

Last updated: 18 December 2023

## **NITELA**

*Nitela* Latreille, 1809:77. Type species: *Nitela spinolae* Latreille, 1809, by monotypy.

*Tenila* Brèthes, 1913b:153. Type species: *Nitela amazonica* Ducke, 1903, by original designation.

*Rhinionitela* F. Williams, 1928a:97. Type species: *Rhinionitela domestica* F. Williams, 1928, by original designation.

Important publications: Ahrens, 1949 (nesting habits of *Nitela spinolae*); Pate, 1937a (key to North American species); Arnold, 1940:129 (key to Afrotropical species); Menke, 1969 (key to subgenus *Tenila*, now *amazonica* group); van Zuijlen, 1994 (revision of the *amazonica* group); Gayubo and Felton, 2000 (revision of European species); T. Li and Q. Li, 2010b (key to Oriental species); Schmid-Egger and van Harten, 2022 (key to species of Arabian Peninsula).

Review of biology: Kazenas, 2001b:170.

### **1. *amazonica* Ducke**

*Nitela amazonica* Ducke, 1903:269, ♀, ♂. Lectotype: ♀, Brazil: Pará (MHNB), designated by van Zuijlen, 1994:251. – Ducke, 1908a:46 (Brazil: Minas Gerais); R. Turner, 1916f:345 (in list of world *Nitela*); Menke, 1969:200 (in revision of *amazonica* group of *Nitela*; Brazil, Trinidad); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Nascimento and Overall, 1979:9 (in list of Hymenoptera described by A. Ducke), 1980:8 (Brazil); Roig, 1988:14 (Ducke's material in Bern Museum); Callan, 1991a:8 (Trinidad); van Zuijlen, 1994:251 (in revision of *amazonica* species group of *Nitela*); Amarante, 2002:42 (in catalog of Neotropical Crabronidae); Starr and Hook, 2003:19 (in catalog of Aculeata of Trinidad, West Indies).

### **2. *apoensis* Tsuneki**

*Nitela apoensis* Tsuneki in Tsuneki et al., 1992b:46, ♀. Holotype: ♀, Philippines: Mindanao: Mount Apo (USNM). – Nuhn and Menke, 1994:25 (holotype in USNM); T. Li and Q. Li, 2010b:338 (in key to Oriental *Nitela*).

### **3. *arabica* Gayubo and Schmid-Egger**

*Nitela arabica* Gayubo and Schmid-Egger, 2014:642, ♀. Holotype: ♀, United Arab Emirates: Sharja Desert park at 25°17'N 55°42'E (Ch. Schmid-Egger collection). – Gayubo and Schmid-Egger, 2014:641 (in key to *Nitela* of Arabian Peninsula, Israel, and Egypt); Gadallah, 2020b:41 (in list of aculeate wasps of Arabian Peninsula); Schmid-Egger and van Harten, 2022:562 (in key to species of Arabian Peninsula; United Arab Emirates: two localities).

### **4. *australiensis* W. Schulz**

*Nitela australiensis* W. Schulz, 1908:483, ♀. Holotype: ♀, Australia: Western Australia: Denham (depository?). – R. Turner, 1916e:286 (synonymy, habitat), 1916f:344 (in list of world *Nitela*); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Cardale, 1985:256 (in catalog of Australian Sphecidae); K. Walker, Naumann, Austin, Taylor, and Cardale, 1992:48 (in catalog of insects of Tasmania); Matthews, 2000b:44 (nesting habits).

*Nitela nigricans* R. Turner, 1910b:428, ♀. Holotype or syntypes: ♀, Australia: Queensland: Bundaberg (BMNH). Synonymized with *Nitela australiensis* by R. Turner, 1916e:286. – R. Turner, 1915b:557 (Tasmania: Eaglehawk Neck).

### 5. *austrocaledonica* F. Williams

*Nitela austrocaledonica* F. Williams, 1945:447, ♀, ♂. Holotype: ♀, New Caledonia: Nouméa (Bishop Mus.?). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Callan, 1990a:22 (New Caledonia: no specific locality); Jennings, Krogmann, and Burwell, 2013:31 (in checklist of Hymenoptera of New Caledonia).

### 6. *bicornis* F. Williams

*Nitela bicornis* F. Williams, 1928a:96, ♀. Holotype: ♀, Philippines: Luzon: Los Baños (Bishop Mus.). – Baltazar, 1966:327 (in catalog of Hymenoptera of Philippines); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); T. Li and Q. Li, 2010b:338 (in key to Oriental *Nitela*).

### 7. *bifida* Menke

*Nitela bifida* Menke, 1969:199, ♀. Holotype: ♀, Costa Rica: Turrialba (USNM). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); van Zuijlen, 1994:252 (in revision of *amazonica* species group of *Nitela*); Hanson and Menke, 1995:639 (known from Costa Rica); Amarante, 2002:42 (in catalog of Neotropical Crabronidae); Cambra, 2005:101 (Panamá).

### 8. *blascoi* Gayubo and Felton

*Nitela blascoi* Gayubo and Felton, 2000:295, ♀, ♂. Holotype: ♀, Spain: Zaragoza Province: Pina de Ebro (Univ. Salamanca). Paratypes: Portugal, Corsica. – J. Fernández, 2001:160 (description of species recorded); Gayubo and Bitsch *in* Bitsch et al., 2001:340 (in Sphecid Fauna of Western Europe); Gayubo, González, Tormos, and Asís, 2008:139 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia), 141 (known only from Iberian Peninsula and Corsica); Mei, 2008:177 (first record from Italy: Sardegna: several localities); Gayubo, González, Tormos, and Asís, 2009:363 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); Bitsch, 2014:404 (recorded from Sardinia by Mei, 2008); Cross, Baldock, and Wood, 2021:50 (in catalog of Sphecidae *sensu lato* of Portugal); Gayubo and Bitsch *in* Bitsch, Antropov, Gayubo, Leclercq, Schmid-Egger, K. Schmidt, and Straka, 2021:306 (in revision of Sphecidae *sensu lato* of Europe).

### 9. *borealis* Valkeila

*Nitela borealis* Valkeila, 1974:78, ♀, ♂. Holotype: ♀, Finland: Western Finland: Vanaja (Mus. Zool. Helsinki). – Lefebber, 1975:38 (Netherlands: all specimens previously recorded as *spinolae* are actually *borealis*); Lomholdt, 1975b:31 (Denmark: Anholt Island); R. Bohart and Menke, 1976:629 (in checklist of world Sphecidae); Lefebber, 1976:151 (Netherlands: Aerdenhout, Bloemendaal, Epen, Holset, Jutfaas, Swier, Wylre; Belgium: La Calamine, Mal near Tongeren, Val Dieu); Lomholdt, 1976:260 (in Sphecid Fauna of Fennoscandia and Denmark); Banaszak, 1977:112 (Poland: Rogalin near Poznań); Haeseler, 1978b:63 (Germany: Niedersachsen: a bog near Oldenburg); Pulawski, 1978:228 (in key to Sphecidae of European part of USSR); Haeseler, 1979:10 (Germany: Niedersachsen: 10 km south of Oldenburg); Leclercq, Gaspar and Verstraeten, 1979:map 1417; Lefebber, 1979:12 (in checklist of Sphecidae of Netherlands), 82 (Netherlands: distribution map); Jacob-Remacle and Leclercq, 1980:193 (Belgium: gardens in Liège); Pagliano, 1980:129 (Italy: Piemonte); Westrich, 1980:629 (Germany: Baden-Württemberg: Tübingen area); Dollfuss and Ressler, 1981:322 (Austria: Niederösterreich: Scheibbs District); Schmidt, 1981:191 (Germany: Baden-Württemberg); Axelsson, 1982:80 (Sweden); Gauss, 1982:75 (Germany: nesting in galls of *Diplolepis rosae*); Gayubo and Nieves, 1982:192 (Spain: nesting in abandoned galls on oaks); Leclercq, 1982a:124 (Belgium: Liège); Dollfuss, 1983b:11 (in catalog of Sphecidae of Austria); Gayubo, 1983f:278 (first record from Spain: Avila and Salamanca Provinces); Janzon, 1983:171 (Sweden: Öland); Riemann, 1983:86 (Germany: Bremen-Daverden area); Gayubo, 1984b:96 (Spain: previously recorded from Salamanca Province), 1984c:371 (Portugal: El Algarve Province); Jacob-Remacle, 1984:260 (Belgium: urban center of Liège); Lefebber, 1984:29 (Netherlands: Maastricht); Gayubo, 1985c:169 (Spain: Palencia: Puebla de Valdivia); Haeseler, 1985a:350 (Germany:

Schleswig-Holstein), 355 (prey), 1985c:571 (Germany: Friesian Islands); Jacob-Remacle, 1985:408 (Belgium); Lefeber, 1985:87 (Netherlands: southern Limburg); Brechtel, 1986:61 (Germany: Südpfalz); Jacob-Remacle, 1986:109 (Belgium; trap-nests); Nilssen, 1986:87 (Sweden); Vikberg, 1986:76 (Finland); Allen, 1987b:28 (Britain; prey: psocopteran nymphs); Felton, 1987b:235 (first record from Britain), 236 (diagnostic characters); Schmidt and Westrich, 1987:365 (Germany: Mainz area); Dollfuss, 1988:13 (Austria: Bisamberg); Jacobs, 1989:14 (Germany: Mecklenburg-Vorpommern); Jacobs and Oehlke, 1990:129 (in key to *Nitela borealis* and *spinolae*), 170 (new records from Democratic Germany); Pagliano, 1990:108 (in catalog of Italian Sphecidae); Rohe, 1990:1049 (Germany: Rheinland-Pfalz: Lenneberg forest); Schwammberger and Priesner, 1990:540 (Austria: Kärnten); Day, 1991:xvii (in summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:119 (in key to Sphecidae of North and Central Europe); Gayubo, Borsato, and Osella, 1991:404 (Italy: Veneto); Kowalczyk, 1991a:90, 93, 97, 105 (Poland: Łódź); Sorg and Wolf, 1991:195 (Germany: Koppelstein Reserve southeast of Koblenz); Allen, 1992:10 (Britain: Kent: Maidstone and Sarden); Budrys, 1992:30 (in list of Sphecidae of Lithuania); Cölln and Jakubzik, 1992:87 (nest parasite: ichneumonid *Perithous divinator* Rossi), 89 (Germany: Rheinland; reared from twigs of *Rubus*); Nilsson, 1992:54 (Sweden); Sorg and Cölln, 1992:132 (Germany: Rheinland-Pfalz: Gönnersdorf); Luig, 1993:44 (Estonia); Torregrosa, Gayubo, Tormos, and Asís, 1993:19 (Spain: Alicante Province); Felton and Schneider, 1994:290 (Luxembourg); Gathman, Greiler, and Tschartke, 1994:10 (Germany: colonization of set-aside fields); Kowalczyk, 1994:74 (Poland: Łagiewniki forest in Łódź); Schmid-Egger, 1994a:688 (Germany: Rheinland-Pfalz: Höllenberg near Grünstadt); Theunert, 1994c:45 (Germany: summary of records from Niedersachsen and Bremen); Jansen and Kaluza, 1995:7 (Germany: endangered in Sachsen); Negrisola in Minelli, Ruffo, and La Posta, 1995b:10 (in catalog of Italian fauna); Schmid-Egger, 1995:62 (Germany: northwest of Baden-Württemberg); Schmid-Egger, Risch, and Niehuis, 1995:196 (summary of records from Germany: Rheinland-Pfalz Province); Jakubzik, 1996:253 (Germany: Köln); Jakubzik and Cölln, 1996b:400 (Germany: Rheinland-Pfalz), 336 (in keys to cocoons); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: endangered); Shlyakhtenok, 1996:304 (Belorussia: Berezinsky Nature Reserve); Tischendorf, 1996:46 (Germany: Hessen: near Bensheim); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Witt, 1996:106 (Germany: Brandenburg), 109 (locality records); Woydak, 1996:41 (Germany: Westfalen: summary of distribution and nesting habits); Celary, 1997:58 (in checklist of Animals of Poland); Riemann, 1997:49 (Germany: Achim 14 km southeast of Bremen); Schmidt and Schmid-Egger, 1997:19 (in checklist of German Sphecidae); Shlyakhtenok, Blinov, and Belyavskaya, 1997:152 (Belorussia: Pripyatskiy National Park); F. Burger, Saure, and Oehlke, 1998:28 (Germany: in list of Sphecidae of Brandenburg); Dollfuss, Gusenleitner, and Bregant, 1998:514 (Austria: summary of collecting records from Burgenland); Gorobchishin, 1998a:49 (Ukraine: Kiev and surroundings); Haeseler and Ritzau, 1998:51 (Germany: Bremen: Harriersand Island in Weser River); Jakubzik, Schlüter, and Cölln, 1998:1182, 1184 (Germany: Rheinland-Pfalz); Lefeber, 1998:182 (Netherlands: Limburg: Sint-Pietersberg near Maastricht at 50°50'N 5°41'E); Tschartke, Gathmann, and Steffan-Deventer, 1998:718 (trap-nesting in Germany); van der Smis-sen, 1998:63 (Germany: Schleswig-Holstein); Cölln and Jakubzik, 1999:29 (Germany: Rheinland-Pfalz: Keuper-Scharren southwest of Hungerburg); Generani, Pagliano, Scaramozzino, and Strumia, 1999:79 (Italy: Toscana: Isola di Montecristo); Herrmann, 1999:8 (Germany: Niedersachsen: Oldenburg area; habitats size); Kuhlmann, Wolf, and Woydak, 1999:568 (Germany: in Nordrhein-Westfalen endangered because of low population level); Ljubomirov, 1999b:51 (Bulgaria: Mount Vitosha near Sofia); Luig and Voolma, 1999:178 (Estonia); Neumayer, Schwarz, and Bregant, 1999:224 (Austria: in checklist of Sphecidae of Land Kärnten); Pauly, 1999:109 (in catalog of Belgian aculeates); M. Schwarz, 1999:86 (Austria: Oberösterreich: city of Linz area); Blösch, 2000:245 (in Sphecidae Fauna of Germany); Canovai et al., 2000:78 (Italy: Toscana: Isola di Montecristo); Gayubo and Felton, 2000:297 (in revision of European *Nitela*); Gonzáles, Gayubo, and Tormos, 2000:19 (Andorra: Santa Coloma); Jacobs, 2000:8 (Germany: Land Mecklenburg-Vorpommern: not endangered); Mokrousov, 2000b:30 (Russia: Nizh-

