

Last updated: 19 November 2013

## **PENEPODIUM**

*Penepodium* Menke in R. Bohart and Menke, 1976:90. Type species: *Pepsis luteipennis* Fabricius, 1804, by original designation.

### **1. albvillosum (Cameron)**

*Podium albvillosum* Cameron, 1888a:26, ♀, ♂. Lectotype: ♂: Panama: Bugaba (BMNH), designated by Menke in R. Bohart and Menke, 1976:92. – Kohl, 1902:71 (in revision of Podiini). – **As *Sceliphron albvillosum***: Dalla Torre, 1897:378 (new combination, in catalog of world Hymenoptera). – **As *Penepodium albvillosum***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); M. Cooper, 1980:89 (collecting resin, examining emergence holes of beetles in dead wood); Ohl, 1996b:216 (listed); Hanson and Menke, 1995:637 (known from Panama); Amarante, 2002:69 (in catalog of Neotropical Sphecidae).

### **2. brasiliense (Schroetky)**

*Sceliphron brasiliense* Schroetky, 1903a:42, ♀. Holotype or syntypes: ♀, Brazil: São Paulo: Jundiahy, now Jundiaí (depository?). – **As *Penepodium brasiliense***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae, as *brasiliense*); Amarante, 2002:69 (in catalog of Neotropical Sphecidae).

### **3. complanatum (F. Smith)**

*Podium complanatum* F. Smith, 1856:236, ♀. Holotype or syntypes: ♀, South America: no specific locality (OXUM). – Kohl, 1902:91 (original description copied). – **As *Sceliphron complanatum***: Dalla Torre, 1897:382 (new combination, in catalog of world Hymenoptera). – **As *Penepodium complanatum***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae).

### **4. distinguendum (Kohl)**

*Podium distinguendum* Kohl, 1902:76, ♀. Syntypes: Brazil: Santa Catarina: Blumenau (NHMW). – **As *Penepodium distinguendum***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae).

### **5. egregium (de Saussure)**

*Podium egregium* de Saussure, 1867:35, ♀. Syntypes: Uruguay: no specific locality (NHMW). – Kohl, 1902:89 (in revision of Podiini); Strand, 1910a:128 (Paraguay); Schroetky, 1913a:223 (Uruguay). – **As *Sceliphron egregium***: Dalla Torre, 1897:384 (new combination, in catalog of world Hymenoptera); Schroetky, 1903b:123 (in checklist of Hymenoptera of Argentina, Paraguay, and Uruguay); Strand, 1910a:128 (Paraguay). – **As *Penepodium egregium***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae).

As *Podium rufipes*: Taschenberg, 1869:425 (Brazil: Lagoa Santa). Corrected to *Podium egregium* by Kohl, 1902:89.

### **6. fallax (Kohl)**

*Podium fallax* Kohl, 1902:80, ♀. Syntypes: Brazil: Rio Grande do Sul: no specific locality (NHMW). – **As *Penepodium fallax***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Dollfuss, 1989:11 (type material in NHMW); Amarante, 2002:69 (in catalog of Neotropical Sphecidae).

### **7. foeniforme (Perty)**

*Ammophilus foeniformis* Perty, 1833:141, sex not indicated. Holotype or syntypes: Brazil: Bahia: Bahia, now Salvador (lost: Diller, 1990:74). – Diller, 1990:74 (type not located in Zool. Staatssammlung München). – **As *Podium foeniforme***: Kohl, 1902:48 (new combination, in revision of Podiini); W. Schulz, 1911b:160 (description of ♂);

Cameron, 1912a:427 (Guyana) – **As *Sceliphron foeniforme***: Dalla Torre, 1897:385 (new combination, in catalog of world Hymenoptera). – **As *Penepodium foeniforme***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Hanson and Menke, 1995:637 (known from Costa Rica); Amarante, 2002:69 (in catalog of Neotropical Sphecidae); Ruíz Cancino, Coronado Blanco, Varela Fuente, and Horta Vega, 2002:669 (in checklist of Mexican Sphecidae).

