

Cladistic analysis of Spartocerini Amyot & Serville 1843

(Hemiptera, Coreidae, Coreinae)

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Supplementary material

Table S1. Species examined in the phylogenetic analysis including subfamily, tribe, and number of males and females analyzed. * Type species; ↓ Obtained through exchange between the BMNH and MCNZ collections.

Subfamily	Tribe	Species	Male	Female	Museum
Coreinae	Acanthocephalini	<i>Acanthocephala</i> sp.	4	3	MCNZ
Coreinae	Acanthocephalini	<i>Empedocles luridus</i> Brailovsky & Barrera	5	3	MCNZ
Coreinae	Acanthocerini	<i>Athaumastus haematicus</i> (Stål)	5	3	MCNZ
Coreinae	Acanthocerini	* <i>Camptischium clavipes</i> (Fabricius)	3	3	MCNZ
Coreinae	Acanthocerini	<i>Crinocerus sanctus</i> (Fabricius)	1	8	MCNZ
Coreinae	Acanthocerini	<i>Lybindus dichrous</i> Stål	4	4	MCNZ
Coreinae	Anisoscelini	* <i>Anisoscelis (Anisoscelis) foliaceus</i> (Fabricius)	2	5	MCNZ
Coreinae	Anisoscelini	<i>Holymenia rubiginosa</i> Breddin	4	4	MCNZ
Coreinae	Anisoscelini	<i>Leptoglossus neovexillatus</i> Allen	5	5	MCNZ
Coreinae	Anisoscelini	* <i>Leptoscelis bipustulatus</i> (Linnaeus)	5	5	INPA
Coreinae	Anisoscelini	* <i>Phthiacnemia picta</i> (Drury)	2	2	MCNZ
Coreinae	Chariesterini	<i>Chariesterus cuspidatus</i> Distant	5	5	MCNZ
Coreinae	Coreini	* <i>Coreus marginatus</i> (Linnaeus)	2	2	MCNZ↓; NHRS
Coreinae	Daladerini	* <i>Dalader acuticosta</i> Amyot & Serville	1	3	MCNZ↓; NHRS
Coreinae	Discogastrini	<i>Discogaster drewseni</i> Stål	8	8	MCNZ
Coreinae	Hypselonotini	<i>Acanonicus hahni</i> (Stål)	4	5	MCNZ
Coreinae	Hypselonotini	<i>Acidomeria sordida</i> (Berg)	4	4	MCNZ
Coreinae	Hypselonotini	<i>Anasa varicornis</i> (Westwood)	4	4	MCNZ

Subfamily	Tribe	Species	Male	Female	Museum
Coreinae	Hypselonotini	* <i>Hypselonotus interruptus</i> Hahn	3	5	MCNZ
Coreinae	Hypselonotini	<i>Paryphes</i> sp.	1	0	MCNZ
Coreinae	Hypselonotini	* <i>Sethenira testacea</i> Spinola	6	4	MCNZ
Coreinae	Mictini	* <i>Mictis profana</i> (Fabricius)	2	4	MCNZ; NHRS
Coreinae	Nematopodini	* <i>Melucha phyllocnemis</i> (Burmeister)	6	8	MCNZ
Coreinae	Nematopodini	<i>Ouranion complutus</i> (Breddin)	1	2	DZUP
Coreinae	Nematopodini	<i>Ouranion crenulatus</i> (Stål)	6	6	UFRG; UFV; ZUEC;
Coreinae	Nematopodini	* <i>Ouranion serrulatus</i> (Perty)	1	1	ZUEC
Coreinae	Nematopodini	<i>Pachylis laticornis laticornis</i> (Fabricius)	4	4	MCNZ
Coreinae	Nematopodini	* <i>Pachylis pharaonis</i> (Herbst)	4	9	MCNZ
Coreinae	Placoscelini	<i>Nyttum punctatum</i> (Dallas)	2	1	MCNZ; ZUEC
Coreinae	Spartocerini	* <i>Euagona diana</i> Dallas	1	0	ZUEC
Coreinae	Spartocerini	<i>Euagona</i> sp.	1	0	MZUSP
Coreinae	Spartocerini	<i>Eubule ampliata</i> (Valdés)	0	1	FSCA
Coreinae	Spartocerini	<i>Eubule farinosa</i> (Dallas)	0	1	DZUP
Coreinae	Spartocerini	<i>Eubule glyphica</i> Berg	0	1	MAPA
Coreinae	Spartocerini	<i>Eubule rugulosa</i> Brailovsky	4	3	DZUP; MCNZ
Coreinae	Spartocerini	* <i>Eubule sculpta</i> (Perty)	11	5	MAPA; MCNZ; UFRG; ZUEC;
Coreinae	Spartocerini	<i>Menenotus diminutus</i> Walker	4	2	DZUP; MCNZ
Coreinae	Spartocerini	* <i>Menenotus lunatus</i> (Laporte)	8	11	DZUP; INPA; MCNZ; MZUSP; UFRJ; ZUEC
Coreinae	Spartocerini	* <i>Molchina compressicornis</i> (Fabricius)	1	2	DZUP; INPA

Subfamily	Tribe	Species	Male	Female	Museum
Coreinae	Spartocerini	<i>Molchina hopei</i> (Perty)	3	1	INPA
Coreinae	Spartocerini	<i>Molchina linnei</i> Stål	4	1	DZUP; MZUSP
Coreinae	Spartocerini	<i>Sephina bicornis</i> Distant	2	1	DZUP
Coreinae	Spartocerini	<i>Sephina geniculata</i> Distant	0	3	MZUSP; MCNZ
Coreinae	Spartocerini	<i>Sephina pubera</i> (Erichson)	0	1	INPA
Coreinae	Spartocerini	* <i>Sephina pustulata</i> (Fabricius)	7	5	MCNZ
Coreinae	Spartocerini	<i>Spartocera batatas</i> (Fabricius)	39	46	FSCA; INPA; MAPA; MCNZ; MZUSP; UFRG; UFV; ZUEC
Coreinae	Spartocerini	<i>Spartocera cinnamomea</i> (Hahn)	16	18	INPA; MAPA; MCNZ; MZUSP; UFRG; UFV; ZUEC
Coreinae	Spartocerini	<i>Spartocera denticulata</i> Stål	10	10	INPA; MAPA; MCNZ; MZUSP; UFRG; ZUEC
Coreinae	Spartocerini	<i>Spartocera dentiventris</i> Berg	11	15	MAPA; MCNZ; UFRG
Coreinae	Spartocerini	* <i>Spartocera fusca</i> (Thunberg)	42	53	FSCA; INPA; MAPA; MCNZ; MZUSP; UFRG; UFV; ZUEC
Coreinae	Spartocerini	<i>Spartocera lativentris</i> Stål	6	10	MAPA; MCNZ; UFRG; UFV
Coreinae	Incetae sedis	* <i>Mamurius mopsus</i> Stål	2	1	MCNZ‡; NHRS
Hydarinae	-	* <i>Madura fuscoclavata</i> Stål	5	3	MCNZ
Meropachyinae	Meropachyini	* <i>Hirilcus gracilis</i> (Burmeister)	3	3	INPA; MCNZ; MZUSP
Meropachyinae	Meropachyini	<i>Meropachys affinis</i> (Dallas)	2	2	INPA; MZUSP
Pseudophloeinae	Pseudophloeini	<i>Vilga (Laevilga) sanctipauli</i> Dolling	1	7	MCNZ

Script S1.

```
macro=;
macreport-;
clbuffer;
var: x y r;
set x 11;
set y 11;
set r 100;
var: resultados['x' 'y'];
loop = primeiro 0 ('x'-1)
loop = segundo 0 ('y'-1)
set resultados [#primeiro #segundo ] sprdiff [#primeiro #segundo 'r'];
stop;
stop;
lquote [];
log/;
macreport-;
log lazy_log_sem_tab.txt;
quoteTrees, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10;
loop = indice 0 ('x'-1)
quote #indice, 'resultados[#indice 0]', 'resultados[#indice 1]', 'resultados[#indice 2]',
'resultados[#indice 3]', 'resultados[#indice 4]', 'resultados[#indice 5]', 'resultados[#indice 6]',
'resultados[#indice 7]', 'resultados[#indice 8]', 'resultados[#indice 9]', 'resultados[#indice
10]';
stop;
log/;
```

Table S2. Characters matrix Spartocerini.

