Supplementary Material S1

The NONA format data file (Goloboff 1999), exported from WinClada (Nixon 2002), that supports the cladistic analysis of Amblytelina and New Caledonian *Mecyclothorax* follows. To replicate the cladistic analysis, copy all file text from "xread" to the end of the file, paste it into Notepad, and save as a file with ".ss" suffix. This can then be imported to WinClada, making certain the Input file dialog box accepts "ALL files." Save the file in WINC format and then it can be opened in Winclada, allowing visualization of all equally parsimonious trees, the consensus cladogram, and all character state optimizations.

xread

''137 65

Neo\_laevicollis\_EOZ 001120000011000021220000013000000100020010000000001120000020-111011010011201-0000001004333000000000-000-0-0000200000000000000000000120000

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cc - 0 7 39 54 75.76 82.87 89 91 96 101 110.111 116 121 126 129;

cc + 1.6 8.38 40.53 55.74 77.81 88 90 92.95 97.100 102.109 112.115 117.120 122.125 127.128 130.136;

proc /;

optcode f 0.136;

#

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;

cn {0 3rd\_antennomere glabrous\_except\_for\_apical\_ring\_of\_setae a\_few\_short\_setae\_basad\_apical\_ring setose\_in\_apical\_half;

{1 Antennomere\_9\_length/width\_ratio 1.46<x<=1.92 2.0<x<2.8 x=>\_2.87-3.67;

{2 Labrum\_front\_margin straight slightly\_emarginate distinctly\_emarginate;

{3 Mandibular\_length\_ratio\_(re\_distance\_from\_condyle\_to\_labral\_margin) very\_short,\_ratio\_1.18-1.55 moderately\_elongate,\_ratio\_of\_1.57-1.92 elongate,\_ratio\_of\_2.0-2.33;

{4 Apical\_2\_maxillary\_palpomeres apparently\_glabrous with\_short,\_sparse\_setose\_pelage with\_long,\_setose\_pelage;

{5 Anterior\_supraorbital\_seta present absent;

{6 Frontal\_grooves very\_shallow,\_not\_evident\_between\_eyes shallow\_to\_deep,\_evident\_between\_eyes;

{7 Frontal\_grooves subparallel arcuately\_convergent,\_then\_divergent\_anterad very\_deep\_from\_front\_of\_eye,\_large\_lateral\_callous,\_pit\_at\_f-c\_suture shallow,\_convergent\_from\_front\_of\_eye,\_no\_pit\_at\_f-c\_suture;

{8 Frontal\_grooves not\_extended\_onto,\_or\_much\_shallower\_on\_clypeus extended\_onto\_clypeus;

{9 Neck\_impression absent,\_dorsum\_of\_head\_convex flat\_area\_between\_hind\_margins\_of\_eye transverse\_depression\_behind\_hind\_margins\_of\_eyes;

{10 Ocular\_lobe\_assessed\_behind\_eye\_(dorsal\_view) protruded,\_meeting\_gena\_at\_obtuse\_angle little\_protruded,\_meeting\_gena\_at\_very\_obuse\_angle;

{11 Ocular\_lobe\_groove\_behind\_eye distinct\_groove\_present shallow\_groove\_present no\_groove\_present,\_juncture\_simple\_change\_in\_angle\_of\_surfaces;

{12 Mentum\_tooth sides\_acute\_to\_subparallel,\_apex\_tightly\_rounded sides\_more\_obtuse,\_apex\_broadly\_rounded;

{13 Mentum\_width/length\_ratio 2.4<x<3.1 3.14<x<3.5 3.7<x<4.5;

{14 Apex\_of\_ligula apically\_rounded\_or\_with\_narrow\_concave\_apex\_between\_setae broad,\_longer\_medially\_with\_shorter\_lateral\_wings broadly\_truncate,\_margin\_straight\_and\_heavily\_sclerotized;

{15 Apical\_ligular\_setae\_(2) proximate,\_separated\_by\_1-2\_setal\_diameters distant,\_separated\_by\_3-4\_or\_more\_setal\_diameters;

{16 Paraglossae extended\_only\_slightly\_beyond\_apex\_of\_ligula extended\_1/2\_distance\_from\_base\_to\_ligular\_apex\_beyond\_apex extended\_as\_far\_beyond\_apex\_as\_basal\_length\_to\_apex extended\_2x\_as\_far\_beyond\_apex\_as\_basal\_length\_of\_apex;

{17 Ocular\_ratio 1.31<x<=1.42 1.43<=x<=1.54 1.55<=x<1.75;