niy Novgorod Oblast'); Schmid-Egger, 2000b:275 (Germany: Baden-Württemberg: shores of Rhine River); Vepřek, 2000:234 (reference to record from Czech Republic by Turner, 1995; Moravia: Bzenec; Slovakia: Babiná, Podjavorník, Tatranská Lesná); Gayubo and Bitsch *in* Bitsch et al., 2001:342 (in Sphecidae Fauna of Western Europe); Haeseler, 2001:266 (Germany: Niedersachsen: Brookdeich near Oldenburg); Ivanov and Ljubomirov, 2001:212 (Bulgaria: Kresna Gorge at 41°48'N 23°10'E); Kazenas, 2001b:34 (in checklist of Sphecidae of Kazakhstan and Central Asia); Ohl et al., 2001:140 (distribution in Germany by provinces); van der Smissen, 2001:62 (Germany: Schleswig-Holstein: not endangered); Zettel, Gross, and Mazzucco, 2001:73 (Austria: Wien); Amiet and Moretti, 2002:177, 178 (first record from Switzerland: Tessin); Beavis, 2002:111 (Great Britain: Kent: Tunbridge Wells area); Kazenas, 2002a:86 (geographic distribution, Kazakhstan: 10 km southwest of Buran on Chernyi Irtysh River); Larivière, 2002b:1 (France: departments of Eure-et-Loir, Loir-et-Cher, and Loiret; available information summarized); Shlyakhtenok and Skibinska, 2002:33 (Belorussia: no specific locality); Söderman and Vikberg, 2002:51 (in list of Aculeata of Finland); van der Meer, 2002:15 (Netherlands: coastal dunes at Meijndel); Cölln, Esser, and Jakubzik, 2003:62 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries); Generani, Pagliano, Scaramozzino, and Strumia, 2003:66 (Italy: Arcipelago Toscano); Haeseler, 2003:340 (Germany: Niedersachsen: Harriersand Island near Bremen); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:67 (Germany: in catalog of wasps and bees of Bayern); von der Heide and Metscher, 2003:103 (Germany: Niedersachsen: Emsland area); Wiśniowski and Werstak, 2003:77 (Poland: Pieniny National Park); Bergsten, Nilsson, and Hellquist, 2004:7 (Sweden: Västerbotten: Nordmaling); Deván, 2004:147 (western Slovakia); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:263 (Germany: in checklist of Sphecidae of Nordrhein-Westfalen); Jakubzik and Cölln, 2004:274 (in key to nests of Hymenoptera nesting in stems of *Rubus*); Jakubzik, Niehuis, and Cölln, 2004:458 (Germany: Rheinland-Pfalz: Roßstein in Rhein valley at 50°06'42"N 7°43'87"E); Klein and Lefeber *in* Peeters, van Achterberg, et al., 2004:401 (in Wasp and Ant Fauna of Netherlands); Majzlan and Deván, 2004:30 (Slovakia: Sekule); Shkuratov, 2004a:78 (Russia: Rostov Oblast': village Yefremovo-Stepanovka); Skibińska *in* Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:356 (in catalog of Polish Crabronidae); Stolle et al., 2004:372 (Germany: Sachsen-Anhalt: in red list of Sphecidae); van Achterberg and Peeters, 2004:31 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:45 and 60 (in checklist of Polish Sphecidae); Bergsten, Ekerholm, Gabrielsson, Hellquist, Petersson, Werner, Ström, Chauvet, and Dalecky, 2005:16 (Sweden: Västerbotten: Bjuröklubbs Nature Reserve); Burger, 2005:34 (Germany: Thüringen); Edwards and Broad, 2005:40 (Great Britain: distribution, status, habitat, flight period, prey, nesting habits, flower visiting, parasites, and distribution map); Hallin, 2005:16 (Sweden: Örebro County: Hällefors); Kofler, 2005:173 (Austria: Tirol: Lienz District: Klambrücke in Leisach Common); Kraatz, 2005:103 (Germany: Niedersachsen: Bümmerstede near Oldenburg); Mandery, 2005:174 (Germany: Bayern: Hainberg Nature Reserve near Nürnberg); Pagliano and Negrisoló, 2005:402 (in Sphecidae Fauna of Italy); Riemann and Hohmann, 2005:561 (Germany: Niedersachsen: city of Bremen and adjacent area); Saure, 2005:17 (Germany: Berlin); Theunert, 2005a:17 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); U. Frommer and Tischendorf, 2006:89 (Germany: Hessen: Schlüchterner Becken); Gorobchishin, 2006:113 (Ukraine: Kruglyk near Kyiv); Liebig, 2006:39 (Germany: Sachsen: Muskauer Heide); Petit, 2006:476 (Belgium: Liège Province: Bassenge); N. Schneider, 2006:140, 142 (Luxembourg: anthropogenic habitats); Shlyakhtenok, 2006:111 (Belorussia: Polesye Radiological Nature Reserve); Vepřek, 2006:510 (Czech Republic: Kokořínsko area); Bitsch, Dollfuss, Bouček, Schmidt, Schmid-Egger, Gayubo, Antropov, and Barbier, 2007:461 (first recorded from Switzerland by Amiet and Moretti, 2002); Cungs, Jakubzik, and Cölln, 2007:140 (Luxembourg: Haardt Nature Reserve); Hallin, 2007b:25 (Sweden: Blekinge Province); Jacobs, 2007:106, 108 (in key to Crabronidae of Germany); Jansen and Kaluza, 2007:24 (Germany: northwestern Sachsen); Saure, 2007:82 (Germany: in checklist of Aculeata of Land Brandenburg); Shlyakhtenok, 2007a:299 (Belorussia: Berezinsky Nature Reserve); Vepřek and Straka, 2007:203 (in catalog of Sphecidae of Czech Republic and Slovakia), 224 (rec-

ords from Czech Republic and Slovakia were summarized by Vepřek, 2000); Dvořák, Bogusch, Malenovský, Bezděčka, Bezděčková, Holý, Liška, Macek, Roller, Říha, Smetana, Straka, and Šima, 2008:66 (Czech Republic: Hády Hill near Brno); Haeseler, 2008:308 (Germany: Friesian Islands); Protsenko and Drozdovskaya, 2008:127 (Ukraine: Sumy Oblast': Mogritsa village); Theunert, 2008:55 (Germany: map of distribution in Niedersachsen and Bremen); Baños-Picón, Asís, Gayubo, and Tormos, 2009:312 (Spain: frequency of specimens collected with hand nets and Malaise traps); Donie, 2009:9 (Germany: Niedersachsen: Oldenburg); U. Frommer, 2009a:28 (Germany: in checklist of Sphecidae of Hessen); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina); Mei, 2009:177 (first record from Italy: Sardegna: several localities); Mokrousov, 2009:287 (Russia: Republic Mari El); Ødegaard, Sverdrup-Thygeson, Hansen, Hanssen, and Öberg, 2009:71 (Norway: locality records); Pagliano, 2009:185 (Italy: Sardinia: Lago di Baratz; Sicilia: Madonie; France: Corse: Bastelicaccia); Baghirov, 2010:678 (Russia: Altai Territories: village Kosh-Agach); Ermilov and Mokrousov: 2010:90 (phoretic mite *Calvolia* sp. in Middle Volga Region of Russia); Esser, Fuhrmann, and Venne, 2010:37 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Johansson, 2010:121 (Sweden: Småland: upper Emå river valley); Mokrousov, 2010a:62 (Russia: Kirov and Nizhniy Novgorod Oblast's, Mari El Republic, Tatarstan, no specific localities) Mokrousov, 2010c:108 (Russia: Chuvash Republic: State Nature Reserve "Prisurskiy"); Rudoiskatel', 2010:1153 (Russia: central Ural Mountains); Saure, 2010a:88 (Germany: Berlin-Reinickendorf: Baumberge), 2010b:175 (Germany: Berlin-Reinickendorf: airport Tempel and Flughafensee Protected Area); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: relatively common); Shorenko and Konovalov, 2010:21 (Ukraine: Lugansk Oblast': village D'yakovo); Treiber, 2010:135 (France: département du Bas-Rhin); van der Smissen, 2010a:345 (Germany: Schleswig-Holstein and Mecklenburg-Vorpommern: locality records), 2010c:397 (Sweden: Södermanland: Ören, Rassa); Baghirov, 2011b:148 (Russia: Altay Republic: Kosh-Agach); Gogala, 2011:16 (Slovenia: Podčetrtek); Mokrousov, Berezin, and Egorov, 2011:76 (Russia: Chuvash Republic); Rudoiskatel', 2011d:241 (Russia: central Ural Mountains); Schmid-Egger, 2011a:38 (Italy: Parco delle Alpi Marittime: Lago Rovino); Shlyakhtenok, 2011:95 (Belorussia: city of Minsk); Theunert, 2011a:20 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen); Tischendorf, Frommer, Flügel et al., 2011:147 (Germany: Hessen: not endangered); Ziska and Saure, 2011:109 (Germany: Berlin: Tegeler Fließ valley); Burguet *in* Durand and Burguet, 2012:3, fiche 13 (France: Puy-de-Dôme: sands Girauts-Faures in Orléat commune); Shlyakhtenok, 2012a:171 (Belorussia, and Russia: Krasnaya Polyana near Sochi: collected in private plots); Standfuss and Standfuss, 2012:427 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Saure, 2013:20 (Berlin: Treptow-Köpenick: Gosener Wiesen); Strumia, Pagliano, and Gayubo, 2012:56 (Italy: Toscana: Riserva di San Rossore); Pankov, 2013:230 (Russia: Ivanovo Oblast'); A. Scholz and Liebig, 2013:22 (Germany: Sachsen: in list of Sphecidae *sensu lato*); Shlyakhtenok, 2013:172 (in annotated catalog of aculeate wasps of Belorussia); Vieira, Oliveira, Brewster, and Gayubo, 2013:18 (Portugal: Douro International Natural Park); Wiśniowski and Piotrowski, 2013:21 (Poland: Poleski National Park); Wiśniowski and Szczepko, 2013:39 (Poland: Kampinos National Park near Warszawa); U. Frommer, 2014:27 (Germany: Hessen: Lorch); U. Frommer, M. Niehuis, and O. Niehuis, 2014:1322 (Germany: Hessen: Roßstein); Hellqvist, Abenius, and Norén, 2014:92 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Mokrousov and Vafin, 2014:58 (Russia: Republic of Tatarstan); Yıldırım, Ljubomirov, and Lelej, 2014:13 (distribution in Turkey by biogeographic provinces); Pärn, Soon, Vallisoo, Hovi, and Luig, 2015:94 (Estonia: no specific locality); Peeters, Klein, van Kemenade, and Spijkers, 2015:59 (Netherlands: Noord-Brabant: Kaaistoep Nature Reserve); P. Rosa and Pagliano, 2015:103 (Italy: Lombardia and Piemonte: Parco del Ticino); Saure, 2015:14 (Germany: Berlin-Lichterfelde); Simon, Lorthiois, and Macé, 2015:54 (France: alluvial terraces in Eure Department: Courcelles-sur-Seine); Cölln and Jakubzik, 2016:18 (Germany: Rheinland-Pfalz: Vulkaneifel District); Else, Bolton, and Broad, 2016:31 (in checklist of Aculeata of Great Britain and Ireland: England); Le Divelec, Chapelin-Viscardi, and Larivière, 2016:109 (northern France: in agricultural landscapes); Mokrousov and Popov, 2016:583 (Russia:

Krasnodarskiy Kray); Saure, 2016b:49 (Germany: Sachsen-Anhalt: fruit orchards), 1916c:205 (Germany: center of Berlin: Großer Tiergarten Park); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae *sensu lato* of Sachsen-Anhalt); Wiśniowski, 2016:129 (Poland: Ojców National Park); Antropov, 2017b:241 (in catalog of Crabroninae of Russia); Di Giovanni, Mei, and Cerretti, 2017:73 (Italy: Lombardia: Riserva Naturale Bosco della Fontana 5 km from Mantova at 45°12'N 10°44'E, found in canopy); Durand and Burguet, 2017:2 (France: Puy-de-Dôme: Réserve Naturelle Nationale Chastreix-Sancy); Jansen, 2017:9 (Germany: Sachsen: Leipzig); Říha, 2017:175 (Czech Republic: Brno); Fresno, 2018:229 (Spain: Asturias: Pola de Lena); Carminati, Mora, and Cretin, 2019:19 (France: in list of Sphecidae *sensu lato* of Franche-Comté); Cross, Baldock, and Wood, 2021:50 (in catalog of Sphecidae *sensu lato* of Portugal); Gayubo and Bitsch *in* Bitsch, Antropov, Gayubo, Leclercq, Schmid-Egger, K. Schmidt, and Straka, 2021:307 (in revision of Sphecidae *sensu lato* of Europe); Kaplan and Yildirim, 2021:70 (in catalog of Crabronidae of Turkey); Olszewski, Wiśniowski, and Ljubomirov, 2021:95 (in commented list of Sphecidae *sensu lato* of Poland); Saure, 2021:82 (Germany: Brandenburg: Nature Reserve Ferbitzer Bruch near Potsdam); Japoshvili and Ljubomirov, 2022:277 (Georgia: Lagodekhi Protected Areas); Kaplan and Yildirim, 2023:1685 (in checklist of Sphecidae *sensu lato* of Turkey).

#### 10. *braunsii* Arnold

*Nitela braunsii* Arnold, 1940:128, ♀ (as *Braunsii*, incorrect original capitalization). Holotype: ♀, South Africa: Eastern Cape Province: Willowmore (TMP). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae).

#### 11. *capicola* Brauns

*Nitela capicola* Brauns, 1911d:140, ♂. Syntypes: ♂, South Africa: Eastern Cape Province: Port Elizabeth (TMP). – R. Turner, 1916f:344 (in list of world *Nitela*); Arnold, 1923c:19 (in revision of southern African *Nitela*), 1930:7 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae).