*Podium nitidum* Spinola, 1851b:33, ♀, ♂. Lectotype: ♂, Brazil: Pará: Belém (Torino), designated by Menke in R. Bohart and Menke, 1976:92. Tentatively synonymized with *Podium foeniforme* by Kohl, 1902:48, definitely by Zavattari, 1908:5, and W. Schulz, 1911b:160. – F. Smith, 1856:235 (in catalog of Hymenoptera in British Museum); Kohl, 1902:93 (original description copied); Casolari and Casolari Moreno, 1980:110 (specimens in M. Spinola collection, Torino); Pagliano, 2008:538 (specimens in M. Spinola collection, Torino, including lectotype). – **As *Sceliphron nitidum***: Dalla Torre, 1897:388 (new combination, in catalog of world Hymenoptera).

*Podium nitidum* Spinola, 1853:49. Objective synonym of *Podium nitidum* Spinola, 1851.

*Podium bellum* Cameron, 1888a:28, ♀. Holotype or syntypes: ♀, Panama: Bugaba (BMNH or OXUM). Synonymized with *Podium foeniforme* by Kohl, 1902:48. – Ashmead, 1899d:355 (in checklist of North American Sphecidae). – **As *Sceliphron bellum***: Dalla Torre, 1897:379 (new combination, in catalog of world Hymenoptera).

### 8. *fumipenne* (Taschenberg)

*Podium fumipenne* Taschenberg, 1869:425, ♀, ♂. Lectotype: ♂, Argentina or Brazil: Paraná (Halle), designated by Menke in R. Bohart and Menke, 1976:92. – Burmeister, 1872:240 (Argentina); Kohl, 1902:88 (in revision of Podiini); Schrottky, 1903b:123 (in checklist of Hymenoptera of Argentina, Paraguay, and Uruguay), 1913a:223 (Argentina: Río Negro, Entre Ríos; Uruguay); Bischoff and von Schulthess, 1937:168 (Lapango on Pilcomayo River). – **As *Sceliphron fumipenne***: Dalla Torre, 1897:386 (new combination, in catalog of world Hymenoptera); Schrottky, 1903b:123 (listed). – **As *Penepodium fumipenne***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Genise, 1981d:51 (nest and prey, use of excrements of rodent *Hydrochoeris hydrochoeris* for nest closure); Amarante, 2002:69 (in catalog of Neotropical Sphecidae); Buys, 2009e:279 (Brazil: recorded from Rio de Janeiro State by Amarante, 2002).

### 9. *gorianum* (Lepelletier de Saint Fargeau)

*Podium gorianum* Lepelletier de Saint Fargeau, 1845:324, ♀. Holotype ♀, “Cayenne” [may be entire French Guiana, or department of Cayenne, or city of Cayenne] (originally Serville coll., now M. Spinola coll., TORINO). – Spinola, 1853:51 (in review of *Podium*, as *goryanum*); Kohl, 1902:69 (in revision of Podiini); W. Schulz, 1904c:778 (Brazil: Saõ Paulo d'Oliveira), 780 (comparison with *Podium flavipenne*); F. Williams, 1928a:127 (British Guyana and Brazil); Richards, 1937a:106 (Guyana, as *goryanum*); Fernald, 1942:30 (Guyana: Kartabo); Richards, 1937a:106 (cockroach prey); Bradley, 1957:43 (type in Turin); Casolari and Casolari Moreno, 1980:110 (specimens in M. Spinola collection); Pagliano, 2008:538 (holotype in M. Spinola collection, Torino). – **As *Sceliphron gorianum***: Dalla Torre, 1897:385 (new combination, as synonym of *Sceliphron flavipenne*). – **As *Penepodium gorianum***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae, as *goryanum*); Nascimento and Overal, 1980:8 (Brazil, Peru); Garcia and Adis, 1993:347 (nesting habits); Hanson and Menke, 1995:637 (known from Costa Rica, as *goryanum*); Amarante, 2002:69 (in catalog of Neotropical Sphecidae); Rasmussen and Asenjo, 2009:15 (in checklist of Crabronidae of Peru).