Species	1														0		
	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	
<i>Acanthocephala</i> sp.	0	0	0	0	0	0	1	0	0	1	1	1	1	1	0	0	1
<i>Empedocles luridus</i> Brailovsky & Barrera	1	0	0	1	0	0	1	0	0	1	1	1	1	1	0	0	1
<i>Athaumastus haematicus</i> (Stål)	0	0	0	0	0	0	1	0	0	0	1	0	1	1	0	1	2
<i>Camptischium clavipes</i> (Fabricius)	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	2
<i>Crinocerus sanctus</i> (Fabricius)	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	2
<i>Lybindus dichrous</i> Stål	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2
<i>Anisoscelis (A.) foliaceus</i> (Fabricius)	0	0	0	0	0	0	1	1	0	1	0	0	0	0	1	0	1
<i>Holymenia rubiginosus</i> Breddin	1	0	0	1	0	0	1	1	0	1	0	0	0	0	1	0	1
<i>Leptoglossus neovexillatus</i> Allen	1	0	0	0	0	0	0	1	1	0	0	1	0	0	1	0	1
<i>Leptoscelis bipustulatus</i> (Linnaeus)	0	0	0	0	0	1	1	0	0	1	0	0	0	0	1	0	1
<i>Phthiacnemia picta</i> (Drury)	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	1
<i>Chariesterus cuspidatus</i> Distant	1	0	0	1	0	0	0	1	1	1	0	0	1	0	0	1	0
<i>Coreus marginatus</i> (Linnaeus)	1	0	0	0	0	0	0	1	1	1	0	0	1	1	0	1	2
<i>Dalader acuticosta</i> Amyot & Serville	0	0	0	0	0	0	1	1	0	1	1	0	0	1	0	1	2
<i>Discogaster drewseni</i> Stål	0	0	1	0	0	1	0	0	0	1	0	0	1	1	0	0	1
<i>Acanonicus hahni</i> (Stål)	1	1	1	0	1	1	0	0	0	1	1	0	0	1	0	0	0
<i>Acidomeria sordida</i> (Berg)	1	1	1	0	0	0	0	0	1	1	0	0	1	0	0	1	2
<i>Anasavaricornis</i> (Westwood)	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	1	1
<i>Hypselonotus interruptus</i> Hahn	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1
<i>Paryphes</i> sp.	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	1
<i>Sethenira testacea</i> Spinola	1	1	1	0	1	0	0	0	1	1	0	1	1	0	0	1	2
<i>Mictis profana</i> (Fabricius)	0	0	0	0	0	0	1	0	1	1	1	0	0	1	0	1	2
<i>Melucha phyllocnemis</i> (Burmeister)	0	1	1	1	1	0	1	1	0	1	1	0	0	1	0	0	1
<i>Ouranion complutus</i> (Breddin)	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1
<i>Ouranion crenulatus</i> (Stål)	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1
<i>Ouranion serrulatus</i> (Perty)	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	2
<i>Pachylis laticornis laticornis</i> (Fabricius)	0	1	0	0	1	0	1	1	0	1	0	0	0	1	0	0	1
<i>Pachylis pharaonis</i> (Herbst)	0	1	0	0	1	0	1	1	0	1	0	0	0	1	0	0	1
<i>Nyttum punctatum</i> (Dallas)	0	0	0	0	0	0	1	0	0	1	1	0	0	1	0	0	2
<i>Euagona diana</i> (Dallas)	0	0	1	1	1	1	0	0	1	1	0	0	1	1	0	1	2
<i>Euagona</i> sp.	0	0	0	1	1	1	1	0	0	1	1	0	0	1	1	0	2
<i>Eubule ampliata</i> (Valdés)	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	1	2
<i>Eubule farinosa</i> (Dallas)	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	1
<i>Eubule glyphica</i> Berg	0	1	1	0	1	1	1	0	1	0	1	0	0	1	0	0	1
<i>Eubule rugulosa</i> Brailovsky	0	0	0	0	0	0	1	0	0	1	1	0	0	1	0	0	1
<i>Eubule sculpta</i> (Perty)	0	0	1	0	1	1	0	0	0	1	1	0	0	1	0	0	1
<i>Menenotus diminutus</i> Walker	0	0	0	0	0	0	1	0	1	1	1	0	0	1	1	0	2
<i>Menenotus lunatus</i> (Laporte)	0	0	0	0	0	0	1	0	1	1	1	0	0	1	1	0	2
<i>Molchina compressicornis</i> (Fabricius)	0	0	0	0	1	0	1	1	0	1	1	0	0	1	0	0	2
<i>Molchina hopei</i> (Perty)	0	0	1	0	1	0	1	1	0	1	1	0	0	1	0	0	2
<i>Molchina linnei</i> Stål	0	0	0	0	1	0	1	1	0	1	1	0	0	1	0	0	2
<i>Sephina bicornis</i> Distant	0	0	0	0	1	1	1	0	1	1	1	0	0	1	0	0	1
<i>Sephina geniculata</i> Distant	0	1	1	1	1	1	1	0	1	1	1	0	0	1	0	0	2
<i>Sephina pubera</i> (Erichson)	0	0	0	?	?	?	1	0	1	1	1	0	0	1	0	0	1
<i>Sephina pustulata</i> (Fabricius)	0	1	1	0	1	1	1	0	0	1	1	0	0	1	0	0	1
<i>Spartocera batatas</i> (Fabricius)	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0	1	2
<i>Spartocera cinnamomea</i> (Hahn)	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	0	1
<i>Spartocera denticulata</i> Stål	0	1	1	0	0	0	0	1	1	1	1	0	0	1	1	0	1
<i>Spartocera dentiventris</i> Berg	0	1	1	0	1	1	0	0	1	1	1	0	0	1	1	0	1
<i>Spartocera fusca</i> (Thunberg)	0	0	0	0	0	1	0	0	1	1	1	0	0	1	1	0	1
<i>Spartocera lativentris</i> Stål	0	1	1	0	1	1	0	0	1	1	1	0	0	1	1	0	1
<i>Mamurius mopsus</i> Stål	1	0	0	1	0	0	0	0	1	0	0	0	1	0	0	1	0
<i>Madura fuscoclavata</i> Stål	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
<i>Hirilcus gracillis</i> (Burmeister)	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	1	0
<i>Meropachys affinis</i> (Dallas)	0	1	1	0	1	1	1	0	0	1	0	0	1	1	0	0	2
<i>Vilga (Laevivilga) sanctipauli</i> Dolling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Species	2		3	
	0	0	0	0
<i>Acanthocephala</i> sp.	0	0	0	0
<i>Empedocles luridus</i> Brailovsky & Barrera	0	0	0	0
<i>Athaumastus haematicus</i> (Stål)	1	1	0	1
<i>Camptischium clavipes</i> (Fabricius)	1	0	0	0
<i>Crinocerus sanctus</i> (Fabricius)	1	0	0	0
<i>Lybindus dichrous</i> Stål	1	1	0	1
<i>Anisoscelis (A.) foliaceus</i> (Fabricius)	0	1	0	0
<i>Holymenia rubiginosus</i> Breddin	0	0	0	1
<i>Leptoglossus neovexillatus</i> Allen	0	1	0	0
<i>Leptoscelis bipustulatus</i> (Linnaeus)	0	0	0	0
<i>Phthiacnemia picta</i> (Drury)	1	0	0	0
<i>Chariesterus cuspidatus</i> Distant	0	1	0	1
<i>Coreus marginatus</i> (Linnaeus)	0	0	0	0
<i>Dalader acuticosta</i> Amyot & Serville	0	0	0	0
<i>Discogaster drewseni</i> Stål	0	0	0	1
<i>Acanonicus hahni</i> (Stål)	1	0	0	0
<i>Acidomeria sordida</i> (Berg)	1	1	0	1
<i>Anasa varicornis</i> (Westwood)	0	0	0	0
<i>Hypselonotus interruptus</i> Hahn	0	1	0	0
<i>Paryphes</i> sp.	0	0	0	0
<i>Sethenira testacea</i> Spinola	1	0	0	0
<i>Mictis profana</i> (Fabricius)	0	0	0	0
<i>Melucha phyllocnemis</i> (Burmeister)	0	0	0	0
<i>Ouranion complutus</i> (Breddin)	0	0	0	1
<i>Ouranion crenulatus</i> (Stål)	0	0	0	1
<i>Ouranion serrulatus</i> (Perty)	0	0	0	1
<i>Pachylis laticornis laticornis</i> (Fabricius)	0	0	0	0
<i>Pachylis pharaonis</i> (Herbst)	0	0	0	0
<i>Nyttum punctatum</i> (Dallas)	0	0	0	1
<i>Euagona diana</i> (Dallas)	0	0	0	0
<i>Euagona</i> sp.	0	0	0	0
<i>Eubule ampliata</i> (Valdés)	0	0	1	0
<i>Eubule farinosa</i> (Dallas)	0	0	1	0
<i>Eubule glyphica</i> Berg	0	0	1	0
<i>Eubule rugulosa</i> Brailovsky	0	0	1	0
<i>Eubule sculpta</i> (Perty)	0	0	1	0
<i>Menenotus diminutus</i> Walker	0	0	0	1
<i>Menenotus lunatus</i> (Laporte)	0	0	0	1
<i>Molchina compressicornis</i> (Fabricius)	0	0	0	0
<i>Molchina hopei</i> (Perty)	0	0	0	0
<i>Molchina linnei</i> Stål	0	0	0	0
<i>Sephina bicornis</i> Distant	0	0	1	0
<i>Sephina geniculata</i> Distant	0	0	1	0
<i>Sephina pubera</i> (Erichson)	0	1	1	0
<i>Sephina pustulata</i> (Fabricius)	0	0	1	0
<i>Spartocera batatas</i> (Fabricius)	0	0	0	1
<i>Spartocera cinnamomea</i> (Hahn)	0	0	0	0
<i>Spartocera denticulata</i> Stål	0	0	0	1
<i>Spartocera dentiventris</i> Berg	0	1	0	0
<i>Spartocera fusca</i> (Thunberg)	0	0	0	1
<i>Spartocera lativentris</i> Stål	0	0	0	1
<i>Mamurius mopsus</i> Stål	1	0	0	1
<i>Madura fuscoclavata</i> Stål	0	0	0	1
<i>Hirilcus gracilis</i> (Burmeister)	0	0	0	1
<i>Meropachys affinis</i> (Dallas)	0	0	0	0
<i>Vilga (Laevivilga) sanctipauli</i> Dolling	0	0	0	0