{18 Ocular\_lobe\_ratio 0.59<x<0.72 0.73<x<0.87 0.88<x<0.97;

{19 Eye\_convexity\_(EyL/EyD) convex\_or\_popeyed,\_2.0<x<2.53 moderately\_convex,\_2.55<x<2.89 little\_convex,\_2.90<x<4.18;

{20 Number\_of\_ommatidia\_across\_horizontal\_diameter\_of\_eye 11-15 16-20 21-30 31-40;

{21 Pronotum broad\_basally,\_MPW/BPW\_=\_1.23-1.80 narrow\_basally,\_MPW/BPW\_=\_1.82-3.91;

{22 Pronotal\_lateral\_seta present absent;

{23 Pronotal\_basal\_seta present absent;

{24 Lateral\_pronotal\_setal\_position\_(if\_present)\_with articulatory\_socket\_in\_or\_adjoining\_lateral\_marginal\_depression articulatory\_socket\_1/2-2\_setal\_diameters\_from\_marginal\_depression articulatory\_socket\_2-4\_setal\_diameters\_from\_marginal\_depression;

{25 Pronotal\_hind\_seta\_(if\_present)\_situated at\_hind\_angle visibly\_anterad\_hind\_angle;

{26 Pronotal\_hind\_angles nearly\_right\_to\_obtuse,\_with\_sides\_subparallel\_anterad\_hind\_angle obtuse,\_sides\_divergent\_anterad\_hind\_angle projected\_denticle\_on\_rounded\_lateral\_margin obsolete,\_lateral\_and\_basal\_margins\_convex;

{27 Pronotal\_hind\_angle rounded\_to\_right-angled acute,\_with\_acuminate\_lateral\_projection\_at\_angle;

{28 Pronotal\_basal\_margin straight\_or\_convex\_mesad\_hind\_angles distinctly\_sinuate\_inside\_hind\_angles;

{29 Pronotal\_median\_base coplanar\_with\_disc\_medially depressed\_relative\_to\_disc\_medially greatly\_depressed\_relative\_to\_disc\_medially;

{30 Pronotum\_median\_base smooth\_laterally\_mesad\_laterobasal\_depressions with\_3-10\_punctures\_each\_side\_mesad\_laterobasal\_depressions with\_>12\_punctures\_each\_side\_mesad\_laterobasal\_depressions;

{31 Pronotal\_basal\_margin beaded\_medially convex\_medially,\_marginal\_bead\_only\_behind\_laterobasal\_depression;

{32 Pronotal\_basal\_marginal\_bead\_if\_present\_(state\_0,\_#31) narrow,\_continuous\_with\_lateral\_bead broader,\_discontinuous\_with\_lateral\_bead;

{33 Pronotal\_median\_longitudinal\_impression well\_defined,\_continuous\_on\_pronotal\_disc fine\_and\_shallow\_on\_disc reduced\_to\_small\_punctures,\_obsolete,\_or\_obscured\_by\_punctures;

{34 Anterior\_transverse\_impression obsolete\_to\_absent\_medially,\_anterior\_callosity\_not\_defined broad\_and\_shallow\_medially,\_anterior\_callosity\_broadly\_convex broad\_and\_deep\_medially,\_anterior\_callosity\_well\_defined\_posteriorly;

{35 Anterior\_transverse\_impression\_ absent\_to\_obsolete\_laterally visible\_only\_in\_outer\_1/4-1/3\_of\_breadth\_each\_side visible\_in\_outer\_1/2\_of\_breadth\_each\_side visible\_across\_entire\_breadth\_of\_notum;

{36 Pronotal\_anterior\_margin unmargined with\_marginal\_bead\_medially;

{37 Pronotal\_front\_angles not\_protruded,\_rounded\_behind slightly\_protruded,\_broadly\_rounded slightly\_protruded,\_narrowly\_to\_tightly\_rounded protruded,\_obtusely\_rounded\_to\_angulate protruded,\_broadly\_rounded;

{38 Pronotal\_lateral\_marginal\_depression\_(at\_midlength) very\_narrow,\_margin\_beaded moderately\_narrrow,\_microsculpture\_visible\_at\_depth broad\_to\_very\_broad,\_lateral\_margin\_variously\_explanate;

{39 Pronotal\_laterobasal\_depression broad,\_smoothly\_extended\_to\_lateral\_margin continuous\_linear\_broadening\_of\_lateral\_marginal\_depression with\_median\_longitudinal/punctate\_depression\_and\_lateral\_tubercle not\_depressed,\_surface\_rugose\_or\_punctate;