As *Podium luteipenne*: F. Smith, 1856:pl. VI, fig 3 (illustration of habitus), corrected to *Podium gorianum* by Kohl, 1902:69.

As *Podium foeniforme*: Cameron, 1912:427 corrected to *Podium gorianum* by Richards, 1937a:106.

### 10. *haematogastrum* (Spinola)

*Podium haematogastrum* Spinola, 1851b:34, ♀, ♂. Syntypes: Brazil: Pará: Belém (Torino). – F. Smith, 1856:235 (in catalog of Hymenoptera in British Museum); Kohl, 1902:90 (in revision of Podiini); W. Schulz, 1904c:780 (Brazil, variation); Ducke, 1907b:90 (Brazil: Maranhão State: Alcântara, Codo), 1910:109 (Brazil: Ceará State); Strand,

1910a:127 (Paraguay); W. Schulz, 1911b:160 (study of type, Kohl's interpretation confirmed); Schrottky, 1913a:223 (Paraguay); F. Williams, 1928a:124 (nesting habits); Snodgrass, 1941:50 (male genitalia); Casolari and Casolari Moreno, 1980:110 (specimen in M. Spinola collection, Torino); Pagliano, 2008:538 (unpublished lectotype in M. Spinola collection, Torino). – **As *Sceliphron haematogastrum***: Dalla Torre, 1897:386 (new combination, in catalog of world Hymenoptera); W. Fox, 1897b:373 (Brazil, diagnostic characters); Strand, 1910a:127 (Paraguay). – **As *Penepodium haematogastrum***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Nascimento and Overal, 1980:8 (Brazil); Ohl, 1996b:216 (listed); Amarante, 2002:69 (in catalog of Neotropical Sphecidae); Rasmussen and Asenjo, 2009:15 (in checklist of Crabronidae of Peru).

*Podium haematogastrum* Spinola, 1853:50. Objective synonym of *Podium haematogastrum* Spinola, 1851.

*Podium consanguineum* F. Smith, 1856:235, ♀. Holotype or syntypes: ♀, South America: no specific locality (BMNH). Synonymized with *Podium haematogastrum* by Menke in R. Bohart and Menke, 1976:92. – Kohl, 1902:92 (original description copied). – **As *Sceliphron consanguineum***: Dalla Torre, 1897:382 (new combination, in catalog of world Hymenoptera); W. Fox, 1897b:373 (Brazil: Chapada and Rio de Janeiro).

### 11. *hortivagans* (Strand)

*Sceliphron hortivagans* Strand, 1910a:128, ♂. Holotype: ♂, Paraguay: Asunción (ZMHU). – **As *Penepodium hortivagans***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae).

### 12. *junonium* (Schrottky)

*Sceliphron junonium* Schrottky, 1903a:41, ♂. Holotype or syntypes: ♂, Brazil: São Paulo: Jundiahy, now Jundiá (depository?). – **As *Penepodium junonium***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae).

### 13. *latro* (Kohl)

*Podium latro* Kohl, 1902:74, ♀. Syntypes: ♀, Brazil: Santa Catarina: no specific locality (NHMW). – Schrottky, 1913a:223 (Paraguay). – **As *Penepodium latro***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Dollfuss, 1989:11 (type material in NHMW); Amarante, 2002:69 (in catalog of Neotropical Sphecidae); Buys, 2006a:121 (nesting habits, description of mature larva), 2009e:279 (Brazil: Rio de Janeiro: Angra dos Reis).