Species	4					5				
	0	0	0	0	0	0	0	0	0	0
<i>Acanthocephala</i> sp.	0	1	0	1	0	0	1	0	1	0
<i>Empedocles luridus</i> Brailovsky & Barrera	0	1	0	1	0	0	1	0	1	-
<i>Athaumastus haematicus</i> (Stål)	0	1	0	0	0	0	1	0	0	1
<i>Camptischium clavipes</i> (Fabricius)	0	1	0	1	0	0	1	0	0	1
<i>Crinocerus sanctus</i> (Fabricius)	0	1	0	1	0	0	1	0	0	1
<i>Lybindus dichrous</i> Stål	0	1	0	0	0	0	1	1	0	0
<i>Anisoscelis (A.) foliaceus</i> (Fabricius)	0	0	0	0	0	0	0	2	2	0
<i>Holymenia rubiginosus</i> Breddin	0	1	0	1	1	0	0	2	2	0
<i>Leptoglossus neovexillatus</i> Allen	0	1	0	1	1	0	0	2	2	0
<i>Leptoscelis bipustulatus</i> (Linnaeus)	0	1	0	1	0	0	1	0	0	0
<i>Phthiacnemia picta</i> (Drury)	0	1	0	1	0	0	1	0	0	0
<i>Chariesterus cuspidatus</i> Distant	0	0	0	0	0	0	0	0	0	0
<i>Coreus marginatus</i> (Linnaeus)	0	1	0	1	1	0	0	0	0	0
<i>Dalader acuticosta</i> Amyot & Serville	0	1	0	1	0	0	1	1	1	0
<i>Discogaster drewseni</i> Stål	1	-	1	-	0	1	-	1	0	0
<i>Acanonicus hahni</i> (Stål)	1	-	1	-	0	1	-	1	0	0
<i>Acidomeria sordida</i> (Berg)	1	-	1	-	0	1	-	1	0	0
<i>Anasa varicornis</i> (Westwood)	1	-	1	-	0	1	-	1	0	0
<i>Hypselonotus interruptus</i> Hahn	1	-	1	-	0	1	-	1	0	0
<i>Paryphes</i> sp.	1	-	?	?	0	1	-	?	1	?
<i>Sethenira testacea</i> Spinola	1	-	1	-	0	1	-	1	0	0
<i>Mictis profana</i> (Fabricius)	0	1	0	1	1	0	1	0	1	1
<i>Melucha phyllocnemis</i> (Burmeister)	0	1	0	1	1	0	1	0	1	1
<i>Ouranion complutus</i> (Breddin)	0	1	0	1	1	0	1	1	1	0
<i>Ouranion crenulatus</i> (Stål)	0	1	0	1	0	0	1	0	0	1
<i>Ouranion serrulatus</i> (Perty)	0	1	0	1	0	0	1	0	0	1
<i>Pachylis laticornis laticornis</i> (Fabricius)	0	0	0	0	1	0	1	1	1	1
<i>Pachylis pharaonis</i> (Herbst)	0	1	0	1	1	0	1	1	1	1
<i>Nyttum punctatum</i> (Dallas)	0	1	0	1	0	0	1	?	1	?
<i>Euagona diana</i> (Dallas)	1	-	?	?	0	1	-	?	1	?
<i>Euagona</i> sp.	1	-	?	?	0	1	-	?	1	?
<i>Eubule ampliata</i> (Valdés)	?	?	1	-	?	?	1	-	1	0
<i>Eubule farinosa</i> (Dallas)	?	?	?	?	?	?	1	-	1	0
<i>Eubule glyphica</i> Berg	?	?	0	0	0	?	0	0	1	0
<i>Eubule rugulosa</i> Brailovsky	1	-	1	-	0	1	-	1	0	0
<i>Eubule sculpta</i> (Perty)	0	0	0	0	0	0	0	1	1	0
<i>Menenotus diminutus</i> Walker	1	-	1	-	0	1	-	1	0	0
<i>Menenotus lunatus</i> (Laporte)	1	-	1	-	0	1	-	1	0	0
<i>Molchina compressicornis</i> (Fabricius)	0	1	0	1	0	0	1	0	1	0
<i>Molchina hopei</i> (Perty)	0	1	0	0	0	0	1	0	0	1
<i>Molchina linnei</i> Stål	0	1	0	1	0	0	1	0	1	0
<i>Sephina bicornis</i> Distant	1	-	1	-	0	0	1	1	1	0
<i>Sephina geniculata</i> Distant	?	?	1	-	0	?	2	1	-	1
<i>Sephina pubera</i> (Erichson)	?	?	1	-	0	?	2	1	-	1
<i>Sephina pustulata</i> (Fabricius)	1	-	1	-	0	0	1	1	0	0
<i>Spartocera batatas</i> (Fabricius)	1	-	1	-	0	1	-	1	0	0
<i>Spartocera cinnamomea</i> (Hahn)	1	-	1	-	0	1	-	1	0	0
<i>Spartocera denticulata</i> Stål	1	-	1	-	0	1	-	1	0	0
<i>Spartocera dentiventris</i> Berg	1	-	1	-	0	1	-	1	0	0
<i>Spartocera fusca</i> (Thunberg)	1	-	1	-	0	1	-	1	0	0
<i>Spartocera lativentris</i> Stål	1	-	1	-	0	1	-	1	0	0
<i>Mamurius mopsus</i> Stål	0	1	0	1	0	0	1	0	1	0
<i>Madura fuscoclavata</i> Stål	1	-	1	-	0	1	-	1	0	0
<i>Hirilcus gracilis</i> (Burmeister)	0	1	1	-	0	0	1	0	1	1
<i>Meropachys affinis</i> (Dallas)	0	1	0	1	1	0	1	0	1	1
<i>Vilga (Laevivilga) sanctipauli</i> Dolling	0	0	0	0	0	0	0	0	0	-