{40 Prosternal\_process smooth\_ventrally,\_rounded\_behind margined\_ventrally,\_a\_bead\_defining\_ventroposterior\_margin;

{41 Proepisternum smooth with\_large\_punctures\_ventrally\_along\_sternum covered\_with\_large\_punctures;

{42 Prosternum medially\_convex\_anterad\_and\_between\_coxal\_cavities medially\_depressed\_only\_between\_coxal\_cavities medially\_depressed\_between\_and\_anterad\_coxal\_cavities;

{43 Prosternum smooth\_medially with\_2-4\_punctures\_medially with\_5-7\_punctures\_medially;

{44 Lateral\_portion\_of\_prosternum impunctate\_except\_for\_anteapical\_furrow irregularly\_punctate;

{45 Prosternal\_anterior\_margin without\_or\_with\_very\_shallow\_indistinct\_groove with\_smooth\_depression\_or\_groove with\_indistinctly\_punctate\_groove with\_distinctly\_punctate\_groove with\_groove\_reduced\_to\_serially\_isolated\_punctures;

{46 Prosternal\_anteapical\_groove\_(if\_present\_at\_all\_in\_some\_form) very\_short,\_restricted\_to\_dorsal\_apex\_of\_prosternum longer,\_from\_apex\_ventrad\_onto\_lateral\_surface\_of\_prosternum continuous\_but\_shallower\_or\_irregular\_between\_sides\_of\_prosternum continuously\_deep\_ventrally\_between\_sides\_of\_prosternum;

{47 Proepimeron with\_anterior\_and\_posterior\_grooves\_smooth with\_anterior\_groove\_minutely\_punctate,\_posterior\_smooth with\_both\_anterior\_and\_posterior\_grooves\_irregular\_or\_punctate;

{48 Parascutellar\_seta present absent;

{49 Scutellum narrower,\_W/L\_=\_0.83-1.86 broader,\_W/L\_=\_2.0-2.5;

{50 Parascutellar\_striole longer,\_terminated\_between\_sutural\_stria\_and\_suture\_where\_parallel short,\_terminated\_between\_sutural\_stria\_&\_suture\_where\_convergent;

{51 Parascutellar\_striole present,\_continuous,\_smooth\_or\_punctate present,\_consisting\_of\_3-8\_punctures,\_not\_connected\_by\_stria present,\_consisting\_of\_1-2\_isolated\_punctures absent;

{52 Dorsal\_elytral\_setal\_count 0 1 2 3-5;

{53 Accessory\_dorsal\_setae absent in\_fifth\_elytral\_interval in\_fifth\_and\_seventh\_elytral\_intervals;

{54 Position\_of\_anterior\_(or\_single)\_dorsal\_elytral\_seta at\_anterior\_1/5-1/3\_of\_length at\_midlength in\_posterior\_third;

{55 Supracarinal\_elytral\_seta\_(basad\_subapical\_seta) absent present present\_and\_doubled;

{56 Elytral\_subapical\_seta present absent;

{57 Elytral\_apical\_seta present absent;

{58 Apex\_of\_elytral\_interval\_8 with\_same\_curvature\_as\_elytral\_apex more\_convex\_than\_rest\_of\_elytra with\_distinct\_ridge\_on\_inner\_margin distinctly\_carinate\_on\_inner\_margin;

{59 Elytral\_shape broadly\_subquadrate,\_sides\_subparallel,\_humeri\_broad subquadrate,\_humeri\_narrowed ellipsoid\_to\_ovoid;

{60 Elytral\_shape\_if\_humeri\_moderately\_broad\_(Character\_59\_state\_2) foreshortened,\_hemiovoid elongate,\_ellipsoid elongate,\_ovoid;

{61 Elytral\_dorsal\_curvature moderately\_convex,\_sides\_sloping\_to\_margins,\_disc\_flat convex,\_sides\_nearly\_vertical,\_disc\_domed very\_convex,\_sides\_nearly\_vertical\_to\_margins,\_apex\_depressed;

{62 Elytral\_basal\_groove hardly\_recurved recurved distinctly\_recurved,\_an\_angular\_hitch\_at\_humerus;

{63 Elytral\_humeral\_angle rounded tightly\_rounded\_to\_obtuse-angulate angulate;

{64 Elytral\_humeral\_angle with\_evenly\_convex\_margin\_on\_base\_and\_lateral\_edge with\_elevated\_humeral\_tooth\_at\_angle;