#### 12. *carinifrons* Menke

*Nitela carinifrons* Menke, 1968e:134, ♀. Holotype: ♀, Costa Rica: Turrialba (USNM). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Hanson and Menke, 1995:639 (known from Costa Rica); Amarante, 2002:42 (in catalog of Neotropical Crabronidae).

#### 13. *cerasicola* Pate

*Nitela cerasicola* Pate, 1937a:5, ♀. Holotype: ♀, USA: New York: Long Island: Woodhaven (ANSP). – Pate, 1937a:7 (in key to North American *Nitela*); Krombein *in* Muesebeck, Krombein, and Townes, 1951:945 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Krombein, 1979b:1640 (in catalog of North American Hymenoptera); H. Allen, 1995:15 (type in ANSP); Buck, 2004:25 (Canada: in checklist of Crabronidae of Ontario), 30 (distribution within Ontario), 51 (first record from Canada: Ontario: Milton).

#### 14. *collaris* R. Turner

As *Nitela fallax*: R. Turner, 1916f:343 (Bihar: Pusa; Sri Lanka), corrected to *Nitela collaris* by R. Turner, 1926b:202. *Nitela collaris* R. Turner, 1926b:201, ♀. Syntypes: India: Bihar: Pusa; Sri Lanka: Peradiniya; Malaysia: Selangor: Kuala Lumpur (BMNH). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); T. Li and Q. Li, 2010b:341 (first record from China: Yunnan: Xishuangbanla Prefecture: Mengla County: Yao Town; description of ♂); Mawadda and Girish Kumar, 2023:114 (in checklist of Crabroninae of Northern India).

#### 15. *constructor* Pulawski

*Nitela constructor* Pulawski, 2010b:381, ♀. Holotype: French Guiana: Petit Saut at 5°02'51"S 52°57'11"W (CAS). – Ruiz-González, Corbara, Leroy, Dejean, and Orivel, 2010:402 (aerial nest made of fungal hyphae).

**16. cooperi van Zuijlen**

*Nitela cooperi* van Zuijlen, 1994:253, ♀, ♂. Holotype: ♀, Ecuador: Morona-Santiago: 6 km east of Macas (BMNH). – Amarante, 2002:42 (in catalog of Neotropical Crabronidae).

**17. costaricensis Brauns**

*Nitela costaricensis* Brauns, 1911d:143, ♀ (as *Costaricensis*, incorrect original capitalization). Holotype: ♀, Costa Rica: San José (depository?). – R. Turner, 1916f:345 (in list of world *Nitela*); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Hanson and Menke, 1995:639 (known from Costa Rica); Amarante, 2002:42 (in catalog of Neotropical Crabronidae).

**18. darwini R. Turner**

*Nitela darwini* R. Turner, 1916f:345, ♀. Holotype or syntypes: ♀, Ecuador: Galapagos Islands: Charles Island, now Floreana (BMNH). – F. Williams, 1926:355 (reference to original finding); Linsley and Usinger, 1966:177 (in checklist of insects of Galapagos Islands); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Amarante, 2002:42 (in catalog of Neotropical Crabronidae).

**19. domestica (F. Williams)**

*Rhinonitela domestica* F. Williams, 1928a:98, ♀. Holotype: ♀, Philippines: Luzon: Los Baños (Bishop Mus.). – Iwata, 1939a:13 (nesting habits in Taiwan); Yasumatsu, 1939a:12 (Taiwan). – **As *Tenila domestica***: Baltazar, 1966:327 (new combination, in catalog of Hymenoptera of Philippines); Tsuneki, 1967b:12, 17 (in key to Larrinae of Taiwan), 60 (Taiwan). – **As *Nitela domestica***: Menke, 1968e:137 (new combination, in key to *Nitela domestica* and *williamsi*); Tsuneki, 1969g:37 (first record from Japan: Nagano Prefecture); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Wu and Zhou, 1996a:96 (in revision in Economic Insect Fauna of China); Li and He, 2004:1102 (in hymenopterous fauna of Zhejiang Province, China); Hua, 2006:281 (in list of Chinese insects, geographic distribution).

As *Nitela* sp.: Haneda, 1968b:55 (Japan: Nagano Prefecture: Ina District), corrected to *Nitela domestica* by Tsuneki, 1969:37.

**20. elegans Matthews**

*Nitela elegans* Matthews, 2000b:41, ♀. Holotype: ♀, Australia: Australian Capital Territory: Deakin (ANIC).

**21. erugifrons van Zuijlen**

*Nitela erugifrons* van Zuijlen, 1994:254, ♂. Holotype: ♂, Colombia: Putamayo: Mocoa (BMNH). – Amarante, 2002:42 (in catalog of Neotropical Crabronidae).

**22. fallax Kohl**

*Nitela fallax* Kohl, 1884a:343, ♀, ♂. Lectotype: ♂, Austria: Tirol: Klobenstein (NHMW), designated by Gayubo and Felton, 2000:302. – Kohl, 1888b:725 (Austria: Tirol, now Italy: Alto Adige), 1893:31 (Austria: Niederösterreich: Wien), Kohl, 1885a:216 (in revision of European Larrinae); Dalla Torre, 1897:699 (in catalog of world Hymenoptera); Antiga and Bofill, 1904:12 (Spain: Cataluña Province); Schmiedeknecht, 1907:206 (in key to Hymenoptera of Central Europe); nec R. Turner, 1916f:343 (= *Nitela collaris*); Stöckhert, 1919:39 (Germany: Franken); Berland, 1925d:128 (in Sphecid Fauna of France); Schmiedeknecht, 1930:667 (in keys to Hymenoptera of North and Central Europe); Zavadil, Šustera, and Baťa, 1937:175 (in catalog of Sphecidae of Czechoslovakia); Zavadil, 1939:121 (Czech Republic: Morava: Tišnov); Baťa, 1942:85 (Czech Republic); Balthasar, 1943:41 (Czech Republic: Moravia: Zlin area); Giner Marí, 1943a:213 (in Sphecid Fauna of Spain); Balthasar, 1944:30 (Czechoslovakia: Moravia: Tišnov); Šnoflák, 1944a:143 (Czech Republic: serpentine steppe near Mohelno); Šnoflák in Zavadil and Šnoflák, 1948:45 (in key to Sphecidae of Czechoslovakia); L. Ahrens, 1949:414 (nests: unicellular preexisting cavities, prey:

psocids); Blüthgen, 1951:232 (faunal records from Germany); Leininger, 1951:116 (Germany: Baden-Württemberg: Hopfengarten); Bischoff and Stadler, 1954:126 (Germany: Bayern: Romberg); de Beaumont, 1954a:64 (Italy), 1954e:92 (Italy); Vogrin, 1955:38 (Yugoslavia); Ceballos, 1956:391 (in catalog of Hymenoptera of Spain); Bajári, 1957a:58 (in key to Hungarian Sphecidae), 1957b:135 (first record from Hungary); Wolf, 1959b:24 (known from Germany, but not from Nassau); Noskiewicz and Puławski, 1960:119 (in key to Polish Sphecidae, not yet found in Poland); Grandi, 1962:96 (Italy); de Beaumont, 1964c:80 (in Sphecid Fauna of Switzerland, not recorded from Switzerland), 1967a:337 (Turkey); Gauss, 1967:554 (Germany: Baden-Württemberg); Niedl and Deneš, 1967:76 (Czech Republic: Třeboň area); Oehlke, 1970:721 (Germany: Berlin); Stritt, 1971a:104 (Germany: Baden-Württemberg: Karlsruhe); Balthasar, 1972:182 (in Sphecid Fauna of Czechoslovakia); Valkeila, 1974:81 (France, Czechoslovakia; redescription); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Guichard, 1978:271 (first record from Greece: Karpenission); Pulawski, 1978:228 (in key to Sphecidae of European part of USSR); Schwammberger, 1978:417 (Germany: Württemberg); Benedek, 1979:231 (Hungary: Bakony Hills); Pagliano, 1980:129 (Italy: Lazio); Westrich, 1980:630 (Germany: Baden-Württemberg: Tübingen area); Schmidt, 1981:191 (Germany: Baden-Württemberg); Dollfuss, 1983a:75 (endangered in Niederösterreich, Austria), 79 (endangered in Kärnten, Austria), 1983b:11 (in catalog of Sphecidae of Austria: Kärnten: Nötsch); Westrich and Schmidt, 1985b:111 (Germany: endangered in Baden-Württemberg); Dollfuss, 1989:11 (type material in NHMW); Pádr *in* Šedivy, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Jacobs and Oehlke, 1990:122 and 170 (not collected in Democratic Germany after 1960); Pagliano, 1990:108 (in catalog of Italian Sphecidae); Schwammberger and Priesner, 1990:540 (Austria: Kärnten); Day, 1991:xvii (in summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:119 (in key to Sphecidae of North and Central Europe); Józán, 1992b:173 (Hungary: Boronka-melléki Protected Area), 1992c:289 (Hungary: Zselic Hills); Felton and Schneider, 1994:290 (Luxembourg); Gusenleitner, 1995:162 (Austria: Wien, Niederösterreich, Steiermark); Jansen and Kaluza, 1995:7 (Germany: endangered in Sachsen); Negrisola *in* Minelli, Ruffo, and La Posta, 1995b:10 (in catalog of Italian fauna); Pagliano and Pesarini, 1995:86 (Italy: Ferrara Province); Gusenleitner, 1996a:8 (Austria: Burgenland, Steiermark); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: endangered); Voblenko, Gorobchishin, and Nesterov, 1996:14 (Ukraine: Polesye Region); Schmid-Egger and Niehuis, 1997:14 (Germany: Rheinland-Pfalz); Schmidt and Schmid-Egger, 1997:19 (in checklist of German Sphecidae); F. Burger, Saure, and Oehlke, 1998:28 (Germany: in list of Sphecidae of Brandenburg), 32 (extinct); Dollfuss, Gusenleitner, and Bregant, 1998:514 (Austria: summary of collecting records from Burgenland); Gorobchishin, 1998a:49 (Ukraine: Kiev and surroundings); Józán, 1998:311 (Hungary: Duna-Dráva National Park); Tschardtke, Gathmann, and Steffan-Deventer, 1998:718 (trap-nesting in Germany); Cölln and Jakubzik, 1999:29 (Germany: Rheinland-Pfalz: Keuper-Scharren southwest of Hungerburg); Pauly, 1999:109 (can be expected in Belgium); M. Schwarz, 1999:86 (Austria: Oberösterreich: city of Linz area); Blösch, 2000:246 (in Sphecid Fauna of Germany); Gayubo and Felton, 2000:301 (in revision of European *Nitela*); Józán, 2000:108 (Hungary: Bakony Mountains); Schmid-Egger, 2000b:275, 279 (Germany: Baden-Württemberg: shores of Rhine River); M. Schwarz, 2000:10 (Austria: Oberösterreich: city of Linz area); Shkuratov, 2000:59 (Russia: Rostov Oblast: Vëshenskaya village area at 49°37'N 41°45'E); Vepřek, 2000:234 (Slovakia: Leles, Panonský Haj); Zettel, 2000:28 (Austria: Wien); Gayubo and Bitsch *in* Bitsch et al., 2001:343 (in Sphecid Fauna of Western Europe); Józán, 2001:279 (Hungary: Somogy County); Ljubomirov, 2001b:50 (Bulgaria: Mount Vitosha near Sofia); Ohl et al., 2001:140 (distribution in Germany by provinces); Szczepko and Kowalczyk, 2001:188 (Poland: Kampinos National Park near Warszawa); Amiet and Moretti, 2002:177, 178 (first record from Switzerland: Tessin); Szczepko and Kowalczyk, 2002:143 (first record from Poland: Bromierzyce in Kampinos National Park); Gusenleitner, 2002:1124 (Austria: Oberösterreich: Plesching near Linz); Shlyakhtenok and Skibinska, 2002:33 (Belorussia: no specific locality); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:67 (Germany: in catalog of wasps and bees of Bayern); Wickl, Voith,