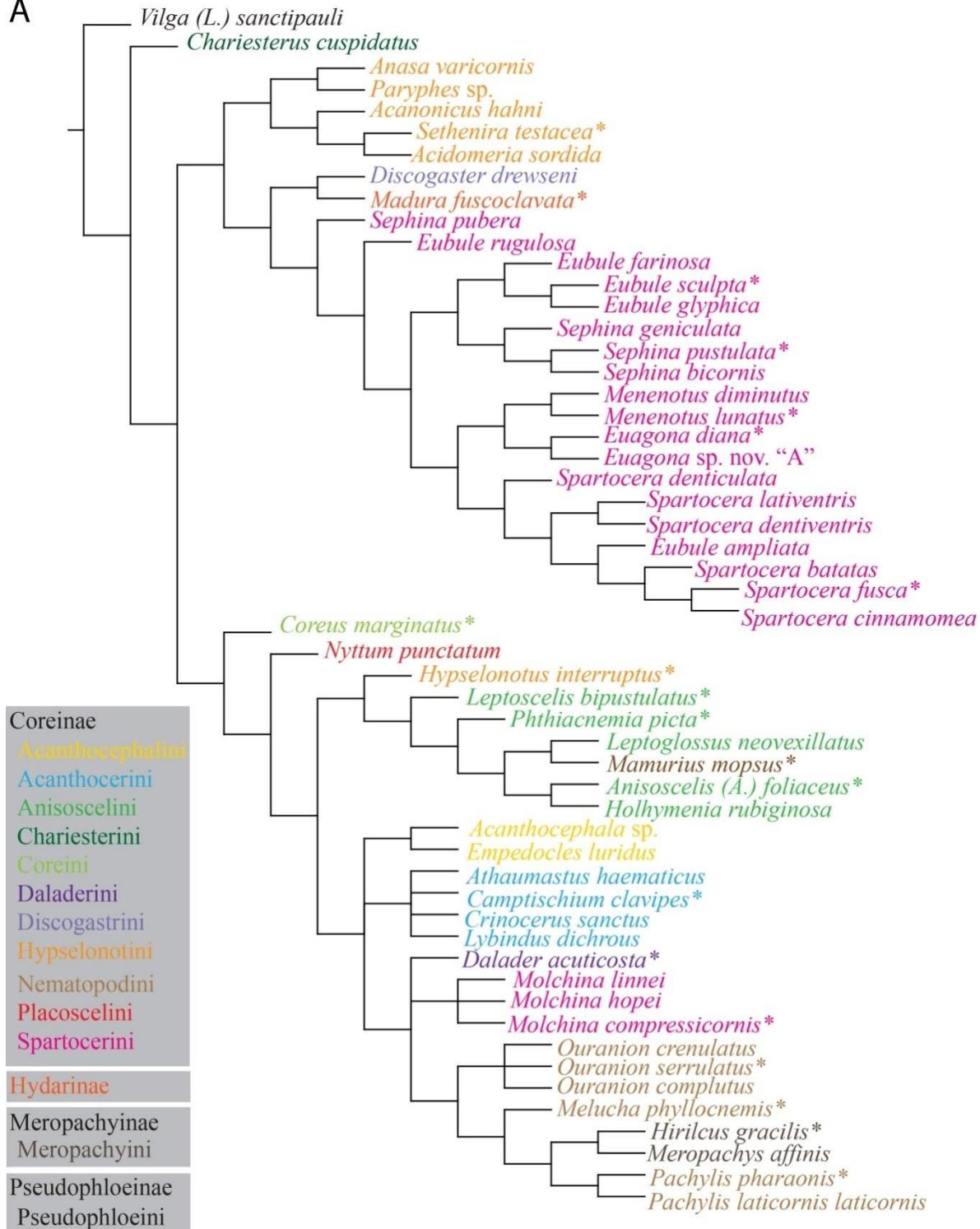
Species	6	7
	0	0
<i>Acanthocephala</i> sp.	- 0 0 0 1 1 0 1 0 0 1 0 0 1 1 0 0 2 0 1 1	
<i>Empedocles luridus</i> Brailovsky & Barrera	- 0 0 0 1 0 1 0 0 1 0 0 1 1 1 0 2 1 0 0	
<i>Athaumastus haematicus</i> (Stål)	- 0 0 1 1 0 1 0 0 1 0 0 1 1 0 0 0 1 0 0	
<i>Camptischium clavipes</i> (Fabricius)	- 0 0 1 1 0 1 0 0 1 0 0 1 1 1 0 2 1 0 1	
<i>Crinocerus sanctus</i> (Fabricius)	1 0 0 1 1 0 0 0 0 1 0 0 1 1 0 0 0 1 0 0	
<i>Lybindus dichrous</i> Stål	- 0 0 1 1 0 0 0 0 0 0 0 1 1 1 0 0 1 1 0	
<i>Anisoscelis (A.) foliaceus</i> (Fabricius)	- 0 1 1 1 0 0 0 0 ? 0 0 1 1 1 0 2 1 1 1	
<i>Holymenia rubiginosus</i> Breddin	- 0 1 1 1 0 0 0 0 0 0 0 1 1 0 0 2 0 0 1	
<i>Leptoglossus neovexillatus</i> Allen	- 0 1 1 1 0 0 0 1 0 0 0 1 1 1 0 1 1 2 1	
<i>Leptoscelis bipustulatus</i> (Linnaeus)	- 0 1 1 1 0 0 0 0 1 0 0 1 1 1 1 2 1 0 1	
<i>Phthiacnemia picta</i> (Drury)	- 0 1 1 1 0 0 0 0 1 0 0 1 1 1 0 2 1 1 1	
<i>Chariesterus cuspidatus</i> Distant	- 0 1 1 0 1 0 0 0 0 0 0 1 1 0 0 2 1 2 1	
<i>Coreus marginatus</i> (Linnaeus)	- 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 1 1 1	
<i>Dalader acuticosta</i> Amyot & Serville	- 0 0 1 1 1 0 0 0 0 0 0 1 0 1 1 1 1 0 1	
<i>Discogaster drewseni</i> Stål	- 0 0 0 1 1 1 0 0 0 0 0 1 1 1 1 1 0 0 2	
<i>Acanonicus hahni</i> (Stål)	- 0 0 1 0 0 0 0 0 0 0 0 1 1 0 1 2 0 2 0	
<i>Acidomeria sordida</i> (Berg)	- 0 0 1 0 0 0 0 0 0 0 0 1 1 0 1 1 1 1 0	
<i>Anasa varicornis</i> (Westwood)	- 0 0 1 1 0 0 0 0 0 0 0 1 1 1 1 0 1 2 0	
<i>Hypselonotus interruptus</i> Hahn	- 0 1 1 1 0 0 0 0 1 0 0 1 1 1 0 2 1 1 1	
<i>Paryphes</i> sp.	- 0 1 1 1 0 0 0 0 ? 0 ? ? ? ? ? ? ? ?	
<i>Sethenira testacea</i> Spinola	- 0 0 1 0 0 0 0 0 0 0 0 0 1 1 0 0 1 1 1 0	
<i>Mictis profana</i> (Fabricius)	0 0 0 0 1 1 0 1 0 1 0 0 1 1 1 1 1 1 1 1 0	
<i>Melucha phyllocnemis</i> (Burmeister)	1 0 0 0 1 1 1 0 0 1 0 0 1 1 0 1 2 1 1 0	
<i>Ouranion complutus</i> (Breddin)	0 0 0 1 1 1 0 0 1 1 1 1 1 1 1 0 2 0 1 0	
<i>Ouranion crenulatus</i> (Stål)	0 0 0 1 1 1 1 0 1 1 1 1 1 1 0 0 1 1 1 0	
<i>Ouranion serrulatus</i> (Perty)	0 0 0 1 1 1 1 0 1 1 1 1 1 1 ? 1 0 1 1 1 0	
<i>Pachylis laticornis laticornis</i> (Fabricius)	1 0 0 0 1 1 1 0 0 1 1 1 1 1 1 0 1 0 1 0 0	
<i>Pachylis pharaonis</i> (Herbst)	1 0 0 0 1 1 1 0 0 0 0 0 1 1 1 1 0 2 1 1 0	
<i>Nyttum punctatum</i> (Dallas)	- 0 1 1 0 0 0 0 0 0 0 0 1 1 0 0 2 0 1 0	
<i>Euagona diana</i> (Dallas)	- 0 1 1 1 1 0 0 0 1 0 1 ? 1 1 0 ? 1 0 0	
<i>Euagona</i> sp.	- 0 1 1 0 1 0 0 0 ? 0 ? ? ? ? ? ? ? ?	
<i>Eubule ampliata</i> (Valdés)	? 0 ? ? 1 1 ? ? 0 1 ? 0 1 0 ? 1 0 1 0 0	
<i>Eubule farinosa</i> (Dallas)	? 0 ? ? 1 1 ? ? 0 0 ? 1 1 1 1 ? 0 1 1 0	
<i>Eubule glyphica</i> Berg	? 0 ? ? 1 1 ? ? 0 0 ? 0 1 1 1 0 2 1 1 0	
<i>Eubule rugulosa</i> Brailovsky	- 0 0 1 1 1 0 0 0 1 0 0 0 0 1 1 1 0 0 1 1 0	
<i>Eubule sculpta</i> (Perty)	- 0 0 1 1 1 0 0 0 0 0 0 0 1 1 1 0 0 1 1 0	
<i>Menenotus diminutus</i> Walker	- 0 0 1 1 1 0 0 0 1 0 0 1 1 1 0 0 1 0 0 0	
<i>Menenotus lunatus</i> (Laporte)	- 0 0 1 1 1 0 0 0 1 0 0 1 1 1 0 0 0 &1 1 0 0	
<i>Molchina compressicornis</i> (Fabricius)	0 0 0 0 1 1 1 1 0 1 0 0 1 1 1 0 0 1 0 1 0 1	
<i>Molchina hopei</i> (Perty)	0 0 0 0 1 1 1 1 0 1 0 0 1 1 1 0 0 1 0 1 0 1	
<i>Molchina linnei</i> Stål	0 0 0 0 1 1 0 1 0 1 0 0 1 1 1 0 0 1 0 1 0 0	
<i>Sephina bicornis</i> Distant	- 0 0 0 1 1 0 0 0 0 0 0 1 0 1 1 0 1 1 1 0	
<i>Sephina geniculata</i> Distant	? 0 ? ? 1 1 ? ? 0 0 ? 1 0 1 1 0 0 1 1 0	
<i>Sephina pubera</i> (Erichson)	? 0 ? ? 1 1 ? ? 0 0 ? 0 0 1 0 0 0 0 1 2 0	
<i>Sephina pustulata</i> (Fabricius)	- 0 0 1 1 1 0 0 0 0 0 0 1 0 1 1 0 1 1 1 0	
<i>Spartocera batatas</i> (Fabricius)	- 0 0 1 1 1 0 0 0 0 0 0 1 0 ? 1 2 1 0 0	
<i>Spartocera cinnamomea</i> (Hahn)	- 0 0 1 1 1 0 0 0 0 0 0 1 0 ? 0 2 0 0 0	
<i>Spartocera denticulata</i> Stål	- 0 0 1 1 1 0 0 0 1 0 1 1 1 ? 0 0 1 0 0	
<i>Spartocera dentiventris</i> Berg	- 0 0 1 1 1 0 0 0 0 0 1 1 0 ? 0 1 1 0 0	
<i>Spartocera fusca</i> (Thunberg)	- 0 0 1 1 1 0 0 0 0 0 0 1 0 ? 0 2 0 0 0	
<i>Spartocera lativentris</i> Stål	- 0 0 1 1 1 0 0 0 1 0 1 1 0 ? 1 1 1 0 0	
<i>Mamurius mopsus</i> Stål	- 0 0 1 0 0 0 0 0 0 0 0 1 1 0 1 1 1 1 0	
<i>Madura fuscoclavata</i> Stål	- 0 1 1 1 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0	
<i>Hirilcusgracillis</i> (Burmeister)	- 1 1 1 0 1 0 0 0 0 0 0 1 1 0 0 0 1 1 1 1	
<i>Meropachys affinis</i> (Dallas)	- 1 1 0 0 1 0 0 0 0 0 0 1 1 0 1 0 0 1 1 0	
<i>Vilga (Laevivilga) sanctipauli</i> Dolling	- 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0	