{65 Elytral\_striae\_on\_disc 1-8\_present,\_complete 1-6\_present,\_7\_obsolete\_to\_absent 1-5\_present,\_6-7\_reduced\_to\_obsolete\_to\_absent 1-3\_to\_1-4\_shallow,\_5-7\_progressively\_obsolete only\_sutural\_stria\_1\_present,\_punctate,\_2-7\_obsolete all\_reduced,\_obsolete\_to\_absent\_except\_stria\_8;

{66 Elytral\_striae\_on\_apex all\_present,\_deep 1-7\_present,\_traceable,\_though\_they\_may\_be\_shallow\_apically 1-3\_to\_1-5\_traceable\_on\_apex,\_7\_evident\_mesad\_subapical\_sinuation only\_striae\_1-2\_&\_7\_visible\_near\_apex,\_3-6\_obsolete only\_sutural\_stria\_&\_7th\_traceable\_near\_apex,\_others\_obsolete only\_sutural\_stria\_traceable\_near\_apex no\_striae\_visible\_at\_apex\_except\_8th\_at\_subapical\_sinuation;

{67 Elytral\_apex\_along\_suture not\_upraised\_in\_a\_conjoined\_juncture upraised\_in\_a\_conjoined\_juncture;

{68 Elytral\_strial\_punctation absent small,\_not\_expanding\_strial\_diameter larger,\_elongate\_or\_round\_but\_little\_expanding\_strial\_diameter large,\_deep,\_expanding\_strial\_diameter;

{69 Setal\_depressions\_of\_dorsal\_elytral\_setae shallow,\_extended\_over\_1/4\_breadth\_of\_interval\_3\_or\_less evident,\_extended\_over\_1/3-1/2\_breadth\_of\_interval\_3 broad,\_deep,\_extended\_over\_3/4\_breadth\_of\_interval\_3;

{70 Elytral\_stria\_8 smoothly\_impressed\_along\_midlength serially\_punctate,\_irregular\_along\_midlength absent\_at\_midlength;

{71 Elytral\_lateral\_marginal\_depression very\_narrow\_throughout\_length narrow\_to\_moderately\_broad,\_microsculpture\_visible\_in\_deepest\_part broad\_anteriorly,\_moderately\_broad\_behind;

{72 Subapical\_sinuation deep,\_distinct,\_more\_abruptly\_curved\_anteriorly broad,\_shallow;

{73 Mesepisternal\_punctures none,\_surface\_smooth 5-6\_small\_punctures\_in\_single\_curved\_line 5-9\_large\_punctures\_in\_2-3\_rows 10\_or\_more\_large\_punctures\_in\_3\_rows;

{74 Mesosternal/mesepisternal\_suture present,\_traceable\_to\_front\_margin\_of\_mesepisternum obsolete\_to\_absent\_anteriorly,\_sclerites\_fused\_near\_prothorax;

{75 Metathoracic\_flight\_wings fully\_developed,\_venated\_with\_reflexed\_apex brachypterous,\_with\_reduced\_apex,\_venation\_reduced stenopterous,\_reduced\_to\_a\_narrow\_strap\_longer\_than\_metanotum vestigial,\_wing\_rudiment\_not\_extended\_to\_apex\_of\_metanotum;

{76 Metepisternal\_width/length\_ratio 0.30<x<0.60 0.60<x<0.87 0.87<x<1.46;

{77 Metepisternum-metepimeron\_suture distinct,\_a\_distinct\_line incomplete,\_reduced\_laterally indistinct,\_a\_depression\_but\_no\_line;

{78 Tarsomeres dorsally\_glabrous dorsally\_setose;

{79 Metatarsomeres\_4 narrow,\_with\_short\_apical\_lobes broadly\_triangular,\_broader\_apex\_with\_very\_short\_lobes broad\_overall,\_bilobed,\_apical\_lobes\_broad,\_elongate;

{80 Suture\_between\_ventrites\_1\_and\_2 straight\_to\_sinuous\_with\_ventrite\_2\_not\_or\_only\_slightly\_depressed sinuous\_with\_ventrite\_2\_distinctly\_depressed\_inside\_curve;

{81 Suture\_between\_abdominal\_ventrites\_2\_and\_3 shallow,\_complete,\_traceable\_to\_margin reduced,\_incomplete,\_absent\_laterally;