Mandery, Weber, Kraus, Bausenwein, and Blösch, 2003:195 (Germany: Bayern: no longer endangered); Shkuratov, 2004a:78 (Russia: Rostov Oblast': Yelanskaya), 2004b:167 (Russia: Rostov Oblast': Gosudarstvennyi Muzei-Zapovednik M.A. Sholokhova); Skibińska *in* Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:356 (in catalog of Polish Crabronidae); Deván, 2004:147 (western Slovakia); Szczepko and Kowalczyk, 2004:126 (Poland: Kampinos National Park near Warszawa); Tischendorf and Frommer, 2004:70 (Germany: first record from Hessen: near Lorch); Wiśniowski, 2004:45 and 60 (in checklist of Polish Sphecidae); Zettel, 2004:4 (Austria: Niederösterreich: Laxenburg); Burger, 2005:34 (Germany: Thüringen); Pagliano and Negrisolò, 2005:402 (in Sphecidae Fauna of Italy); Saure, 2005:17 (Germany: Berlin); Straka, 2005a:398 (critically endangered in Czech Republic); Gorobchishin, 2006:113 (Ukraine: Kyiv Oblast': Koncha-Ozerna, village Svityl'ne, Volodarka; Vinnitsa Oblast': Dubovets); Józán, 2006:286 (Hungary: Béda-Karapanca section of Duna-Drava National Park); Magdalou, 2006a:7, 10 (France: Pyrénées-Orientales: Réserve Naturelle de la Massane); N. Schneider, 2006:142 (Luxembourg: anthropogenic habitats); Shlyakhtenok, 2006:111 (Belorussia: Polesye Radiological Nature Reserve); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Wiesner, 2006:237 (Germany: first record from Brandenburg: Martinskirchen); Bitsch, Dollfuss, Bouček, Schmidt, Schmid-Egger, Gayubo, Antropov, and Barbier, 2007:461 (recorded from France by Magdalou, 2006, first recorded from Switzerland by Amiet and Moretti, 2002); Jacobs, 2007:106, 107 (in key to Crabronidae of Germany); Jansen and Kaluza, 2007:24 (Germany: northwestern Sachsen); Józán, 2007:179 (Hungary: Zselic hills); Saure, 2007:82 (Germany: in checklist of Aculeata of Land Brandenburg); Shlyakhtenok, 2007b:364 (Ukraine: Chernobyl area); Vepřek and Straka, 2007:203 (in catalog of Sphecidae of Czech Republic and Slovakia), 224 (first recorded from Slovakia by Vepřek, 2000); Ljubomirov and Yildirim, 2008:234 (in catalog of Crabronidae of Turkey); U. Frommer, 2009a:28 (Germany: in checklist of Sphecidae of Hessen), 37 (Germany: Hessen: Rabenau); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina); Pagliano, 2009:185 (Italy: Liguria: Mortola); Mokrousov, 2010a:62 (Russia: Nizhniy Novgorod Oblast': no specific localities), 2010b:100 (Russia: Nizhniy Novgorod Oblast': no specific localities); Rudoiskatel', 2010:153 (Russia: central Ural Mountains); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: very rare); Theunert, 2010b:19 (Germany: Niedersachsen: National Park Riddagshausen near Braunschweig; discussion of habitat, distribution, and endangerment); van der Smissen, 2010a:345 (Germany: Schleswig-Holstein: Grifheim); Burger, 2011a:287 (Germany: in red list of Sphecidae *sensu lato* of Thüringen); Józán, 2011:180 (in checklist of Sphecidae *sensu lato* of Hungary); Mokrousov, Berezin, and Egorov, 2011:76 (Russia: Chuvash Republic); Rudoiskatel', 2011e:249 (Russia: Chelyabinsk Oblast': Il'men' Nature Reserve); N. Schneider and Feitz, 2011:121 (Luxembourg); Theunert, 2011a:20 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen); Tischendorf, Frommer, Flügel et al., 2011:147 (Germany: Hessen: not endangered); Boillat, 2012:227 (Switzerland: in checklist of insects of Canton de Genève); Strumia, Pagliano, and Gayubo, 2012:56 (Italy: Toscana: Riserva di San Rossore); Theunert, 2012:34 (Germany: first record from Sachsen Anhalt: Colbitz-Letlinger Heide at 52°21.604'N 11°29.961'N); A. Scholz and Liebig, 2013:22 (Germany: Sachsen: in list of Sphecidae *sensu lato*); Shlyakhtenok, 2013:173 (in annotated catalog of aculeate wasps of Belorussia); Bitsch, 2014:404 (records from Germany by Theunert, 2010b, 2012 and from France by Magdalou, 2006a reported; France: Lot: Cabrerets); U. Frommer, 2014:27 (Germany: Hessen: Lorch); Yildirim, Ljubomirov, and Lelej, 2014:13 (distribution in Turkey by biogeographic provinces); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae *sensu lato* of Sachsen-Anhalt); Antropov, 2017b:241 (in catalog of Crabroninae of Russia); Di Giovanni, Mei, and Cerretti, 2017:73 (Italy: Lombardia: Riserva Naturale Bosco della Fontana 5 km from Mantova at 45°12'N 10°44'E, found in canopy); Magdalou, 2017:15 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Forêt de la Massane); Fresno, 2018:231 (Spain: Barcelona: Mas Mirambell); Carminati, Mora, and Cretin, 2019:19 (France: in list of Sphecidae *sensu lato* of Franche-Comté); U. Frommer, 2020:157 (Germany: Hessen: Weilburg); Kejval, Blažej, and Erhart, 2020:103 (western Czech Republic);

Cross, Baldock, and Wood, 2021:50 (in catalog of Sphecidae *sensu lato* of Portugal); Gayubo and Bitsch *in* Bitsch, Antropov, Gayubo, Leclercq, Schmid-Egger, K. Schmidt, and Straka, 2021:308 (in revision of Sphecidae *sensu lato* of Europe); Kaplan and Yildirim, 2021:70 (in catalog of Crabronidae of Turkey); Olszewski, Wiśniowski, and Ljubomirov, 2021:95 (in commented list of Sphecidae *sensu lato* of Poland); Jakubzik and Cölln, 2022:11 (Germany: Rheinland-Pfalz: Moselle River valley between Drohn and Kattenes); Budrys, Budrienė, Lazauskaitė, and Orlovskytė, 2023:109 (first record from Lithuania: Puvočiai in Varėna district); Kaplan and Yildirim, 2023:1685 (in checklist of Sphecidae *sensu lato* of Turkey).

As *Nitela spinolae*: Pagliano, 20014:77 (specimens in M. Spinola collection, Torino).

### 23. *feltoni* Gayubo and Schmid-Egger

*Nitela feltoni* Gayubo and Schmid-Egger, 2014:645, ♀. Holotype: ♀, United Arab Emirates: al-Ajban at 24°36'N 55°01'E (Ch. Schmid-Egger personal collection, Berlin, Germany). – Gayubo and Schmid-Egger, 1014:641 (in key to *Nitela* of Arabian Peninsula, Israel, and Egypt); Gadallah, 2020b:41 (in list of aculeate wasps of Arabian Peninsula); Schmid-Egger and van Harten, 2022:562 (in key to species of Arabian Peninsula; locality records from United Arab Emirates; description of ♂).

### 24. *floridana* Pate

*Nitela floridana* Pate, 1934:241, ♀. Holotype: ♀, USA: Florida: Orange County: no specific locality (USNM). – Pate, 1937a:7 (in key to North American *Nitela*); Krombein *in* Muesebeck, Krombein, and Townes, 1951:945 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Krombein, 1979b:1640 (in catalog of North American Hymenoptera).

### 25. *fuscipes* van Zuijlen

*Nitela fuscipes* van Zuijlen, 1994:255, ♀, ♂. Holotype: ♀, ♂. Holotype: ♀, Argentina: Salta: Lerma (AMNH). – Amarante, 2002:42 (in catalog of Neotropical Crabronidae).

### 26. *guiana* (F. Williams)

*Rhinonitela guiana* F. Williams, 1928a:168, ♀. Holotype: ♀, Guiana: Blairmont (Bishop Mus.). – As *Nitela guiana*: Menke, 1969:200 (new combination, in revision of *amazonica* group of *Nitela*); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); van Zuijlen, 1994:256 (in revision of *amazonica* species group of *Nitela*); Hanson and Menke, 1995:639 (known from Costa Rica); Amarante, 2002:42 (in catalog of Neotropical Crabronidae); Starr and Hook, 2003:19 (in catalog of Aculeata of Trinidad, West Indies).

### 27. *henrici* R. Turner

*Nitela henrici* R. Turner, 1926a:111, ♀. Syntypes: ♀, Sri Lanka: Colombo (BMNH). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Krombein, 1985c:325 (two paratypes in Colombo Museum); T. Li and Q. Li, 2010b:337 (in key to Oriental *Nitela*).

### 28. *intermedia* van Zuijlen

*Nitela intermedia* van Zuijlen, 1994:258, ♀. Holotype: ♀, Costa Rica: Puntarenas: Golfo Dulce 24 km west of Piedras Blancas (USNM). – Amarante, 2002:42 (in catalog of Neotropical Crabronidae); Starr and Hook, 2003:19 (in catalog of Aculeata of Trinidad, West Indies); Cambra, 2005:102 (Panamá).

### 29. *koreana* Tsuneki

*Nitela koreana* Tsuneki, 1982b:4, ♀. Holotype: ♀, North Korea: "Prov. Gang-von district, Ondzong, Kum-gang san" (TMB). – Tsuneki, 1982b:15 (known from Korea); Paik, 1985:199 (in list of Sphecidae of Korea); Nemkov, 1990c:81 (Russia: Maritime Province); Nemkov *in* Nemkov, Kazenas, Budrys, et Antropov, 1995:415 (in key to Sphecidae of Russian Far East); Nemkov, 2008b:20 (in catalog of Crabronidae of Asiatic Russia), 2009b:83 (in new

catalog of Sphecidae and Crabronidae of Asiatic Russia), 2012c:439 (in catalog of Crabronidae of Russian Far East); Antropov, 2017b:241 (in catalog of Crabroninae of Russia).

### 30. *kurandae* R. Turner

*Nitela kurandae* R. Turner, 1908:508, ♀. Holotype or syntypes: ♀, Australia: Queensland: Cairns (BMNH). – R. Turner, 1916e:287 (Queensland: Bundaberg, Kuranda; Tasmania: Eaglehawk Neck; Western Australia: Yallingup), 1916f:344 (in list of world *Nitela*); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Cardale, 1985:256 (in catalog of Australian Sphecidae).

### 31. *laevigata* Ljubomirov

*Nitela laevigata* Ljubomirov, 2008:257, ♀, ♂. Holotype: ♂, Spain: Canary Islands: La Palma: Playa del Río Taburiente in Parque Nacional de la Caldera de Taburiente (MNCN).

### 32. *leoni* Krombein

*Nitela leoni* Krombein, 1968:700, ♀, ♂. Holotype: ♀, USA: Florida: Highlands County: Lake Annie (USNM). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Krombein, 1979b:1640 (in catalog of North American Hymenoptera).

### 33. *longinervis* van Zuijlen

*Nitela longinervis* van Zuijlen, 1994:259, ♀. Holotype: ♀, Colombia: Putumayo: Mocoa (BMNH). – Amarante, 2002:42 (in catalog of Neotropical Crabronidae).

### 34. *lubutuana* Arnold

*Nitela lubutuana* Arnold, 1929c:399, ♀. Holotype: ♀, Zaire: Lubutu (MRAC). – Arnold, 1930:7 (in checklist of Afrotropical Sphecidae); Schouteden, 1930:92 (Zaire); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlanga, 1995:39 (paratype in Bulawayo Museum).

### *ssp. nyasae* Arnold

*Nitela lubutuana* race *nyasae* Arnold, 1947:157, ♀, ♂. Syntypes: Malawi: Zomba (SAM). – *As Nitela lubutuana nyasae*: R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlanga, 1995:39 (syntype in Bulawayo Museum).

### 35. *lucens* Gayubo and Felton

*Nitela lucens* Gayubo and Felton, 2000:302, ♀, ♂. Holotype: ♀, Spain: Salamanca Province: Villarino de los Aires (Univ. Salamanca). Paratypes: Austria, Belgium, Germany, Great Britain, Portugal. – J. Fernández, 2001:160 (description of species recorded); Gayubo and Bitsch *in* Bitsch et al., 2001:345 (in Sphecid Fauna of Western Europe); González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavaler); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo et al. 2004:131 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Majzlan and Deván, 2004:33 (Slovakia: Malacky-Široké, in error); Tischendorf and Frommer, 2004:70 (Germany: first record from Hessen: near Lorch); Allen, 2005b:14 (Great Britain: Hertfordshire: Welwyn; Kent County: Maidstone; Surrey County: Cranleigh); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Edwards and Broad, 2005:42 (Great Britain: distribution, status, habitat, flight period, prey, nesting habits, flower visiting, parasites, and distribution map); N. Schneider, 2006:136, 140 (Luxembourg: anthropogenic habitats); Baños-Picón, Gayubo, Asís, and González, 2007:256, 259 (Spain: Zamora: Cabañas de Aliste); Jacobs, 2007:106, 108 (in key to Crabronidae of Germany); Vago, 2007:175 (France: département de Somme); Vepřek and Straka, 2007:203 (in catalog of Sphecidae of Czech Republic and Slovakia), 224

(record from Slovakia by Majzlan and Devan, 2004, was misidentification); Gayubo, González, Tormos, and Asís, 2008:139 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Baños-Picón, Asís, Gayubo, and Tormos, 2009:312 (Spain: frequency of specimens collected with hand nets and Malaise traps); Debuysse and Vago, 2009:4 (in list of Sphecidae *sensu lato* of northern France); Gayubo, González, Tormos, and Asís, 2009:364 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:624 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Burguet *in* Durand and Burguet, 2010:55 (France Département d'Ardèche: Ardèche Gorges); Ermilov and Mokrousov, 2010:90 (phoretic mite *Histiogaster* sp. in Middle Volga Region of Russia); Mokrousov, 2010a:62 (Russia: Nizhniy Novgorod and Vladimir Oblast's: no specific localities), 2010b:100 (first record from Russia: Novgorod and Vladimir Oblast's: no specific locality); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: rare); Cruz-Sánchez, Asís, Gayubo, Tormos, and González, 2011:499 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park: effects of wildfire); Gogala, 2011:16 (Slovenia: Gorjansko); Mokrousov, 2011:406 (Russia: Nizhniy Novgorod and Vladimir Oblast's); Schmid-Egger, 2011a:38 (Italy: Parco delle Alpi Marittime: Brignola); Tischendorf, Frommer, Flügel et al., 2011:90 (Germany: Hessen: data insufficient to evaluate degree of endangerment); A. Scholz and Liebig, 2013:22 (Germany: Sachsen: in list of Sphecidae *sensu lato*); Vieira, Oliveira, Brewster, and Gayubo, 2013:18 (Portugal: Douro International Natural Park, Serras de Aire e Candeeiros Natural Park, and Paúl do Boquilobo Nature Reserve); Baldock, 2014:355 (Spain: Island of Mallorca); U. Frommer, 2014:27 (Germany: Hessen: Lorch); Else, Bolton, and Broad, 2016:31 (in checklist of Aculeata of Great Britain and Ireland: England); Antropov, 2017b:241 (in catalog of Crabroninae of Russia); Cassar, Mifsud, and Schmid-Egger, 2020a:76 (Malta: Dingli); Cross, Baldock, and Wood, 2021:50 (in catalog of Sphecidae *sensu lato* of Portugal); Gayubo and Bitsch *in* Bitsch, Antropov, Gayubo, Leclercq, Schmid-Egger, K. Schmidt, and Straka, 2021:309 (in revision of Sphecidae *sensu lato* of Europe); Budrys, Budrienė, Lazauskaitė, and Orlovskytė, 2023:110 (first record from Lithuania: several localities); U. Frommer and Bahmer, 2023:194 (Germany: Hessen: Giessen: city gardens).

### 36. *luzonensis* F. Williams

*Nitela luzonensis* F. Williams, 1928a:97, ♀. Holotype: ♀, Philippines: Luzon: Los Baños (Bishop Mus.). – Baltazar, 1966:327 (in catalog of Hymenoptera of Philippines); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Tsuneki, 1976b:74 (Philippines; redescription); Tsuneki et al., 1992b:43 (Philippines; variation); T. Li and Q. Li, 2010b:339 (in key to Oriental *Nitela*); Haneda, 2011:45 (Philippines: Palawan: Iwahig).

