

The NONA format data file (Goloboff 1999), exported from WinClada (Nixon 2002), that supports the cladistic analysis of Odacanthini and *Cyphocoleus* 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 may be imported to WinClada, making certain the Input file dialog box accepts "ALL files." Save the file in WINC format and enjoy.

[illegible]

Colliuris_(s.s.)_surinamensis_Neo
02000102000010000200030011100102001221000010001000010033100001020000002300
0000010100011120202010112000000001110101000106
Colliuris_(Colliurita)_bivittis_Neo
020001000000100002000200110001001012010000100010000000110001010100000000-
01101010000011020212010110001000001110101000106
Colliuris_(Mimocasnonia)_pilatei_Nea
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02-01030000001020202010111002000001110101000106
Colliuris_(Odacanthomimus)_oglobini_Neo
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Colliuris_(Plagiorhytis)_corusca_Neo
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Cosnania_lioptera_Nea
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Cosnania_pensylvanica_Nea
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Deipyrodes_palustris_Oz
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11103000001?01000002010010001000?????101000102
Dicraspeda_quadrispinosa_Oz 0100010000001001-
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Dobodura_armata_Oz 0300010000000101-
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Erectocolliuris_fairmairei_Af
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Eucolliuris_fuscipennis_As
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Eudalia_atrata_Oz 0100010000000001-
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Lachnothorax_tokkia_As_+_Oz
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Lasiocera_orientalis_As
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Mimocolliuris_chaudoiri_As
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Myrmecodemus_globulicollis_Oz 0000010200000101-
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Neoeudalia_nigra_Oz

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Odacantha_(s._s.)_melanura_Eu

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Odacantha_(Heliocasonia)_metallica_As

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Ophionea_thouzeti_Oz

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Porocara_nigricollis_Oz

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Renneria_kamouni_Oz

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Stenidia_hovana_Af

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Parascopodes_cyaneus_Oz

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Pentagonica_daimiella_As

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Pentagonica_picticornis_Nea

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Pentagonica_vittipennis_Oz

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Scopodes_angulicollis_Oz

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Scopodes_bryophilus_NZ

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Scopodes_fossulatus_NZ

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Scopodes_edwardsii_NZ

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Scopodes_simplex_Oz

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Scopodes_tasmanicus_Oz

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Aeolodermus_emarginatus_Oz
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Diplacanthogaster_bicolor_Neo
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Homethes_elegans_Oz
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Homethes_gracilis_Oz
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Homethes_guttifer_Oz
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Quammenis_spectabilis_Neo
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Stenocheila_lacordairei_Neo
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Cyphocoleus_lissus_NC 0211010200010101-
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Cyphocoleus_monteithi_NC 0311010101020101-
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Cyphocoleus_mirabilis_NC
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Cyphocoleus_lescheni_NC
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Cyphocoleus_latipennis_NC
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Cyphocoleus_cordatus_NC
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Cyphocoleus_cardiopterus_NC
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Cyphocoleus_globulicollis_NC
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Cyphocoleus_flavipes_NC
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Cyphocoleus_subulatus_NC
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Cyphocoleus_iledespinsensis_NC
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Cyphocoleus_prolixus_NC
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Cyphocoleus_heterogenus_NC 0211020100010101-
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Cyphocoleus_parovicollis_NC
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Cyphocoleus_ovicollis_NC
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Cyphocoleus_burwelli_NC 031102010002010-
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101010100001300220110101100100
Cyphocoleus_angustatus_NC 031102010002010-
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101001110101000032?????????????????0
;
cc - 36.37 102 119;
cc + 0.35 38.101 103.118;
cc ] 119;
proc /;
optcode f 0.5 7.13 15.27 29.46 48.59 61.71 73.83 85.117 119;
optcode u 6 14 28 47 60 72 84 118;

#
$
;
cn {0 Labrum truncate_to_slightly_emarginate_apically
broadly_convex_apically;
{1 Mandibular_length short,_<=_to_~1.5_x_distance_antenna_base-
labral_margin moderately_elongate,_1.5-1.75_X_distance elongate,_>1.8-
2.25_x_distance very_elongate,_>2.3_X_distance;
{2 Maxillary_galea_comprising_two_subequal_segments_
a_single_elongate_segment;
{3 Maxillary_galea free_of_the_lacinia
appressed_to_the_outer_surface_of_lacinia;