{82 Abdominal\_ventrites\_3-5 with\_irregular\_linear\_plaques\_in\_lateral\_reaches with\_round,\_smooth\_depressed\_plaques\_in\_lateral\_reaches with\_surface\_punctate\_obscuring\_any\_other\_features;

{83 Apical\_abdominal\_ventrite\_6\_(male) with\_1\_seta\_each\_side\_(total\_of\_2) with\_2\_setae\_each\_side\_(total\_of\_4) with\_3\_setae\_each\_side\_(total\_of\_6) with\_4\_setae\_each\_side\_(total\_of\_8);

{84 Apical\_abdominal\_ventrite\_(female) with\_2\_setae\_each\_side\_(total\_of\_4) with\_3\_setae\_each\_side\_(total\_of\_6) with\_4\_setae\_each\_side\_(total\_of\_8);

{85 Apical\_abdominal\_ventrite\_6\_(female) glabrous\_medially\_between\_apical\_setae with\_setose\_patch\_of\_4-5\_setae\_medially with\_pair\_of\_subapical\_setae\_medially;

{86 Microsculpture\_on\_frons granulate\_isodiametric\_sculpticells evident\_to\_shallow\_isodiametric\_mesh isodiametric\_to\_transverse\_mesh\_in\_transverse\_rows indistinct\_transverse\_mesh\_or\_lines absent,\_surface\_glossy;

{87 Microsculpture\_of\_pronotal\_disc isodiametric\_in\_transverse\_rows\_mixed\_with\_transverse\_mesh,\_2-3x transverse\_mesh,\_sculpticells\_3-4x\_broad\_as\_long mix\_of\_transverse\_mesh\_and\_transverse\_lines reduced,\_surface\_glossy,\_with\_indistinct\_transverse\_mesh\_or\_lines;

{88 Microsculpture\_of\_pronotal\_base isodiametric\_between\_basal\_punctures transversely\_stretched\_isodiametric\_between\_punctures evident\_transverse\_mesh,\_sculpticells\_2-3x\_broad\_as\_long indistinct,\_elongate\_transverse\_mesh\_or\_unconnected\_lines;

{89 Microsculpture\_of\_elytral\_disc a\_mix\_of\_distinct\_isodiametric\_and\_transverse\_sculpticells a\_regular\_transverse\_mesh,\_sculpticell\_breadth\_2-3x\_length a\_mix\_of\_transverse\_mesh\_3-4x,\_and\_transverse\_lines reduced,\_surface\_glossy,\_indistinct\_mesh\_plus\_lines\_over\_part;

{90 Microsculpture\_on\_abdominal\_lateral\_base swirling\_isodiametric\_and\_transverse\_sculpticells reduced,\_surface\_glossy\_with\_indistinct\_sculpticells;

{91 Body\_coloration dark,\_elytral\_margins\_concolorous\_or\_indistinctly,\_narrowly\_\_paler ferruginous,\_elytra\_bicolored\_with\_outer\_4-5\_intervals\_much\_paler ferruginous,\_elytra\_bicolored,\_outer\_3-4\_intervals,\_apex\_much\_paler;

{92 Antecostal\_margin\_of\_male\_tergite\_9\_(ring\_sclerite) angulate broadly\_rounded;

{93 Distal\_terminus\_of\_male\_tergite\_9\_antecostal\_margin not\_extended extended,\_the\_distal\_angle\_with\_an\_elongate\_extension;

{94 Aedeagal\_ventral\_(right,\_except\_M.\_storeyi)\_paramere\_shape elongate,\_paddle-like,\_apex\_broadly\_subparallel\_to\_rounded\_tip quadrate-conchoid,\_dorsal\_and\_ventral\_margins\_subparallel\_to\_apex elongate-conchoid,\_apex\_narrowed\_so\_shape\_is\_subtriangular very\_elongate,\_moderately\_narrow,\_paramere\_>0.85\_lobe\_gape very\_elongate,\_apical\_half\_narrowed\_to\_whiplike\_extension;

{95 Aedeagal\_ventral\_(right,\_except\_M.\_storeyi)\_paramere densely\_setose\_on\_apicoventral\_margin,\_apical\_setae\_not\_present densely\_setose\_on\_apicoventral\_margin,\_apical\_setae\_not\_different with\_8-21\_setae\_on\_ventral\_margin,\_apical\_setae\_distinct with\_2-7\_setae\_on\_ventral\_margin\_well\_separated\_from\_apical\_setae glabrous\_(or\_a\_single\_seta)\_on\_ventral\_margin\_plus\_2\_apical\_setae;