### 37. *maxima* Maidl

*Nitela maxima* Maidl, 1925a:389, ♀, ♂. Syntypes: Indonesia: Sumatra: no specific locality (NHMW). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Dollfuss, 1989:11 (holotype in NHMW); T. Li and Q. Li, 2010b:339 (in key to Oriental *Nitela*).

### 38. *menkei* van Zuijlen

*Nitela menkei* van Zuijlen, 1994:260, ♀. Holotype: ♀, Peru: Loreto: Explornapo Camp on Río Napo 160 km northeast of Iquitos (USNM). – Amarante, 2002:42 (in catalog of Neotropical Crabronidae); Rasmussen and Asenjo, 2009:11 (in checklist of Crabronidae of Peru).

### 39. *merceti* Brauns

*Nitela merceti*: Brauns, 1911a:240 (South Africa, as *Merceti*, incorrect original capitalization; prey: Psocidae; closing nest with clay). Nomen nudum.

*Nitela merceti* Brauns, 1911d:142, ♀, ♂ (as *Merceti*, incorrect original capitalization). Syntypes: South Africa: Eastern Cape Province: Willowmore (TMP). – R. Turner, 1916f:344 (in list of world *Nitela*); Arnold, 1923c:20 (in revision of southern African *Nitela*), 1930:7 (in checklist of Afrotropical Sphecidae), 1940:127 (redescription); de Beau-

mont, 1967b:511 (South Africa: Basutoland); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Dollfuss, 1989:11 (paratype in NHMW); Hancock, Chahwanda, and Mhlanga, 1995:39 (syntype in Bulawayo Museum).

*Nitela transvaalensis* Brauns, 1911d:141, ♀. Holotype: ♀, South Africa: North West Province: Lichtenburg (TMP). Synonymized with *Nitela merceti* by Arnold, 1940:127. – R. Turner, 1916f:344 (in list of world *Nitela*); Arnold, 1923c:21 (in revision of southern African *Nitela*).

#### 40. *miekae* Simon Thomas

*Liris miekae* Simon Thomas, 1995b:123, ♀, ♂. Holotype: ♀, Senegal: Ziguinchor (ZMA).

#### 41. *mochii* Arnold

*Nitela mochii* Arnold, 1940:129, ♀ (as *Mochii*, incorrect original capitalization. Holotype: Egypt: Wadi Digla near Cairo (lost: Gayubo and Schmid-Egger, 2014:647). Neotype: ♀, Egypt: Wadi Hof (S.F. Gayubo collection), designated by Gayubo and Schmid-Egger, 2014:647. – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlanga, 1995:39 (holotype in Bulawayo Museum); Roche, 2007a:98 (in checklist of Egyptian Crabronidae), 2007b:6 (in checklist of Egyptian Ampulicidae, Sphecidae, and Crabronidae); Gayubo and Schmid-Egger, 2014:641 (in key to *Nitela* of Arabian Peninsula, Israel, and Egypt), 647 (Egypt, Israel, diagnostic characters); Gadallah, 2020b:41 (in list of aculeate wasps of Arabian Peninsula).

#### 42. *nigripalpis* van Zuijlen

*Nitela nigripalpis* van Zuijlen, 1994:260, ♀, ♂. Holotype: ♀, Colombia: Huila: Cuevas de Los Guacheros in Lae (BMNH). – Amarante, 2002:42 (in catalog of Neotropical Crabronidae).

#### 43. *obliquipropodea* T. Li and Q. Li

*Nitela obliquipropodea* T. Li and Q. Li, 2010b:340, ♂. Holotype: ♂: China: Yunnan: Tengchong County: Baoshan City: Gaoligongshan (Yunnan Agricultural University, Kunming, China). – T. Li and Q. Li, 2010b:338 (in key to Oriental *Nitela*).

#### 44. *ochripes* Arnold

*Nitela ochripes* Arnold, 1940:126, ♀. Holotype: ♀, Zimbabwe: Bulawayo (Bulawayo). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlanga, 1995:39 (holotype in Bulawayo Museum).

#### 45. *ohgushii* Tsuneki

*Nitela ohgushii* Tsuneki, 1956c:34, ♀. Holotype: ♀, Japan: Kyushu: Miyazaki Prefecture: Island of Koshima (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, 1956c:34 (in key to *Nitela* of Japan), 1964l:62 (in key to Larrinae of Japan and Korea); Nambu, 1975b:61 (Japan: Saitama Prefecture); Tsuneki, 1970b:9 (central Japan); Nambu, 1972e:89 (Japan: Saitama Prefecture); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Tano, 1994a:5 (holotype in K. Tsuneki collection); Hashimoto and Nakanishi, 1997:17 (holotype transferred to Hyogo Mus.).

#### 46. *oxiana* Gussakovskij

*Nitela oxiana* Gussakovskij, 1945:36, ♀. Holotype: ♀, Tajikistan: Tigrovaya Balka Nature Reserve (ZIN). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Kazenas, 1978b:162 (in key to Sphecidae of Kazakhstan and Central Asia), 2001b:34 (in checklist of Sphecidae of Kazakhstan and Central Asia).

**47. *parallela* Arnold**

*Nitela parallela* Arnold, 1929c:398, ♀. Holotype: ♀, Zimbabwe: Umtali (Bulawayo). – Arnold, 1930:7 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlanga, 1995:39 (holotype in Bulawayo Museum).

**48. *pendleburyi* R. Turner**

*Nitela pendleburyi* R. Turner, 1926b:202, ♀. Syntypes: Malaysia: Selangor: Kuala Lumpur (BMNH). – Gibson-Hill, 1950:161 (Cocos Islands); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); T. Li and Q. Li, 2010b:339 (in key to Oriental *Nitela*).

**49. *philippinica* Tsuneki**

*Nitela philippinica* Tsuneki in Tsuneki et al., 1992b:46, ♀. Holotype: ♀, Philippines: Mindanao: Bukidnon: Sungeo (USNM). – Nuhn and Menke, 1994:26 (holotype in USNM); T. Li and Q. Li, 2010b:338 (in key to Oriental *Nitela*).

**50. *polaszeki* van Zuijlen**

*Nitela polaszeki* van Zuijlen, 1994:261, ♀. Holotype: ♀, Costa Rica: Guanacaste: Santa Rosa National Park (BMNH). – Amarante, 2002:42 (in catalog of Neotropical Crabronidae).

**51. *promontorii* Brauns**

*Nitela promontorii* Brauns, 1911d:141, ♂. Holotype: ♂, South Africa: Eastern Cape Province: Uitenhage (TMP). – R. Turner, 1916f:344 (in list of world *Nitela*); Arnold, 1923c:19 (in revision of southern African *Nitela*), 1930:7 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae).

**52. *protuberancis* T. Li and Q. Li**

*Nitela protuberancis* T. Li and Q. Li, 2010b:339, ♀. Holotype: ♀, China: Yunnan: Longyang County: Baoshan City: Lujiang Town: Pumanshao Village (Yunnan Agriculture University, Kunming, China). – T. Li and Q. Li, 2010b:338 (in key to Oriental *Nitela*).

**53. *reticulata* Ducke**

*Nitela reticulata* Ducke, 1908a:47, ♀, ♂. Syntypes: Brazil: Para: Belém (Mus. Goeldi, Bélem). – R. Turner, 1916f:345 (in list of world *Nitela*); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Nascimento, 1979:13 (holotype in Mus. Goeldi, Bélem); Nascimento and Overal, 1979:9 (in list of Hymenoptera described by A. Ducke), 1980:8 (Brazil); Amarante, 2002:42 (in catalog of Neotropical Crabronidae).

**54. *retifera* Arnold**

*Nitela retifera* Arnold, 1940:126, ♀. Holotype: ♀, Zimbabwe: Bulawayo (Bulawayo). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlanga, 1995:39 (holotype in Bulawayo Museum).

**55. *rhodesiae* Arnold**

*Nitela rhodesiae* Arnold, 1940:128, ♀, ♂. Syntypes: Zimbabwe: Bulawayo (Bulawayo). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlanga, 1995:39 (syntypes in Bulawayo Museum).

**56. *rufiventris* R. Turner**

*Nitela rufiventris* R. Turner, 1916d:448, ♀. Holotype or syntypes: Malawi: Lake Nyasa: Monkey Bay (BMNH). – R. Turner, 1916f:344 (in list of world *Nitela*); Arnold, 1923c:19 (original description copied), 1930:7 (in checklist of Afrotropical Sphecidae); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae).

**57. rugosa F. Williams**

*Nitela rugosa* F. Williams, 1928a:95, ♂. Holotype:♂, Philippines: Luzon: Los Baños (USNM). – Baltazar, 1966:327 (in catalog of Hymenoptera of Philippines); Menke, 1968e:138 (additional description); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Tsuneki et al., 1992b:43 (Philippines: Mindanao; description of ♀).

**58. rugosissima Arnold**

*Nitela rugosissima* Arnold, 1940:125, ♀, ♂. Syntypes: Zimbabwe: Bulawayo (Bulawayo). – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Hancock, Chahwanda, and Mhlanga, 1995:39 (syntypes in Bulawayo Museum).

**59. schmidti Brauns**

*Nitela schmidti* Brauns, 1911d:142, ♀ (as *Schmidti*, incorrect original capitalization). Syntypes: Costa Rica: San José (TMP). – R. Turner, 1916f:345 (in list of world *Nitela*); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Dollfuss, 1989:11 (paratype in NHMW); Hanson and Menke, 1995:639 (known from Costa Rica); Amaranante, 2002:42 (in catalog of Neotropical Crabronidae).

**60. sculpturata R. Turner**

*Nitela reticulata* R. Turner, 1908:508, ♀ (June), junior primary homonym of *Nitela reticulata* Ducke, 1908. Holotype or syntypes: ♀, Australia: Queensland: Mackay (BMNH). – R. Turner, 1916e:287 (locality records).

*Nitela sculpturata* R. Turner, 1916f:343. Substitute name for *Nitela reticulata* R. Turner, 1908. – R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Cardale, 1985:256 (in catalog of Australian Sphecidae).

**61. spinolae Latreille**

*Nitela spinolae* Latreille, 1809:77, ♀. Holotype or syntypes: ♀, in Gallia Australi [= southern France]: no specific locality (lost). Neotype: ♀, France: Haute-Garonne: Saint-Béat (MNHN), designated by Valkeila, 1974:75. – Vander Linden, 1829:41 (bibliographic references, southern France); Dahlbom, 1942a:13 (in review of Scandinavian aculeates), 1844:297 (in revision of Sphecidae and Pompilidae), 1845:511 (redescription); Lepeletier de Saint Fargeau, 1845:210 (in revision of world Hymenoptera); Wissmann, 1849:15 (Germany: Kingdom of Hannover: Münden); Tischbein, 1852:141 (Germany); F. Smith, 1856:382 (in catalog of Hymenoptera in British Museum); Ruthe and Stein, 1857:315 (Germany: Berlin area); Schenck, 1857:108 (Germany: in revision of fossorial wasps of Nassau Region); Taschenberg, 1858:100 (in key to Sphecidae of Germany); Assmuss, 1859:617 (Russia: Moscow Governorate); Funk, 1859:58 (Germany: Bayern: Bamberg); Schenck, 1860:146 (Germany: Nassau Region), 1861:142 (Germany: Nassau Region); Brischke, 1862:105 (Germany: Preussen Province, now Poland: Pomorze Region); Giraud, 1866:474 (nesting in stems of *Rubus*, but mainly in galleries of other insects in tree trunks, cocoon); Taschenberg, 1866:183 (in revision of Hymenoptera of Germany); A. Costa, 1867c:120 (in revision of Italian Sphecidae); Kirchner, 1867:223 (in catalog of European Hymenoptera); Schenck, 1867a:352 (Germany: Nassau Region); Thomson, 1870:239 (in revision of Swedish wasps); A. Costa, 1871b:49 (in revision of Italian Sphecidae); Dours, 1874:152 (in catalog of Hymenoptera of France); Thomson, 1874:205 (in revision of Hymenoptera of Scandinavia); Marquet, 1875:209 (France: Hérault: Cette, now Sète); Taschenberg, 1875:380 (Germany: Halle); Girard, 1879:943 (listed); Kohl, 1880:138 (Austria: Tirol, and Italy: Trentino–Alto Adige); Marquet, 1881:184 (France: Landes); Kohl, 1883e:672 (Switzerland); von Heyden, 1884:120 (Germany: Frankfurt am Main area), Kohl, 1885a:216 (in revision of European Larrinae); Sickmann, 1885:180 (Germany: Niedersachsen: Wellingholthausen); Wüstnei, 1886:38 (Germany: Schleswig-Holstein: Husum); Schøyen, 1887:10 (Norway: Helgøen at lake Mjøsen); Brischke, 1888a:54 (Germany: Hela Peninsula, now Poland: Hel Peninsula), 1888b:100 (Poland: Pomerania); Kohl, 1888b:725 (Austria: Tirol, now Italy: Alto Adige); Kohl, 1893:31 (Austria: Niederösterreich: Piesting); F. Morawitz, 1893a:111 (Russia: Karelian Isthmus); Sickmann, 1893:83 (Germany: Niedersachsen: Iburg); Krieger,