Species	8										9									
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acanthocephala</i> sp.	0	2	0	0	1	1	1	1	1	2	1	1	1	0	1	0	0	1	1	1
<i>Empedocles luridus</i> Brailovsky & Barrera	0	2	0	0	1	1	1	1	1	2	0	1	1	1	0	0	1	1	1	1
<i>Athaumastus haematicus</i> (Stål)	0	2	0	0	0	1	1	0	1	2	1	1	0	0	0	0	-	-	1	
<i>Camptischium clavipes</i> (Fabricius)	0	0	0	0	1	1	1	1	1	2	1	1	1	0	0	0	0	-	-	2
<i>Crinocerus sanctus</i> (Fabricius)	0	0	0	0	0	1	1	1	1	2	1	1	0	0	0	0	1	0	2	2
<i>Lybindus dichrous</i> Stål	0	0	0	0	0	1	1	1	1	2	0	1	0	0	0	0	-	-	2	
<i>Anisoscelis (A.) foliaceus</i> (Fabricius)	0	1	0	0	1	1	2	1	1	1	1	1	0	1	1	0	0	-	-	1
<i>Holymenia rubiginosus</i> Breddin	1	-	0	0	1	1	1	1	1	2	1	1	0	1	1	0	0	-	-	1
<i>Leptoglossus neovexillatus</i> Allen	0	2	0	0	1	1	1	1	1	2	1	1	0	1	0	0	1	0	1	2
<i>Leptoscelis bipustulatus</i> (Linnaeus)	1	-	1	0	1	1	1	1	1	2	1	0	0	1	0	0	1	0	1	2
<i>Phthiacnemia picta</i> (Drury)	0	2	0	0	1	1	2	1	1	2	0	1	0	1	0	0	0	-	-	2
<i>Chariesterus cuspidatus</i> Distant	0	2	0	0	1	1	2	1	1	2	0	0	0	1	0	0	0	-	-	1
<i>Coreus marginatus</i> (Linnaeus)	0	2	0	0	0	0	1	1	1	2	1	0	0	1	0	0	0	-	-	1
<i>Dalader acuticosta</i> Amyot & Serville	0	0	0	0	0	1	1	1	1	2	0	0	0	1	1	0	0	-	-	1
<i>Discogaster drewseni</i> Stål	0	0	0	0	0	1	0	1	0	2	0	0	0	1	1	1	0	-	-	2
<i>Acanonicus hahni</i> (Stål)	0	2	0	0	1	1	1	1	1	1	0	1	0	0	0	0	1	1	1	1
<i>Acidomeria sordida</i> (Berg)	1	-	0	1	0	0	1	1	1	2	0	1	0	1	0	0	1	1	1	1
<i>Anasa varicornis</i> (Westwood)	1	-	0	0	1	1	1	0	1	2	0	0	0	1	0	0	1	0	1	1
<i>Hypselonotus interruptus</i> Hahn	0	2	0	0	1	1	2	1	1	2	1	1	0	1	0	0	1	1	1	1
<i>Paryphes</i> sp.	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
<i>Sethenira testacea</i> Spinola	1	-	0	1	0	0	1	1	1	2	0	1	0	1	0	0	1	0	1	1
<i>Mictis profana</i> (Fabricius)	1	-	0	0	1	1	2	1	1	2	0	0	0	0	0	0	-	-	1	
<i>Melucha phyllocnemis</i> (Burmeister)	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	2	0	-	-	2
<i>Ouranion complutus</i> (Breddin)	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	-	-	1	
<i>Ouranion crenulatus</i> (Stål)	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	-	-	0	
<i>Ouranion serrulatus</i> (Perty)	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	-	-	1	
<i>Pachylis laticornis laticornis</i> (Fabricius)	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	-	-	1	
<i>Pachylis pharaonis</i> (Herbst)	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	2	0	-	-	1
<i>Nyttum punctatum</i> (Dallas)	1	-	0	0	0	1	1	0	1	2	1	1	0	1	0	0	-	-	1	
<i>Euagona diana</i> (Dallas)	?	?	?	?	?	?	1	?	?	?	?	?	?	?	?	?	1	1	0	0
<i>Euagona</i> sp.	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
<i>Eubule ampliata</i> (Valdés)	0	1	1	2	0	0	1	0	1	2	1	0	1	1	0	0	1	0	1	1
<i>Eubule farinosa</i> (Dallas)	1	-	0	1	0	0	1	1	1	2	1	0	1	0	0	1	1	0	2	1
<i>Eubule glyphica</i> Berg	1	-	0	0	0	1	2	1	1	2	1	1	1	0	0	1	1	0	2	1
<i>Eubule rugulosa</i> Brailovsky	1	-	1	1	0	0	1	1	1	2	1	0	1	1	0	1	1	0	0	1
<i>Eubule sculpta</i> (Perty)	1	-	0	1	0	0	1	1	1	2	1	1	1	0	0	1	1	0	2	1
<i>Menenotus diminutus</i> Walker	0	2	0	1	0	0	1	1	1	1	1	1	1	1	0	1	1	0	2	1
<i>Menenotus lunatus</i> (Laporte)	0	2	0	1	0	0	1	1	1	2	0	1	1	1	0	1	1	0	0	1
<i>Molchina compressicornis</i> (Fabricius)	0	0	0	0	1	1	2	0	1	1	0	1	1	0	0	0	1	1	2	1
<i>Molchina hopei</i> (Perty)	0	0	0	0	1	1	2	0	1	1	0	1	1	0	0	0	-	-	1	
<i>Molchina linnei</i> Stål	0	0	0	0	1	1	2	0	1	1	1	1	1	0	0	0	1	0	2	2
<i>Sephina bicornis</i> Distant	1	-	0	1	0	0	2	1	1	2	1	1	1	1	0	1	1	1	0	1
<i>Sephina geniculata</i> Distant	1	-	1	0	0	0	2	1	1	2	1	1	1	0	0	1	1	1	0	1
<i>Sephina pubera</i> (Erichson)	1	-	0	0	0	0	1	1	1	2	1	1	1	1	1	0	1	0	2	1
<i>Sephina pustulata</i> (Fabricius)	1	-	0	1	0	0	2	1	1	2	1	1	1	1	0	1	1	0	0	1
<i>Spartocera batatas</i> (Fabricius)	0	1	0	1	0	0	1	0	1	2	1	1	1	0	0	1	1	0	0	1
<i>Spartocera cinnamomea</i> (Hahn)	0	2	1	2	0	0	1	0	1	2	1	1	1	1	0	1	1	0	0	1
<i>Spartocera denticulata</i> Stål	0	1	1	1	0	0	1	1	1	2	1	1	1	1	0	1	1	0	2	1
<i>Spartocera dentiventris</i> Berg	0	1	0	2	0	0	1	0	1	2	1	0	1	1	1	0	1	0	2	1
<i>Spartocera fusca</i> (Thunberg)	0	2	1	2	0	0	1	0	1	2	1	1	1	1	0	1	1	0	0	1
<i>Spartocera lativentris</i> Stål	0	1	1	2	0	0	1	0	1	2	1	1	1	1	0	1	1	0	0	1
<i>Mamurius mopsus</i> Stål	1	-	0	0	0	0	1	1	1	2	1	0	0	1	0	0	1	0	1	1
<i>Madura fuscoclavata</i> Stål	1	-	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	0	2	2
<i>Hirilcus gracilis</i> (Burmeister)	0	0	0	0	1	1	1	1	1	1	0	0	1	0	2	0	-	-	1	
<i>Meropachys affinis</i> (Dallas)	0	0	0	0	1	1	1	1	1	1	0	1	0	0	2	0	-	-	1	
<i>Vilga (Laevivilga) sanctipauli</i> Dolling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	

