

24 May 2025

ISODONTIA

Isodontia Patton, 1880a:380. Type species: *Isodontia philadelphica* (Lepeletier de Saint Fargeau, 1845) [= *Sphex philadelphicus* Lepeletier de Saint Fargeau, 1845], by original designation.

Leontosphex Arnold, 1945:90. Type species: *Sphex leoninus* de Saussure, 1890, by original designation.

Murrayella R. Bohart and Menke, 1963:137. Type species: *Sphex elegans* F. Smith, 1856, by original designation.

Revision: Hensen, 1991a (Malaysia), 1991b (Australia).

Key to species: Pagliano, 1984:366 (Italy), Scaramozzino and Pagliano, 1987 (Italy).

Review of biology: Bequaert, 1930:122 (all *Isodontia* nest in plant stems); Kazenas: 2001b:73.

1. *albata* Hensen

Isodontia albata Hensen, 1991b:126, ♀, ♂. Holotype: ♂, Australia: Queensland: Cairns (BMNH).

2. *alvarengai* Fritz

Isodontia alvarengai Fritz, 1983a:28, ♀. Holotype: ♀, Brazil: Río Javari, Estirão do Equador (originally M. Fritz coll., now MACN). – Fritz, 1993:16 (holotype in M. Fritz coll.); Amarante, 2002:73 (in catalog of Neotropical Sphecidae).

3. *apicalis* (F. Smith)

Sphex apicalis Harris, 1835:588, nomen nudum. – Taylor, 1884:80 (Canada: British Columbia: Island of Vancouver).

Sphex apicalis F. Smith, 1856:262, ♂. Syntypes: Florida: Saint John's Bluff; Georgia: no specific locality (BMNH). – Cresson, 1863:319 (in catalog of North American Hymenoptera); Taschenberg, 1869:414 (Illinois); Cresson, 1873:211 (Texas); Fernald, 1931a:442 (synonymy); Kohl, 1890:381 (as senior homonym of *Sphex apicalis* F. Smith, 1865:253, acting as First Reviser, and as junior synonym of *Sphex philadelphicus*). – **As *Isodontia apicalis***: Fernald, 1903a:269 (in key to North American *Isodontia*), 270 (new combination, valid species, not a synonym of *Sphex philadelphicus*); R. Bohart and Menke, 1963:134 (in revision of Nearctic Sphecini), 1976:123 (in checklist of world Sphecidae); Krombein, 1979b:1582 (in catalog of North American Hymenoptera); Ahlstrom, 1995:107 (in checklist of insects of North Carolina); Buck, 2004:24 (Canada: in checklist of Sphecidae of Ontario), 29 (distribution within Ontario), 33 (first record from Canada: Ontario: Point Pelee National Park); Horta Vega, Pinson Domínguez, Barrientos Lozano, and Correa Sandoval, 2007: 47 (Mexico: Tamaulipas); McCravy, Bara, Hessler, Luxmore, Stinebaker, and Jenkins, 2009:113 (Illinois: Hancock County: Alice L. Kibbe Life Science Station); Buck and Bennett, 2025:224 (in checklist of Sphecidae sensu lato of Canada, Alaska, and Greenland: Canada: Ontario; no specific locality).

Isodontia macrocephala var. *cinerea* Fernald, 1903:271, sex and origin not stated. Lectotype: ♀, Florida: Enterprise (USNM), designated by R. Bohart and Menke, 1963:134. Synonymized with *Sphex apicalis* by Fernald, 1931a:442. – Fernald, 1903a:269 (in key to North American *Isodontia*). – **As *Chlorion aztecum cinereum***: Fernald, 1906:356 (new combination, new status, in revision of Sphecini of North America and West Indies); Mickel, 1918b:398 (in catalog of Nebraskan Sphecidae); Brimley, 1938:444 (North Carolina: Raleigh); Fernald, 1943a:287 (Florida); Spencer and Wellington, 1948:10 (British Columbia). – **As *Sphex aztecus cinereus***: Murray in Muesebeck, Krombein, and Townes, 1951:972 (new combination, new status, in catalog of North American Hymenoptera). – **As *Chlorion cinereum***: Krombein, 1953a:332 (new status, North Carolina), 1953b:124 (visiting flowers of *Pluchea* sp., Asteraceae), 133 (North Carolina: Kill Devil Hills); Krombein and Evans, 1955:232 (Florida); Krombein, 1958f:191 (in supplement to catalog of North American Hymenoptera: now full species, Virginia to Texas); Wray, 1967:123 (North Carolina: Kill Devil Hills); L. Davis, 1978:216 (North Carolina: Kill Devil Hills, data from

Krombein, 1953a). – **As *Isodontia cinerea***: Krombein, 1963f:276 (new combination, Maryland: Plummers Island near Washington, D.C.).

Chlorion harrisi Fernald, 1906:359, ♀, ♂. Unnecessary substitute name for *Sphex apicalis* Smith, 1856:262, junior primary homonym of *Sphex apicalis* F. Smith, 1856:253 (now *Isodontia chrysorrhoea*). – Suehiro, 1960:298 (Midway Atoll). – **Nec following authors** (= *Isodontia mexicana*): Fernald, 1906:359; H. Smith, 1908b:333; A. Gibson, 1913:124; Rohwer, 1916b:679; Mickel, 1918b:398; Rohwer in Viereck, 1925:679; Engelhardt, 1928:269; Swezey:1931:393; Rau, 1935a:65, 1943:648; Fernald, 1943a:288; Krombein, 1951a:143; Krombein and Evans, 1954:233, 1955:232; Krombein, 1956b:154; Koerber and Medler, 1958:55, 57, 58; Yoshimoto, 1960:335. – **As *Sphex harrisi***: Murray in Muesebeck, Krombein, and Townes, 1951:972 (new combination); Kelner-Pillault, 1962:102; Kurczewski and Kurczewski, 1963:147. – **As *Isodontia harrisi***: F. Williams, 1932:25 (new combination); Swezey, 1947:8; Evans and Lin, 1956a:143; Evans, 1963c:87 (nesting behavior).

4. *apicata* (Bingham)

Ammophila apicata Bingham, 1897:234, ♀. Holotype: ♀, India: Bombay (BMNH). – **As *Chlorion apicata*** (subgenus *Isodontia*): R. Turner, 1919c:397 (new combination). – **As *Isodontia apicata***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae).

5. *aurifrons* (F. Smith)

Sphex aurifrons F. Smith, 1859:157, ♀. Lectotype: ♀, Indonesia: Maluku: Island of Aru (OXUM), designated by Hensen, 1991a:13. – F. Smith, 1863b:134 (known from Java, Sulawesi, Aru, and Africa), 1871a:362 (in catalog of Oriental Aculeata); Cameron, 1889c:107 (in list of Sphecidae of Oriental Region); Kohl, 1890b:439 (original description copied); Bingham, 1897:247 (in revision of wasps and bees of British India, now India and Pakistan); Dalla Torre, 1897:415 (in catalog of world Hymenoptera); Cameron, 1906b:57 (Indonesia: Papua: Tami); R. Turner, 1912a:197 (Indonesia: Papua: Wataikwa River); R. Turner in R. Turner, Meade-Waldo, and Morley, 1915:4 (Indonesia: Papua: Wataikwa River). – **As *Isodontia aurifrons***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Cardale, 1985:226 (in catalog of Australian Sphecidae); Hensen, 1991a:11 (member of *Isodontia aurifrons* species group), 13 (in revision of Malaysian Sphecina), 1991b:126 (in revision of Australian *Isodontia*); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Dollfuss, 2008b:1400 (locality records from India, Laos, and Malaysia); Barthélémy, 2014:7 (China: Hong Kong); Pham, Truong, Th.T. Nguyen, Th.H. Nguyen, Q. Nguyen, and Th.M. Nguyen, 2019:73 (Vietnam: Hanoi and vicinity, redescription); Pham and Antropov, 2021:316 (recorded from Vietnam by Pham, Truong, Th.T. Nguyen, Th.H. Nguyen, Q. Nguyen, and Th.M. Nguyen, 2019); Barthélémy and Guénard, 2025:44 (China: Hong Kong).

Sphex morosus F. Smith, 1860b:122, ♂ (as *morosa*, incorrect original termination). Holotype or syntypes: ♂, Indonesia: Moluccas: Batjan Islands (now Bacan): no specific locality (OXUM). Synonymized with *Isodontia aurifrons* by Hensen, 1991a:13. – F. Smith, 1863b:134 (known from Waigeo, Batjan (now Bacan), Seram, and Australia), 1871a:362 (in catalog of Oriental Aculeata); Kohl, 1890b:448 (original description copied); Bingham, 1895:443 (Philippines: Luzon), 1897:246 (in revision of wasps and bees of British India, now India and Pakistan); Dalla Torre, 1897:433 (in catalog of world Hymenoptera); Ashmead, 1904a:6 (Philippines: Luzon); Cameron, 1905k:64 (Moluccas: Amboina), 1906b:57 (Indonesia: Papua: Bawé); R. Turner, 1919c:397 (as new synonym of *Chlorion praslinius*); Baltazar, 1966:345 (in catalog of Hymenoptera of Philippines); Tsuneki, 1974b:587 (first record from Thailand: Chiang Mai); van Vondel, 1995:29 (specimens from Java in Natuurmuseum Rotterdam, as *moroso triodon*). – **As *Chlorion morosa***: Rohwer, 1922:668 (new combination, occurrence in Philippines questionable, diagnostic characters). – **As *Isodontia morosa***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae).

Sphex volatilis F. Smith, 1860:122, ♂. Holotype: ♂, Indonesia: Moluccas: Batjan Islands (now Bacan): no specific locality (OXUM). Synonymized with *Isodontia morosa* by van der Vecht in R. Bohart and Menke, 1976:123. – F.

Smith, 1863b:134 (known from Batjan), 1871a:362 (in catalog of Oriental Aculeata); Kohl, 1890b:455 (original description copied); Dalla Torre, 1897:447 (in catalog of world Hymenoptera).

Sphex triodon Kohl, 1890:377, ♂. Lectotype: ♂, Indonesia: Java: no specific locality (NHMW). Synonymized with *Isodontia aurifrons* by Hensen, 1991a:13. – Dalla Torre, 1897:444 (in catalog of world Hymenoptera); Berland, 1926c:283 (Philippines: Palawan); van Vondel, 1995:29 (specimens from Java in Natuurmuseum Rotterdam, as *moroso triodon*). – **As *Isodontia triodon***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae, as questionable subspecies of *Isodontia morosa*); Dollfuss, 1989:10 (lectotype in NHMW).

Sphex abditus Kohl, 1895:51, ♀. Holotype: ♀, Sikkim? (NHMW). Synonymized with *Isodontia aurifrons* by Hensen, 1991a:13. – Dalla Torre, 1897:413 (in catalog of world Hymenoptera); R. Turner, 1912a:197 (merely a local form of *Sphex aurifrons*); Berland, 1926c:283 (Sikkim). – **As *Isodontia abdita***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae), possibly a synonym of *Isodontia aurifrons*; Cardale, 1985:226 (in catalog of Australian Sphecidae); Dollfuss, 1989:10 (holotype in NHMW).

Sphex abditus st. *nugenti* R. Turner, 1910a:345, ♀. Holotype or syntypes: ♀, Australia: Queensland: Cairns (BMNH). Synonymized with *Isodontia aurifrons* by Hensen, 1991a:13. – R. Turner, 1910a:343 (in key to Australian Sphecini). – **As *Isodontia abdita nugenti***: R. Bohart and Menke, 1976:123 (new combination, new status, in checklist of world Sphecidae); Cardale, 1985:226 (in catalog of Australian Sphecidae).

6. *auripes* (Fernald)

Sphex tibialis Lepeletier de Saint Fargeau, 1845:339, ♀, junior primary homonym of *Sphex tibialis* Fabricius, 1781. Holotype or syntypes: ♀, USA: Pennsylvania: Philadelphia (originally Serville coll., now M. Spinola coll., Torino). – F. Smith, 1856:262 (in catalog of Hymenoptera in British Museum); A. Costa, 1864b:112 (specimen from Australia in Museo Zoologico di Napoli, clearly in error); de Saussure, 1867:39 (relationships); Cresson, 1873:211 (Texas); Kohl, 1890:379 (in revision of world Sphecini); Dalla Torre, 1897:444 (in catalog of world Hymenoptera); W. Schulz, 1911b:166 (both sexes of de Saussure are conspecific); Strand, 1916b:101 (Pennsylvania); Berland, 1926c:283 (North America); Casolari and Casolari Moreno, 1980:103 (specimens in M. Spinola collection); Pagliano, 2008:533 (unpublished lectotype in M. Spinola collection, Torino). – **As *Isodontia tibialis***: Patton, 1880a:380 (new combination, diagnostic characters); Cresson, 1887:275 (in catalog of North American Hymenoptera); Ashmead, 1899d:353 (in checklist of North American Sphecidae); J. Smith, 1900:523 (in list of insects of New Jersey); Fernald, 1903a:269 (in key to North American *Isodontia*); Viereck, 1903d:120 (Maryland: Chestertown).

Chlorion auripes Fernald, 1906:356. Substitute name for *Sphex tibialis* Lepeletier de Saint Fargeau. – J. Smith, 1910:677 (in new list of insects of New Jersey); Rohwer, 1916b:679 (in catalog of Hymenoptera of Connecticut); Rau and Rau, 1918:203 (nesting in old nest of *Xylocopa*, filling nest with grass); Britton, 1920:339 (in checklist of insects of Connecticut); Rohwer in Viereck, 1925:679 (in key to Sphecidae of Connecticut: Branford); Rau, 1926:200 (Missouri: Wickes: sheltered clay bank; closing nest with grass); Salt, 1927:182 (Texas: Dallas: stylopized specimen); J.Ch. Bradley, 1928:1011 (in catalog of New York Sphecidae); Rau, 1928b:362 (nesting habits, prey: tettigoniids *Conocephalus memorale* Scudder and *Orchelimum vulgare* Harris, and gryllid *Oecanthus quadripunctatus* Beutenmiller), 1931:200 (homing experiments); Brimley, 1938:444 (North Carolina: Beaufort, Elizabeth City, Goldsboro, Raleigh); Dow, 1943:241 (illustration of male genitalia); Fernald, 1943a:288 (Florida); Dreisbach, 1944:268 (in key to Sphecinae of Michigan), 272 (Michigan: locality records); Krombein, 1950a:268 (North Carolina: Dare County); Murray in Muesebeck, Krombein, and Townes, 1951:972 (in catalog of North American Hymenoptera); Krombein, 1953a:331 (North Carolina); Krombein and Evans, 1955:232 (Florida); Krombein, 1958f:191 (in supplement to catalog of North American Hymenoptera: description of larva by Evans and Lin, 1956, reported); L. Davis, 1978:216 (South Carolina: Kill Devil Hills, data from Krombein, 1953a); Piek and Spanjer, 1986:182 (in list of Sphecidae with known prey). – **As *Isodontia auripes***: K. Cooper, 1950:105 (new combination, Massachusetts: Cape Code: Woods Hole); Evans and Lin, 1956a:143 (description of larva); Evans,

1959b:147 (additional description of larva); R. Bohart and Menke, 1963:137 (in revision of Nearctic Sphecini); Krombein, 1963f:276 (Maryland: Plummers Island near Washington, D.C.); C. Lin, 1966a:243 (review of nesting habits); Krombein, 1967b:246 (nesting habits observed in artificial nests), 1970:3 (nesting habits); Bitner, 1972:24 (predation in nest by larvae of *Lecontella cancellata*, a clerid); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Krombein, 1979b:1582 (in catalog of North American Hymenoptera); Steiner, 1986:96 (references to papers on nesting habits); Beyer, Miller, and Fleming, 1987:480 (Tennessee: Humphreys County); O'Brien, 1989b:205 (distribution in Michigan); Spofford, Kurczewski, and Downes, 1989:261 (reference to publication on nest parasite, undetermined miltogrammine species); Ahlstrom, 1995:107 (in checklist of insects of North Carolina); S. Jacobs, 2003:unnumbered page (occurring in Pennsylvania); Buck, 2004:24 (Canada: in checklist of Sphecidae of Ontario), 29 (distribution within Ontario), 32 (first record from Canada: list of localities); Miller, Pearce, and O'Neill, 2009:3 (known to be parasitized by *Paraxenos auripedis* (Pierce), Strepsiptera); Barrett, Kang, Gomez, Kainth, and O'Donnell, 2021:200 (nesting habits in New York State); Buck and Bennett, 2025:224 (in checklist of Sphecidae sensu lato of Canada, Alaska, and Greenland: Canada: Ontario: no specific locality).