1894:10 (Germany: Dürrenberg in Saale Valley); Westerlund, 1896:28 (Finland: no specific locality); Acloque, 1897:91 (in Sphecidae Fauna of France and Algeria); Dalla Torre, 1897:699 (in catalog of world Hymenoptera); Mocsáry, 1897:77 (Hungary, including Fiume, now Rijeka in Croatia); Borries, 1897:65 (nesting habits); Strand, 1898b:93 (Norway); de Cobelli, 1903:119 (Italy: Province of Trentino); Adlerz, 1904:137 (known prey: aphids); Aurivillius, 1904:277 (in revision of Swedish Sphecidae); Ferton, 1905:71 (mating inside twig); Schmiedeknecht, 1907:206 (in key to Hymenoptera of Central Europe); de Gaulle, 1908:121 (in catalog of French Hymenoptera); Vincens, 1910:11 (nest and prey, probably a *Passaloeus* as suggested by use of resin and aphid prey); Dittrich, 1911b:21 (Germany: Niederschlesien Province, now Poland: Dolny Śląsk Region); Graeffe, 1911:50 (Italy: Trieste area); W. Schulz, 1911a:68 (Schenck's material of 1857:209 not found in Zool. Mus. Marburg Univ.); Birula, 1912:537 (Ukraine: Zhytomyr Oblast': Radomyshl'); Rudow, 1912:64 (nesting in stems of *Foeniculum* and in wood, prey); Schirmer, 1912:165 (Germany: Berlin area); Alfken, 1914:276 (northwestern Germany, as *spinolai*); Zilahy Kiss, 1915:80 (Hungary: Kecskemét, Várkudu); R. Turner, 1916f:343 (in list of world *Nitela*); Noskiewicz, 1918:139 (Galicia, now western Ukraine: Hołosko near Lwów); Honoré, 1919:268 (France: Seine-et-Oise: Bouray, as *spinolai*); O. Meyer, 1919:150 (Germany: Posen Province, now Poland: Poznań Region, as *spinolai*); Łoziński, 1920:121 (Poland: Kraków); A. Wagner, 1920:37 (Germany: Lower Elbe region); Dubois, 1921a:18 (first record from Belgium: Beverloo), 1922:194 (in key to Belgian Sphecidae); Ferton, 1923:145 (nesting habits); Berland, 1925d:128 (in Sphecidae Fauna of France); Bischoff, 1925:299 (Latvia: Wezkukkul); Blüthgen, 1925:166 (Germany: Saale River valley: Roßbach); Coulon, 1925:122 (France: Evreux); Bouwman, 1926:279 (in list of Sphecidae of Netherlands, as *spinolai*); Friese, 1926:150 (in key to Sphecidae of Central Europe, short morphological and biological characteristics); Crèvecoeur and Maréchal, 1927:139 (Belgium: Saint-André-les-Bruges); L. Ahrens, 1928:57 (nesting habits); Bouwman, 1928b:27 (in revision of Sphecidae of Netherlands); Blüthgen, 1929:82 (Germany: Saale River valley: Naumburg); Maneval, 1929b:289 (nest and prey); Schmiedeknecht, 1930:667 (in keys to Hymenoptera of North and Central Europe, as *spinolai*); Bondroit, 1932:38 (Belgium: Solbosch, Uccle); Giordani Soika, 1932a:22 (Italy: Lido di Venezia); Bondroit, 1933:31 (Belgium: Uccle, as *Spinolai*); E. Nielsen, 1933:290 (summary of nesting habits); Balles, 1934:17 (Germany: Baden-Württemberg: Oberachern); Bernard, 1934b:250 (prey: *Myopsocus eatoni* Mac Lachlan, a psocid); Bondroit, 1934:60 (Belgium: Boendael, Watermael); Jansson, 1934:289 (Sweden); Bernard, 1935:65 (France: Var: Fréjus area; prey: *Myopsocus eatoni* Mac Lachlan); Forsius in Forsius and Hellén, 1935:11 (in checklist of Hymenoptera of Finland); Marchand and Dulac, 1935:60 (France: Saône-et-Loire: Saint Laurent d'Andenay, as *spinolai*); Crèvecoeur and Maréchal, 1936:252 (in catalog of Belgian Hymenoptera); Roller, 1936:315 (Austria: loess cliffs at Bisamberg near Vienna); Bischoff, 1937b:2 (Canary Islands); Dulac, 1937:14 (France: Saône-et-Loire: Saint-Laurent d'Andenay); Zavadil, Šustera, and Bat'a, 1937:175 (in catalog of Sphecidae of Czechoslovakia); A. Wagner, 1938a:119 (northwestern Germany); nec Yasumatsu, 1939:11 (= *yasumatsui*); Leclercq, 1941a:68 (Belgium: Pays de Liège), 1941b:12 (Belgium: Liège area); Paul, 1941:39 (Germany: Pommern: Stettin area, now Poland: Województwo Zachodniopomorskie: Szczecin area); Giner Marí, 1943a:211 (in Sphecidae Fauna of Spain); Guiglia, 1944b:29 (Italy), 1947a:28 (Italy: Piano Maiuri), 1948c:202 (Italy: Sardegna: Cagliari); Šnoflák in Zavadil and Šnoflák, 1948:45 (in key to Sphecidae of Czechoslovakia); L. Ahrens, 1949:414 (nests are unicellular preexisting cavities, prey consists of psocids); Cavro, 1950:36 (France: Département du Nord); nec Yasumatsu, 1950:1478 (= *yasumatsui*); de Beaumont, 1951h:33 (Switzerland: Neuchâtel area); Caruel, 1953:101 (France: Marne Department); Nouvel and Ribaut, 1953:179 (France: Hautes-Pyrénées: Cauterets, Orédon, as *spinolai*); Bischoff and Stadler, 1954:126 (Germany: Bayern: Romberg); de Beaumont, 1954a:64 (Italy), 1954e:92 (Italy); Fahlander, 1954:253 (Sweden: Gästrikland Region); Aerts, 1955:60 (Germany: Rheinland); Iwata, 1955:29 (egg size, number of oocytes), possibly *Nitela yasumatsui*; Valkeila, 1955:54 (nest, prey, larva with single spinneret); Vogrin, 1955:38 (Yugoslavia); Tsuneki, 1956c:34 (in key to *Nitela* of Japan), 35 (Europe); Bajári, 1957a:58 (in key to Hungarian Sphecidae); Zirngiebl, 1957:178 (Germany: Rheinland-Pfalz: Bir-

kenheide, Landau); Benno, 1958b:12 (in review of Dutch Sphecidae); Evans, 1958c:126 (discussion of larval description by Valkeila, 1955); Wolf, 1959b:24 (Germany: Nassau); Noskiewicz and Puławski, 1960:119 (in key to Polish Sphecidae); Hoop, 1961:64 (Germany: Schleswig-Holstein: Kronshagen and Rosenkranz); Janvier, 1962:512 (nesting habits, description of larva); Tsuneki, 1962e:70 (*Nitela spinolae* in Iconographia Insectorum Japonicorum, Ed. II is actually *Nitela yasumatsui*); Valkeila, 1962b:66 (southwestern Finland); Wengris, 1962:205 (Lithuania: Vilnius area); Babiý, 1964:114 (Austria: Land Salzburg); de Beaumont, 1964c:80 (in Sphecid Fauna of Switzerland, as *spinolai*); Diniz, 1964a:4 (Portugal: Aljustrel, Coimbra, Paço de Queirã, Rezende); Evans, 1964b:284 (discussion of Janvier, 1962, description of larva); Hüsing and Jäger, 1964:192 (Germany: Sachsen-Anhalt: Nietleben near Halle, as *spinolai*), 197 (preying on aphids); Plavil'shchikov, 1964:122 (Russia: Mordovian State Nature Reserve, as *spinolai*); Scobiola-Palade, 1965:109 (first record from Romania: Braşov Region: Bucegi Mountains); Benedek, 1966a:162, 164 (occasionally nesting in galls of *Rhodites rosae* L.); Benno, 1967:36 (in checklist of Sphecidae of Netherlands); de Beaumont, 1967a:336 (Turkey; as *spinolai*); Gauss, 1967:554 (Germany: Baden-Württemberg, as *spinolai*); J. Heinrich, 1967:76 (Germany: Bayern: near Aschaffenburg); Niedl and Deneš, 1967:76 (Czech Republic: Třeboň area); Scobiola-Palade, 1967b:43 (Romania); Nagy, 1968:378 (nest parasite in Romania: *Smicromyrme septentrionalis* Hoffer, a mutillid, now *Smicromyrme sicana* (De Stefani Perez, 1887)); Lefeber, 1969b:99 (Netherlands: Sint-Pietersberg = Montagne Saint Pierre), 1969c:233 (Netherlands: Sint-Pietersberg); Zangheri, 1969:1704 (Italy: in catalog of flora and fauna of Romagna Region); Oehlke, 1970:722 (Democratic Germany); Lefeber, 1971a:18 (Netherlands: Caberg, Mamelis; Belgium Eben, Gellik, Wonck); Lomholdt, 1971:123 (first record from Denmark: Gentofte near København); Schmidt, 1971b:37 (Germany: Rheinland-Pfalz: Gonsenheimer Wald, Mombacher Feld); Stritt, 1971a:104 (Baden-Württemberg: Germany: Karlsruhe); Balthasar, 1972:181 (in Sphecid Fauna of Czechoslovakia); Haeseler, 1972:155, 172, 200, 204 (Germany: Schleswig-Holstein; anthropogenic habitats); Kofler, 1972:107 (Austria: eastern Tirol); Niedl and Deneš, 1972:152 (Czech Republic: Třeboň area); Scobiola-Palade, 1972b:253 (Romania); Erlandsson, 1974:75 (Italy); Valkeila, 1974:75 (redescription, designation of neotype); Lefeber, 1975a:38 (Netherlands: Heerlen, Mechelen, Puttberg, Sibbe); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Lefeber, 1976:151 (Netherlands: Heerlen); Lomholdt, 1976:261 (in Sphecid Fauna of Fennoscandia and Denmark); Cretin and Robert, 1977:45 (France: Doubs: Chassagne-Saint Denis); Kolesnikov, 1977:318 (Russia: Bryansk Oblast'); Schmidt, 1977:96 (Germany: Baden-Württemberg: Enzklösterle in Schwarzwald), 1977/78:56 (Germany: Rheinland-Pfalz: Gonsenheimer Wald); Báez and Ortega, 1978:192 (Canary Islands); Schwammberger, 1978:417 (Germany: Württemberg); Benedek, 1979:231 (Hungary: Bakony Hills); Leclercq in Leclercq, Gaspar and Verstraeten, 1979:map 1418 (distribution in Belgium); Lefeber, 1979:12 (in checklist of Sphecidae of Netherlands), 83 (Netherlands: distribution map); Casolari and Casolari Moreno, 1980:120 (specimens in M. Spinola collection, Torino); Pagliano, 1980:129 (Italy: Piemonte); Westrich, 1980:630 (Germany: Baden-Württemberg: Tübingen area); Dollfuss and Ressler, 1981:322 (Austria: Niederösterreich: Scheibbs District); Schmidt, 1981:192 (Germany: Baden-Württemberg); Woydak, 1981:41 (Germany: Westfalen: Hamm); Axelsson, 1982:80 (Sweden); Donath, 1982:213 (Germany: Cottbus Bezirk); Gauss, 1982:74 (Germany: nesting in old galleries of barkbeetles); Skibińska, 1982:120, 123 (Poland: Mazovian Voivodship: Warszawa); Dollfuss, 1983b:12 (in catalog of Sphecidae of Austria); Riemann, 1983:85 (Germany: Bremen-Daverden area); Lefeber, 1984:29 (Netherlands: Maastricht); Józán, 1985b:57 (Hungary south of Lake Balaton), 69 (map of distribution in Hungary), 84 (ecological and zoogeographic characteristics); Lefeber, 1985:87 (Netherlands: southern Limburg); Radović, 1985:65 (sting apparatus analyzed); Tyrner, 1985:9 (Czech Republic: Jezerka Nature Reserve in Krušné Hory = Erzgebirge); Brechtel, 1986:61 (Germany: Südpfalz); Nilssen, 1986:87 (Sweden); Felton, 1987b:235 (Great Britain), 236 (diagnostic characters); Skibińska, 1986b:164 (Poland: Warszawa: streetside green), 168 (green areas of housing estates), 174 (various green urban habitats); Steiner, 1986:104 (references to publications on nesting habits); Schmidt and Westrich, 1987:365 (Germany: Mainz area, as *spinolai*); Dollfuss,

