Fabricius, 1793, junior primary homonym of *Sphex maxillosus* Poiret, 1787 [= *Sphex funerarius* Gussakovskij, 1934].

Fernaldina R. Bohart and Menke, 1963, *University of California Publications in Entomology* 30:130.

Type species: *Sphex lucae* de Saussure, 1867. By monotypy.

argentatus Fabricius, 1787

Sphex argentata [!] (= *argentatus*) Fabricius, 1787, *Mantissa Insectorum sistens eorum species nuper detectas adiectis characteribus genericis, differentiis specificis, emendationibus, observationibus*, Vol. 1, p274 - "...in Coromandel..." (South India, no specific locality), lectotype female, ZMUC, incorrect original termination. Designated by van der Vecht, 1961, *Zoologische Verhandelingen* 48: 28.

Sphex unicolor Fabricius, 1787, *Mantissa Insectorum sistens eorum species nuper detectas adiectis characteribus genericis, differentiis specificis, emendationibus, observationibus*, Vol. 1, p275, - "...in Hispania..." (Spain). Synonymised with *Sphex argentatus* by Fabricius, 1804 in *Systema Piezatorum secundum ordines, genera, species adiectis synonymis, locis, observationibus, descriptionibus*, p209-210.

Sphex umbrosus Christ, 1791, *Naturgeschichte, Klassifikation und Nomenclatur der Insekten vom Bienen, Wespen und Ameisengeschlecht; als der fünften Klasse fünfte Ordnung des Linneischen Natursystems von den Insekten: Hymenoptera*, p293. Synonymised with *Sphex argentatus* by van der Vecht, 1961, *Zoologische Verhandelingen* 48: 28.

Distribution: India: Assam, West Bengal, Uttar Pradesh. Sri Lanka. Myanmar. Thailand. Laos. Cambodia. Vietnam. Peninsular Malaysia. China:

Beijing, Zhejiang, Sichuan, Heibei, Shandong, Shaanxi, Guangdong, Guangxi. **Hong Kong**. Taiwan. Korea. Japan: Honshu, Kyushu (Goto Islands), Ryukyu Islands, Hachijo-Jima Island. Korea. Philippines: Luzon, Palawan, Basilan, Calicoan. Indonesia: Moluccas (Aru, Bacan, Seram, Morotai), Sumatra, Java, Lesser Sunda Islands, Sulawesi, Papua (Manokwari, Merauke, Bivak, Wataikwa River). Borneo. Africa: Senegal, Djibouti, Ethiopia (Harar District), Angola, Egypt, Sudan, Benin, Botswana, Kenya, Malawi, Mozambique, Zaire, Uganda, Namibia, South Africa, Tanzania, Zambia, Zimbabwe, Ivory Coast. Djibouti: Daklak Island, Tajura. Dahleeh Island. Kuwait. Yemen: Socotra. Israel. Seychelles islands. Kazakhstan. Australia: Queensland, Northern Territory, Australian Capital Territory. Spain.

diabolicus F. Smith; 1858

Sphex diabolicus F. Smith, 1858, *Journal of the Proceedings of the Linnean Society* 2:100 - "Borneo (Sarawak)", lectotype female HEC. Designated by van der Vecht, 1973, *Proceedings. Koninklijke Nederlandse Akademie van Wetenschappen* (Series C) 76:342.

Sphex fulvo-hirta [!] Bingham, 1890, *The Journal of the Bombay Natural History Society* 5:242 - "Celon", holotype female BMNH, incorrect original hyphenation and termination of *fulvohirtus*. Synonymised with *Sphex diabolicus* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 21.

Sphex flammitrichus Strand, 1913, *Archiv für Naturgeschichte, Abteilung A* 79 (3): 83 - "(Kankau)" lectotype female DEI. Synonymised by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 21.

Sphex umbrosus var. *aureopilosa* [!] Berland, 1928, *Bulletin du Muséum National d'Histoire Naturelle* 34:330 - "Vietnam: Ba-Cha", lectotype male MNHN, incorrect original termination of *aureopilosus*. Synonymised with *Sphex diabolicus flammitrichus* by Menke in *Sphecids Wasps of the World. A generic revision*, p 114.

Distribution: India. Sri Lanka. Laos. Vietnam. Malaysia: Sarawak. Indonesia: Sumatra, West Java, Sulawesi, Moluccas (Bacan, Seram, Ambon), Kalimantan. New Guinea. Vietnam. Philippines. Japan: Ryukyu islands, Kyushu, Honshu, Osumi islands (Yakushima Island). China: Hunan, Sichuan, Yunan. **Hong Kong**. Taiwan. Korea.

sericeus (Fabricius, 1804)

Sphex aurulenta [!] Fabricius, 1793, *Entomologia systematica emendata et aucta. Secundum classes, ordines, genera, species adiectis synonymis, locis, observationibus, descriptionibus*. Vol. 2, p201 - "Tranquebariae" (Tharangambadi, India), holotype or syntype (depository unknown), incorrect original termination of *aurulentus*. Junior primary homonym of *Sphex aurulentus* Fabricius, 1787.