7. *auripygata* (Strand)

Sphex auripygatus Strand, 1913a:80, ♂. Holotype: ♂, Taiwan: Kosempo (DEI). – Strand, 1916a:19 (description of ♀), 1927:255 (in list of species described by author); Yasumatsu, 1938c:123 (Taiwan; in revision of East Asian Sphecini); Tsuneki, 1967j:4 (recorded from Taiwan but not collected by present author); Oehlke and Wudowenz, 1974:421 (holotype in DEI). – **As *Isodontia auripygata***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Tsuneki, 1977c:2 (Taiwan: Pingtung Prefecture: Kentin Park as *auripygatus*); Hensen, 1991a:13 (member of *Isodontia chrysorrhoea* species group); Porter, Stange, and Wang, 1999:5 (in checklist of Sphecidae of Taiwan); Takahashi, 2005:17 (locality records from Japan and Taiwan); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Terayama and Tano, 2006:5, 12, 17 (in key to Japanese Ampulicidae and Sphecidae); Ito, Oshio, Handa, and Watanabe, 2015:173 (Island of Iriomote; nesting in dead wood cavity; prey: cockroach *Rhabdoblatta formosana* (Shiraki)); Pham, Kumar and Danilov, 2015:1587 (in list of Sphecidae s.l. of Vietnam).

8. *azteca* (de Saussure)

Sphex aztecus de Saussure, 1867:38, ♀. Lectotype: ♀, Mexico: Cordova (MHNG), designated by Menke in R. Bohart and Menke, 1976:123. – Cameron, 1889a:35 (Mexico); Kohl, 1890:385 (in revision of world Sphecini); Dalla Torre, 1897:416 (in catalog of world Hymenoptera); W. Fox, 1897b:376 (Brazil: Chapada); Berland, 1926c:283 (Argentina: Santiago del Estero Province and Tucumán); Liebermann, 1931:81 (in revision of Argentinean Sphecini); Murray in Muesebeck, Krombein, and Townes, 1951:972 (in catalog of North American Hymenoptera). – **As *Chlorion aztecum***: Fernald, 1906:353 (new combination, in revision of Sphecini of North America and West Indies); J. Smith, 1910:677 (in new list of insects of New Jersey); Fernald, 1931a:441 (study of holotype); Brimley, 1938:444 (North Carolina: Buncombe County eastward); Fernald, 1943a:287 (Florida); Dreisbach, 1944:268 (in key to Sphecinae of Michigan); Krombein, 1950a:268 (North Carolina: Dare County; as *aztecum aztecum*), 1953a:331 (North Carolina), 1953b:124 (visiting flowers of *Cephalanthus occidentalis* L., Rubiaceae, and *Pluchea* sp., Asteraceae), 132 (North Carolina: Kill Devil Hills); Krombein and Evans, 1954:233 (Florida); Krombein, 1958f:191 (in supplement to catalog of North American Hymenoptera: description of larva by Evans and Lin, 1956a, reported); L. Davis, 1978:216 (North Carolina: Kill Devil Hills, data from Krombein, 1953a). – **As *Isodontia azteca***: Patton, 1881a:381 (new combination); Ashmead, 1899d:353 (in checklist of North American Sphecidae); Snow, 1906:133 (Arizona: Baboquivari, Oak Creek 20 mi. southwest of Flagstaff); Evans and Lin, 1956a:143 (description of larva); Menke, 1965a:214 (synonymy); Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Amarante, 2002:73 (in catalog of Neotropical Sphecidae); Ruíz Cancino, Coronado Blanco,

Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Dollfuss, 2008b:1400 (Peru: Ucayali: Pucalpa at 8°21'S 74°33'W).

Sphex robustus Cameron, 1888:36, ♀, ♂ (as *robusta*, incorrect original termination). Lectotype: ♀, Mexico: Yucatán: Temax (BMNH), designated by Menke, 1965a:214. Synonymized with *Sphex aztecus* by Kohl, 1890:385 and Menke, 1965a:214 (as new synonym). – Dalla Torre, 1897:439 (in catalog of world Hymenoptera). – **As *Isodontia robusta***: Ashmead, 1899d:353 (new combination, in checklist of North American Sphecidae).

9. *bastiniana* Richards

Isodontia bastiniana Richards, 1937a:103, ♂. Holotype: ♂, Guiana: no specific locality (BMNH). – R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Fernández, 2000:142 (Colombia); Amarante, 2002:73 (in catalog of Neotropical Sphecidae).

10. *boninensis* (Tsuneki)

Sphex boninensis Tsuneki, 1973a:1, ♀, ♂. Holotype: ♀, Japan: Bonin Islands: Island of Chichijima (originally K. Tsuneki coll., now?). – Haneda, 1973:30 (Japan: Bonin Islands: Island of Chichijima); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Tsuneki, 1984a:1 (Japan: Ogasawara = Bonin Islands); Takahashi and Shimizu, 2001:12 (Japan: Ogasawara Islands: Chichi-Jima); Terayama and Tano, 2006:5, 13, 17 (in key to Japanese Ampulicidae and Sphecidae); Takahashi, 2010:18 (Japan: in list of Hymenoptera of Ogasawara = Bonin islands).

11. *bruneri* (Fernald)

Chlorion bruneri Fernald, 1943:238, ♀, ♂. Holotype: ♀, Cuba: no specific locality (USNM). – Dow, 1943:241 (illustration of male genitalia). – **As *Isodontia bruneri***: Alayo Dalmau, 1973:185 (new combination, in catalog of Cuban Hymenoptera), 1976:11 (in key to Cuban *Isodontia*), 27 (in checklist of Cuban Sphecidae); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae, possibly a synonym of *Isodontia elegans*); de Zayas, 1981:78 (Cuba); Fernández, Garcés, Portuondo, Valdés and Expósito, 2001:1022 (collected on weed flowers in Botanical Garden of Santiago de Cuba); Amarante, 2002:73 (in catalog of Neotropical Sphecidae); Genaro, 2006:51 (in Catalog of Cuban Sphecidae and Crabronidae).

12. *capillata* Hensen

Isodontia capillata Hensen, 1991a:15, ♂. Holotype: ♂, Indonesia: Irian Jaya (= New Guinea): Jayapura (RMNH). – Hensen, 1991a:14 (member of *Isodontia diodon* species group).

13. *cellicula* Q. Li and Yang

Isodontia cellicula Q. Li and Yang, 1996:355, ♂. Holotype: ♂, China, Guangxi Province: Bose at 23°09'N 106°06' (Beijing Agricult. Univ.).

14. *cestra* Hensen

Isodontia cestra Hensen, 1991a:15, ♀, ♂. Holotype: ♀, Indonesia: n. Sulawesi: Tangkoko - Dua Saudara Nature Reserve, 1°30'N, 125°10'E (RMNH). – Hensen, 1991a:14 (member of *Isodontia diodon* species group).

15. *chrysorrhoea* (Kohl)

Sphex apicalis F. Smith, 1856:253, ♀, primary homonym of *Sphex apicalis* F. Smith, 1856:262. Holotype or syntypes: ♀, Indonesia: Sumatra: no specific locality (BMNH). – F. Smith, 1871a:361 (in catalog of Oriental Aculeata); Cameron, 1889c:107 (in list of Sphecidae of Oriental Region).

Sphex chrysorrhoeus Kohl, 1890:371, substitute name for *Sphex apicalis* F. Smith, 1856:253 (as First Reviser, Article 24.2.1). – Dalla Torre, 1897:418 (in catalog of world Hymenoptera). – **As *Chlorion chrysorrhoeus***: R. Turner, 1914b:250 (new combination, Borneo). – **As *Isodontia chrysorrhoea***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Dollfuss, 1989:10 (type material in NHMW); Hensen, 1991a:13 (member of *chrysorrhoea* group, in revision of Malaysian Sphecina); Dollfuss, 2008b:1400 (Vietnam: Tam Dao at

21°28'N 105°38'E); Pham, Kumar and Danilov, 2015:1587 (in list of Sphecidae s.l. of Vietnam); Pham, Truong, Th.T. Nguyen, Th.H. Nguyen, Q. Nguyen, and Th.M. Nguyen, 2019:73 (Vietnam: Hanoi and vicinity).
Sphex hewitti Cameron, 1906e:119, ♂. Holotype or syntypes: ♂, Malaysia: Sarawak: Kuching (BMNH?, Sarawak Museum?). Synonymized with *Chlorion chrysorrhoeus* by R. Turner, 1914b:250.

16. *costipennis* (Spinola)

Sphex costipennis Spinola, 1851b:38, ♀. Holotype: Brazil: Pará: Belém (M. Spinola collection, Torino). – F. Smith, 1856:258 (in catalog of Hymenoptera in British Museum); de Saussure, 1867:39 (Brazil, Guyana; redescription); Burmeister, 1872:239 (Brazil: Novo Friburgo; Argentina: Tucumán); Cameron, 1889a:35 (Central America); Kohl, 1890:382 (in revision of world Sphecini); Dalla Torre, 1897:420 (in catalog of world Hymenoptera); W. Fox, 1897b:375 (Brazil); Ducke, 1901:242 (Brazil: Pará: Belém); Schrottky, 1903b:123 (in checklist of Hymenoptera of Argentina, Paraguay, and Uruguay); Strand, 1910a:133 (Paraguay), 1912:289 (nest structure); Bodkin, 1918:315 (British Guiana: Issororo); Berland, 1926c:284 (miscellaneous locality records); Liebermann, 1931:83 (in revision of Argentinean Sphecini); van der Vecht, 1961a:33 (as synonym of *Isodontia fuscipennis*); R. Bohart and Menke, 1963:135 (as synonym of *Isodontia fuscipennis*); Pagliano, 2008:527 (holotype in M. Spinola collection, Torino). – **As *Chlorion costipennis***: Cameron, 1905:426 (new combination, Guyana); Fernald, 1906:351 (in revision of Sphecini of North America and West Indies), 1942:30 (Guyana); Dow, 1943:241 (illustration of male genitalia); Rau, 1943:648 (Mexico: Tamaulipas: Limón); Casolari and Casolari Moreno, 1980:102 (specimens in M. Spinola collection). – **As *Isodontia costipennis***: Patton, 1881a:381 (new combination); Ashmead, 1899d:353 (in checklist of North American Sphecidae); Schrottky, 1913a:225 (Argentina: Tucumán); Rau, 1933:183 (Panama: Island of Barro Colorado); Richards, 1937a:102 (Guyana, tettigoniid prey); Willink, 1951:79 (in revision of Argentinean Sphecini); van der Vecht, 1961:9 and 33 (as synonym of *Isodontia fuscipennis*); Menke, 1965a:214 (good species, diagnostic characters); C. Lin, 1966a:244 (review of nesting habits); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Nascimento and Overal, 1980:6 (Brazil, Peru); Soares, Zanette, Pimenta, Gonçalves, and Martins, 2001:245 (nesting habits); Amarante, 2002:73 (in catalog of Neotropical Sphecidae); Buschini and Woiski, 2006:175 (nesting habits, no protandry); Dollfuss, 2008b:1400 (locality records from Ecuador, French Guyana, and Mexico); Buschini and Woiski, 2008:355 (Brazil: Parana: Parque Municipal das Araucárias in municipality of Guarapuava); Buys, 2009e:277 (Brazil: Rio de Janeiro: Itatiaia); Rasmussen and Asenjo, 2009:16 (in checklist of Crabronidae of Peru); Buys, 2011b:2 (Brazil: Rio de Janeiro: Itatiaia); Pires, Pompeu, Soares, and Silva, 2013:125 (use of achenes and leaves of *Gochnatia barrosii* Cabrera, Asteraceae, for nest construction); Buys and Rodrigues, 2014:41 (Brazil: first record from State of Espírito Santo: Baixo Guandu); Silvestre, Demétrio, Trad, de Oliveira Lima, Auko, and de Souza, 2014:70 (Brazil: Mato Grosso do Sul: dry forests in Bodoquena Mountain Range and Brazilian Chaco); Martínez and Torretta, 2015:213 (Argentina: Buenos Aires: Reserva Natural de Usos Múltiples Isla Martín García at 34°11'S 58°15'W; nest parasite: *Messatoporus transversostriatus* Spinola, Ichneumonidae); Trad and Silvestre, 2017:4 (Brazil: Mato Grosso do Sul).

Sphex costipennis Spinola, 1853:54. Objective synonym of *Sphex costipennis* Spinola, 1851.

As *Sphex lanierii*: F. Smith, 1859b:55 (description of nest), corrected to *Isodontia costipennis* by Ducke, 1901:241.

17. *cyanipennis* (Fabricius)

Sphex cyanipennis Fabricius, 1793:200, sex not stated. Holotype or syntypes: French Guyana: Cayenne (lost: van der Vecht, 1961a:32). – Fabricius, 1796:155 (in Index to his Entomologia Systematica, 1793); Lichtenstein, 1796:197 (in auction catalog); Coquebert, 1799:20 (redescription), pl. IV, Fig. 10 (illustration of Fabrician type); Turton, 1801:484 (redescription); F. Smith, 1856:259 (in catalog of Hymenoptera in British Museum); A. Costa, 1864b:112 (specimen from Chile in Museo Zoologico di Napoli); Kohl, 1890b:193 (original description copied); Dalla Torre, 1897:420 (in catalog of world Hymenoptera, as *cyaneipennis*); Ruiz Pereira, 1924:101 (Chile: Cerro San Cristóbal); Casolari and Casolari Moreno, 1980:102 (specimens in M. Spinola collection); Pagliano, 2008:523 (specimens in

M. Spinola collection, Torino). – **As *Pepsis cyanipennis***: Fabricius, 1804:208 (new combination, redescription). – **As *Isodontia cyanipennis***: van der Vecht, 1961:10 and 32 (new combination, interpretation of species); Menke, 1963b:228 (synonymy); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Callan, 1990b:19 (in checklist of Trinidad Sphecidae); Hanson and Menke, 1995:637 (known from Costa Rica); Cambra and Santos, 2000:51 (Panama: Parque Nacional Coiba in Isla de Coiba, Pacific Ocean); Amarante, 2002:73 (in catalog of Neotropical Sphecidae); Starr and Hook, 2003:22 (in catalog of Aculeata of Trinidad, West Indies); Dollfuss, 2008b:1400 (locality records from Ecuador and French Guyana); Buys, 2009e:277 (Brazil: Rio de Janeiro: recorded from Itatiaia by Willink, 1951, as *I. nigrocoerulea*), 2011b:2 (Brazil: Rio de Janeiro: Itatiaia).

Sphex nigrocoeruleus Taschenberg, 1869:415, ♀, ♂ (as *nigro-coerulea*, incorrect original hyphenation and termination). Syntypes: Venezuela: no specific locality (Halle). Synonymized with *Isodontia cyanipennis* by van der Vecht, 1961:10 and 32. – Kohl, 1890:383 (in revision of world Sphecini); Dalla Torre, 1897:434 (in catalog of world Hymenoptera); W. Fox, 1897b:375 (Brazil: Chapada; as *nigrocaeruleus*); Ducke, 1901:242 (Brazil: Pará: Belém); Schrottky, 1903b:123 (in checklist of Hymenoptera of Argentina, Paraguay, and Uruguay); Jörgensen, 1912:286 (Argentina: Mendoza Province); Berland, 1926c:284 (miscellaneous locality records); Liebermann, 1931:83 (in revision of Argentinian Sphecini, as *nigrocoeruleans*). – **As *Isodontia nigrocoerulea***: Schrottky, 1913a:225 (new combination, Argentina); Willink, 1951:82 (in revision of Argentinian Sphecini); Nascimento and Overal, 1980:6 (Brazil, Peru).

Isodontia bipunctata Rohwer, 1913:452, ♀. Holotype: ♀, Panama: Canal Zone (USNM). Synonymized with *Isodontia cyanipennis* by Menke, 1963b:228.

18. *delicata* Hensen

Isodontia delicata Hensen, 1991a:17, ♂. Holotype: ♂, Indonesia: Irian Jaya: Jasyapura (RMNH). – Hensen, 1991a:14 (member of *Isodontia diodon* species group).

19. *diodon* (Kohl)

Sphex diodon Kohl, 1890:377, ♂. Lectotype: Indonesia: "Celebes, Sumatra", but probably Asian continent (NHMW), designated by Hensen, 1991a:17. – Dalla Torre, 1897:421 (in catalog of world Hymenoptera); Berland, 1926c:283 (Indonesia: Java: Malang); Tsuneki, 1974b:586 (Thailand). – **As *Isodontia diodon***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Dollfuss, 1989:10 (type material in NHMW); Hensen, 1991a:14 (member of *Isodontia diodon* species group), 17 (in revision of Malaysian Sphecina); Dollfuss, 2008b:1401 (India: Kerala: Themala at 8°58.0'N 77°03.5'E; Tamil Nadu: 11 km SE Kotagiri Kunchepani); Barthélémy, 2010:201 (Hong Kong, nesting habits, preying on cockroaches); Barthélémy and Broad, 2012:52 (nest parasite in Hong Kong: *Hadrocryptus perforator* Barthélémy and Broad, an ichneumonid); Barthélémy, 2012:6 (nest structure, prey, life history), 2014:5 (China: Hong Kong); Pham, Kumar and Danilov, 2015:1587 (in list of Sphecidae s.l. of Vietnam); Barthélémy and Guénard, 2025:44 (China: Hong Kong).