1988:13 (Austria); Karsai, 1988:100 (Hungary: Kiskunság National Park); Kowalczyk, 1988b:65 (Poland: environs of Łódź); Wolf, 1988b:140 (Germany: Rheinland-Westfalen); Jacobs, 1989:14 (Germany: Mecklenburg-Vorpommern); Pádr *in* Šedivý, 1989a:168 (in checklist of Czechoslovakian Sphecidae); Scobiola-Palade, 1989:88 (Romania: delta of Danube); Jacobs and Oehlke, 1990:129 (in key to *Nitela borealis* and *spinolae*), 1990:170 (new records from Democratic Germany); Kowalczyk, 1990:291 (Poland: Góry Świętokrzyskie); Pádr, 1990:75 (Czech Republic: Praha area); Pádr, 1990:75 (Czech Republic: Praha area); Pagliano, 1990:108 (in catalog of Italian Sphecidae); Rohe, 1990:1049 (Germany: Rheinland-Pfalz: Lenneberg forest); Schwammlberger and Priesner, 1990:540 (Austria: Kärnten); Day, 1991:xvii (in summary of European Endangered Hymenoptera Lists); Dollfuss, 1991:119 (in key to Sphecidae of North and Central Europe); Nilsson, 1991:83 (Sweden: Lake Mälaren); N. Schneider, 1991:93 (Luxembourg), 107 (nest structure, two eggs in one cell); Sorg and Wolf, 1991:195 (Germany: Koppelstein Reserve southeast of Koblenz); Budrys, 1992:31 (in list of Sphecidae of Lithuania); Wiśniowski, 1993a:95 (Poland: Białowieża Primeval Forest); Józán, 1992a:229 (Hungary: Béda-Karapancsa Protected Area), 1992b:173 (Hungary: Boronka-melléki Protected Area); K. Weber, 1992:88 (Germany: Bayern: Bamberg District); Else, 1993b:198 (Great Britain: Hampshire); Edwards, 1993:198 (Great Britain: Sussex); Kuhlmann, 1993:77 (Germany: known from Westfalen); Sorg and Wolf, 1993:60 (Germany: Rheinland-Westfalen: Nature Reserve Die Spey); Wiśniowski, 1993a:97 (Poland: in checklist of Sphecidae of Białowieża Primeval Forest); Schmid-Egger, 1994a:688 (Germany: Rheinland-Pfalz: Höllenberg near Grünstadt); Theunert, 1994c:45 (Germany: summary of records from Niedersachsen and Bremen, as *spinolai*); Józán, 1995:105 (Hungary: projected Duna-Dráva National Park); Negrisoló *in* Minelli, Ruffo, and La Posta, 1995b:10 (in catalog of Italian fauna, as *spinola*); Riemann, 1995:52 (Germany: Bremen); Schmid-Egger, 1995:62 (Germany: northwestern Baden-Württemberg); Schmid-Egger, Risch, and Niehuis, 1995:196 (Germany: summary of records from Rheinland-Pfalz); Skibińska, 1995:423, 426, 427 (Poland: pine forest in Białowieża Primeval Forest); Jakubzik, 1996:253 (Germany: Köln); Jakubzik and Cölln, 1996b:400 (Germany: Rheinland-Pfalz); Schmid-Egger, Schmidt, and Doczkal, 1996:377 (Germany: Baden-Württemberg: not endangered); Witt, 1996:106 (Germany: Brandenburg), 109 (locality records); Woydak, 1996:41 (Germany: Westfalen: summary of distribution and nesting habits); Celary, 1997:58 (in checklist of Animals of Poland); Schmidt and Schmid-Egger, 1997:20 (in checklist of German Sphecidae); F. Burger, Saure, and Oehlke, 1998:28 (Germany: in list of Sphecidae of Brandenburg); Józán, 1998:311 (Hungary: Duna-Dráva National Park); Kulik, 1998:131 (northwestern Germany); Tscharnke, Gathmann, and Steffan-Deventer, 1998:718 (trap-nesting in Germany); van der Smissen, 1998:63 (Germany: Mecklenburg-Vorpommern, Niedersachsen, Schleswig-Holstein); Cölln and Jakubzik, 1999:29 (Germany: Rheinland-Pfalz: Keuper-Scharren southwest of Hungerburg); Neumayer, Schwarz, and Bregant, 1999:224 (Austria: in checklist of Sphecidae of Land Kärnten); Pauly, 1999:109 (in catalog of Belgian aculeates); Zehnder and Zettel, 1999:131 (Switzerland: recolonization of flooded area in Valais Canton); Blösch, 2000:246 (in Sphecid Fauna of Germany); Gayubo and Felton, 2000:305 (in revision of European *Nitela*); Gonzáles, Gayubo, and Tormos, 2000:19 (Andorra: Santa Coloma); Jacobs, 2000:8 (Germany: Land Mecklenburg-Vorpommern: not endangered); Józán, 2000:108 (Hungary: Bakony Mountains); Schmid-Egger, 2000b:275 (Germany: Baden-Württemberg: shores of Rhein River); Vicidomini, 2000b:26 (Italy: previously recorded from Campania, as *spinola*); Dorow, 2001:136 (Germany: Hessen: Schönbuche Forest Reserve); Ohl et al., 2001:140 (distribution in Germany by provinces); Gayubo and Bitsch *in* Bitsch et al., 2001:345 (in Sphecid Fauna of Western Europe); Józán, 2001:279 (Hungary: Somogy County); Kuhlmann, 2001:19 (Germany: Nordrhein-Westfalen: Nature Reserve Bleikuhlen near Blankenrode); Ljubomirov, 2001b:50 (Bulgaria: Mount Vitosha near Sofia); Skibińska, 2001:220 (Poland: Białowieża Primeval Forest); Szczepko and Kowalczyk, 2001:188 (Poland: Kampinos National Park near Warszawa); van der Smissen, 2001:62 (Germany: Schleswig-Holstein: not endangered); Zettel, Gross, and Mazzucco, 2001:73 (Austria: Wien); Amiet and Moretti, 2002:177, 178 (Switzerland: Tessin); Bieri, 2002:76 (Liechtenstein); Deván, 2002a:200 (Slovakia: Kobela Nature Reserve near Nové Mesto); Dorow, 2002:16 (Germa-

ny: Hessen: Weiherkopf Forest Reserve); Józán, 2002:53 (Hungary: Mecsek Mountains); Kowalczyk, Szczepko, and Świątek, 2002:153 (Poland: Kampinos National Park near Warszawa); Kuhlmann, 2002:66 (Germany: Bayern: National Park Bayerischer Wald); Shlyakhtenok and Skibinska, 2002:33 (Belorussia: no specific locality); Wiśniowski, 2002:70 (Poland: Ojców National Park); Cölln, Esser, and Jakubzik, 2003:62 (Germany: northwestern Rheinland-Pfalz: excavation sites and quarries, as *spinolai*); Drewes, 2003:139 (France: Haute-Savoie: mouth of Dranse); Flügel, 2003:8 (Germany: Hessen: Knüllwald); Generani, Pagliano, Scaramozzino, and Strumia, 2003:66 (Italy: Arcipelago Toscano, as *spinola*); González, Gayubo, Asís, Tormos, and García, 2003:61 (Spain: Soria: Chavaler); Haeseler, 2003:340 (Germany: Niedersachsen: Harriersand Island near Bremen); Kuhlmann and Quest, 2003:50 (Germany: Bayern: Bayerischer Wald National Park); Mandery, Kraus, Voith, Wickl, Scheuchl, Schubert, and Warncke, 2003:67 (Germany: in catalog of wasps and bees of Bayern); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Ohl and Linde, 2003:151 (number of ovarioles); Steffan-Dewenter and Leschke, 2003:1966 (Germany: Niedersachsen: orchard meadows); von der Heide and Metscher, 2003:103 (Germany: Niedersachsen: Emsland area); Wiśniowski in Dylewska and Wiśniowski, 2003:151 (Poland: Ojców National Park); Wiśniowski and Werstak, 2003:77 (Poland: Pieniny National Park); Deván, 2004:147 (western Slovakia); Dorow, 2004a:127 (Germany: Hessen: Schönbuche Nature Reserve); Esser, Jakubzik, Sonnenburg, and Woydak, 2004:263 (Germany: in checklist of Sphecidae of Nordrhein-Westfalen, as *spinolai*); Gayubo et al. 2004:131 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Klein and Lefebvre in Peeters, van Achterberg, et al., 2004:401 (in Wasp and Ant Fauna of Netherlands); Majzlan and Deván, 2004:33 (Slovakia: Malacky-Široké); Schneider and Carrières, 2004:98 (Luxembourg: Bon-Pays Region); Skibińska in Bogdanowicz, Chudzicka, Pilipiuk, and Skibińska, 2004:356 (in catalog of Polish Crabronidae); Szczepko and Kowalczyk, 2004:126 (Poland: Kampinos National Park near Warszawa); van Achterberg and Peeters, 2004:31 (in checklist of Sphecidae of Netherlands); Wiśniowski, 2004:45 and 60 (in checklist of Polish Sphecidae); Burger, 2005:34 (Germany: Thüringen); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Gathmann, 2005:109 (Germany: Niedersachsen: agricultural landscape near Göttingen; nest parasite: *Melittobia acasta* (Walker), Eulophidae); Haeseler, 2005:629 (Germany: Niedersachsen: Steller Heide near Bremen); Kofler, 2005:173 (Austria: Tirol: Lienz District: Weiherburg in Ainet Common, Amlach, Thal Schwarzboden in Assling Common, Kreithof in Tristach Common); Kowalczyk and Kurzac, 2005:105 (Poland: Botanical Garden in Łódź); Pagliano and Negrisoló, 2005:402 (in Sphecidae Fauna of Italy); Quest and Kuhlmann, 2005:33 (Germany: Bayern: Bayerischer Wald National Park); Riemann and Hohmann, 2005:561 (Germany: Niedersachsen: city of Bremen and adjacent area); Saure, 2005:17 (Germany: Berlin); Schmalz, 2005:57 (references to XIX<sup>th</sup> century authors); Theunert, 2005a:17 (Germany: in checklist of Sphecidae of Niedersachsen and Bremen); Venne and Bleidorn, 2005:43 (Germany: Nordrhein-Westfalen: Moosheide Nature Reserve); Wiśniowski, 2005a:312 (Poland: Ojców National Park; occurring only in forest and on wooden buildings); Gorobchishin, 2006:113 (Ukraine: Kyiv Oblast': Volodarka); Liebig, 2006:39 (Germany: Sachsen: Muskauer Heide); Magdalou, 2006a:7, 10 (France: Pyrénées-Orientales: Réserve Naturelle de la Massane); Shlyakhtenok, 2006:111 (Belorussia: Polesye Radiological Nature Reserve); N. Schneider, 2006:140, 142 (Luxembourg: anthropogenic habitats); Tomarchio and Turrisi, 2006:957 (Italy: first record from Sicilia: Mount Etna); Baños-Picón, Gayubo, Asís, and González, 2007:256, 259 (Spain: Zamora: Cabañas de Aliste); Bitsch, Dollfuss, Bouček, Schmidt, Schmid-Egger, Gayubo, Antropov, and Barbier, 2007:461 (recorded from Italy by Pagliano and Negrisoló, 2005, and from France by Magdalou, 2006); Cungs, Jakubzik, and Cölln, 2007:140 (Luxembourg: Haardt Nature Reserve); Dorow, 2007:263 (Germany: Hessen: Niddahänge Forest Reserve); Flügel, 2007:40 (Germany: Hessen: Halberg near Neumorschen); Hallin, 2007b:25 (Sweden: Blekinge Province); Jacobs, 2007:106, 107 (in key to Crabronidae of Germany); Jansen and Kaluza, 2007:24 (Germany: northwestern Sachsen); Józán, 2007:172, 179 (Hungary: Zselic hills); Kowalczyk and Nadolski, 2007:284 (Poland:

Łódź: railway areas); Saure, 2007:82 (Germany: in checklist of Aculeata of Land Brandenburg); Shlyakhtenok, 2007a:299 (Belorussia: Berezinsky Nature Reserve); G. Turrisi and R. Turrisi, 2007:121 (Italy: Sicilia: Mount Etna: Botanical Garden Nuova Gussonea and vicinity); Vago, 2007:175 (France: département de Somme); Venne, Bleidorn, and Lauterbach, 2007:302 (Germany: Nordrhein-Westfalen: Bielefeld); Vepřek and Straka, 2007:203 (in catalog of Sphecidae of Czech Republic and Slovakia); Gayubo, González, Tormos, and Asís, 2008:139 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia), 141 (occurring in central Spain); Ljubomirov and Yildirim, 2008:235 (in catalog of Crabronidae of Turkey); Protsenko and Drozdovskaya, 2008:127 (Ukraine: Sumy Oblast': Vakalivshchina village); Theunert, 2008:56 (Germany: map of distribution in Niedersachsen and Bremen); Baños-Picón, Asís, Gayubo, and Tormos, 2009:312 (Spain: frequency of specimens collected with hand nets and Malaise traps); Debuysse and Vago, 2009:4 (in list of Sphecidae *sensu lato* of northern France); U. Frommer, 2009a:28 (Germany: in checklist of Sphecidae of Hessen); González, Gayubo, Asís, and Tormos, 2009:624 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Guéorguiev and Ljubomirov, 2009:264 (Bulgaria: Maleshevska Planina); Ødegaard, Sverdrup-Thygeson, Hansen, Hanssen, and Öberg, 2009:28 (known from Norway), 71 (Norway: locality records); Pagliano, 2009:185 (Italy: recorded from Sicilia by Tomarchio and Turrisi, 2006); Ruchin, Antropov, and Shibayev, 2009:169 (Russia: Republic of Mordovia); Sobek, Tscharncke, Scherber, Schiele, and Steffan-Dewenter, 2009:614 (Germany: Thüringen: Nationalpark Hainich: nesting mostly in canopy); Szczepko and Wiśniowski, 2009:70 (Poland: Spała Landscape Park); Esser, Fuhrmann, and Venne, 2010:37 (Germany: in checklist of aculeates of Nordrhein-Westfalen); Hable, von der Dunk, and Knipfer, 2010:66 (Germany: Bayern: vicinity of Dietfurt); Hable, Krauss, von der Dunk, and Wickl, 2010:27 (Germany: Bayern: Sulz- and Ottmaringer Tal); Saure, 2010b:175 (Germany: Berlin-Reinickendorf: airport Tempel and Flughafensee Protected Area); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: relatively common); Schmidt, 2010:137 (Germany: Bayern: collected along Main-Donau canal); van der Smissen, 2010a:345 (Germany: Schleswig-Holstein and Mecklenburg-Vorpommern: locality records), 2010c:397 (Sweden: Öland: Byrums Sandvik); Józán, 2011:180 (in checklist of Sphecidae *sensu lato* of Hungary); Schmid-Egger, 2011c:556 (Austria: Tirol: Tiroler Lech Nature Park); Theunert, 2011a:20 (Germany: in checklist of aculeates of Niedersachsen including city of Bremen); Tischendorf, Frommer, Flügel et al., 2011:148 (Germany: Hessen: not endangered); Boillat, 2012:227 (Switzerland: in checklist of insects of Canton de Genève); Burguet *in* Durand and Burguet, 2012:3, fiche 14 (France: Puy-de-Dôme: sands Giraults-Faures in Orléat commune); Gerth, Mayer, Hering, Wolf, Schaffer, and Bleidorn, 2012:9 (Germany: Sachsen: Bienitz in Leipzig); Prisniy, 2012:48 (Russia: Belgorod Oblast'); Saure, 2012b:229 (Germany: Berlin-Spandau: Spandauer Forst); Strumia, Pagliano, and Gayubo, 2012:56 (Italy: Toscana: Riserva di San Rossore); Saure, 2013:20 (Berlin: Treptow-Köpenick: Gosener Wiesen); A. Scholz and Liebig, 2013:22 (Germany: Sachsen: in list of Sphecidae *sensu lato*); Shlyakhtenok, 2013:173 (in annotated catalog of aculeate wasps of Belorussia); Vieira, Oliveira, Brewster, and Gayubo, 2013:18 (Portugal: Douro International Natural Park, Serras de Aire e Candeeiros Natural Park, and Paúl do Boquilobo Nature Reserve); Wiśniowski and Szczepko, 2013:39 (Poland: Kampinos National Park near Warszawa); Bitsch, 2014:404 (France: Alpes-Maritimes: Casterino; Aude: Preixan, Montredon-des-Cobières; Hautes-Pyrénées: Saint-Lary-Soulan; Haut-Rhin: Munster); U. Frommer, 2014:27 (Germany: Hessen: Lorch); Hellqvist, Abenius, and Norén, 2014:92 (in catalog of Ampulicidae, Sphecidae, and Crabronidae of Sweden, by provinces); Pagliano, 2014:77 (specimens in M. Spinola collection, Torino, are *Nitela fallax*); Yıldırım, Ljubomirov, and Lelej, 2014:13 (distribution in Turkey by biogeographic provinces); Bogusch, Astapenková, and Heneberg, 2015:6 (Czech Republic: reared from galls of *Lipara* sp., Chloropidae, as *spinolai*); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Simon, Lorthiois, and Macé, 2015:54 (France: alluvial terraces in Eure Department: Courcelles-sur-Seine); Weber, 2015:62 (Germany: Bayern: Nature Reserve Börstig near Hallstadt); Blažej, Macek, and Trýzna, 2016:122 (Czech Republic: České Švýcarsko = Bohemian Switzerland National Park); Mokrousov and Popov, 2016:583 (Russia: Adygea: Maykop); A. Scholz,