Sphex sericea [!] Fabricius, 1804, *Systema Piezatorum secundum ordines, genera, species*

adiectis synonymis, locis, observationibus, descriptionibus, p211 – "...maris pacifici Insulis", lectotype female, ZMUC, incorrect original termination of *sericeus*. Designated by van der Vecht, 1961, Hymenoptera Sphecoidea Fabriciana. *Zoologische Verhandelingen* 48: 30.

Sphex Fabricii [!] Dahlbom, 1843, Hymenoptera Europaea praecipue borealia; formis typicis nonnullis Specierum Generumve Exoticorum aut Extraneorum propter nexum systematicus associatis; per Familias, Genera, Species et Varietates disposita atque descripta. Tomus: *Sphex* in sensu Linneano, p27, syntype female (depository unknown), incorrect original capitalization of *fabricii*. Synonymised with *Sphex sericeus* by Kohl, 1885, *Természetrázi Füzetek* 9: 194.

Sphex lineola [!] Lepeletier de Saint Fargeau, 1845, Histoire naturelle des Insectes. Hyménoptères. Vol. 3: 353 – "Java", holotype or syntype male (no specific locality), incorrect original termination of *lineolus*. Synonymised with *Sphex sericeus* by Kohl, 1885, *Természetrázi Füzetek* 9: 195.

Sphex ferruginea [!] Lepeletier de Saint Fargeau, 1845, Histoire naturelle des Insectes. Hyménoptères. Vol. 3: 345 – "Sans patrie, mais exotique", holotype or syntype female, incorrect original termination of *ferrugineus*. Synonymised with *Sphex sericeus* by Kohl, 1885, *Természetrázi Füzetek* 9: 194.

Sphex ferox F. Smith, 1862, *Journal of the Proceedings of the Linnean Society, Zoology* 6: 55 – "Amboyna; Celebes", junior primary homonym of *Sphex ferox* Westwood, 1837. Syntype male BMNH and OXUM (no specific locality). Synonymised with *Sphex aurulentus* by Kohl, 1885, *Természetrázi Füzetek* 9:195.

Sphex lepeletierii de Saussure, 1867, Reise der österreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859 unter den Befehlen des Commodore B. von Wüllerstorff-Urbair. Zoologischer Theil. Zweiter Band, p40 - "Java, Batavia", holotype or syntypes female NHMW. Synonymised with *Sphex aurulentus* by Kohl, 1885, *Természetrázi Füzetek* 9:195.

Sphex Godeffroyi [!] de Saussure, 1869, Entomologische Zeitung 30: 57 – "La Nouvelle Hollande. Cap York", holotype or syntype female (no specific locality), incorrect capitalisation of *godeffroyi*. Synonymised with *Sphex aurulentus* by Kohl, 1885, *Természetrázi Füzetek* 9: 195.

Sphex aurifex F. Smith, 1873 in J.L. Brenchley. Jottings during the cruise of the H.M.S. Curaçoa among the South Sea islands in 1865, with numerous illustrations and natural history notices, p460 – "Western Australia: Champion Bay", holotype female BMNH. Synonymised with *Sphex aurulentus* by Kohl, 1890, *Annalen des k.k. Naturhistorischen Hofmuseums* 5: 392.

Sphex aurulentus var. *pallida-hirta* [!] Kohl, 1890, *Annalen des k.k. Naturhistorischen Hofmuseums*

5: 393 – "Amboina...; P. Moresby...;" (Indonesia: Moluccas & Papua New Guinea), incorrect hyphenation and termination of *pallidehirtus*. Synonymised with *Sphex sericeus* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 22.

Sphex rugosus Matsumura, 1912, *Thousand insects of Japan. Supplement IV*:176, 177. Junior primary homonym of *Sphex rugosus* De Geer, 1773, holotype of syntype (?) female, Taiwan (depository unknown). Synonymised with *Sphex sericeus* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 22.

Sphex lineolus wegneri van der Vecht and Krombein, 1955, *Idea* 10: 39, holotype male RMNH. Synonymised with *Sphex sericeus* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 22.

Sphex sericeus nigrescens van der Vecht and Krombein, 1955, *Idea* 10: 39, holotype female USNM. Synonymised with *Sphex sericeus* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 22.

Sphex sericeus ferocior van der Vecht and Krombein, 1955, *Idea* 10: 40. Substitute name for *Sphex ferox* F. Smith. Synonymised with *Sphex sericeus* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 22.