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{4 Apical_maxillary_palpomeres apparently_glabrous
 covered_with_short,_sparsely_distributed_setae
 covered_with_long,_dense_setae;
 {5 Antennal_scape moderately_long,_length_2.0-2.3_x_breadth
 elongate,_length_2.4-3.2_x_breadth very_elongate,_length_3.5-
 4.9_x_breadth;
 {6 Antennal_scape
 gracile_to_moderately_broad,_anterior_surface_at_most_slightly_bowed
 bowed,_swollen,_anterior_surface_distinctly_convex;
 {7 Antennomeres_2-3 glabrous_except_for_apical_setae_(ring_setae_on_3)
 with_short_setae_sparsely_distributed_along_shaft
 with_short_setae_densely_distributed_along_shaft;
 {8 Antennomeres concolorous_or_basal_antennomeres_paler apical_3-
 4_antennomeres_distinctly_paler,_testaceous antennomeres_7-8_or_8-9_paler
 antennomeres_7-10_paler;
 {9 Frons broadly_convex
 with_broad_median_convexity_and_two_adjacent_paralateral_grooves
 with_cristate_median_convexity_and_paralateral_grooves;
 {10 Frons smooth_or_irregularly_upraised distinctly_punctate;
 {11 Supraorbital_setae two,_both_anterior_and_posterior_seta_present
 posterior_seta_present,_anterior_absent
 neither_anterior_nor_posterior_seta_present;
 {12 Eyes moderate large,_greatly_projected
 hypertrophied,_convexly_projected;
 {13 Eye_size moderate very_small;
 {14 Number_of_ommatidia_across_horizontal_diameter_of_eye 10_or_more 8;
 {15 Eye_convexity moderately_convex very_convex,_pop-eyed;
 {16 Eye_convexity moderately_convex nearly_flat;
 {17 Neck without_any_constriction_behind_vertex,_sides_not_constricted
 with_moderate_constriction_behind_vertex,_sides_constricted
 with_very_distinct_neck_constriction,_head_pedunculate;
 {18 Neck_defined_by elongate_gena,_head_stalked
 short_gena,_head_truncate_behind;
 {19 Submentum with_two_setae_each_side with_single_seta_(inner)_each_side;
 {20 Ventral_surface_of_gena glabrous with_seta_each_side;
 {21 Mentum without_median_tooth_ with_shallow_bidentate_tooth
 with_obtuse_median_tooth,_apex_rounded
 with_acute_median_tooth,_apex_pointed;
 {22 Suture_between_mentum_and_gula/submentum straight_and_complete
 reduced_to_an_indistinct_impression,_straight_or_not;
 {23 Suture_between_mentum_and_gula/submentum
 complete_across_width,_distinct_or_not
 absent_medially,_mentum_and_gula_fused;
 {24 Pronotum orbicular parallel-
 sided_or_basal_margins_straight_and_divergent;
 {25 Pronotal_length subequal_or_less_than_width greater_than_width;
 {26 Pronotal_length less_than_to_twice_pronotal_width
 twice_or_more_than_twice_pronotal_width;
 {27 Front_angles rounded briefly_protruded extensively_protruded,_acute
 extensively_protruded,_horn-like_or_digitiform_process;
 {28 Pronotal_hind_angles flat,_not_upraised
 with_slightly_upraised_tubercle with_elongate,_spinose_projection
 with_very_elongate,_horn-like_or_digitiform_process;

{29 Median_base bordered_by_evenly_convex_marginal_bead
 bordered_laterally_by_sinuate_bead,_basally_by_straight_margin;
 {30 Pronotal_basal_margin straight_between_pronotal_hind_angles
 with_median_lobe_extended_posteriorly;
 {31 Pronotal_disc smooth_or_punctate_laterally
 with_shallow_transverse_wrinkles with_moderate_transverse_wrinkles
 with_deep_transverse_wrinkles;
 {32 Pronotal_disc smooth_or_transversely_wrinkled_overall
 punctate_overall;
 {33 Pronotal_disc without_parasagittal_grooves
 with_shallow_parasagittal_grooves with_deep_parasagittal_grooves;
 {34 Prothoracic_episternum not_expanded_nor_visible_in_dorsal_view
 expanded,_outer_surface_visible_in_dorsal_view;
 {35 Proepisternum smooth,_impunctate punctured_in_posterior_half
 distinctly_punctured_or_wrinkled_over_entire_surface;
 {36 Pronotal_lateral_seta present absent more_than_one_seta_present;
 {37 Pronotal_basal_seta present absent
 more_than_one_seta_present_each_side;
 {38 Pronotal_base smooth,_wrinkled_or_punctate_as_anterior_portion
 punctate;
 {39 Pronotal_lateral_margin straight_to_convexly_curved
 angulate_at_lateral_seta;
 {40 Pronotal_lateral_margin ridgelike,_lateral_depression_present
 absent,_lateral_seta_if_present_not_in_groove;
 {41 Elytral_humerus sinuously_rounded_laterad_parascutellar_striole
 tightly_rounded_to_angulate_near_or_laterad_base_of_fifth_interval
 distinctly_angulate_near_or_laterad_base_of_fifth_interval;
 {42 Elytral_humerus broadly_extended_laterally narrowly_extended_laterally
 very_narrowly_extended_laterally;
 {43 Elytral_basal_margin straight_between_humeri_across_scutellar_base
 inflexed_at_scutellar_base,_elytral_base_cordate;
 {44 Elytral_basal_groove of_uniform_depth_from_scutellum_to_humerus
 with_deep_pit_at_base_of_stria_3;
 {45 Elytral_lateral_marginal_depression
 narrow_outside_anterior_series_of_lateral_elytral_setae
 broadly_expanded_outside_anterior_series_of_lateral_elytral_setae;
 {46 Elytral_lateral_margin
 convex_laterad_anterior_series_of_lateral_elytral_setae
 invaginated_laterad_anterior_series_of_lateral_elytral_setae;
 {47 Parascutellar_seta present,_doubled_or_not absent;
 {48 Parascutellar_seta
 in_articulatary_socket_nearly_to_coplanar_with_interval_1
 in_papillate_articulatary_socket_elevated_above_interval_1;
 {49 Parascutellar_seta single_each_elytron double_each_elytron;
 {50 Dorsal_elytral_setae 3-4_or_more 2_(anterior_and_medial_setae_present)
 1_(medial_only) 0;
 {51 Dorsal_elytral_setae 3-4_or_less more_than_3-
 4,_present_along_length_of_interval_3;
 {52 Dorsal_elytral_setae articulatary_socket_coplanar_with_elytral_disc
 set_in_foveate_articulatary_socket;
 {53 Dorsal_elytral_setae
 not_surrounded_by_differentially_colored_cuticular_spot
 surrounded_by_differentially_colored_cuticular_spot;