{96 Aedeagal\_ventral\_(right,\_except\_M.\_storeyi)\_paramere with\_dorsal\_surface\_glabrous\_or\_with\_single\_subapical\_seta\_ with\_dorsal\_surface\_setose\_(4-18\_setae\_present\_in\_apical\_half);

{97 Aedeagal\_dorsal\_(left,\_except\_M.\_storeyi)\_paramere\_shape broad\_basally,\_apical\_half\_elongate,\_margins\_subparallel broad\_basally,\_apex\_short,\_narrowly\_rounded,\_subangulate broadly\_quadrate\_basally,\_apical\_extension\_narrowly\_attenuate narrower\_basally,\_evenly\_narrowed\_to\_whip-shaped\_apex;

{98 Aedeagal\_dorsal\_(left,\_except\_M.\_storeyi)\_paramere glabrous\_apically,\_setae\_may\_be\_present\_subapically 2-4\_very\_short\_setae\_at\_apex 2-4\_(or\_1)\_longer\_setae\_at\_apex 2-4\_longer\_apical\_setae\_plus\_4\_additional\_shorter\_subapical\_setae;

{99 Aedeagal\_median\_lobe\_ostial\_opening without\_ventroapical\_operculum with\_hinged\_ventroapical\_opercular\_flap;

{100 Aedeagal\_internal\_sac unilobed,\_short\_to\_long bilobed,\_with\_distinct\_dorsal\_and\_apical\_lobes;

{101 Aedeagal\_internal\_sac with\_flagellum\_associated\_with\_gonopore with\_circular\_flagellar\_plate\_associated\_with\_gonopore without\_flagellum,\_only\_dorsal\_plate\_present;

{102 Short\_to\_elongate\_flagellar\_configuration\_(state\_0\_of\_#101) thin,\_lightly\_sclerotized,\_may\_be\_short,\_sinuous,\_or\_long\_and\_whiplike broad,\_porrect,\_spikelike cresent-shaped\_remnant\_of\_flagellar\_sheath\_base;

{103 Apical\_flagellar\_plate\_(state\_1\_of\_#101) donut-like\_roll\_lightly\_sclerotized\_or\_spiculated,\_gonopore\_within well-sclerotized\_and\_ridged\_plate,\_gonopore\_on\_convex\_side;

{104 Aedeagal\_sac\_dorsal\_plate absent,\_flagellum\_and\_flagellar\_sheath\_only present\_in\_addition\_to\_or\_instead\_of\_flagellum\_and\_flagellar\_sheath;

{105 Aedeagal\_sac\_dorsal\_plate\_(state\_1\_#104) translucent,\_covered\_with\_microspicules well\_sclerotized,\_smooth;

{106 Aedeagal\_internal\_sac\_surface\_dorsad\_position\_of\_dorsal\_plate unarmored with\_patch\_of\_robust\_macrospicules;

{107 Aedeagal\_internal\_sac\_ventral\_sclerite\_patch absent,\_area\_basad\_flagellum\_and\_sheath\_unsclerotized present\_as\_distinct\_sclerite\_basad\_flagellum\_and\_sheath;

{108 Aedeagal\_internal\_sac\_ventrobasal\_spicular\_sclerite absent present;

{109 Aedegal\_median\_lobe\_shaft gracile,\_aedeagus\_relatively\_narrow\_dorsoventrally,\_parallel-sided broad,\_aedeagus\_robust,\_broadest\_at\_midlength;

{110 Aedeagal\_median\_lobe\_tip extended\_narrowly\_beyond\_ostium narrow,\_not\_extended\_beyond\_ostium broadly\_expanded\_dorsoventrally,\_extended\_beyond\_ostium broadly\_expanded\_dorsoventrally,\_not\_extended\_beyond\_ostium;

{111 Broad\_extension\_of\_aedeagal\_median\_lobe\_(states\_2,\_3\_#110) parallel-sided\_dorsoventrally\_to\_rounded\_tip convexly\_spoon\_shaped,\_expanded\_both\_dorsally\_and\_ventrally downturned,\_tip\_at\_angle\_to\_shaft,\_apical\_face\_straight apex\_expanded\_dorsally\_&\_ventrally,\_adze-shaped broadly\_downturned\_in\_fishhook\_configuration,\_tip\_pointed;

{112 Aedeagal\_median\_lobe\_apical\_margin smoothly\_convex\_to\_acuminate with\_hitch\_to\_distinct\_invagination\_along\_margin with\_distinct\_invagination\_along\_margin;