Sphex stüberi van der Vecht and Krombein, 1955, *Idea* 10: 42, holotype female RMNH, incorrect original diacritic mark of *stueberii*. Synonymised with *Sphex sericeus* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 22.

Distribution: India. Sri Lanka. Myanmar. Laos. Vietnam. Cambodia. Thailand. Malaysia. Philippines: Luzon, Basilan Island. Indonesia: Moluccas (Ambon, Seram, Waigeo, Aru, Ternate, Bacan), Papua, Java, Sumatra, East Nusa Tenggara, Krakatau islands, Sulawesi, Kalimantan. Papua New Guinea. Malaysia: Peninsular Malaysia, Sarawak. China: Fujian, Guangdong, Hainan, Yunan, Jiangsu, Zhejiang. **Hong Kong**. Taiwan. Japan: Ryukyu islands. Australia: northwest Queensland, western Australia. Yemen: Aden.

subtruncatus Dahlbom, 1843

Sphex subtruncatus Dahlbom, 1843, Hymenoptera Europaea praecipue borealia; formis typicis nonnullis Specierum Generumve Exoticorum aut Extraneorum propter nexum systematicus associatis; per Familias, Genera, Species et Varietates disposita atque descripta. Tomus: *Sphex* in sensu Linneano, p25 – "Africa", lectotype female (depository unknown), incorrect termination of *subtruncatus*, designated by van der Vecht, 1973, *Proceedings. Koninklijke Nederlandse Akademie van Wetenschappen (Series C)* 76: 350.

Sphex nigripes F. Smith, 1856, Catalogue of hymenopterous insects in the collection of the British Museum. Part IV. Sphegidae, Larridae and Crabronidae, p254 – "Sumatra; North China (Shanghai)", junior primary homonym of *Sphex*

nigripes Fabricius, 1793., syntypes BMNH. Synonymised with *Sphex subtruncatus* by W. Schultz, 1912, *Berliner Entomologische Zeitschrift* 57: 94.

Sphex siamensis Taschenberg, 1869, *Zeitschrift für die Gesamten Naturwissenschaften* 34:413 – “Siam”, Holotype or syntypes female (no specific locality). Synonymised with *Sphex subtruncatus* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 28.

Sphex erythropoda Cameron, 1889, *Memoirs and Proceedings of the Manchester Literary & Philosophical Society* (Series 4) 1: 18, 20 – “India”, Syntypes female (no specific locality, Calcutta Museum). Synonymised with *Sphex nigripes* by Kohl, 1890, *Annalen des k.k. Naturhistorischen Hofmuseums* 5: 421.

Sphex sulciscuta [!] Gribodo, 1894, *Miscellanea Entomologica. Nuntius Entomologicus Internationalis* 2: 2 – “I. Mindoro” (Philippines), holotype or syntypes female (no specific locality), incorrect termination of *sulciscutus*. As new synonym of *Sphex nigripes muticus* by W. Schulz, 1911, *Zoologische Annalen* 4: 167.

Sphex nigripes var. *tsingtauensis* Strand, 1915, *Archiv für Naturgeschichte, Abteilung A* 81 (11): 107 – “Tsingtau” (China), holotype female DEI.

Sphex subtruncatus xuthus van der Vecht, 1957, *Verhandlungen der Naturforschenden Gesellschaft in Basel* 68: 364, holotype male MHNB. Synonymised with *Sphex subtruncatus* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 28.

Sphex subtruncatus orius van der Vecht, 1957, *Verhandlungen der Naturforschenden Gesellschaft in Basel* 68: 366, holotype male MHNB. Synonymised with *Sphex subtruncatus* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 28.

Sphex subtruncatus krombeini van der Vecht in Krombein, 1984, *Smithsonian Contributions to Zoology* No. 387: 28, holotype female USNM. Synonymised with *Sphex subtruncatus* by Hensen, 1991, *Tijdschrift voor Entomologie* 134: 28.

Distribution: India: Uttar Pradesh. Nepal. Bhutan. Sri Lanka. Vietnam. Laos. Malaysia. Thailand. Singapore. Indonesia: Lesser Sunda Islands, Sumba, Flores, Bangka, Java, Lombok, Kalimantan, Timor, Sumatra, Sulawesi, Halmahera. Korea. China: Guizhou, Hunan, Shanghai, Jiangsu. **Hong Kong**. Taiwan. Philippines: Samar group of Islands, Mindoro, Basilan Island. Japan: Okinawa. Africa: South Africa, Malawi, Ethiopia.

ACKNOWLEDGMENT

The author wishes to thank Dr. Michael Ohl, Museum fuer Naturkunde Leibniz-Institut fuer Evolutions- und Biodiversitaetsforschung an der Humboldt-Universität, Berlin, Germany for his review and comments on the original manuscript, and also Graham Reels (UK) for his kind editing.

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