Sphex maia Bingham, 1893:379, ♂, ♀. Syntypes: Burma: Tenasserim: no specific locality (BMNH). Synonymized with .. by.. – Bingham, 1897:249 (in revision of wasps and bees of British India, now India and Pakistan); Dalla Torre, 1897:430 (in catalog of world Hymenoptera). – **As *Chlorion maia***: R. Turner, 1914b:251 (new combination, Borneo to Sikkim).

20. *dolosa* (Kohl)

Sphex dolosus Kohl, 1895:49, ♀. Holotype: ♀, French Guyana: no specific locality (NHMW). – Dalla Torre, 1897:421 (in catalog of world Hymenoptera); Ducke, 1901:242 (Brazil: Pará: Belém); Berland, 1926c:284 (French Guyana, locality record in Dalla Torre, 1897 is in error). – **As *Chlorion dolosum***: Fernald, 1942:30 (new combination, Guyana: Kartabo). – **As *Isodontia dolosa***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Nascimento and Overal, 1980:6 (Brazil, Peru); Dollfuss, 1989:10 (holotype in NHMW); Amarante,

2002:73 (in catalog of Neotropical Sphecidae); Rasmussen and Asenjo, 2009:16 (in checklist of Crabronidae of Peru).

21. *edax* (Bingham)

Sphex edax Bingham, 1897:251, ♀. Syntypes: ♀, India: Sikkim; Burma: Tenasserim; Sri Lanka: no specific locality (BMNH). – **As *Isodontia edax***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Pu, 1986:8 (China); Wu and Zhou, 1996a:44 (in revision in Economic Insect Fauna of China); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Pham, Kumar and Danilov, 2015:1588 (in list of Sphecidae s.l. of Vietnam).

22. *egens* (Kohl)

Sphex egens Kohl, 1898a:335, ♂. Holotype: ♂, Papua New Guinea: Neu Pommern, now New Britain: Kinigunang (TMB). – **As *Isodontia egens***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Hensen, 1991a:14 (member of *Isodontia diodon species group*), 17 (in revision of Malaysian Sphecina).

23. *elegans* (F. Smith)

Sphex elegans F. Smith, 1856:262, ♂. Holotype or syntypes: ♂, USA: California: no specific locality (BMNH). – Cresson, 1863:319 (in catalog of North American Hymenoptera); A. Costa, 1864a:60 (two specimens from Mexico in Napoli Museum), 1864b:112 (specimen from Mexico in Museo Zoologico di Napoli); Taylor, 1884:80 (Canada: British Columbia: Island of Vancouver); W. Fox, 1893d:10 (Mexico: Baja California), 1894c:103 (Mexico: Baja California Sur); G. Carpenter, 1930b:298 (nest closure); Murray in Muesebeck, Krombein, and Townes, 1951:972 (in catalog of North American Hymenoptera). – **As *Chlorion elegans***: Fernald, 1906:361 (new combination, in revision of Sphecini of North America and West Indies); H. Smith, 1908b:333 (in revision of Nebraskan Sphecidae); Stevens, 1917:421 (North Dakota); Mickel, 1918b:399 (in catalog of Nebraskan Sphecidae); Ainslie, 1924:269 (nesting habits); Dow, 1943:241 (illustration of male genitalia); Krombein, 1958f:191 (in supplement to catalog of North American Hymenoptera: Utah); W. Ferguson, 1962:81 (nest parasite: *Sphaerophthalma (Photopsis) ?ferruginea* (Blake), a mutillid). – **As *Isodontia elegans***: Patton, 1880a:380 (new combination, diagnostic characters); Cresson, 1887:275 (new combination, in catalog of North American Hymenoptera); Ashmead, 1899d:353 (in checklist of North American Sphecidae); Fernald, 1903a:269 (in key to North American *Isodontia*, valid species); F. Parker and R. Bohart, 1966:94 (Nevada: Verdi; parasites: *Epistenia coerulenta* Westwood, Pteromalidae, and *Amobia floridensis* Townsend, Sarcophagidae); G. Bohart, Nye, and Hawthorn, 1970:49 (Utah: Logan, onion pollinator); R. Bohart and Menke, 1963:138 (in revision of Nearctic Sphecini); Evans, 1963d:238 (description of larva); C. Lin, 1966a:243 (review of nesting habits); Krombein, 1967b:240 (nesting habits observed in artificial nests); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Porter, 1978:171 (Texas); Krombein, 1979b:1583 (in catalog of North American Hymenoptera); Rust, Menke, and Miller, 1985:46 (California: Channel Islands); Parks, 1986:34 (California: Torrey Pines State Reserve); Spofford, Kurczewski, and Downes, 1989:255 (summary of previous records for nest parasite *Amobia floridensis* (Townsend), a miltogrammine fly); Ohl and Linde, 2003:149 (number of ovarioles); Buck, Paiero, and Marshall, 2006:39 (Canada: Ontario: Essex County: La Salle; USA: New York: Bronx and Westchester counties); Horta Vega, Pinson Domínguez, Barrientos Lozano, and Correa Sandoval, 2007: 47 (Mexico: Tamaulipas); O'Brien and Craves, 2007:94 (first record from Michigan); O'Neil and O'Neil, 2007:139 (nests and prey in Montana); Ratzlaff, 2016:29 (Canada: British Columbia: from Spencer and Wellington, 1948); Buck and Bennett, 2025:224 (in checklist of Sphecidae sensu lato of Canada, Alaska, and Greenland: Canada: British Columbia, Ontario, first records from Alberta and Saskatchewan: no specific locality).

24. *elsei* Hensen

Isodontia elsei Hensen, 1991a:19, ♀, ♂. Holotype: ♂, Indonesia: Sulawesi: "Rosenberg, Toelabella" (RMNH). – Hensen, 1991a:19 (member of *praslinia* group); Pham and Antropov, 2021:316 (first recorded from Vietnam: Son La city).

25. *exornata* Fernald

Isodontia exornata Fernald, 1903a:270, ♀, ♂. Syntypes: USA: Florida: Indian River and Biscayne Bay; North Carolina; and Georgia (USNM, ANSP, Agric. Coll. Amherst). – Fernald, 1903a:269 (in key to North American *Isodontia*); R. Bohart and Menke, 1963:137 (in revision of Nearctic Sphecini); C. Lin, 1966a:243 (review of nesting habits); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Krombein, 1979b:1582 (in catalog of North American Hymenoptera); Ahlstrom, 1995:107 (in checklist of insects of North Carolina). – **As *Chlorion exornatum***: Bequaert, 1930:123 (new combination, nesting in twigs); Brimley, 1938:444 (North Carolina: citation of Fernald, 1903); Fernald, 1943a:287 (Florida); Krombein and Evans, 1955:232 (Florida); Krombein, 1958f:191 (in supplement to catalog of North American Hymenoptera: Florida). – **As *Sphex exornatus***: Murray in Muesebeck, Krombein, and Townes, 1951:972 (new combination, in catalog of North American Hymenoptera).

? *Sphex instabilis* F. Smith, 1856:263, ♀. Syntypes: ♀, North America: no specific locality (depository?). – Cresson, 1863:319 (in catalog of North American Hymenoptera), 1887:275 (in catalog of North American Hymenoptera); Dalla Torre, 1897:427 (in catalog of world Hymenoptera); Ashmead, 1899d:353 (in checklist of North American Sphecidae); Fernald, 1906:418 (possibly a synonym of *Isodontia exornata*); R. Bohart and Menke, 1976:123 (as questionable synonym of *Isodontia exornata*).

26. *formosicola* (Strand)

Sphex formosicola Strand, 1913a:82, ♀. Lectotype: ♀, Taiwan: Hoozan (DEI), designated by Hensen, 1991a:13. – Strand, 1916a:19 (Taiwan: Tainan), 1927:255 (in list of species described by author); Yasumatsu, 1938c:107 (Taiwan; in revision of East Asian Sphecini); Iwata, 1939b:162 (nesting habits); Tsuneki, 1967j:4 (recorded from Taiwan but not collected by present author); Oehlke and Wudowenz, 1974:422 (three syntypes in DEI). – **As *Isodontia formosicola***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Hensen, 1991a:11 (member of *Isodontia aurifrons* species group), 13 (in revision of Malaysian Sphecina); Porter, Stange, and Wang, 1999:5 (in checklist of Sphecidae of Taiwan); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Dollfuss, 2008b:1401 (Meghalaya: Tura at 25°30'N 9014'E).

27. *franzi* (Cameron)

Sphex franzi Cameron, 1902:246, ♂ (as *Franzi*, incorrect original capitalization). Holotype: ♂, Borneo: no specific locality (BMNH). – **As *Isodontia franzi***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Hensen, 1991a:14 (member of *Isodontia diodon* species group), 17 (in revision of Malaysian Sphecina).

28. *fuscipennis* (Fabricius)

Pepsis fuscipennis Fabricius, 1804:210, ♀. Lectotype: ♀: South America: no specific locality (Lund), designated by van der Vecht, 1961a:33. – Dahlbom, 1845:XXI (specimens in collection Fabricius are *Sphex sericea*); A. Costa, 1864a:60 (one specimens from Australia in Napoli Museum, clearly in error); Dalla Torre, 1897:254 (in catalog of world Hymenoptera). – **As *Isodontia fuscipennis***: van der Vecht, 1961a:9 and 33 (new combination); R. Bohart and Menke, 1963:135 (in revision of Nearctic Sphecini), 1976:123 (in checklist of world Sphecidae); Porter, 1978:171 (Texas); Heithaus, 1979:193 (Costa Rica: Guanacaste: Hacienda las Ciruelas 30.5 km northwest of Cañas); Callan, 1990b:19 (in checklist of Trinidad Sphecidae); Hanson and Menke, 1995:637 (known from Costa Rica); Amarante, 2002:73 (in catalog of Neotropical Sphecidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Starr and Hook, 2003:22 (in catalog of Aculeata of

Trinidad, West Indies); Horta Vega, Pinson Domínguez, Barrientos Lozano, and Correa Sandoval, 2007: 47 (Mexico: Tamaulipas).

Sphex chrysobaptus F. Smith, 1856:257, ♀ (as *chrysobapta*, incorrect original termination). Holotype or syntypes: ♀, Brazil: no specific locality (BMNH). Synonymized with *Sphex costipennis* by Kohl, 1890:382 and with *Isodontia fuscipennis* by Bohart and Menke, 1976:123.

Sphex petiolatus F. Smith, 1856:259, ♂ (as *petiolata*, incorrect original termination), junior primary homonym of *Sphex petiolatus* Drury, 1773. Holotype or syntypes: ♂, Brazil: Para: no specific locality (BMNH). Synonymized with *Sphex costipennis* by Taschenberg, 1869:417 and with *Isodontia fuscipennis* by Bohart and Menke, 1963:136.

29. *guaranitica* Willink

Isodontia guaranitica Willink, 1951:92, ♀, ♂ Holotype: ♂, Argentina: Misiones: Pindapoy (originally M. Fritz coll., now MACN). – R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Fritz, 1993:16 (holotype in M. Fritz coll.); Amarante, 2002:73 (in catalog of Neotropical Sphecidae).

30. *harmandi* (Pérez)

Sphex harmandi Pérez, 1905a:151 (as *Harmandi*, incorrect original capitalization), ♂, actually ♀ (Berland, 1926c:283). Holotype or syntypes: ♀, Japan: no specific locality, presumably Tokyo area (MNHN). – Pérez, 1905a:25 (listed); Berland, 1926c:283 (type in MNHN, diagnostic characters); K. Iida, 1934:101 (nesting habits); Iwata, 1936b:168 (nesting habits); Yasumatsu, 1938c:103 (Japan; in revision of East Asian Sphecini); Iwata, 1955:28 (egg size, number of oocytes), 1960:210 (number of ovarioles and oocytes, egg size); Tsuneki, 1963b:60, 77 (nesting habits); Tsuneki and Shimoyama, 1963:48 (Japan: Towada Prefecture); Tsuneki, 1964k:4 (nesting habits); T. Iida, 1967:27 (description of larva); Fukuda, 1968:27 (Japan); Haneda, 1968b:56 (Japan: Nagano Prefecture: Ina District); Itami, 1968a:15 (Japan: Yamagata Prefecture: foot of Mount Iide); Nambu, 1968b:26 (Japan: Saitama Prefecture); Nishino, 1968:24 (Japan); Haneda, 1969:69 (Japan: Yamanashi Prefecture); Itami, 1969:46 (Japan: Niigata Prefecture); Tsuneki, 1969e:24 (Japan: specimens in Osaka Museum of Natural History); Suda, 1973:123 (Japan: Yamanashi Prefecture); Tsuneki and Moriyama, 1973:15 (orientation during emerging from nest); Nambu, 1975b:69 (Japan: Saitama Prefecture). – **As *Isodontia harmandi***: C. Lin, 1966a:244 (new combination, review of nesting habits); Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Tsuneki, 1982b:14 (known from Korea); Paik, 1985:197 (in list of Sphecidae of Korea); Wu and Zhou, 1996a:41 (in revision in Economic Insect Fauna of China); Konno, Palma, Hitara, M. Julliano, L. Julliano, and Yasuhara, 2002:310 (bradykinins not found in venom); Haneda, 2003:3 (Japan: Nagasaki Prefecture: Tsushima); Tano, Kurokawa, Murota, and Nozaka, 2003:30 (Japan: Nagasaki Prefecture: Tsushima); Ohl and Linde, 2003:149 (number of ovarioles); Suda, 2004:35 (Japan: Yamanashi Prefecture); Haneda, Inoue, Nozaka, Tano, Kurokawa, H. Murota, and T. Murota, 2005:63 (Japan: Fukui Prefecture: Mount Monju); Negoro, Haneda, and Tano, 2005:43 (Japan: Toyama Prefecture); Haneda, Nozaka, Tano, Kurokawa and Murota, 2006a:18 (Japan: Toyama Prefecture), 2006b:46 (Japan: Nagasaki Prefecture: Tsushima); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Terayama and Tano, 2006:5, 13, 17 (in key to Japanese Ampulicidae and Sphecidae); Dollfuss, 2008b:1401 (Japan: Chichibu in Gumasta prefecture; Chichila in Tamanashi Prefecture; Ehime, Niigata); Ohkusa and Tajima, 2010:11 (Japan: Honshu Island: Shiga Prefecture); Matsumoto and Makino, 2011:158 (Japan: suburbs of Tokyo; prefers nesting in artificial nests of bundle type rather than curtain type); J.-K. Kim, 2014:419 (in catalog of Sphecidae s.l. of Korean Peninsula); Kim, Yeo, and Kim, 2014:287 (in key to *Isodontia* of South Korea, in revision of Sphecidae sensu stricto of South Korea); Imasaki and Endo, 2022:2 (cannibalism of larvae).

31. *immaculata* Hensen

Isodontia immaculata Hensen, 1991a:17, ♀, ♂. Holotype: ♂, Papua New Guinea: New Ireland: trail to Lelet, plateau near Danum (CAS). – Hensen, 1991a:14 (member of *Isodontia diodon* species group).

32. *jaculator* (F. Smith)

Sphex jaculator F. Smith, 1860b:122, ♂. Holotype or syntypes: ♂, Indonesia: Moluccas: Batjan Islands (now Bacan): no specific locality (OXUM). – F. Smith, 1863b:134 (known from Batjan Islands, now Bacan), 1871a:362 (in catalog of Oriental Aculeata); Kohl, 1890b:445 (original description copied); Dalla Torre, 1897:425 (in catalog of world Hymenoptera). – **As *Isodontia jaculator***: van der Vecht in R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Hensen, 1991a:19 (member of *praslinia* group), 20 (in revision of Malaysian Sphecina).

33. *laevipes* (W. Fox)

Sphex laevipes W. Fox, 1897b:375, ♀, ♂. Lectotype: ♂, Brazil: Mato Grosso: Uacarizal (Carnegie Mus.), designated by Menke, 1964d:238. – Berland, 1926c:284 (Brazil: Bahia; color variation). – **As *Isodontia laevipes***: Menke, 1964d:238 (new combination, redescription); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Amarante, 2002:73 (in catalog of Neotropical Sphecidae).

34. *leonina* (de Saussure)

Sphex leoninus de Saussure, 1890: pl. 19, fig. 6, ♂. Holotype: ♂, illustrated specimen, Madagascar: no specific locality (MHNG). – Kohl, 1895:50 (redescription); Dalla Torre, 1897:428 (in catalog of world Hymenoptera); Berland, 1926c:282 (Madagascar: locality records); Leclercq, 1953b:211 (Madagascar). – **As *Isodontia leonina***: Menke in R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Pulawski, 2003b:795 (in checklist of Malagasy Sphecidae); Dollfuss, 2008b:1401 (Madagascar: Toamasina: Moramanga); Madl, 2014a:1017 (in catalog of Ampulicidae, Crabronidae, and Sphecidae of Madagascar, with synonymy and locality records), 2014b:22 (Madagascar: Cap d'Ambre, Nosy Komba).