{113 Aedeagal\_median\_lobe\_apex smoothly\_extended\_past\_ostial\_opening with\_dorsoventral\_crease\_distad\_ostial\_opening;

{114 Female\_bursa\_copulatrix\_shape elongate,\_columnar,\_length/width\_>2.0-3.25 short\_and\_columnar,\_length/width\_1.0-2.0;

{115 Female\_bursa\_copulatrix\_surface membranous,\_not\_wrinkled,\_transparent thin,\_surface\_wrinkled\_and\_translucent thick,\_surface\_wrinkled\_and\_not\_transparent;

{116 Female\_bursal\_copulatrix\_apicoventral\_surface membranous\_as\_remainder\_of\_bursa sclerotized\_into\_plate-like\_structure;

{117 Female\_bursa\_copulatrix\_ of\_approximately\_equal\_diameter\_throughout\_length with\_smaller\_apical\_portion,\_diameter\_much\_less\_than\_basal\_part;

{118 Spermathecal\_duct\_placement on\_bursa\_near\_common\_oviduct/bursa\_juncture apically\_on\_bursa\_copulatrix\_main\_lobe dorsoapically\_on\_bursa\_copulatrix\_main\_lobe basodorsally\_on\_bursa\_dorsad\_common\_oviduct/bursa\_juncture;

{119 Spermathecal\_duct\_placement\_near\_common\_oviduct\_(state\_0,\_#118) on\_right\_side\_of\_bursa\_laterad\_common\_oviduct on\_ventral\_side\_of\_bursa\_distad\_common\_oviduct;

{120 Female\_bursa\_copulatrix\_configuration unipartite,\_without\_dorsal\_lobe bipartite,\_spermathecal\_duct\_entering\_smaller\_dorsal\_lobe\_apex bipartite,\_spermathecal\_duct\_entering\_dorsal\_lobe\_equal\_to\_ventral;

{121 Helminthoid\_sclerite elongate\_sclerotized\_apodeme rounded\_projection two\_parallel\_apodemes absent;

{122 Ligular\_apophysis\_on\_common\_oviduct absent present;

{123 Spermathecal\_duct present,\_spermatheca\_stalked absent,\_spermatheca\_appressed;

{124 Spermathecal\_duct\_(state\_0\_of\_#123) subequal\_to\_spermathecal\_length 1.25-3.0x\_spermathecal\_length;

{125 Spermathecal\_shape fusiform\_or\_ovoid\_bulb\_on\_narrow\_duct filiform\_reservoir\_on\_equal-sized\_duct appressed\_bulb;

{126 Spermathecal\_gland\_duct entering\_on\_spermathecal\_duct\_at\_spermathecal\_base entering\_on\_spermathecal\_reservoir;

{127 Ramus\_(gonocoxite\_VIII\_of\_Deuve\_1993) present\_as\_defined\_membranous\_fold present,\_heavily\_sclerotized;

{128 Lateroapical\_fringe\_of\_setae\_on\_gonocoxite\_1 composed\_of\_single\_seta composed\_of\_2\_setae composed\_of\_2-5\_setae\_(at\_least\_3\_setae\_unilaterally);

{129 Medial\_setae\_of\_gonocoxite\_1 absent\_along\_entire\_mesal\_margin\_(or\_only\_1-2\_small\_setae\_apically) absent\_at\_apex\_but\_several\_subapically\_along\_margin large\_seta\_at\_apical\_angle\_plus\_other\_setae\_along\_mesal\_margin;

{130 Mediobasal\_surface\_of\_gonocoxite\_1 smooth extensively\_shagreened\_with\_overlapping\_scales\_or\_setae;

{131 Apical\_gonocoxite\_2 broadly\_subtriangular,\_apex\_rounded,\_mitten-shaped narrowly\_subtriangular,\_basal\_width\_<\_0.4x\_length more\_broadly\_subtriangular,\_basal\_width\_about\_half\_length with\_lateral\_apodeme\_basally,\_basal\_width\_0.6-0.7x\_length falciform,\_basolateral\_apodeme,\_basal\_width\_>0.75\_length;

{132 Lateral\_ensiform\_setae\_of\_apical\_gonocoxite\_2 1 2-3\_(at\_least\_2\_unilaterally) 3-5\_(3\_or\_more\_both\_sides);

{133 Lateral\_ensiform\_setae\_of\_apical\_gonocoxite\_2 shorter,\_basal\_seta\_0.25-0.40x\_gonocoxite\_length longer,\_basal\_seta\_0.40-0.50x\_gonocoxite\_length;