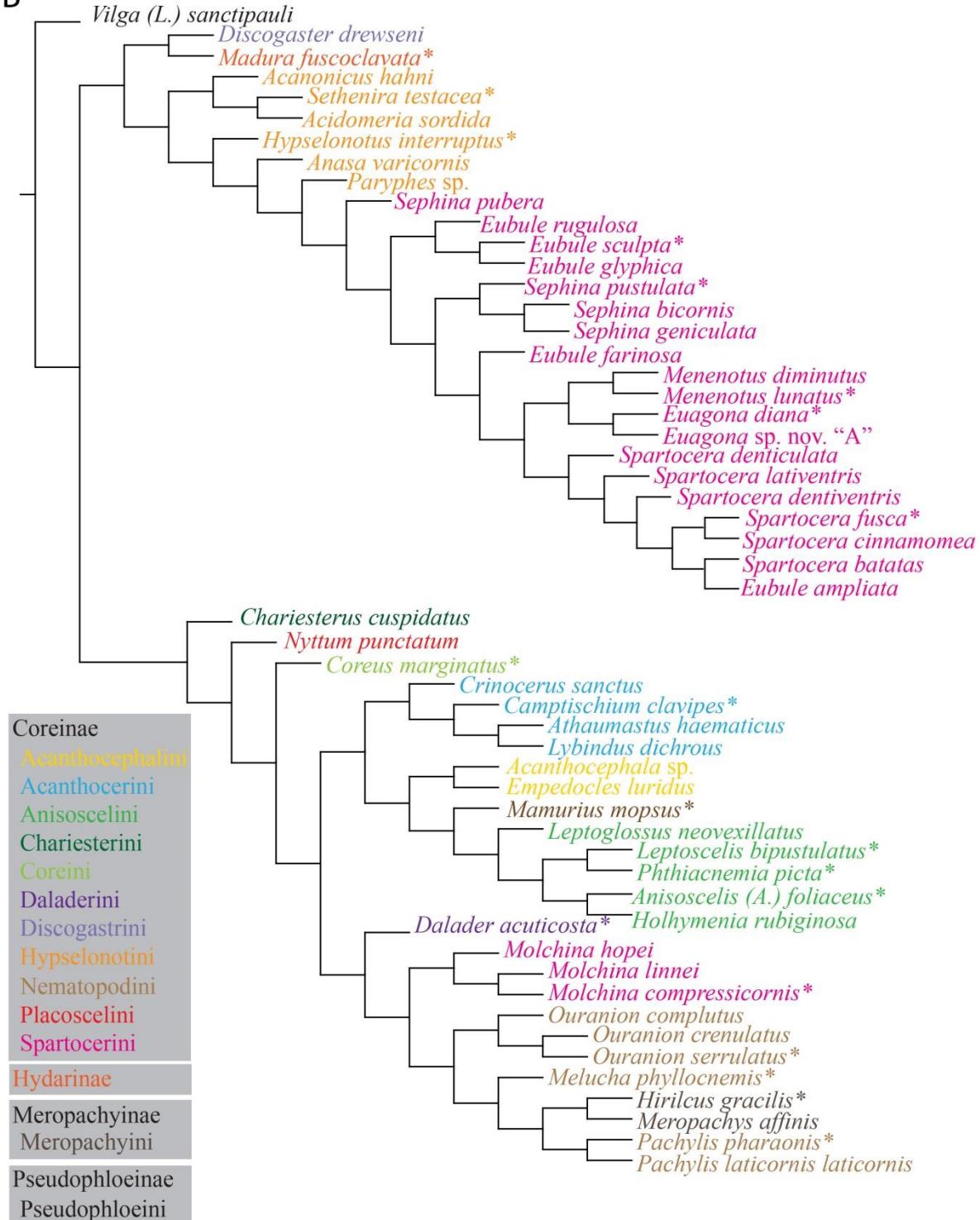
Species	1	1	
	0	1	
	0	0	
<i>Acanthocephala</i> sp.	1	0	0
<i>Empedocles luridus</i> Brailovsky & Barrera	1	0	0
<i>Athaumastus haematicus</i> (Stål)	1	0	0
<i>Camptischium clavipes</i> (Fabricius)	1	0	1
<i>Crinocerus sanctus</i> (Fabricius)	1	0	1
<i>Lybindus dichrous</i> Stål	1	0	1
<i>Anisoscelis (A.) foliaceus</i> (Fabricius)	2	0	0
<i>Holymenia rubiginosus</i> Breddin	1	0	0
<i>Leptoglossus neovexillatus</i> Allen	0	0	0
<i>Leptoscelis bipustulatus</i> (Linnaeus)	1	0	0
<i>Phthiacnemia picta</i> (Drury)	1	0	0
<i>Charisteruscus pidatus</i> Distant	0	0	0
<i>Coreus marginatus</i> (Linnaeus)	0	0	0
<i>Dalader acuticosta</i> Amyot & Serville	1	0	0
<i>Discogaster drewseni</i> Stål	0	0	0
<i>Acanonicus hahni</i> (Stål)	1	0	0
<i>Acidomeria sordida</i> (Berg)	1	0	0
<i>Anasa varicornis</i> (Westwood)	1	0	0
<i>Hypselonotusinterruptus</i> Hahn	1	0	0
<i>Paryphes</i> sp.	?	0	0
<i>Sethenira testacea</i> Spinola	1	0	0
<i>Mictis profana</i> (Fabricius)	0	0	0
<i>Melucha phyllocnemis</i> (Burmeister)	0	1	1
<i>Ouranion complutus</i> (Breddin)	0	0	1
<i>Ouranion crenulatus</i> (Stål)	0	0	1
<i>Ouranion serrulatus</i> (Perty)	0	0	1
<i>Pachylis laticornis laticornis</i> (Fabricius)	0	1	1
<i>Pachylis pharaonis</i> (Herbst)	0	1	1
<i>Nyttum punctatum</i> (Dallas)	0	0	0
<i>Euagona diana</i> (Dallas)	0	0	0
<i>Euagona</i> sp.	?	0	0
<i>Eubule ampliata</i> (Valdés)	1	?	?
<i>Eubule farinosa</i> (Dallas)	0	?	?
<i>Eubule glyphica</i> Berg	1	?	?
<i>Eubule rugulosa</i> Brailovsky	0	0	0
<i>Eubule sculpta</i> (Perty)	0	0	0
<i>Menenotus diminutus</i> Walker	0	0	0
<i>Menenotus lunatus</i> (Laporte)	0	0	0
<i>Molchina compressicornis</i> (Fabricius)	1	0	0
<i>Molchina hopei</i> (Perty)	1	0	0
<i>Molchina linnei</i> Stål	1	0	0
<i>Sephina bicornis</i> Distant	0	0	0
<i>Sephina geniculata</i> Distant	0	?	?
<i>Sephina pubera</i> (Erichson)	1	?	?
<i>Sephina pustulata</i> (Fabricius)	0	0	0
<i>Spartocera batatas</i> (Fabricius)	1	0	0
<i>Spartocera cinnamomea</i> (Hahn)	1	0	0
<i>Spartocera denticulata</i> Stål	0	0	0
<i>Spartocera dentiventris</i> Berg	1	0	0
<i>Spartocera fusca</i> (Thunberg)	1	0	0
<i>Spartocera lativentris</i> Stål	1	0	0
<i>Mamurius mopsus</i> Stål	1	0	0
<i>Madura fuscoclavata</i> Stål	2	0	0
<i>Hirilcus gracillis</i> (Burmeister)	0	0	1
<i>Meropachys affinis</i> (Dallas)	0	0	1
<i>Vilga (Laevivilga) sanctipauli</i> Dolling	0	0	0