Sphex leoninus de Saussure, 1891:259, ♂. Objective synonym of *Sphex leoninus* de Saussure, 1890. – Leclercq, 1961d:108 (Madagascar). – **As *Chlorion leoninum***: Arnold, 1945:90 (new combination, Madagascar, redescription).

Sphex leoninus de Saussure, 1892:431, ♀, ♂ (as *leonina*, incorrect original termination). Objective synonym of *Sphex leoninus* de Saussure, 1890.

35. *longiventris* (de Saussure)

Sphex longiventris de Saussure, 1867:37, ♂. Holotype or syntypes: ♂, Guinea: no specific locality (MHNG). – Gribodo, 1884c:300 (Ethiopia: Let Marefia 16 km N Ankoher); W. Schulz, 1911b:165 (good species, redescription, confirmation of Gribodo's identification of 1884); de Beaumont, 1967b:503 (full species status). – **As *Chlorion pelopoeiformis* var. *longiventris***: Arnold, 1928c:354 (new combination, new status, in revision of southern African *Isodontia*), 1930:17 (in checklist of Afrotropical Sphecidae). – **As *Sphex pelopoeiformis longiventris***: Leclercq, 1955h:24 (new combination, new status, summary of locality records from Africa, Zaire: Elizabethville, now Lubumbashi). – **As *Isodontia longiventris***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae). – **As *Isodontia pelopoeiformis* var. *longiventris***: Dollfuss, 2008b:1402 (locality records from Kenya, Mozambique, South Africa, Tanzania, Zambia, and Zimbabwe).

Sphex meruensis Cameron, 1908a:264, ♀. Holotype or syntypes: ♀, Tanzania: Mount Meru lowlands (NRS). Synonymized with *Chlorion pelopoeiformis longiventris* by Arnold, 1928c:354. – R. Bohart and Menke, 1976:123 (as tentative synonym of *Isodontia longiventris*).

36. *maidli* (Yasumatsu)

Sphex maidli Yasumatsu, 1938c:113, ♀, ♂. Holotype: ♂, Japan: Honshu: Hoki Prefecture: Daisen (Fukuoka Univ.). – Tsuneki, 1957e:35 (nesting habits), 1963b:69, 78 (nesting habits), 1964k:13 (nesting habits), 1967g:44 (western Japan: Mont Hyonosen); Tano, 1968:33 (Japan). – **As *Isodontia maidli***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Sk. Yamane and Ikudome, 1990:100 (Japan: distribution in Ryukyu Islands); Hensen, 1991a:11 (member of *Isodontia aurifrons* species group); Wu and Zhou, 1996a:42 (in revision in

Economic Insect Fauna of China); Yamane, Ikudome, and Terayama, 1999:477 (Japan: in Identification Guide to Sphecidae of Nansei = Ryukyu Islands); Haneda, Nosaka, Tano, Kurokawa, and Murota, 2004:29 (Japan: Gifu Prefecture); Negoro, Haneda, and Tano, 2005:43 (Japan: Toyama Prefecture); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Terayama and Tano, 2006:5, 13, 17 (in key to Japanese Ampulicidae and Sphecidae); N. Yamamoto, 2011:10 (Japan: Kyūshū: mainland Nagasaki Prefecture).

37. *mexicana* (de Saussure)

Sphex apicalis de Saussure, 1867:38, ♀, ♂ (authorship attributed to Harris), junior primary homonym of *Sphex apicalis* F. Smith, 1856. Syntypes: USA: Illinois, Tennessee, Kansas (depository?) – Cameron, 1889a:35 (summary of distribution records); Leclercq, 1991a:274 (correction to Leclercq's, 1979, catalog of French and Benelux Sphecidae: *mexicana* is the correct name for *apicalis* de Saussure).

Sphex apicalis varietas *mexicana* de Saussure, 1867:38, ♀, ♂ (as *Mexicana*, incorrect original capitalization). Lectotype: ♂, Mexico: Orizaba (MHNG), designated by Menke in R. Bohart and Menke, 1976:123. Synonymized with *Sphex apicalis* de Saussure by R. Bohart and Menke, 1963:139. – Kohl, 1890:381 (as synonym of *Sphex philadelphicus*). – **As *Isodontia mexicana***: R. Bohart and Menke, 1963:139 (new combination, new status, in revision of Nearctic Sphecini); Evans, 1964b:239 (description of larva); Medler, 1965:137 (nesting behavior observed in artificial nests); C. Lin, 1966a:239 (nesting habits); Pilon and Steiner, 1966:482 (locality records from Michigan and Quebec); Krombein, 1967b:242 (nesting behavior observed in artificial nests); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Porter, 1978:171 (Texas); Krombein, 1979b:1583 (in catalog of North American Hymenoptera); Finnamore, 1982:17 (in Sphecid Fauna of southern Quebec); Piek and Spanjer, 1986:184 (in list of Sphecidae with known prey); Steiner, 1986:96 (references to papers on nesting habits); Alvarez Pereyra and Reyes Villanueva, 1987:207 (floral records); Scaramozzino and Pagliano, 1987:155 (Italy); Hamon, Delmas, Maldès, and Tussac, 1988:112 (France: Mediterranean coast; Spain: Gerona Province), 117 (in key to *Isodontia* of France; Scaramozzino and Currado, 1988:871 (nest provisioning); Scaramozzino and Vergano, 1988:26 (nesting habits in Italy); Spofford, Kurczewski, and Downes, 1989:255 (summary of previous records for nest parasites *Amobia distorta* (Allen) and *Senotainia trilineata* (Wulp), miltogrammine flies); Tussac and Voisin, 1989:109 (nesting habits in France and Spain); O'Brien, 1989b:205 (distribution in Michigan); Pagliano, 1990:59 (in catalog of Italian Sphecidae); Hamon, Fonfria, and Tussac, 1991:128 and 131 (in key to French Sphecini), 132 (in France established in many Mediterranean departments); Negrisol, 1991:316 (Italy: Trieste and Udine Provinces); Scaramozzino et al., 1991:39 (nesting behavior in Italy); Fonfria, 1993:91 (France: Bouches-du-Rhône: Eygalières); Mochi and Luchetti, 1993:104 (Italy); E. Nielsen, 1993:10 (nest building, prey); Gayubo and Borsato, 1994:199 (Italy: Veneto); Scaramozzino, Currado, Vergano, and Andreone, 1994:897 (Italy: Piemonte: nesting habits); Schmid-Egger and Schmidt, 1994:12 (Europe south of Alpes and Croatia); Ahlstrom, 1995:107 (in checklist of insects of North Carolina); Gogala, 1995:74 (first record from Slovenia); Hanson and Menke, 1995:637 (known from Costa Rica); Negrisol, 1995a:18 (visiting flowers of *Eryngium maritimum* L., Apiaceae and *Echinophora spinosa* L., Apiaceae), 22 (Italy: Veneto); Negrisol in Minelli, Ruffo, and La Posta, 1995b:2 (in catalog of Italian fauna); Pagliano and Pesarini, 1995:83 (Italy: Ferrara Province); Vernier, 1995:169 (Switzerland, review of European findings), 176 (in key to Sphecini of Switzerland); Gusenleitner, 1996c:818 (Croatia: Rovinj); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:48 (in Sphecid Fauna of Western Europe); Kurczewski, 1998d:250 (pine barrens in upstate New York); Manley and Carithers, 1998:198 (parasite: *Sphaerophthalma pensylvanica pensylvanica* (Lepelletier de Saint Fargeau), a mutillid); Westrich, 1998:24 (first record from Germany: Tübingen); Pagliano and Scaramozzino, 1999:155 (Italy: Piemonte: Borgomale); Salzmänn-Wandeler and Rezbanyai-Reser, 1999:101 (Switzerland: Tessin: Monte Generoso); Canovai et al., 2000:84 (map of collecting localities in Italy and Corsica); Pagliano, Scaramozzino, and Strumia, 2000:290 (introduction into Italy); Ohl et al., 2001:142 (recorded from Germany but not occurring there); Salzmänn-Wandeler and Rezbanyai-Reser, 2001:158 (Switzerland: Tessin Canton: Meride area); Amarante, 2002:73 (in catalog of Neotropical Sphecidae); Ruíz Cancino, Coronado Blanco,

Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Carrière, 2003b:586 (history of introduction in France, nest and larva); S. Jacobs, 2003:two unnumbered pages (removing nests from storm windows frame tracks before installing storm windows); O'Neil and O'Neil, 2003:447 (nesting habits); Schmid-Egger, 2003:754 (Italy: Basilicata: Lauria); Zettel, 2003:115 (first record from Austria: Eichkögel near Mödling); Buck, 2004:24 (Canada: in checklist of Sphecidae of Ontario); Hellrigl, 2004a:173 and 2004b:188 (Italy: Trentino-Alto Adige, as Südtirol: Brixen, Vahrn 5 km N Brixen; Italy: Cavaion Veronese: Bardolino), 2004b:190 (in key to *Chalybion*, *Isodontia*, and *Sceliphron* of Trentino-Alto Adige, Italy), 191 (in key to nests of *Isodontia* and *Sceliphron*); Jenkins and Matthews, 2004:209 (Georgia and South Carolina, nesting in trap nest, prey: *Oecanthus fultoni* Walker); Fallahzadeh, Ostovan, and Shojaei, 2005:43 (first record from Iran: Fars: Jahrom); Fonfria, 2005:97 (nesting habits); Pagliano and Negrisol, 2005:48 (in Sphecidae Fauna of Italy); Rennwald, 2005:41 (Germany: Baden-Württemberg: Kehl near Strasbourg; nesting there in 2003 and 2004; list of prey species); Artmann-Graf, 2006:4 (Switzerland: Luzern Canton: Trübelbachweiher in Pfaffnau commune); Giles and Ascher, 2006:231 (New York: Black Rock Forest Preserve); Hellrigl, 2006a:371 (Italy: Alto Adige, as Südtirol: additional localities); Józán, 2006:284 (Croatia: Brseč, Draga, Fontana, Koromačno, Mošenička, Raša, Ravnj, Rovinj Selo, Skitača, Strepčići, Sveta Jelena, Vsar: Orsana, Zagorje; Hungary: Lábod, Szarvaskend); Magdalou, 2006b:109 (France: Pyrénées-Orientales: Mas-Larrieu Nature Reserve near Argelès-sur-Mer), 2006c:7 (France: Pyrénées-Orientales: Réserve Naturelle du Mas-Larrieu); Burguet, 2007:unnumbered p. 4 (France: Puy-de-Dôme: sands Girauds-Faures in Orléat commune); Horta Vega, Pinson Domínguez, Barrientos Lozano, and Correa Sandoval, 2007:48 (Mexico: Tamaulipas); Jacobs, 2007a:41 (in key to Sphecidae of Germany, not yet found in Germany); O'Neill, O'Neill, and O'Neill, 2007:123 (specimens emerging from parasitized cells are smaller); Dollfuss, 2008b:1401 (locality records from Croatia, Italy, Slovenia, and Spain); Taki, Kevan, Viana, Silva, and Buck, 2008:227 (artificial protective cover of trap nests increases colonization rate); Taki, Viana, Kevan, Silva, and Buck, 2008:18 (Canada: Ontario: Norfolk County); Amiet, 2009:155 (Switzerland: Solothurn, nesting behavior); Fallahzadeh, Ostovan, and Saghaei, 2009:236 (Iran: Fars: Jahrom), 240 (color photograph); Józán, 2009:165 (Croatia); McCravy, Bara, Hessler, Luxmore, Stinebaker, and Jenkins, 2009:113 (Illinois: Hancock County: Alice L. Kibbe Life Science Station); O'Neil and O'Neil, 2009:90 (prey, nest associates, sex ratios); Pagliano, 2009:175 (Italy: whole country); Bánk Botond, 2010:4 (Hungary: Balatonudvari); Bitsch, 2010:104 (in supplement to vol. II of Faune de France, 1997: recent records from Western Europe reported: France: first records from the following Départements: Alpes-de-Haute-Provence, Hautes-Alpes, Corse, Côte-d'Or, Doubs); Burguet in Durand and Burguet, 2010:20 (France Département d'Ardèche: Ardèche Gorges); Herbrecht, 2010:47 (northwestern France: locality records); Józán, 2010:253 (Hungary: Somogy County); Rasplus, Villemant, Paiva, Delvare, and Roques, 2010:754 (in list of Hymenoptera introduced to Europe); Schmid-Egger, 2010a:22 (in red list of Aculeata of Germany: relatively common); Smit and Wijngaard, 2010:67 (first record from Netherlands: Noord-Brabant: Sint Michielsgestel), 69 (in checklist of Sphecinae of Netherlands); Treiber, 2010:135 (France: départements du Bas-Rhin and du Haut-Rhin); van der Smissen, 2010b:385 (France: Ardèche, Gard, and Vaucluse: locality records); Dardaine and Peru, 2011:237 (France: Godron, Nancy); Field, Ohl, and Kennedy, 2011:734 (in molecular cladistic analysis of Ammophilini); Gogala, 2011:6 (Slovenia); Józán, 2011:178 (in checklist of Sphecidae s.l. of Hungary); Tischendorf, Frommer, Flügel et al., 2011:182 (Germany: not yet found in Hessen, but may be expected there); Wiesbauer, Zettel, Gross, and Neumayer, 2011:142 (Austria: range extension to Wien, Niederösterreich: Langenzersdorf near Bisamberg, and Salzburg); Boillat, 2012:229 (Switzerland: in checklist of insects of Canton de Genève); Burguet in Durand and Burguet, 2012:2 (France: Puy-de-Dôme: sands Girauds-Faures in Orléat commune); Ceccolini and Paggetti 2012b:118 (Italy: Umbria); Četković, Čubriločić, Plečaš, Popović, Savić, and Stanisavljević, 2012:63 (first record from Serbia: Belgrade, Fruška Gora National Park); U. Frommer, 2012:189 (Germany: recent migrant through Rhône-Rhein trench); Gogala, 2012:219 (introduced to Slovenia); Hellrigl, 2012:129 (Italy: Provincia Autonoma di Bolzano-Alto Adige, as Südtirol); Strumia, Pagliano, and Gayubo, 2012:55 (Italy: Toscana: Riserva di San Rossore); Callot and Brua, 2013:34 (France: Alsace: established since 2007);