{134 Lateral\_ensiform\_setae\_of\_gonocoxite\_2 on\_lateral\_margin\_of\_gonocoxite on\_ventral\_surface\_of\_gonocoxite;

{135 Apical\_nematiform\_setae\_of\_gonocoxite\_2 in\_fossa\_1/4-1/5\_from\_apex in\_fossa\_1/2-1/4\_from\_apex;

{136 Mesal\_surface\_of\_laterotergite\_IX setose spiculose;

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tread 'wha' (0(((((((46(((64(((((62(61 63))(55((56(54 57))(51 60))))(58 59))((52 53)(48 50)))(45 49)))(42 47))(43 44)))(41(39 40)))((30(28 29))(27((36(31(33(26 37))))(32(34(35(38(24 25)))))))))(20((22 23)(19 21))))(18(17(15 16))))((8(13 14))(7((10 11)(9 12)))))(6(5(3(4(1 2))))))) \* (0(((((((46(((64(((((62(61 63))(55((56(54 57))(51 60))))(58 59))((52 53)(48 50)))(45 49)))(42 47))(43 44)))(41(39 40)))((30(28 29))(27((36(31(33(26 37))))(32(34(35(38(24 25)))))))))(20(19(21(22 23)))))(18(17(15 16))))((8(13 14))(7((10 11)(9 12)))))(6(5(3(4(1 2))))))) \* (0(((((((46(((64(((((62(61 63))(55((56(54 57))(51 60))))(58 59))((52 53)(48 50)))(45 49)))(42 47))(43 44)))(41(39 40)))((30(28 29))(27((36(31(33(26 37))))(32(34(35(38(24 25)))))))))(20(22(23(19 21)))))(18(17(15 16))))((8(13 14))(7((10 11)(9 12)))))(6(5(3(4(1 2))))))) \* (0(((((((46(((64(((((62(61 63))(55((56(54 57))(51 60))))(58 59))((52 53)(48 50)))(45 49)))(42 47))(43 44)))(41(39 40)))((30(28 29))(27(32((36(31(33(26 37))))(34(35(38(24 25)))))))))(20(22(23(19 21)))))(18(17(15 16))))((8(13 14))(7((10 11)(9 12)))))(6(5(3(4(1 2))))))) \* (0(((((((46(((64(((((62(61 63))(55((56(54 57))(51 60))))(58 59))((52 53)(48 50)))(45 49)))(42 47))(43 44)))(41(39 40)))((30(28 29))(27(32((36(31(33(26 37))))(34(35(38(24 25)))))))))(20((22 23)(19 21))))(18(17(15 16))))((8(13 14))(7((10 11)(9 12)))))(6(5(3(4(1 2))))))) \* (0(((((((46(((64(((((62(61 63))(55((56(54 57))(51 60))))(58 59))((52 53)(48 50)))(45 49)))(42 47))(43 44)))(41(39 40)))((30(28 29))(27(32((36(31(33(26 37))))(34(35(38(24 25)))))))))(20(19(21(22 23)))))(18(17(15 16))))((8(13 14))(7((10 11)(9 12)))))(6(5(3(4(1 2))))))) \* (0(((((((46(((64(((((62(61 63))(55((56(54 57))(51 60))))(58 59))((52 53)(48 50)))(45 49)))(42 47))(43 44)))(41(39 40)))((30(28 29))(27((36(31(33(26 37))))(32(34(35(38(24 25)))))))))(20(21(19(22 23)))))(18(17(15 16))))((8(13 14))(7((10 11)(9 12)))))(6(5(3(4(1 2))))))) \* (0(((((((46(((64(((((62(61 63))(55((56(54 57))(51 60))))(58 59))((52 53)(48 50)))(45 49)))(42 47))(43 44)))(41(39 40)))((30(28 29))(27(32((36(31(33(26 37))))(34(35(38(24 25)))))))))(20(21(19(22 23)))))(18(17(15 16))))((8(13 14))(7((10 11)(9 12)))))(6(5(3(4(1 2))))))) \* (0(((((((46(((64(((((62(61 63))(55((56(54 57))(51 60))))(58 59))((52 53)(48 50)))(45 49)))(42 47))(43 44)))(41(39 40)))((30(28 29))(27(32(36(31(33(26 37))))(34(35(38(24 25))))))))(20(19 21 22 23)))(18(17(15 16))))((8(13 14))(7((10 11)(9 12)))))(6(5(3(4(1 2)))))))

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