2016:72 (Germany: Sachsen: Kleinraschützer Heide); Stolle and Saure, 2016:924 (Germany: in list of Sphecidae *sensu lato* of Sachsen-Anhalt); Wiśniowski, 2016:129 (Poland: Ojców National Park); Astapenková, Heneberg, and Bogusch, 2017: 7 (reared from galls of *Lipara* sp., Chloropidae); Antropov, 2017b:241 (in catalog of Crabroninae of Russia); Di Giovanni, Mei, and Cerretti, 2017:73 (Italy: Lombardia: Riserva Naturale Bosco della Fontana 5 km from Mantova at 45°12'N 10°44'E, found in canopy); Flügel, 2017:5 (Germany: Rheinland-Pfalz: Eschkopf); Magdalou, 2017:15 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Forêt de la Massane); Fresno, 2018:231 (Spain: Asturias: Pola de Lena), Barcelona: Mas Mirambell); Lett, 2018:203 (France: Loir-et-Cher: Gièvres at 47°16'39"N 1°41'52"E); Carminati, Mora, and Cretin, 2019:19 (France: in list of Sphecidae *sensu lato* of Franche-Comté); Olszewski and Kowalczyk, 2019:104 (northern Poland: Pomorze Gdańskie = Gdańsk Pomerania); Ruchin and Antropov, 2019a:13234 (Russia: Mordovia State Nature Reserve, occurrence needs confirmation); Kejval, Blažej, and Erhart, 2020:103 (western Czech Republic); Cross, Baldock, and Wood, 2021:50 (in catalog of Sphecidae *sensu lato* of Portugal); Gayubo and Bitsch *in* Bitsch, Antropov, Gayubo, Leclercq, Schmid-Egger, K. Schmidt, and Straka, 2021:310 (in revision of Sphecidae *sensu lato* of Europe); Herb and Schmid-Egger, 2021:9 (Germany: Bayern: Kaufbeuren area); Kaplan and Yildirim, 2021:70 (in catalog of Crabronidae of Turkey); Olszewski, Wiśniowski, and Ljubomirov, 2021:95 (in commented list of Sphecidae *sensu lato* of Poland); Saure and Marten, 2021:135 (Germany: Sachsen-Anhalt: Nationalpark Harz); Bogusch and Heneberg, 2022:985 (reared from artificial *Lipara* nests in Czech Republic); U. Frommer and Bahmer, 2023:194 (Germany: Hessen: Giessen: city gardens); Kaplan and Yildirim, 2023:1686 (in checklist of Sphecidae *sensu lato* of Turkey).

### 62. *townesorum* Krombein

*Nitela townesorum* Krombein, 1950d:130, ♀. Holotype: ♀, USA: California: Yosemite National Park near Glacier Point (AEI). – Krombein *in* Muesebeck, Krombein, and Townes, 1951:945 (in catalog of North American Hymenoptera); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); Krombein, 1979b:1640 (in catalog of North American Hymenoptera); Townes and Townes, 1984:25 (holotype in AEI).

### 63. *truncata* Gayubo and Felton

*Nitela truncata* Gayubo and Felton, 2000:306, ♀, ♂. Holotype: ♀, Spain: Salamanca Province: Villarion de los Aires (Univ. Salamanca). Paratypes: France, Germany, Greece, Italy, Portugal. – J. Fernández, 2001:160 (description of species recorded); Gayubo and Bitsch *in* Bitsch et al., 2001:347 (in Sphecid Fauna of Western Europe); Nieves-Aldrey, Fontal-Cazalla, Garrido-Torres, and Rey del Castillo, 2003:42 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo et al., 2004:131 (Spain: Madrid: Estación Biogeológica de El Ventorrillo in Sierra de Guadarrama); Gayubo, Nieves-Aldrey, González, Tormos, Rey del Castillo, and Asís, 2004:108 (Spain: Madrid: Monte de El Pardo); Cruz-Sánchez, Gayubo, González, and Torres, 2005:220 (Spain: Salamanca: San Martín del Castañar); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Baños-Picón, Gayubo, Asís, and González, 2007:256, 259 (Spain: Zamora: Cabañas de Aliste); Jacobs, 2007:106, 107 (in key to Crabronidae of Germany); Gayubo, González, Tormos, and Asís, 2008:139 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia); Baños-Picón, Asís, Gayubo, and Tormos, 2009:312 (Spain: frequency of specimens collected with hand nets and Malaise traps); Gayubo, González, Tormos, and Asís, 2009:364 (Spain: Valladolid: Reserva Natural Riberas de Castronuño – Vega del Duero); González, Gayubo, Asís, and Tormos, 2009:624 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park); Pagliano, 2009:185 (Italy: recorded from Piemonte: San Benedetto Belbo, by Gayubo and Felton, 2000); Schmid-Egger, 2010a:17 (in red list of Aculeata of Germany: rare); Cruz-Sánchez, Asís, Gayubo, Tormos, and González, 2011:499 (Spain: Salamanca and Zamora provinces: Arribes del Duero Natural Park: effects of wildfire); Schmid-Egger, 2011a:38 (France: Parc National du Mercantour: Saint Sauveur; Italy: Parco delle Alpi Marittime: Brignola); Bayındır, Gürbüz, Ljubomirov, and Pohl, 2013:146 (first record from Turkey: Isparta: Kasnak Oak Forest Nature

Reserve); Çubuk and Gülmez, 2013:35 (first record from Turkey: Tokat Province: Tekneçik); Vieira, Oliveira, Brewster, and Gayubo, 2013:18 (Portugal: Douro International Natural Park and Paúl do Boquilobo Nature Reserve); Bitsch, 2014:404 (France: Alpes-Maritimes: Casterino, Sospel); Yıldırım, Ljubomirov, and Lelej, 2014:13 (distribution in Turkey by biogeographic provinces, as *truncate*); Koçak and Kemal, 2015:147 (in checklist of Hymenoptera of Turkey); Le Divelec, Chapelin-Viscardi, and Larivière, 2016:109 (northern France: in agricultural landscapes); Cross, Baldock, and Wood, 2021:50 (in catalog of Sphecidae *sensu lato* of Portugal); Kaplan and Yıldırım, 2021:70 (in catalog of Crabronidae of Turkey); Gayubo and Bitsch *in* Bitsch, Antropov, Gayubo, Leclercq, Schmid-Egger, K. Schmidt, and Straka, 2021:312 (in revision of Sphecidae *sensu lato* of Europe); Can, 2022a:222 (supernumerary vein in forewing); Kaplan and Yıldırım, 2023:1686 (in checklist of Sphecidae *sensu lato* of Turkey).

#### 64. *virginensis* Rohwer

*Nitela virginensis* Rohwer, 1923a:100, ♀. Holotype: ♀, USA: Virginia: Chain Bridge (USNM). – Pate, 1934:242 (diagnostic characters, locality records), 1937a:7 (in key to North American *Nitela*, as *virginiensis*); Brimley, 1942:35 (North Carolina); Krombein *in* Muesebeck, Krombein, and Townes, 1951:945 (in catalog of North American Hymenoptera, as *virginiensis*); Krombein and Evans, 1954:232 (Florida: Cape Sable, as *virginiensis*); Krombein, 1958a:52 (USA: West Virginia: Lost River State Park), 60 (description of ♂), 1958f:187 (in supplement to catalog of North American Hymenoptera: Wisconsin), 1963f:273 (Maryland: Plummers Island near Washington, D.C.); Wray, 1967:125 (North Carolina, as *virginiensis*); Bohart and Menke, 1976:325 (in checklist of world Sphecidae, as *virginiensis*); Krombein, 1979b:1640 (in catalog of North American Hymenoptera, as *virginiensis*); Finnamore, 1982:112 (in Sphecid Fauna of Southern Quebec, as *virginiensis*); Ahlstrom, 1995:110 (in checklist of insects of North Carolina); Hook, 1998:250 (first record from Texas: Travis County: Austin); Buck, 2004:25 (Canada: in checklist of Crabronidae of Ontario), 30 (distribution within Ontario), 51 (first record from Ontario: list of localities).

#### 65. *williamsi* Menke

*Nitela williamsi* Menke, 1968e:134, ♀. Holotype: ♀, Malaysia: Selangor: Ulu Gombak (USNM). – Menke, 1968e:137 (in key to *Nitela domestica* and *williamsi*); R. Bohart and Menke, 1976:325 (in checklist of world Sphecidae); T. Li and Q. Li, 2010b:338 (in key to Oriental *Nitela*).

#### 66. *yasumatsui* Tsuneki

*Nitela yasumatsui* Tsuneki, 1956c:34, ♀, ♂. Holotype: ♀, Japan: Fukui Prefecture: Koike (originally K. Tsuneki coll., now Hyogo Mus.). – Tsuneki, 1956c:33 (in key to *Nitela* of Japan); Tsuneki and Shimoyama, 1963:48 (Japan: Towada Prefecture); Tsuneki, 1964l:62 (in key to Larrinae of Japan and Korea); Haneda, 1968a:43 (Japan); Nambu, 1968b:20 (Japan: Saitama Prefecture), 1972e:89 (Japan: Saitama Prefecture), 1973a:150 (Japan: Saitama Prefecture), 1975b:61 (Japan: Saitama Prefecture); Tano, 1994a:5 (holotype in K. Tsuneki collection), 1994b:43 (allotype in K. Tsuneki collection); Tano, 1995:44 (holotype in K. Tsuneki collection); Hashimoto and Nakanishi, 1997:17 (holotype and allotype transferred to Hyogo Mus.); Suda, 2004:40 (Japan: Yamanashi Prefecture); Haneda, Inoue, Nozaka, Tano, Kurokawa, H. Murota, and T. Murota, 2005:65 (Japan: Fukui Prefecture: Mount Monju); Haneda, Nozaka, Tano, Kurokawa and Murota, 2006a:22 (Japan: Toyama Prefecture); Ohkusa, 2006a:24 (Japan: Honshu: Gifu Prefecture), 2007:34 (Japan: central Honshu: Aichi Prefecture).

As *Nitela spinolae*: Yasumatsu, 1939a:11 (Japan) and 1950:1478 (Japan), corrected to *Nitela yasumatsui* by Tsuneki, 1956c:34, possibly also Iwata, 1955:29 (egg size, number of oocytes).

**ssp. taiwana Tsuneki**

*Nitela yasumatsui taiwana* Tsuneki, 1982e:28, ♀. Holotype: ♀, Taiwan: Mount Ali (originally K. Tsuneki coll., now Hyogo Mus.). – Tano, 1995:43 (holotype in K. Tsuneki collection.); Hashimoto and Nakanishi, 1997:17 (holotype transferred to Hyogo Mus.); Hua, 2006:281 (in list of Chinese insects, geographic distribution).

**sp.**

de Beaumont, 1968a:271 (Canary Islands: Lanzarote, Fuertaventura, Gran Canaria, Gomera, Hierro, Palma); Báez and Ortega, 1978:192 (Canary Islands); Rodgers and Homewood, 1982:233 (Tanzania: Usambara Mountains); Gayubo, 1984b:89 (Spain: Salamanca Province); Smithers, 1990:42 (preying on Psocoptera in Australia); Amaranter, 1993:19 (northeastern Brazil); Hohmann, La Roche, Ortega, and Barquín, 1993:228 (Canary Islands); Gonzáles, Gayubo, and Torres, 1998b:74, 75 (Spain: Valladolid Province); Gayubo, García, Torres, and González, 1999:90 (Spain: Soria Province); González, Gayubo, and Torres, 1999:355 (Spain: Valladolid: Viana de Cega); Cambra and Santos, 2000:53 (first record of genus from Panama: Parque Nacional Coiba in Isla de Coiba, Pacific Ocean); Gayubo, González, and Torres, 2000:186 (Spain: Salamanca Province); Gonzáles, Gayubo, and Tormos, 2000:19 (Andorra: Santa Coloma); Beardsley and Perreira, 2002:13 (Hawaiian Islands); Alves-dos-Santos, 2003:330 (Brazil: University of São Paulo campus); Portunodo and Fernández, 2004:135 (Cuba: Sierra Maestra); Genaro, 2006:54 (in checklist of Cuban Sphecidae and Crabronidae); Standfuss and Standfuss, 2006b:97 (Greece: Thessalia: Magnisia Peninsula at 39°N 23°E); Gayubo, González, Tormos, and Asís, 2008:139 (Spain: Salamanca: Parque Natural de Las Batuecas – Sierra de Francia, sp. aff. *lucens*); Vieira, Oliveira, Brewster, and Gayubo, 2013:18 (Portugal: Serras de Aire e Candeeiros Natural Park); Silvestre, Demétrio, Trad, de Oliveira Lima, Auko, and de Souza, 2014:68 (Brazil: Mato Grosso do Sul: dry forests in Bodoquena Mountain Range and Brazilian Chaco; two species); Trad and Silvestre, 2017:5 (Brazil: Mato Grosso do Sul); Magdalou, 2017:15 (France: Pyrénées-Orientales: Réserves Naturelles Catalanes: Julols); Jacobs and Liebig, 2018:146 (Russia: Irkutsk Oblast: Bol'shoye Goloustnoye).

**NOMEN NUDUM IN NITELA**

*capensis* Brauns: Dollfuss, 1989:10 (type material in NHMW).