Carbonell, 2013:72 (Spain: Cataluña: Girona Province: Garrotxa); Zettel, Zimmermann, and Wiesbauer, 2013:12 (Austria: Wien: Donaupark), 16 (history of distribution in Austria); Bitsch, 2014:396 (recent records from Netherlands and Serbia reported; France: new locality records); Chapelin-Viscardi and Larivière, 2014:123 (France: Loiret: Orléans); Fateryga, Protsenko, and Zhidkov, 2014:185 (first record from Crimea: near Pushkino); Ercit, Martinez-Novoa, and Gwynne, 2014:1 (females of *Oecanthus nigricornis* Walker, Gryllidae, are taken as prey more often than males because bearing eggs impedes a female's ability to escape predation); R. Burger, 2015:15 (Germany: current distribution in Rheinland-Pfalz); Hausl-Hofstätter and Teppner, 2015:66 (Austria: first records from Burgenland and Steiermark); Lett, 2015:5 (France: Loir-et-Cher: Gièvres); MacIvor, 2015:4 (Canada: Ontario: Toronto: nesting on vegetated roofs); K. Schmidt, 2015:131 (Germany: Baden-Württemberg: Heidelberg); Semelbauer, 2015:10 (first record from Slovakia: Šenkvice at 48°18'4.53"N, 17°21'39.32"E); Shorenko, 2015:316 (in list of Sphecidae *sensu lato* of Crimea); Straka, Bogusch, Tyrner, Řiha, Benda, Čížek, Halada, Máchačková, Marhoul, and Tropek, 2015:81 (first record from Czech Republic: Brno and vicinity); Vanoye-Eligio, Meléndez-Ramírez, Ayala, Navarro-Alberto, and Delfín-González, 2015:995 (Mexico: in list of Sphecidae s.l. of Yucatán); Hopfenmüller, 2016:93 (Germany: Bayern: Lindau am Bodensee); Le Divelec, Chapelin-Viscardi, and Larivière, 2016:108 (northern France: in agricultural landscapes); Vago, 2016:1 (France: Département du Nord: Cambrai); Arens, 2017a:627 (first record from Greece: Peloponnesus); Burguet and Durand, 2017:9 (France: Puy-de-Dôme: basin of river Crouël); Danilov, 2017b:215 (in catalog of Sphecidae s.s. of Russia); Gradinarov, 2017:2 (first record from Bulgaria: Sofia); Jahantigh, Rakhshani, Mokhtari, and Ramroodi, 2017:28 (Iran: known from Fars Province); Magdalou, 2017:15 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Forêt de la Massane, Mas Larrieu); Notton, 2017:241 (first record from Great Britain: London: Greenwich Peninsula Ecology Park); Řiha, 2017:174 (Czech Republic: Brno); Shorenko, 2017:76 (in Crimea collected in June); Amolin, Martynov and Nikulina, 2018:337 (Ukraine: Donetsk Botanical Garden at 48°0'44"N 37°53'1"E); Fresno, 2018: 226 (Spain: La Rioja: Calahorra, and Navarra: Cárcar); U. Frommer and Bahmer, 2018:53 (Germany: Hessen: Lahntal = Lahn River valley); Kraus and Wickl, 2018: (Germany: Bayern: Nürnberg); Lett, 2018:202 (France: Loir-et-Cher: Gièvres at 47°16'39"N 1°41'52"E); Polidori, Nucifora, and Sánchez-Fernández, 2018:1 (the species only partially fills its environmental niche in the invaded range; is expected to expand in Europe toward North and East); Shorenko, 2018:127 (Crimea, including localities, habitats, and number of specimens); Carminati, Mora, and Cretin, 2019:29 (France: in list of Sphecidae *sensu lato* of Franche-Comté); S. Ivanov, Fateryga, and Zhidkov, 2019:75 (Crimea: reared from trap nests); Burton, H. Weiser, and P. Weiser, 2019:53 (Germany: Baden-Württemberg: north Baden; nesting habits); Burton and P. Weiser, 2019:1 (current distribution in Europe, nesting habits); Saure, Streese, and Ziska, 2019:247 (Germany: first record from Brandenburg: several localities in Berlin); Bitsch, Barbier, and Jacobs *in* Bitsch, Barbier, Gayubo, Jacobs, Leclercq, and Schmidt, 2020:143 (in Sphecidae Fauna of Europe); Danilov, 2020:320 (specimens from Canada in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia); Field, Gonzalez-Voyer, and Boulton, 2020:7 (evolution of parental care); U. Frommer, 2020:151 (Germany: Hessen: Gießen; history of expansion in Europe); Schirmel, Entling, and Eckerter, 2020:150 (Germany: Rheinland-Pfalz: agricultural landscape near Landau; *Meconema meridionale* (A. Costa) and *M. thalassinum* (De Geer) represented 95% of prey, and *Pholidoptera griseoaptera* (De Geer) further 4%, all Tettigonidae); Turrise, 2020:55 (Italy: Sicilia: Catania and Messina provinces; Cillo, Mulas, Macis, and Pusceddu, 2021:50 (Italy: Sardegna: locality records); Cross, Baldock, and Wood, 2021:19 (in catalog of Sphecidae s.l. of Portugal); Herb and Schmid-Egger, 2021:9 (Germany: Bayern: Kaufbeuren area); Olszewski, Wiśniowski, and Ljubomirov, 2021:103 (in commented list of Sphecidae *sensu lato* of Poland); Żurawlew and Butrym, 2021:5 (Poland: Wrocław); Pernat, August, Groom, Memedemin, and Reyserhove, 2022:1 (flower species visited); U. Frommer and Bahmer, 2023:194 (Germany: Hessen: Giessen University Botanical Garden and city gardens); Hoffmann, Gardein, Witt, and Greil, 2023:45 (Germany: Niedersachsen: Braunschweig and Hanover, Schleswig-Holstein:Labe); Buck and Bennett, 2025:224 (in checklist of Sphecidae *sensu lato* of Canada, Alaska, and

Greenland: Canada: Ontario, Quebec, first records from British Columbia, New Brunswick, Nova Scotia, and Prince Edward Island: no specific locality).

As *Chlorion harrisi* (corrected to *Isodontia mexicana* by R. Bohart and Menke, 1963:140): Fernald, 1906:359 (in revision of Sphecini of North America and West Indies); H. Smith, 1908b:333 (in revision of Nebraskan Sphecidae); J. Smith, 1910:677 (in new list of insects of New Jersey); A. Gibson, 1913:124 (Canada: Ontario: Chatham); Rohwer, 1916b:679 (in catalog of Hymenoptera of Connecticut); Mickel, 1918b:398 (in catalog of Nebraskan Sphecidae); Britton, 1920:340 (in checklist of insects of Connecticut); Rohwer in Viereck, 1925:679 (in key to Sphecidae of Connecticut; New Haven); J.Ch. Salt, 1927:182 (stylopized specimen; Connecticut: Stamford); Bradley, 1928:1011 (in catalog of New York Sphecidae); Engelhardt, 1928:269 (nesting habits); Swezey, 1931:393 (Hawaiian Islands: Oahu: Waianae); Rau, 1935a:65 (nesting in hollow stems, lining cells with grass); Brimley, 1938:444 (North Carolina: Raleigh and Southern Pines westward); Dow, 1943:241 (illustration of male genitalia); Fernald, 1943a:288 (Florida); Rau, 1943:648 (Mexico: Tamaulipas: Santa Engracia, courtship dance); Dreisbach, 1944:268 (in key to Sphecinae of Michigan), 272 (Michigan: locality records); Krombein, 1951a:143 (Virginia: Dunn Loring; visiting tulip-tree honeydew); Krombein and Evans, 1954:233 (Florida: Marco), 1955:232 (Florida); Krombein, 1956b:154 (West Virginia: Lost River State Park); Koerber and Medler, 1958:55 (Wisconsin, nesting in trap-nests), 57 (map of distribution in Wisconsin), 58 (list of prey), 1958f:191 (in supplement to catalog of North American Hymenoptera: description of larva by Evans and Lin, 1956a, reported); Yoshimoto, 1960:335 (Hawaiian Islands). – As *Sphex harrisi*: Murray in Muesebeck, Krombein, and Townes, 1951:972 (new combination, in catalog of North American Hymenoptera); Kelner-Pillault, 1962:102 (introduced to France: Hérault: La Tamarissière), corrected to *Isodontia mexicana* by Hamon, Delmas, Maldès, and Tussac, 1988:112; Kurczewski and Kurczewski, 1963:147 (Pennsylvania: Presque Isle State Park). – As *Isodontia harrisi*: F. Williams, 1932:25 (new combination, Hawaiian Islands: Oahu: Koolau Mountains); Swezey, 1947:8 (Hawaii: Oahu: Wahiawa); Evans and Lin, 1956a:143 (description of larva).

As *Isodontia philadelphica* (corrected to *Isodontia mexicana* by Buck, 2004:75): Harrington, 1902:224 (Canada: Ontario: Ottawa) and Faull, 1913:384 (Canada: Toronto region).

As *Sphex paludosus*: Amiet, 1989:290 (first record from Switzerland: Tessin), corrected to *Isodontia mexicana* by Amiet, 2009:155.

As *Prionyx subfuscatus*: Bitsch, 2010:105 (France: Loiret: Olivet), corrected to *Isodontia mexicana* by Bitsch, 2014:396

38. *nidulans* Hensen

Isodontia nidulans Hensen, 1991a:20, ♀. Holotype: ♀, Philippines: Luzon: Olongapo in Subic Bay (USNM). – Hensen, 1991a:19 (member of *Isodontia praslinia* species group).

39. *nigella* (F. Smith)

Sphex nigellus F. Smith, 1856:255, ♀, ♂ (as *nigella*, incorrect original termination). Syntypes: China: Shanghai (BMNH). – A. Costa, 1864a:60 (one specimen from Adelaide, Australia, in Napoli Museum); de Saussure, 1867:38 (China: Shanghai); Kohl, 1885b:192 (in revision of Palearctic *Sphex*), 1890:379 (in revision of world Sphecini); Bingham, 1897:249 (in revision of wasps and bees of British India, now India and Pakistan); Dalla Torre, 1897:433 (in catalog of world Hymenoptera); R. Turner, 1908:467 (Australia: Queensland: Mackay and Cairns), 1910a:343 (in key to Australian Sphecini), 1912a:197 (Indonesia: Papua: Wataikwa River); R. Turner in R. Turner, Meade-Waldo, and Morley, 1915:4 (Indonesia: Papua: Wataikwa River); Berland, 1926c:283 (miscellaneous locality records); Dover, 1926:234 (China: Hong Kong); Piel, 1933:109 (nesting habits); Shirôzu, 1934:122 (Japan: Goto Islands); Baba, 1935:84 (Japan: Island of Sado); Yasumatsu, 1935b:35 (Japan: Ryukyu Archipelago: Island of Iriomote); Iwata, 1936b:165 (nesting habits); Gussakovskij, 1938:3 (China: Kiangsu Province); Yasumatsu, 1938c:99 (in revision of East Asian Sphecini), 1942c:106 (China: Beijing); Iwata, 1955:28 (egg size, number of oocytes); Miyamoto, 1959:34 (visiting flowers of *Daucus carota* L., Apiaceae), 35 (visiting flowers of *Ampelopsis*

heterophylla Sieb. et Zucc., Vitaceae), 37 (visiting flowers of *Polygonum reynoutria* Makino, Polygonaceae); Hirashima and Kifune, 1962:176 (parasitized by *Pseudoxenos esakii*, a strepsipteran); Tsuneki, 1962a:6 (Japan: Ryukyu Islands: Island of Amami-Oshima), 1963b:55, 77 (nesting habits); Tsuneki and Shimoyama, 1963:48 (Japan: Towada Prefecture); Iwata, 1964a:318 (nesting gregariously in Japan, but solitary in Thailand); Tano, 1964:38 (Japan: Kyushu: Island of Yakushima); Tsuneki, 1964k:1 (nesting habits); T. Iida, 1967:6 (description of larva); Tsuneki, 1967i:383 (Ryukyu Islands), 1967j:4 (Taiwan); Fukuda, 1968:27 (Japan); Haneda, 1968a:45 (Japan), 1968b:56 (Japan: Nagano Prefecture: Ina District); Itami, 1968a:15 (Japan: Yamagata Prefecture: foot of Mount Iide); Nambu, 1968b:26 (Japan: Saitama Prefecture); Nishino, 1968:24 (Japan); Tsuneki, 1968l:50 (South Korea: Island of Quelpart, now Island of Cheju); Haneda, 1969:69 (Japan: Yamanashi Prefecture); Itami, 1969:46 (Japan: Niigata Prefecture); Tsuneki, 1969e:24 (Japan: specimens in Osaka Museum of Natural History), 1969i:59 (Japan: Fukui Prefecture: Taichôdzi temple); Haneda, 1970:13 (Japan: Akita Prefecture), 1971b:31 (Taiwan); Tano, 1971:82 (Japan: Shikoku: Mount Tsurugi); Tsuneki, 1971f:2 (Taiwan), 1971m:2 (China: Beijing: Tiendang); Yamada, 1971:34 (Japan: Aichi Prefecture); Haneda, 1972a:5 (Taiwan); Nambu, 1972e:90 (Japan: Saitama Prefecture); Tano, 1972:22 (Ryukyu Islands); Murota, 1973a:101 (Ryukyu Islands: Amami group), 1973b:116 (Taiwan); Nambu, 1973a:152 (Japan: Saitama Prefecture); Tsuneki and Moriyama, 1973:15 (orientation during emerging from nest); Tsuneki, 1974a:361 (Korea); Nambu, 1975b:69 (Japan: Saitama Prefecture); Tsuneki, 1976d:288 (China: Manchuria: Cheng 31 km east of Harbin); Kifune and Yamane, 1985:55 (stylopized by *Paraxenos esakii* (Hirashima and Kifune, 1962), Strepsiptera); Piek and Spanjer, 1986:189 (in list of Sphecidae with known prey); Tsuneki, 1991:199 (Korea). – **As *Isodontia nigella***: Patton, 1881a:381 (new combination); C. Lin, 1966a:244 (review of nesting habits, as *nigellus*); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Tsuneki, 1979d:9 (Japan), 1982b:14 (known from Korea), 1982d:6 (Taiwan), 1982f:46 (Ryukyu Islands: Okinawa), 1982g:55 (known from Ryukyu archipelago); Cardale, 1985:227 (in catalog of Australian Sphecidae); Paik, 1985:197 (in list of Sphecidae of Korea); Steiner, 1986:96 (references to papers on nesting habits); Kifune, 1988:305 (stylopized by *Paraxenos esakii* (Hirashima and Kifune), Strepsiptera); Yamane and Ikudome, 1990:99 (Japan: distribution in Ryukyu Islands); Hensen, 1991a:19 (member of *Isodontia prasinia* species group); K. Walker, Naumann, Austin, Taylor, and Cardale, 1992:49 (in catalog of insects of Tasmania); Takahashi, 1993:3 (Japan: Island of Hachijo-Jima); S. Gupta, 1995:85 (India: Uttar Pradesh); Kazenas in Nemkov, Kazenas, Budrys, and Antropov, 1995:384 (in key to Sphecidae of Russian Far East); Miyatake, 1996:101 (specimens in Hiroshi Aoki collection); Wu and Zhou, 1996a:41 (in revision in Economic Insect Fauna of China, as *nigellus*); Porter, Stange, and Wang, 1999:5 (in checklist of Sphecidae of Taiwan); Yamane, Ikudome, and Terayama, 1999:477 (Japan: in Identification Guide to Sphecidae of Nansei = Ryukyu Islands); Lee and Shin, 2000:24, 25, 27 (Korea: Suwon and Kwangju-gun, as *nigellus*); Q. Li and He, 2001:755 (China: Tianmushan Nature Reserve at 30°22'N 119°26'E); Konno, Palma, Hitara, M. Juliano, L. Juliano, and Yasuhara, 2002:310 (bradykinins not found in venom); Haneda, 2003:3 (Japan: Nagasaki Prefecture: Tsushima); Nozaka and Murota, 2003:44 (photograph of female with prey); Ohl and Linde, 2003:149 (number of ovarioles); Tano, Kurokawa, Murota, and Nozaka, 2003:30 (Japan: Nagasaki Prefecture: Tsushima); Wu, Zhou, Q. Li, and Yang, 2003:805 (China: Fujian Province, as *nigellus*); Q. Li and He, 2004:1125 (China: in hymenopterous fauna of Zhejiang Province); Suda, 2004:35 (Japan: Yamanashi Prefecture); Haneda, Inoue, Nozaka, Tano, Kurokawa, H. Murota, and T. Murota, 2005:63 (Japan: Fukui Prefecture: Mount Monju); Haneda, Nozaka, Tano, Kurokawa, and Murota, 2005:43 (Japan: Gifu Prefecture); Negoro, Haneda, and Tano, 2005:43 (Japan: Toyama Prefecture); Haneda, Nozaka, Tano, Kurokawa and Murota, 2006a:18 (Japan: Toyama Prefecture), 2006b:46 (Japan: Nagasaki Prefecture: Tsushima); Hua, 2006:276 (in list of Chinese insects, geographic distribution); Nambu, 2006:246 (Japan: Tokyo: Imperial Palace garden); Terayama and Tano, 2006:5, 13, 17 (in key to Japanese Ampulicidae and Sphecidae); Endo, Nishimoto, Hashimoto, and Nakanishi, 2007:13 (Japan: Hyogo Prefecture: sandy beaches); Haneda, Nozaka, Tano, Kurokawa, H. Murota, and T. Murota, 2007:52 (Japan: Kagoshima Prefecture: Amami Oshima Islands); Ohkusa, 2007:33 (Japan: central Honshu: Aichi Prefecture); Dollfuss, 2008b:1401 (Japan:

Niigata, Osana); Nemkov, 2008c:10 (first record from Russia: Primorskiy Kray: Vladivostok); Ohkusa and Tajima, 2008:74 (Japan: central Honshu: Aichi Prefecture); Murota and Kurokawa, 2009:12 (Japan: Ryukyu Archipelago: Amami Oshima Islands); Nemkov, 2009b:45 (in new catalog of Sphecidae and Crabronidae of Asiatic Russia); Danilov, 2010b:44 (distribution of Palearctic-Indomalayan-Australian type); N. Yamamoto, 2011:10 (Japan: Kyūshū: mainland Nagasaki Prefecture); Nemkov, 2012c:434 (in catalog of Sphecidae of Russian Far East); Barthélémy, 2012:7 (nest structure, prey, nesting habits), 2014:7 (China: Hong Kong); J.-K. Kim, 2014:419 (in catalog of Sphecidae s.l. of Korean Peninsula); Kim, Yeo, and Kim, 2014:287 (in key to *Isodontia* of South Korea, here as *nigellus*, in revision of Sphecidae sensu stricto of South Korea); Kishi and Nagase, 2015:16 (Japan: Tokyo University: Yayoi Campus: visiting flowers); Murao, 2015:39 (Japan: Kyushu: coast of northwestern Fukuoka Prefecture); Danilov, 2017b:215 (in catalog of Sphecidae s.s. of Russia), 2020:320 (specimens from Japan in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia); Pham and Antropov, 2021:316 (first record from Vietnam: Hoa Binh and Ninh Binh provinces); Terayama, 2021:18 (Japan: Port of Tokyo Wild Bird Park); A. Fateryga, Ivanov, Mokrousov, and V. Fateryga, 2023:4 (first record from Crimea: Karadag at 44°54'48"N 35°12'06"E); Barthélémy and Guénard, 2025:44 (China: Hong Kong).