### 14. *luteipenne* (Fabricius)

*Pepsis luteipennis* Fabricius, 1804:210, sex not indicated. Lectotype: ♀, South America: no specific locality (ZMUC), designated by van der Vecht, 1961a:44. – **As *Pepsis luteipenne***: Dahlbom, 1845:XXI (new combination, specimens in collection Fabricius are *Podium luteipenne*). – **As *Podium luteipenne***: Dahlbom, 1843:23 (new combination, re-description), 1845:435 (in key); Lepeletier de Saint Fargeau, 1845:324 (in revision of world Hymenoptera); Spinola, 1851:51 and 1853:51 (as junior synonym of *Podium flavipenne*, authorship mistakenly attributed to Lepeletier de Saint Fargeau); F. Smith, 1856:235 (in catalog of Hymenoptera in British Museum, as *luteipennis*), nec pl VI, fig 3 (illustration of habitus = *Penepodium gorianum*); Cameron, 1888a:27 (Panama); Kohl, 1902:69 (as synonym of *Podium gorianum*); Richards, 1937a:106 (Guyana); van der Vecht, 1961a:43 (redescription of holotype); Casolari and Casolari Moreno, 1980:110 (specimens in M. Spinola collection, Torino); Pagliano, 2008:537 (specimens in M. Spinola collection, Torino). – **As *Sceliphron luteipenne***: Dalla Torre, 1897:381 (new combination, in catalog of world Hymenoptera). – **As *Penepodium luteipenne***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Nascimento and Overal, 1980:8 (Brazil); Brockmann, 1985b:312 (nest closure summary); Radović, 1985:64 (sting apparatus analyzed); Ohl, 1996b:216 (listed); Hanson and Menke, 1995:637 (known from Panama); Amarante, 2002:69 (in catalog of Neotropical Sphecidae); Buys, 2009a:33 (larval behavior and development), Buys, 2009e:279 (Brazil: Rio de Janeiro: Niterói, Petrópolis), Silva

Jardim; nesting habits), 2011d:99 (nesting exclusively in shaded areas from November to May, and exclusively in exposed area from June to October), 2012a:24 (nesting habits).

*Podium flavipenne* Latreille, 1809:59, sex not indicated. Holotype or syntypes: “Cayenne” [may be entire French Guiana, or department of Cayenne, or city of Cayenne] (lost). Synonymized with *Podium luteipenne* by Lepeletier de Saint Fargeau, 1845:324. – Spinola, 1851:51 and 1853:51 (in key to *Podium*, authorship mistakenly attributed to Fabricius); Kohl, 1902:84 (in revision of Podiini); W. Schulz, 1904c:779 (questioned determination of W. Fox, 1897); Cameron, 1912a:427 (Guyana); F. Williams, 1928a:118 (nesting habits); G. Carpenter, 1930b:298 (nest closure); Evans and Lin, 1956a:151 (discussion of Williams’s 1928a:121 description of larva); Piek and Spanjer, 1986:188 (in list of Sphecidae with known prey. – **As *Sceliphron flavipenne***: Dalla Torre, 1897:381 (new combination, in catalog of world Hymenoptera); W. Fox, 1897b:373 (Brazil: Rio de Janeiro and Santarém). – **As *Dynatus flavipennis***: Casolari and Casolari Moreno, 1980:110 (new combination, specimen in M. Spinola collection, Torino); Pagliano, 2008:537 (specimen in M. Spinola collection, Torino).

*Podium latreillei* Spinola, 1853:51 (as *Latreillei*, incorrect original capitalization). Unnecessary substitute name for *Podium flavipenne* of Latreille, 1809. Synonymized with *Podium luteipenne* by F. Smith, 1856:235. – Casolari and Casolari Moreno, 1980:110 (specimens in M. Spinola collection, Torino); Pagliano, 2008:538 (specimen in M. Spinola collection, Torino).