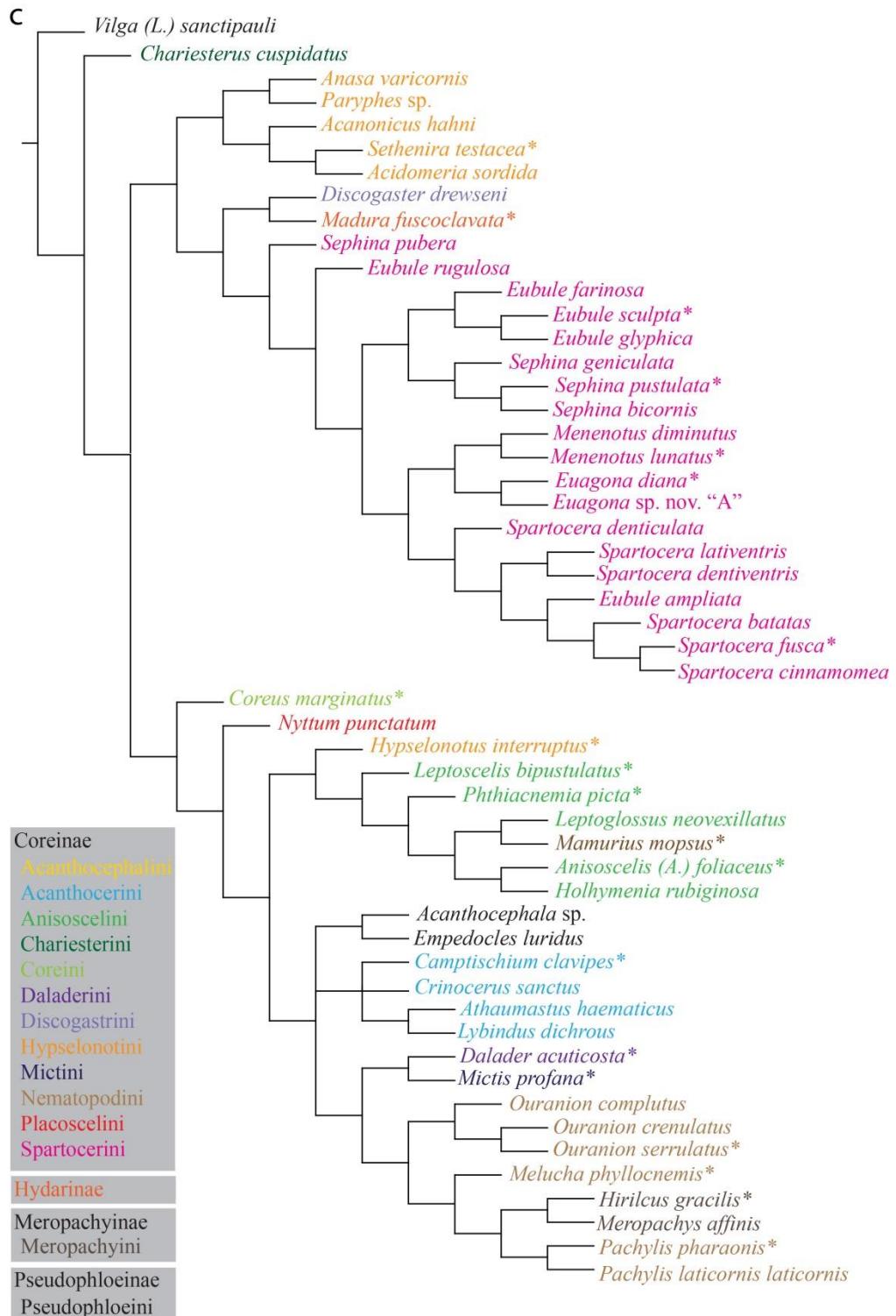
Fig. S2. Cladogram resulting of the analysis without Mictini and *Molchina* spp., respectively, to test occurrence of long-branch attraction bias. A – Strict consensus cladogram for Spartocerini under equal weighting (EW) without Mictini. B – Consensus cladogram for Spartocerini under implied weighting (IW) resulting from the seventh (15.767) K value, without Mictini. C – Strict consensus cladogram for Spartocerini under equal weighting (EW) without *Molchina* spp. D – Consensus cladogram for Spartocerini under implied weighting (IW) resulting from the second (5.953) K value, without *Molchina* spp. Type species are indicated by a *; subfamilies and tribes in the color legend.