Sphex xanthognathus Pérez, 1905a:151, ♂. Holotype or syntypes: ♂, Japan: Yokohama (MNHN). – Synonymized with *Sphex nigellus* by Berland, 1926c:283. – Pérez, 1905a:25 (listed); Hensen, 1991a:19 (valid name for *Sphex nigellus* F. Smith, 1856 nec *Sphex nigellus* Lichtenstein, 1796, which is an auction catalog name of unclear status).

40. *nigelloides* (Strand)

Sphex nigelloides Strand, 1915:88, ♀. Holotype: Sri Lanka: Pankulam (DEI). – Strand, 1927:254 (in list of species described by author); Oehlke and Wudowenz, 1974:424 (holotype in DEI). – **As *Isodontia diodon nigelloides***: R. Bohart and Menke, 1976:123 (new combination, new status, in checklist of world Sphecidae). – **As *Isodontia nigelloides***: Hensen, 1991a:14 (full species status, member of *Isodontia diodon* species group), 17 (reverted to full species status).

41. *obscurella* (F. Smith)

Sphex obscurellus F. Smith, 1856:251, ♀, ♂ (as *obscurella*, incorrect original termination). Syntypes: Australia: Van Diemen's Land, now Tasmania: no specific locality (BMNH). – Kohl, 1890b:449 (original description copied); Froggatt, 1892:210 (in catalog of Australian Hymenoptera); Dalla Torre, 1897:434 (in catalog of world Hymenoptera); R. Turner, 1908:467 (diagnostic characters, Tasmania), 1910a:343 (in key to Australian Sphecini). – **As *Chlorion obscurellus***: R. Turner, 1915b:551 (new combination, Tasmania: Hobart). – **As *Isodontia obscurella***: van der Vecht, 1973:351 (new combination, should be selected as valid name, if *Isodontia vidua* is conspecific); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Cardale, 1985:227 (in catalog of Australian Sphecidae); Hensen, 1991a:19 (member of *Isodontia praslinia* species group), 1991b:127 (in revision of Australian *Isodontia*); K. Walker, Naumann, Austin, Taylor, and Cardale, 1992:49 (in catalog of insects of Tasmania).

42. *ochroptera* (Kohl)

Sphex ochropterus Kohl, 1890:378, ♀. Holotype or syntypes: ♀, Indonesia: Sulawesi: Bantimurung (Dresden, destroyed in World War II). – Kohl, 1898a:336 (description of ♂); Dalla Torre, 1897:435 (in catalog of world Hymenoptera); van Vondel, 1995:29 (specimens from Java in Natuurmuseum Rotterdam). – **As *Isodontia ochroptera***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Hensen, 1991a:19 (member of *ochroptera* group, in revision of Malaysian Sphecina); Dollfuss, 2008b:1401 (locality records from India, Indonesia, Laos, and Malaysia); Barthélémy, 2014:7 (China: Hong Kong); Barthélémy and Guénard, 2025:45 (China: Hong Kong).

43. *paludosa* (Rossi)

Sphex paludosus Rossi, 1790:61, sex not stated (as *paludosa*, incorrect original termination). Holotype or syntypes: Italy: Etruria, now Toscana: no specific locality (lost). – Illiger, 1807b:95 (southern France, redescription); Vander Linden, 1827:364 (Dalmatia, Italy, France); Germar, 1817:261 (Dalmatia: islands of Golfo di Quarnero, now Croatia: Kvarnerski zaljev); Lepeletier de Saint Fargeau, 1845:338 (in revision of world Hymenoptera); von Frauenfeld, 1861:103 (Croatia: Dalmatia: no specific locality); A. Costa, 1867b:70 and 1867c:14 (in revision of Italian Sphecidae); A. Costa, 1869a:16 (Italy: Piemonte); Palma, 1869:38 (Italy: Sicilia settentrionale); Dours, 1874:146 (in catalog of Hymenoptera of France: Hyères, Montpellier); A. Costa, 1886b:21 (Italy: Sardegna); Ed. André, 1888:152 (in revision of Sphecidae of Europe and Algeria), 9* (bibliographic references); Kohl, 1889a:26 (critique of André's description), 1890:373 (in revision of world Sphecini); De Stefani Perez, 1895:226 (in catalog of Sicilian Hymenoptera), 1896:131 (nesting habits and prey); Acloque, 1897:96 (in Sphecid Fauna of France and Algeria); Dalla Torre, 1897:436 (in catalog of world Hymenoptera); Rudow, 1899:42 (nest structure); Mocsáry, 1900:79 (Kingdom of Hungary, some localities are in today's Croatia); De Stefani Perez, 1901:222 (nesting habits); Antiga and Bofill, 1904:5 (Spain: Cataluña Province); Dusmet and Mercet, 1906:509, 515 (in key to Spanish Sphecini); Schmiedeknecht, 1907:245 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:104 (in catalog of French Hymenoptera); Rudow, 1912:44 (Italy: Sicilia: Palermo, nesting sites, prey: long legged spiders, clearly in error); Berland, 1921:533 (Greece); Fahringer, 1922:178 (Turkey); Berland, 1923b:287 (France: locality records), 1925d:39 (in Sphecid Fauna of France), 1928b:175 (nesting habits); Schmiedeknecht, 1930:705 (in keys to Hymenoptera of North and Central Europe); Bernard, 1933:61 (France: Drôme: Dieulefit); E. Nielsen, 1933:306 (summary of nesting habits); Grandi, 1934:130 (Italy: Lazio: Rocca San Stefano); Maidl, 1934:64 (Greece: Aegean Islands: Milos and Seriphos); Nadig, 1934:34 (Italy: Sardegna: Macomer); Berland, 1935b:57 (review of nesting behavior); Bernard, 1935:61 (France: Var: Fréjus area); Dusmet y Alonso, 1935:56 (Spain: Madrid: El Escorial; as *paludosa*); Giner Marí, 1943a:84 (in Sphecid Fauna of Spain); Giordani Soika, 1944:13 (Italy: Sicilia: no specific locality); Guiglia, 1944b:8 (Italy: Lazio); Zavادل in Zavادل and Šnoflák, 1948:167 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Berland and Bernard, 1949:3 (in revision of French *Sphex* s. l.), 12 (review of nesting habits); Cleu, 1953:50 (France: Ardèche River basin); Nouvel and Ribaut, 1953:177 (France: reported from Hautes-Pyrénées: Gèdre, par Berland, 1925); Harant and Leclercq, 1955:250 (France: Hérault: Avèze); Vogrin, 1955:31 (Yugoslavia); Ceballos, 1956:364 (in catalog of Hymenoptera of Spain); Bajári, 1957a:9, 10 (in key to Hungarian Sphecidae, not yet found in Hungary); de Beaumont, 1959a:10 (Italy); Berland, 1960:195 (nesting habits); de Beaumont, 1965a:13 (Greece), 1967a:275 (Turkey); Balthasar, 1972:422 (in Sphecid Fauna of Czechoslovakia: not yet found in country); Esmaili and Rastegar, 1974:45 (Iran); Pulawski, 1978:183 (in key to Sphecidae of European part of USSR); Radović and Krunić, 1979:unpaginated foldout (nesting in coarse sand and loose soil, foreleg structure); Piek and Spanjer, 1986:190 (in list of Sphecidae with known prey); nec Amiet, 1989:290 (= *Isodontia mexicana*); Schuberth and Schönlitzer, 1993:264 (facial fovea present, as *padulosus*). – **As *Isodontia paludosa***: Grandi, 1962:97 (new combination, Italy); C. Lin, 1966a:244 (review of nesting habits); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Guichard, 1978:270 (Greece); Pagliano, 1980:110 (Italy: Lazio); Gayubo, 1981a:135 (northern Spain: Sierra de Béjar); Dollfuss, 1983b:2 (occurrence in

Austria doubtful); Mingo and Gayubo, 1983:148 (Spain); Pagliano, 1984:367 (Italy); Chevin and Chevin, 1985:38 (France: Aude); Pagliano, 1985:10 (Italy); Paik, 1985:197 (in list of Sphecidae of Korea); Radović, 1985:64 (sting apparatus analyzed, as *paludosus*); Hamon, Delmas, Maldès, and Tussac, 1988:117 (in key to *Isodontia* of France); Gayubo, Asís, and Tormos, 1990a:10 (Spain); Pagliano, 1990:59 (in catalog of Italian Sphecidae); Dollfuss, 1991:28 (in key to Sphecidae of North and Central Europe); Hamon, Fonfria, and Tussac, 1991:128 and 131 (in key to French Sphecini), 132 (discontinuous distribution in France: Hautes-Pyrénées and Hautes-Alpes); Gayubo, Borsato, and Osella, 1992:275 (Greece, Morocco); Negrisoló in Minelli, Ruffo, and La Posta, 1995b:2 (in catalog of Italian fauna); Scharrer, 1995:22 (Croatia: Island of Krk); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:50 (in Sphecid Fauna of Western Europe); Giachino, Grosso, Marchetti, Pagliano, Scaramozzino, and Vailati, 2000:104 (Greece); Ljubomirov, 2000:6 (Bulgaria, no specimens preserved in N. Nedelkov collection); Vicidomini, 2000b:24 (Italy: previously recorded from Campania); Kazenas, 2001b:14 (in checklist of Sphecidae of Kazakhstan and Central Asia); Carrière, 2003b:585 (France: Hérault: Bessan and Faugères, visiting flowers of *Allium ampeloprasum* L.); Drewes, 2003:138 (Croatia: Island of Krk); Schmid-Egger, 2003:754 (Italy: Basilicata: Lauria, Sicilia: Madonie); Gayubo and Özbek, 2005:7 (Turkey: nine localities); Gülmez and Tüzün, 2005:45 (Turkey: Ankara Province); Pagliano and Negrisoló, 2005:49 (in Sphecid Fauna of Italy); Yildirim and Ljubomirov, 2005:1787 (Turkey: Erzurum: Şenkaya); Standfuss and Standfuss, 2006c:307 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Dollfuss, 2008b:1402 (locality records from Bulgaria, Croatia, Greece, Jordan, and Turkey); Ljubomirov and Yildirim, 2008:16 (in catalog of Sphecidae of Turkey); Baños-Picón, Asís, Gayubo, and Tormos, 2009:310 (Spain: frequency of specimens collected with hand nets and Malaise traps); Józán, 2009:165 (Croatia: 3 km north of Brsec, Sveta Jelena); Bitsch, 2010:105 (in supplement to vol. II of Faune de France, 1997: recent records from Bulgaria and France reported); Tüzün and Yüksel, 2010:4468 (Turkey: Niğde Province); van der Smitten, 2010b:385 (France: Ardèche: Saint-Thomé, Vogüe); Gogala, 2011:6 (Slovenia); Japoshvili and Ljubomirov, 2012:96 (Turkey: Isparta: Gölcük Nature Park 8 km southwest of city of Isparta, as *paludosa*); Yildirim, 2012:74 (Turkey: Tunceli: Mazgirt: Kalaycı); Józán, 2014:131 (Croatia: Martina); Ljubomirov, and Pohl, 2013:146 (Turkey: Isparta: Kasnak Oak Forest Nature Reserve); Yildirim, 2014:29 (Turkey: distribution by biogeographic provinces); Koçak and Kemal, 2015:278 (in checklist of Hymenoptera of Turkey); Gülmez and Dizer, 2016:57 (Turkey: Tokat Province); Arens, 2017a:627 (Greece: Peloponnesus); Danilov, 2017b:215 (in catalog of Sphecidae s.s. of Russia); Danilov and Mokrousov, 2017a:108 (first record from Russia: Stavropolskiy Kray: near Kislovodsk); Jahantigh, Rakhshani Mokhtari, and Ramroodi, 2017:28 (Iran: known from no specific locality); Gülmez, 2019:3 (Turkey: Ankara and Tokat provinces: no specific localities); Bitsch, Barbier, and Jacobs in Bitsch, Barbier, Gayubo, Jacobs, Leclercq, and Schmidt, 2020:145 (in Sphecid Fauna of Europe); Danilov, 2020:320 (specimen from Turkey in Institute of Systematics and Ecology of Animals, Novosibirsk, Russia); Maharramov, Mokrousov, and Proshchalykin, 2020:46 (Azarbaijan: Nakichivan Autonomous Republic); Kaplan and Yildirim, 2023:1692 (in checklist of Sphecidae *sensu lato* of Turkey).

Sphex fuscatus Dahlbom, 1843:25, ♂ (as *fuscata*, incorrect original termination), junior primary homonym of *Sphex fuscatus* Fabricius, 1793. Holotype: ♂, origin unknown (Lund). Synonymized with *Sphex paludosus* by Kohl, 1890b:373, synonymy confirmed by de Beaumont, 1953h:195. – Dahlbom, 1845:436 (in key to world Sphecini); F. Smith, 1856:243 (in catalog of Hymenoptera in British Museum); Giraud, 1863a:14 (Italy: Piemonte: Suse); Kirchner, 1867:218 (in catalog of European Hymenoptera); Marquet, 1875:207 (France: Hérault: Cette, now Sète); Kohl, 1881:28 (redescription), 1885b:191 (in revision of Palearctic *Sphex*); Gasperini, 1887:18 (recorded from Dalmatia, now Croatia, by Germar, 1817 and Frauenfeld, 1861); Graeffe, 1911:49 (Italy: Trieste area).

Sphex claviger F. Smith, 1856:247, ♀ (as *clavigera*, incorrect original termination). Holotype or syntypes: ♀, Australia: no specific locality (BMNH). Synonymized with *Isodontia paludosa* by van der Vecht, 1973:351. – Froggatt, 1892:210 (in catalog of Australian Hymenoptera); Dalla Torre, 1897:419 (in catalog of world Hymenoptera); R. Turner, 1910a:343 (in key to Australian Sphecini). – As ***Chlorion claviger***: Chandler, 1928:177 (new combination, Australia: Victoria: Red Cliffs; nesting habits).

Sphex parthenius A. Costa, 1858a:19 and 27, ♂ (as *parthenia*, incorrect original termination). Holotype: ♂, Italy: Campania: Monti Partenii in Benevento Region (Napoli). Synonymized with *Sphex fuscatus* by Kohl, 1881:29. – A. Costa, 1858b:9 (in revision of Sphecidae of Kingdom of Naples), 1861:35 (description of ♀), 1863:65 (Italy: Calabria Ulteriore: Brancaleone); Kirchner, 1867:218 (in catalog of European Hymenoptera).

? *Sphex eversmanni* Ed. André, 1888:151, ♀, ♂ (as *Eversmanni*, incorrect original capitalization). Syntypes: southern Russia and Spain: no specific locality (MNHN). Tentatively synonymized with *Isodontia paludosa* by Bohart and Menke, 1976:123. – Ed. André, 1888:9* (listed); Kohl, 1889a:26 (as new synonym of *Palmodus occitanicus*).

As *Sphex chrysoptera*: Ghiliani, 1842:24 (listed from Italy: Sicilia: Siracuse); Pagliano, 2008:525 (specimens in M. Spinola collection, Torino).

44. *papua* Hensen

Isodontia papua Hensen, 1991a:18, ♂. Holotype: ♂, Indonesia: Irian Jaya: Araucaria Camp (RMNH). – Hensen, 1991a:14 (member of *Isodontia diodon* species group).

45. *paranensis* (Berland)

Sphex paranensis Berland, 1926d:284, ♂. Lectotype: ♂, Argentina: Corrientes: Bella Vista on shore of Paraná River (MNHN), designated by Menke in R. Bohart and Menke, 1976:124. – Liebermann, 1931:82 (in revision of Argentinean Sphecini). – As *Isodontia paranensis*: Willink, 1951:85 (new combination, in revision of Argentinean Sphecini, description of ♀); Llano, 1959:59 (nest and prey, metamorphosis); C. Lin, 1966a:244 (review of nesting habits); R. Bohart and Menke, 1976:124 (in checklist of world Sphecidae); Fritz, 1993:16 (allotype in M. Fritz coll., actually first described female); Amarante, 2002:73 (in catalog of Neotropical Sphecidae), 2005a:14 (correction to his 2002 catalog); Dollfuss, 2008b:1402 (Argentina: Entre Ríos: Pronunciamiento).