*Podium dubium* Taschenberg, 1869:427, ♀. Lectotype: ♀, Brazil: Nova Friburgo (HALLE), designated by Menke in R. Bohart and Menke, 1976:86. Synonymized with *Penepodium luteipenne* by Menke in R. Bohart and Menke, 1976:86. – Kohl, 1902:86 (in revision of Podiini); F. Williams, 1928a:126 (Brazil: Nichteroy near Rio de Janeiro, now Niterói); Buys, 2001:329 (description of last instar larva). – **As *Sceliphron dubium***: Dalla Torre, 1897:384 (new combination, in catalog of world Hymenoptera).

### 15. *mocsaryi* (Kohl)

*Podium mocsaryi* Kohl, 1902:73, ♀ (as *Mocsáryi*, incorrect original capitalization and diacritic mark). Holotype: ♀, South America: no specific locality (TMB). – Richards, 1937a:106 (Guyana). – **As *Penepodium mocsaryi***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae); Rasmussen and Asenjo, 2009:15 (in checklist of Crabronidae of Peru).

### 16. *pauloense* (Schrottky)

*Sceliphron pauloense* Schrottky, 1903a:42, ♀ (as *pauloëense*, incorrect original diacritic mark). Holotype or syntypes: ♀, Brazil: São Paulo: Jundiahy, now Jundiaí (depository?). – **As *Penepodium pauloense***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae).

### 17. *princeps* (Kohl)

*Podium princeps* Kohl, 1902:83, ♀. Syntypes: “Cayenne” [may be entire French Guiana, or department of Cayenne, or city of Cayenne] (ZMHU). – **As *Penepodium princeps***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae); Rasmussen and Asenjo, 2009:15 (in checklist of Crabronidae of Peru).

### 18. *romandinum* (de Saussure)

*Podium romandinum* de Saussure, 1867:35, ♀. Syntypes: Brazil: Amazon area: no specific locality (NHMW). – Kohl, 1902:81 (in revision of Podiini). – **As *Sceliphron romandinum***: Dalla Torre, 1897:389 (new combination, in catalog of world Hymenoptera); W. Fox, 1897b:373 (Brazil: Santarém). – **As *Penepodium romandinum***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Dollfuss, 1989:11 (type material in NHMW); Amarante, 2002:69 (in catalog of Neotropical Sphecidae); Rasmussen and Asenjo, 2009:15 (in checklist of Crabronidae of Peru).

**19. *spretum* (Kohl)**

*Podium spretum* Kohl, 1902:79, ♀. Holotype: ♀, Brazil: no specific locality (ZMHU). – **As *Penepodium spretum***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae); Buys, 2009e:279 (Brazil: recorded from Rio de Janeiro State by Amarante, 2002).

**20. *taschenbergi* (Kohl)**

*Podium taschenbergi* Kohl, 1902:87, ♀ (as *Taschenbergi*, incorrect original capitalization). Holotype: ♀, Brazil: Nova Friburgo (Halle). – **As *Penepodium taschenbergi***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae); Buys, 2009e:279 (Brazil: recorded from Rio de Janeiro State by Kohl, 1902, and by Amarante, 2002).

**21. *triste* (Kohl)**

*Podium egregium* var. *triste* Kohl, 1902:90, ♀, ♂. Syntypes: Brazil: Rio Grande do Sul (NHMW). – **As *Penepodium triste***: Menke in R. Bohart and Menke, 1976:92 (new combination, new status, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae).

**22. *viduatum* (Kohl)**

*Podium viduatum* Kohl, 1902:82, ♂. Holotype: ♂, Brazil: Pernambuco (NHMW). – **As *Penepodium viduatum***: Menke in R. Bohart and Menke, 1976:92 (new combination, in checklist of world Sphecidae); Amarante, 2002:69 (in catalog of Neotropical Sphecidae).

**sp.**

Starr and Hook, 2003:22 (in catalog of Aculeata of Trinidad, West Indies); Field, Ohl, and Kennedy, 2011:734 (in molecular cladistic analysis of Ammophilini).