A



B





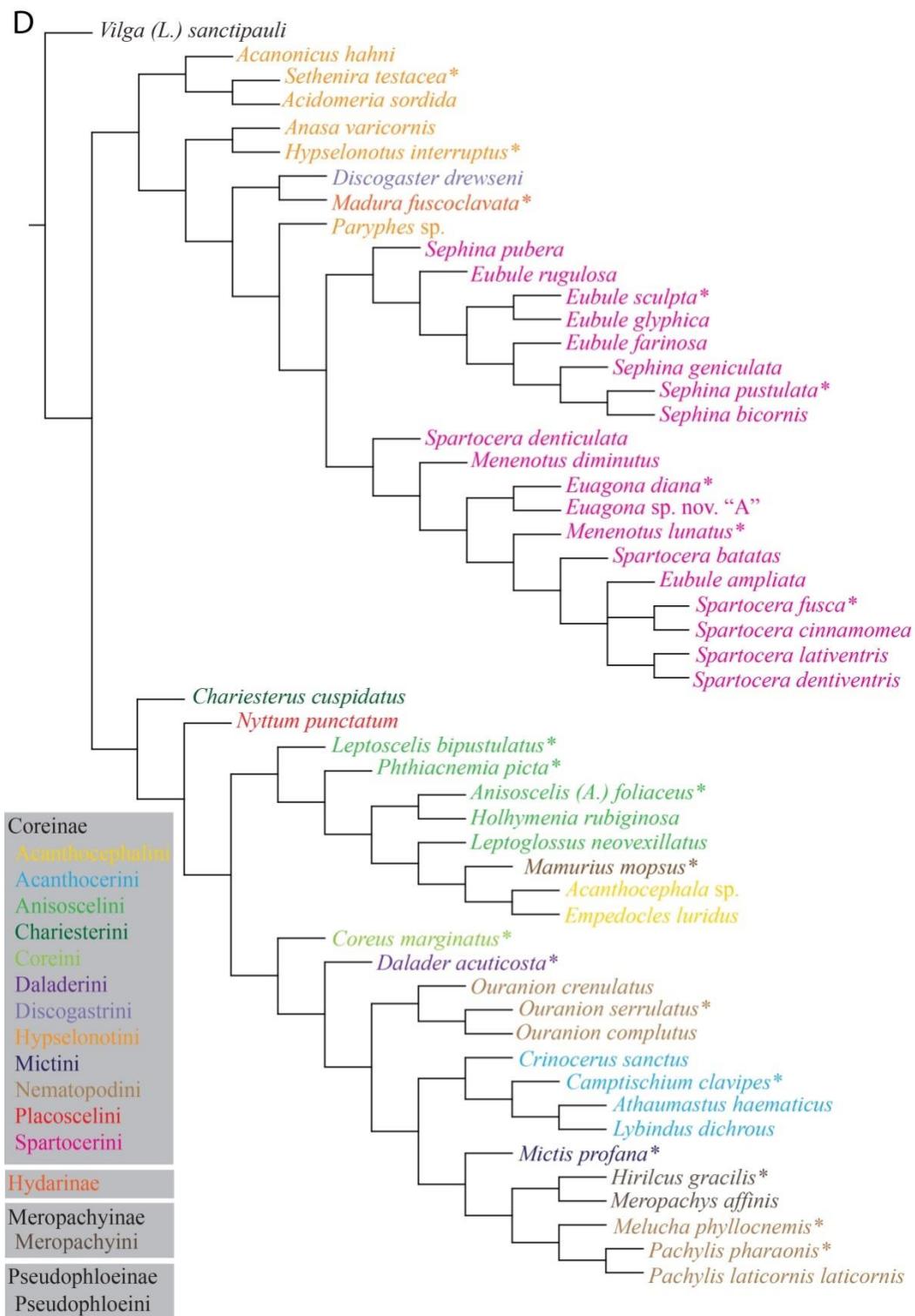


Fig. S3. Cladogram resulting of the analysis without character 67 (Sturnia III and IV, male, tubercles: absent (0); present (1)). A – Equal weighting (EW). B – Implied weighting (IW) resulting from the sixth (13.079) K value. Type species are indicated by a *; subfamilies and tribes in the color legend.