46. *pelopoeiformis* (Dahlbom)

Sphex pelopoeiformis Dahlbom, 1845:437, sex not stated. Holotype or syntypes: South Africa: KwaZulu-Natal: Port Natal, now Durban (Lund). – F. Smith, 1856:245 (in catalog of Hymenoptera in British Museum, redescription); Radoszkowski, 1881:210 (Angola); Kohl, 1885b:193 (in revision of Palearctic *Sphex*; Sudan: Khartoum), 1890:372 (in revision of world Sphecini), 1894: 342 (country unknown: Cabenda, perhaps Cabinda Province of Angola); Dalla Torre, 1897:436 (in catalog of world Hymenoptera); Bingham, 1902:216 (South Africa: Pretoria); W. Schulz, 1906:308 (Fernando Po, now Bioko); Cameron, 1908a:264 (Tanzania: Usambara Mountains), 1910:137 (South Africa: Transvaal, now Gauteng, Limpopo, and Mpumalanga; as *pelopiiformis*); Brauns, 1911a:118 (South Africa); von Schulthess, 1914:286 (Cameroon); Strand, 1916b:104 (Angola and German East Africa, now Tanzania); Berland, 1926c:282 (miscellaneous locality records, as *pelopeiformis*); Schouteden, 1930:95 (Zaire, as *pelopeiformis*); Honoré, 1944a:76 (in revision of Egyptian Sphecini); Leclercq, 1955h:23 (bibliographic references, new locality records from Africa); Berland, 1956:1171 (in revision of African Sphecini); Smithers, 1958:193 (nesting habits); Leclercq, 1961b:46 (Zaire); Diniz, 1964c:100 (in key to Angolan *Sphex*), 102 (Angola: Lunda: Dundo); de Beaumont, 1967b:503 (South Africa: Natal, now Durban); van Vondel, 1995:24 (specimens from Cameroon and Malawi in Natuurmuseum Rotterdam). – As *Chlorion pelopoeiformis*: Arnold, 1928c:353 (new combination, in revision of southern African *Isodontia*), 1930:17 (in checklist of Afrotropical Sphecidae). – As *Isodontia pelopoeiformis*: G. Heinrich, 1969:113 (new combination, Angola: between Cuanza and Cunene Rivers, collecting charcoal for nest building); Leclercq, 1969:1050 (Congo Brazzaville); R. Bohart and Menke, 1976:124 (in checklist of world Sphecidae); Gess, 1981:29 (South Africa: Hilton Farm 18 km west-northwest of Grahamstown; nesting behavior), 68 (careful search for nesting sites), 69-70 (use of plant material for nest; buzzing); Rodgers and Homewood, 1982:233 (Tanzania: Usambara Mountains); Guichard, 1988a:119 (Saudi Arabia); Dollfuss, 1990:122 (Central African Republic); S. Gess and F. Gess, 2003:90 (South Africa: visiting flowers of *Foeniculum vulgare* L., Apiaceae, *Acacia caffra* (Thunb.) Willd., *Acacia karroo* Hayne, Fabaceae, and *Selago* sp., Scrophulariaceae) Gadallah and Assery, 2004a:221 (in catalog of Sphecidae of Saudi Arabia); Dollfuss,

2008b:1402 (locality records from Benin, Kenya, Malawi, South Africa, and Tanzania); Gadallah, Al Dhafer, Aldryhim, Fadl, and Elgharbawy, 2013:361 (in new catalog of Sphecidae of Saudi Arabia); Gadallah, 2020d:85 (in list of aculeate wasps of Arabian Peninsula).

47. *pempuchi* (Tsuneki)

Sphex pempuchi Tsuneki, 1971f:3, ♀. Holotype: ♀, Taiwan: Nantou Prefecture: Pempuchi (originally K. Tsuneki coll., now USNM). – Murota, 1973b:116 (Taiwan); Tsuneki, 1973f:40 (Taiwan); Nuhn and Menke, 1994:26 (holotype transferred to USNM). – **As *Isodontia pempuchi***: R. Bohart and Menke, 1976:124 (new combination, in checklist of world Sphecidae); Porter, Stange, and Wang, 1999:5 (in checklist of Sphecidae of Taiwan); Hua, 2006:276 (in list of Chinese insects, geographic distribution).

48. *permutans* (R. Turner)

Sphex permutans R. Turner, 1912:198, ♀. Lectotype: ♀, Indonesia: Papua: Wataikwa River (BMNH), designated by Hensen, 1991a:18. – R. Turner in R. Turner, Meade-Waldo, and Morley, 1915:4 (Indonesia: Papua: Wataikwa River; redescription). – **As *Isodontia permutans***: R. Bohart and Menke, 1976:124 (new combination, in checklist of world Sphecidae); Hensen, 1991a:14 (member of *Isodontia diodon* species group), 18 (in revision of Malaysian Sphecina).

49. ? *petiolata* (Drury)

Sphex petiolatus Drury, 1773:75, pl. XXXIX, fig. 7, [♀]. Holotype: ♀, Jamaica: no specific locality (destroyed?). – Cresson, 1963:320 (in catalog of North American Hymenoptera). – **As *Sceliphron petiolatum***: Dalla Torre, 1897:388 (new combination, in catalog of world Hymenoptera); Fernald, 1906:418 ("apparently a *Sceliphron*"); B. Porter, 1926:21 (unrecognizable species). – **As *Podium petiolatum***: Ashmead, 1899d:355 (new combination, in checklist of North American Sphecidae), 1900:309 (in checklist of Caribbean Hymenoptera). – **As *Isodontia petiolata***: R. Bohart and Menke, 1976:124 (tentative new combination, possibly a *Podium*); Amarante, 2002:73 (in catalog of Neotropical Sphecidae).

? *Sphex vagus* Christ, 1791:305, sex not stated (as *vaga*, incorrect original termination, name given to Drury, 1773, vol. 2, pl. 39, Fig. 7). Holotype or syntypes: Jamaica (depository unknown), junior primary homonym of *Sphex vagus* Linnaeus, 1758, and of *Sphex vagus* Scopoli, 1763. – Dalla Torre, 1897:446 (in catalog of world Hymenoptera, is not a *Sphex*); R. Bohart and Menke, 1976:124 (tentative new synonym of *Isodontia petiolata*).

50. *philadelphica* (Lepeletier de Saint Fargeau)

Sphex philadelphicus Lepeletier de Saint Fargeau, 1845:340, ♀ (as *Philadelphica*, incorrect original capitalization and termination). Holotype or syntypes: USA: Pennsylvania: Philadelphia (depository?). – F. Smith, 1856:262 (in catalog of Hymenoptera in British Museum); Cresson, 1863:320 (in catalog of North American Hymenoptera); de Saussure, 1867:38 (as junior synonym of *Sphex apicalis*); Kohl, 1890:380 (in revision of world Sphecini); Hubbard, 1894:315 (nesting in pitchers of pitcher-plant *Sarracenia flava* L., Sarraceniaceae in Florida); Dalla Torre, 1897:437 (in catalog of world Hymenoptera); Strand, 1916b:100 (Massachusetts); Berland, 1926c:284 (Mexico: Orizaba, North America). – **As *Chlorion philadelphicus***: Fernald, 1906:359 (new combination, as tentative synonym of *Chlorion harrisi*). – **As *Isodontia philadelphica***: Patton, 1880a:380 (new combination, diagnostic characters); Cresson, 1887:275 (in catalog of North American Hymenoptera); Ashmead, 1890:33 (in checklist of Hymenoptera of Colorado); C. Robertson, 1892:103 (visiting flowers of *Mentha canadensis* L., Lamiaceae), 104 (visiting flowers of *Lycopus sinuatus* Ell., Lamiaceae), 107 (visiting flowers of *Pycnanthemum linifolium* Ph., Lamiaceae), 1894:453 (visiting flowers of *Eupatorium serotinum* Michx., Asteraceae), 455 (visiting flowers of *Solidago canadensis* Linnaeus, Asteraceae), 460 (visiting flowers of *Aster paniculatus* Lam., Asteraceae); Hubbard, 1896:315 (nesting in pitchers of pitcher-plant *Sarracenia flava*, Sarraceniaceae); C. Robertson, 1896:73 (visiting flowers of *Polygonum hydropiperoides* Michx., Polygonaceae); Ashmead, 1899d:353 (in checklist of North American Sphecidae); Bridwell, 1899:209 (Kansas: no specific locality); J. Smith, 1900:523 (in list of insects of New Jersey); nec

Harrington, 1902:224 (= *Isodontia mexicana*); nec Faull, 1913:384 (= *Isodontia mexicana*); Evans, 1964b:240 (description of larva); Menke, 1965a:213 (synonymy); R. Bohart and Menke, 1963:135 (in revision of Nearctic Sphecini), 1976:124 (in checklist of world Sphecidae); Radović, 1985:64 (sting apparatus analyzed); Spofford, Kurczewski, and Downes, 1989:255 (summary of previous records for nest parasite *Amobia floridensis* (Townsend), a miltogrammine fly); Ahlstrom, 1995:107 (in checklist of insects of North Carolina); Amarante, 2002:73 (in catalog of Neotropical Sphecidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae); Buck, Paiero, and Marshall, 2006:40 (first record from Canada: Ontario: Kent County: Rondeau Provincial Park); Giles and Ascher, 2006:231 (New York: Black Rock Forest Preserve); Dollfuss, 2008b:1403 (Canada: Ontario: London); Buck and Bennett, 2025:224 (in checklist of Sphecidae sensu lato of Canada, Alaska, and Greenland: Canada: Ontario: no specific locality).

Sphex macrocephalus W. Fox, 1890b:137, ♀ (as *macrocephala*, incorrect original termination). Holotype: ♀, USA: Pennsylvania: Philadelphia (ANSP or USNM?). Synonymized with *Isodontia azteca* by Patton 1894:46, and with *Isodontia philadelphia* by R. Bohart and Menke, 1963:135. – Kohl, 1895:50 (original description copied). – **As *Isodontia macrocephala***: J. Smith, 1900:523 (new combination, in list of insects of New Jersey, as *macrocephalus*); Fernald, 1903a:269 (in key to North American *Isodontia*; valid species, not a synonym of *Isodontia azteca*). – **As *Chlorion macrocephalum***: Rohwer, 1916b:679 (new combination, in catalog of Hymenoptera of Connecticut); Rohwer in Viereck, 1925:679 (in key to Sphecidae of Connecticut); J.Ch. Bradley, 1928:1011 (in catalog of New York Sphecidae, as *macrocephala*).

Sphex aztecus var. *digueti* Berland, 1926d:283, ♀. Holotype: ♀, Mexico: Oaxaca: Basse-Mixtèque near Sylacayoapam (MNHN). Synonymized with *Isodontia philadelphia* by Menke, 1965a:213.

51. *pilipes* Hensen

Isodontia pilipes Hensen, 1991a:13, ♀, ♂. Holotype: ♀, Indonesia: Sumatra: Res. Benkoelen, Tandjong Sakati (RMNH). Paratypes: Borneo, Burma, Malaysia, New Guinea. – Hensen, 1991a:11 (member of *Isodontia aurifrons* species group).

52. *poeyi* Pate

Isodontia poeyi Pate, 1948d:185, ♂. Holotype: ♂, Cuba: Oriente Province: Sierra Cristal (ANSP?). – Alayo Dalmau, 1973:185 (in catalog of Cuban Hymenoptera), 1976:11 (in key to Cuban *Isodontia*), 27 (in checklist of Cuban Sphecidae); R. Bohart and Menke, 1976:124 (in checklist of world Sphecidae); de Zayas, 1981:78 (Cuba); Amarante, 2002:73 (in catalog of Neotropical Sphecidae); Portuondo and Fernández, 2004:134 (Cuba: Sierra Maestra); Amarante, 2005a:14 (correction to his 2002 catalog); Genaro, 2006:51 (in Catalog of Cuban Sphecidae and Crabronidae; other country: Isla de la Juventud).

ssp. antillana Genaro

Isodontia poeyi antillana Genaro, 2017:11, ♀. Holotype: ♀, Dominican Republic: La Altagracia: Boca de Yuma: Cueva de Berna (FSCA).

53. *praslinia* (Guérin-Ménéville)

Sphex praslinius Guérin-Ménéville, 1831:pl. 9, fig. 1, ♀ (as *praslinia*, incorrect original termination). Holotype: ♀, Papua New Guinea: New Ireland: Port Praslin (MSNG). – Guérin-Ménéville, 1838:262 (description); F. Smith, 1856:245 (in catalog of Hymenoptera in British Museum); Dalla Torre, 1897:437 (in catalog of world Hymenoptera); R. Turner, 1912a:197 (Indonesia: Papua: Wataikwa River); R. Turner in R. Turner, Meade-Waldo, and Morley, 1915:4 (Indonesia: Papua: Wataikwa River); Guiglia, 1948b:180 (type in Genova; as *Praslinius*). – **As *Chlorion (Isodontia) praslinius***: R. Turner, 1919c:397 (new combination). – **As *Isodontia praslinia***: R. Bohart and Menke, 1976:124 (new combination, in checklist of world Sphecidae); Hensen, 1991a:19 (member of *Isodontia praslinia* species group), 20 (in revision of Malaysian Sphecina).

Sphex ustulatus Kohl, 1890:378, ♀. Holotype or syntypes: ♀, Indonesia: Timor: no specific locality (NHMW). Synonymized with *Isodontia praslinia* by Hensen, 1991a:20. – Dalla Torre, 1897:446 (in catalog of world Hymenoptera). – **As *Isodontia ustulata***: R. Bohart and Menke, 1976:124 (new combination, in checklist of world Sphecidae); Dollfuss, 1989:10 (holotype in NHMW).

Sphex simplex Kohl, 1898a:335, ♂. Lectotype: ♂, Papua New Guinea: Madang Province: Erima in Astrolabe Bay (TMB), designated by Hensen, 1991a:20. Synonymized with *Isodontia praslinia* by Hensen, 1991a:20. – **As *Isodontia simplex***: R. Bohart and Menke, 1976:124 (new combination, in checklist of world Sphecidae).

Sphex insularis Cameron, 1901:240, ♂. Holotype: ♂, Papua New Guinea: New Britain: no specific locality (BMNH). Synonymized with *Isodontia praslinia* by Hensen, 1991a:20. – **As *Isodontia insularis***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae).

54. *sepicola* (F. Smith)

Sphex sepicola F. Smith, 1859:158, ♀, ♂. Lectotype: ♀, Indonesia: Maluku: Island of Aru (OXUM), designated by Hensen, 1991a:20. – F. Smith, 1863b:134 (known from Aru), 1871a:362 (in catalog of Oriental Aculeata); Kohl, 1890b:452 (original description copied); Dalla Torre, 1897:440 (in catalog of world Hymenoptera). – **As *Isodontia sepicola***: van der Vecht in R. Bohart and Menke, 1976:124 (new combination, in checklist of world Sphecidae); Hensen, 1991a:19 (member of *Isodontia praslinia* species group), 20 (in revision of Malaysian Sphecina), 1991b:127 (in revision of Australian *Isodontia*); Dollfuss, 2008b:1403 (Australia: Hourmans gap).

Sphex albohirtus R. Turner, 1908:466, ♀, ♂. Lectotype: ♀, Australia: Queensland: Mackay (BMNH), designated by Hensen, 1991a:20. Synonymized with *Isodontia sepicola* by Hensen, 1991a:20. – R. Turner, 1910a:343 (in key to Australian Sphecini). – **As *Isodontia albohirta***: R. Bohart and Menke, 1976:123 (new combination, in checklist of world Sphecidae); Cardale, 1985:226 (in catalog of Australian Sphecidae); Augul, 2019:496 (recorded from Iraq by Kaddou, 1967, as *Sceliphron albohirtus*).

55. *severini* (Kohl)

Sphex severini Kohl, 1898a:337, ♀ (as *Severini*, incorrect original capitalization). Holotype: ♀, Indonesia: Java: no specific locality (Inst. Roy. Sci. Nat. Bruxelles). – **As *Isodontia diodon severini***: R. Bohart and Menke, 1976:123 (new combination, new status, in checklist of world Sphecidae). – **As *Isodontia severini***: Hensen, 1991a:14 (member of *Isodontia diodon* species group), 18 (full species status, in revision of Malaysian Sphecina); Dollfuss, 2008b:1403 (locality records from Indonesia and Malaysia).

Sphex malayanus Cameron, 1902b:134, ♂. Lectotype: ♀ [sic], East Malaysia: Sarawak: Kuching (BMNH), designated by Hensen, 1991a:18. Synonymized with *Isodontia severini* by Hensen, 1991a:18. – R. Turner, 1914b:251 (as junior synonym of *Chlorion maia*).

Chlorion severini var. *philippensis* Rohwer, 1922:669, ♀, ♂. Holotype: ♀, Philippines: Palawan: Puerto Princesa (USNM). Synonymized with *Isodontia severini* by Hensen, 1991a:18. – **As *Isodontia diodon philippensis***: Baltazar, 1966:343 (new combination, new status, in catalog of Hymenoptera of Philippines); R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae); Tano, Nozaka, Kurokawa, and Murota, 1994:52 (Philippines).

Isodontia diodon alemon van der Vecht, 1957:367, ♂. Holotype: ♂, Indonesia: Sumba (Basel). Synonymized with *Isodontia severini* by Hensen, 1991a:19. – R. Bohart and Menke, 1976:123 (in checklist of world Sphecidae).

56. *simoni* (du Buysson)

Eremochares simoni du Buysson, 1898:356, ♀, ♂ (as *Simoni*, incorrect original capitalization). Lectotype: South Africa: Gauteng: Hammanskraal (MNHN), designated by Menke in R. Bohart and Menke, 1976:124. – **As *Chlorion simoni***: Arnold, 1928c:354 (new combination, in revision of southern African *Isodontia*), 1930:17 (in checklist of Afrotropical Sphecidae); Scott in Arnold, 1933a:370 (Ethiopia: Harar District). – **As *Sphex simoni***: Arnold, 1920:26 (new combination; as synonym of *Chlorion pelopoeiforme*); Schouteden, 1930:95 (Zaire); Arnold, 1951:145 (Ethiopia: Dilla); Leclercq, 1955h:23 (bibliographic references, new locality records from Zaire),

1961b:47 (Zaire); Diniz, 1964c:100 (in key to Angolan *Sphex*), 102: (Angola: Lunda: Andrada, Muíta-Luembe). – ***As Isodontia simoni***: R. Bohart and Menke, 1976:124 (new combination, in checklist of world Sphecidae); Gess, 1981:30 (South Africa: Hilton Farm 18 km west-northwest of Grahamstown); S. Gess, 1996:273, 283, 288 (floral records); S. Gess and F. Gess, 2003:91 (South Africa: visiting flowers of unnamed Mesembryanthema, *Asclepias buchenaviana* Schinz, Apocynaceae, *Lasiospermum bipinnatum* (Thunb.) Druce, Asteraceae, and *Senecio* sp., Asteraceae); Dollfuss, 2008b:1403 (locality records from Malawi, South Africa, Zambia, and Zimbabwe).

Sphex trichionotus Cameron, 1910b:138, ♂. Holotype or syntypes: ♂, South Africa: Limpopo: Pietersburg, now Polokwane (TMP). – ***As Chlorion trichionotus***: Arnold, 1928c:375 (new combination, as tentative synonym of *Chlorion simoni*). – ***As Isodontia trichionota***: R. Bohart and Menke, 1976:124 (new combination, as tentative synonym of *Isodontia simoni*).

57. *sonani* (Yasumatsu)

Sphex sonani Yasumatsu, 1938c:117, ♀, ♂. Holotype: ♂, Taiwan: Koshun (Takeuchi Ent. Lab.). – Tsuneki, 1967j:4 (Taiwan); Murota, 1973b:116 (Taiwan); Tsuneki, 1971f:2 (Taiwan). – ***As Isodontia sonani***: R. Bohart and Menke, 1976:124 (new combination, in checklist of world Sphecidae); Wu and Zhou, 1996a:43 (in revision in Economic Insect Fauna of China); Porter, Stange, and Wang, 1999:5 (in checklist of Sphecidae of Taiwan); Hua, 2006:276 (in list of Chinese insects, geographic distribution).

58. *splendidula* (A. Costa)

Sphex splendidulus A. Costa, 1858b:7, ♀, ♂. Syntypes: Italy: Marche: Sanseverino (Napoli). – A. Costa, 1867b:69 and 1867c:12 (in revision of Italian Sphecidae); Kirchner, 1867:218 (in catalog of European Hymenoptera); A. Costa, 1869a:16 (Italy: Piemonte, as *splendidula*); Kohl, 1885b:193 (in revision of Palearctic *Sphex*); Ed. André, 1888:141 (in revision of Sphecidae of Europe and Algeria), 8* (bibliographic references); Gasperini, 1889:71 (Dalmatia: Lesina, now Croatia: Hvar); Kohl, 1890:374 (in revision of world Sphecini); P. Marchal, 1893d:XXIX (nesting habits); Baldini, 1894:50 (Italy: Modena area); Nicolas, 1893:826 (nest site, prey, preimaginal stages), 1894:39 (nesting in twigs); De Stefani Perez, 1895:226 (in catalog of Sicilian Hymenoptera); Kohl, 1895:71 (Marchal's and Nicholas's biological observations reported); Dalla Torre, 1897:441 (in catalog of world Hymenoptera); Antiga and Bofill, 1904:5 (Spain: Cataluña Province); Dusmet and Mercet, 1906:509, 515 (in key to Spanish Sphecini); de Gaulle, 1908:104 (in catalog of French Hymenoptera); Maidl, 1922:67 (Croatia); Ferton, 1923:86 (preying on *Oecanthus pellucens* (Scopoli), Gryllidae, like *Tachysphex mediterraneus*); Berland, 1925d:39 (in Sphecid Fauna of France), 1926c:282 (France: Provence); E. Nielsen, 1933:305 (summary of nesting habits); Giner Marí, 1934a:130 (Spain); Berland, 1935b:57 (summary of known nesting behavior); Bernard, 1935:61 (France: Var: Fréjus area); Grandi, 1935a:111 (Italy); Giner Marí, 1943a:84 (in Sphecid Fauna of Spain); Chaudoir, 1947:142 (France: Gard: Roquemaure); Zavadil in Zavadil and Šnoflák, 1948:167 (in key to Sphecidae of Czechoslovakia, not yet found in Czechoslovakia); Berland and Bernard, 1949:3 (in revision of French *Sphex* s. l.), 11 (review of biological data); Cleu, 1953:50 (France: Ardèche River basin); de Beaumont and Bytinski-Salz, 1955:42 (Israel); Harant and Leclercq, 1955:250 (France: Hérault: Pont Juvénal); Vogrin, 1955:31 (Yugoslavia); Ceballos, 1956:364 (in catalog of Hymenoptera of Spain); Bajári, 1957a:9, 10 (in key to Hungarian Sphecidae, not yet found in Hungary), 1957b:134 (first record from Hungary); Nouvel and Ribaut, 1958:8 (France: Pyrénées-Orientales: Banyuls-sur-Mer); de Beaumont, 1959a:10 (Italy), 1960a:6 (Greece: Island of Rhodes), 1965a:13 (Greece), 1967a:275 (Turkey); Balthasar, 1972:422 (in Sphecid Fauna of Czechoslovakia: not yet found in country); Pulawski, 1978:183 (in key to Sphecidae of European part of USSR). – ***As Isodontia splendidula***: C. Lin, 1966a:244 (new combination, review of nesting habits, as *splendicula*); R. Bohart and Menke, 1976:124 (in checklist of world Sphecidae); Pagliano, 1980:110 (Italy: Liguria), 1984:367 (Italy); Chevin and Chevin, 1985:38 (France: Aude); Pagliano, 1985:10 (Italy); Gayubo, 1986b:35 (Spain: Andalucía); Gayubo and Tormos, 1986a:8 (Spain: Castellón de la Plana); Asís and Jiménez, 1987:24d (Spain: Province of Castellón); Tormos and Jiménez, 1987b:316 (Spain: Valencia Province: Dehesa de El Saler); Hamon, Delmas, Maldès, and Tussac, 1988:117 (in key to *Isodontia* of France); Pagliano,

1990:59 (in catalog of Italian Sphecidae); Hamon, Fonfria, and Tussac, 1991:126 and 131 (in key to French Sphecini), 132 (in France along Mediterranean shore); Negrisolo, 1991:316 (Italy: Duino); Gayubo, Borsato, and Osella, 1992:276 (Greece); Scaramozzino, 1993:277 (nest and prey); Gayubo and Borsato, 1994:200 (Italy: Veneto, Toscana); Tormos, Asís, and Gayubo, 1994:187, 193 (Spain: Province of Albacete); Negrisolo in Minelli, Ruffo, and La Posta, 1995b:2 (in catalog of Italian fauna); Gusenleitner, 1996c:818 (Croatia: Rovinj); Bitsch, Barbier, Gayubo, Schmidt, and Ohl, 1997:51 (in Sphecidae Fauna of Western Europe); Pagliano and Scaramozzino, 1999:155 (Italy: Piemonte: Borgomale); Vicidomini, 2000b:25 (Italy: previously recorded from Campania); Ivanov and Ljubomirov, 2001:210 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); Carrière, 2003b:586 (visiting flowers of *Eryngium campestre* L., Apiaceae, and *E. maritimum* L., Apiaceae); Drewes, 2003:138 (Croatia: Šibenik; Spain: Tarragona); Gülmez and Tüzün, 2005:46 (Turkey: Province of Ankara); Jacobs, 2005a:437 (Bulgaria: Arkutino near Burgas); Pagliano and Negrisolo, 2005:49 (in Sphecidae Fauna of Italy); Standfuss and Standfuss, 2006c:307 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Vicidomini and Pignataro, 2007:2 (Italy: Salerno: known from Parco Nazionale del Cilento east of Vallo di Diano), 15 (Italy: Provincia di Salerno: San Severino di Centola); Dollfuss, 2008b:1403 (locality records from Bulgaria, Croatia, Greece, India: Uttaranchal: 13 km northwest of Nainital, Italy, and Turkey); Ljubomirov and Yildirim, 2008:16 (in catalog of Sphecidae of Turkey); Guéorguiev and Ljubomirov, 2009:262 (Bulgaria: Maleshevska Planina); Józán, 2009:165145 (Croatia: Radelić Draga); Pagliano, 2009:175 (Italy: Lombardia: Rivanazzano); Bitsch, 2010:105 (in supplement to vol. II of Faune de France, 1997: recent records from Bulgaria and France reported); van der Smissen, 2010b:385 (France: Ardèche: Saint-Maurice-d'Ibie; Vaucluse: Bédoin); Gogala, 2011:6 (Slovenia: Brje near Komen); Yildirim, 2014:29 (Turkey: distribution by biogeographic provinces); Koçak and Kemal, 2015:278 (in checklist of Hymenoptera of Turkey); Gülmez and Dizer, 2016:57 (Turkey: Tokat Province); Yildirim, Ljubomirov, Özbek, and Yüksel, 2016:4 (Turkey: Tunceli Province); Arens, 2017a:627 (Greece: Peloponnesus); Magdalou, 2017:15 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Julols); Gülmez, 2019:3 (Turkey: Ankara and Tokat provinces: no specific localities), 4 (abnormal forewing venation); Mokrousov, Shorenko, and Shlyakhtenok, 2019:12 (first record from Russia: Dagestan: four localities, and from Cyprus: Paphos: near Pittokopos at 34.981°N 32.404°); Bitsch, Barbier, and Jacobs in Bitsch, Barbier, Gayubo, Jacobs, Leclercq, and Schmidt, 2020:145 (in Sphecidae Fauna of Europe); Kaplan and Yildirim, 2023:1692 (in checklist of Sphecidae *sensu lato* of Turkey).

? *Sphex affinis* Lucas, 1849:271, sex not stated. Holotype or syntypes: Algeria: Alger (MNHN?). – F. Smith, 1856:244 (in catalog of Hymenoptera in British Museum); Kohl, 1885b:189 (as tentative synonym of *Sphex splendidulus*), 203 (original description copied); Ed. André, 1888:140 (in revision of Sphecidae of Europe and Algeria), *8 (bibliographic references); Kohl, 1890:374 (as tentative synonym of *Sphex splendidulus*); Dalla Torre, 1897:413 (in catalog of world Hymenoptera); Roth, 1925:381 (synonymy with *Sphex splendidulus* is doubtful, as no member of *Isodontia* is known from North Africa); Leclercq, 1955h:17 (bibliographic references); Ceballos, 1956:362 (in catalog of Hymenoptera of Spain).

59. *stanleyi* (Kohl)

Sphex stanleyi Kohl, 1890:376, ♀, ♂ (as *Stanleyi*, incorrect original capitalization). Syntypes: Zaire: Equateur Province: no specific locality (Inst. Roy. Sci. Natur. Bruxelles). – Dalla Torre, 1897:442 (in catalog of world Hymenoptera); Brauns, 1911a:118 (South Africa); Berland, 1926c:282 (miscellaneous locality records); Leclercq, 1955h:22 (bibliographic references, new locality records from Zaire and South Africa); Berland, 1956:1172 (in revision of African Sphecini); Leclercq, 1961b:47 (Zaire). – **As *Chlorion stanleyi***: Arnold, 1928c:356 (new combination, in revision of southern African *Isodontia*), 1930:17 (in checklist of Afrotropical Sphecidae). – **As *Isodontia stanleyi***: R. Bohart and Menke, 1976:124 (new combination, in checklist of world Sphecidae); F. Gess, 1981:30 (South Africa: Hilton Farm 18 km west-northwest of Grahamstown; nest, prey), 32 (nesting in pithy stems), 34 (nesting in old galleries of bee *Xylocopa caffrariae* in hollow stems of *Phragmites australis* (Cav.) Trin. ex Steud., Poaceae), 66 (nesting in three types of stems), 69-70 (use grass leaves for nest; buzzing), 75

(member of nesting community associated with *Aloe ferox* Mill., Asphodelaceae); Dollfuss, 1989:10 (type material in NHMW), 2008b:1404 (locality records from Benin, Ethiopia, Kenya, Malawi, Mozambique, Namibia, South Africa, Senegal, Tanzania, Uganda, Zambia, and Zimbabwe).

Sphex stanleyi Kohl in Schletterer, 1891:14, ♀, ♂ (as *Stanleyi*, incorrect original capitalization). Objective synonym of *Sphex stanleyi* Kohl, 1890.

60. *vanlinhi* Pham

Isodontia vanlinhi Pham, 2016:64, ♀, ♂. Holotype: ♀, Vietnam: Thai Binh Province: Hung Ha: Hong Minh at 20°35'N, 106°08'E (Institute of Ecology and Biological Resources, Hanoi). – Pham and Antropov, 2021:316 (recorded from Vietnam by Pham, 2016)

61. *vidua* (F. Smith)

Sphex viduus F. Smith, 1856:249, ♂ (as *vidua*, incorrect original termination). Syntypes: ♂, Australia: no specific locality (OXUM). – Kohl, 1890b:454 (original description copied); Froggatt, 1892:210 (in catalog of Australian Hymenoptera); Dalla Torre, 1897:447 (in catalog of world Hymenoptera). – **As *Isodontia vidua***: van der Vecht, 1973:351 (new combination, may be a subspecies of *Isodontia obscurella*); R. Bohart and Menke, 1976:124 (in checklist of world Sphecidae); Cardale, 1985:227 (in catalog of Australian Sphecidae).

62. *visseri* Willink

Isodontia visseri Willink, 1951:88, ♀, ♂. Holotype: ♂, Argentina: Buenos Aires (IML). – R. Bohart and Menke, 1976:124 (in checklist of world Sphecidae); Amarante, 2002:73 (in catalog of Neotropical Sphecidae); Dollfuss, 2008b:1404 (Argentina: Entre Ríos: Pronunciamiento, French Guyana: Régina, Uruguay: 70 km southwest of Artigas).

sp.

Heithaus, 1979:193 (Costa Rica: Guanacaste: Hacienda las Ciruelas 30.5 km northwest of Cañas); Amarante, 1993:19 (northeastern Brazil); Cambra, 1993:16 (Peru: Pakitz at 11°57'S, 71°17'W); Camillo, Garófalo, Serrano, and Muccillo, 1995:466 (Brazil, highest nesting frequency in September to April); Naumann, 1993:181 (Australia: Queensland: Heathlands area in Cape York); Assis and Camillo, 1997:338-344 (observations in trap nests); Naumann, 1998:183 (Australia: northwest Queensland: Musselbrook area, approximately 18°40'S 138°23'E); Packer, 2004:134 (structure of female gastral sterna); Ruíz Cancino, Coronado Blanco, and Horta Vega, 2005:170 (Mexico: recorded from State of Tamaulipas); Dollfuss, 2008b:1404 (French Guyana: 20 km east of St. Laurent du Maroni); Pires, Souza-Silva, and Pompeu, 2009:1 (nesting habits); Pires, Pompeu, and Souza-Silva, 2012:304 (Brazil: Minas Gerais: biological reserve Boqueirão); Silvestre, Demétrio, Trad, de Oliveira Lima, Auko, and de Souza, 2014:70 (Brazil: Mato Grosso do Sul: dry forests in Bodoquena Mountain Range and Brazilian Chaco); Batista Matos, Santos Silva, and Teodoro, 2016:173 (Brazil: Maranhão: near Miranda do Norte at 3°36'S 44°34'W, five species); Trad and Silvestre, 2017:4 (Brazil: Mato Grosso do Sul); Buys, 2020b:80 (in cladistic analysis of larvae of Sphecidae s.s.).

NOMINA NUDA IN ISODONTIA

Isodontia albata Hensen: Dollfuss, 1989:10 (paratype in NHMW).

Isodontia egens albata Vecht: Dollfuss, 1989:10 (paratype in NHMW).