{54 Elytral_macrosetae present_only_on_interval_3
 also_present_on_interval_5 also_present_on_intervals_5_and_7
 also_present_in_intervals_1,_5_and_7 present_on_all_intervals_1-7;
 {55 Elytra evenly_convex_from_base_to_apex
 with_shallow_lateral_depression_at_basal_1/3_of_length
 with_deep,_distinct_lateral_depression_at_basal_1/3_of_length
 with_deep_lateral_depressions_in_basal_and_apical_halves;
 {56 Discal_elytral_intervals flat_to_slightly_convex moderately_convex
 very_convex;
 {57 Elytral_striae present,_shallow_to_deep
 present_basally_andlaterally,_absent_in_apical_half absent;
 {58 Elytral_intervals_3,_5,_and_7
 of_equal_convexity_(or_nearly_equal)_to_others_on_disc
 broader_and_more_elevated_than_intervals_1,_2,_4,_and_6;
 {59 Elytral_striae impunctate_to_minutely_punctate regularly_punctate
 distinctly,_broadly_and_deeply_punctate;
 {60 Lateral_elytral_setae with_articulatorty_sockets_not_greatly_raised
 with_papillate_articulatorty_sockets;
 {61 Elytral_apices meeting_at_suture,_margins_evenly_curved
 separately_rounded_with_space_between_elytra
 separately_pointed,_elytra_bispinose_apically
 separately_spinose,_each_elytron_with_apical_spine;
 {62 Elytral_subapical_spine_at_apex_of_stria_3 absent present;
 {63 Subapical_situation nearly_obsolete,_elytral_apices_obliquely_truncate
 evident very_distinct,_angularly_concave
 very_distinct,_with_subapical_spine_laterally;
 {64 Apical_elytral_setae subapical_and_apical_present
 only_subapical_present;
 {65 Mesepisternal_fovea absent present;
 {66 Metathoracic_flight_wings present,_functional_with_folded_apex
 vestigial;
 {67 Metepisternal_length_to_width_ratio 2.5-4.0 2.0-2.4 1.3-1.6
 less_than_or_equal_to_1.0;
 {68 Abdominal-metathoracic_juncture loosely_articulated,_membranous
 tightly_articulated,_fused;
 {69 Elytral_and_abdominal_ventrite_cuticle
 moderately_sclerotized,_somewhat_flexible extremely_thick_and_brittle;
 {70 Surface_of_frons apparently_glabrous,_micropunctures_may_be_present
 with_short,_sparse_pelage with_dense_pelage_of_visible_setae;
 {71 Elytral_intervals
 glabrous_except_for_primary_setae_(micropunctures_possible)
 with_very_short_pelage_of_secondary_setae
 with_moderately_short_pelage_of_secondary_setae
 with_long_dense_pelage_distributed_over_surface;
 {72 Dorsal_pelage_setae fine,_thin,_pointed thick,_club-like;
 {73 Head_surface glabrous_except_for_macrosetae
 with_additional_macrosetae_posterad_supraorbital_setae;
 {74 Frons_microsculpture evident,_isodiametric_to_transverse
 reduced,_not_traceable_except_in_spots absent;
 {75 Frons_covered_with_distinct_isodiametric_sculpticells
 covered_with_evident,_stretched_isodiametric_sculpticells
 covered_with_dense_transverse_microsculpture;
 {76 Frons_surface smooth_with_longitudinal_microreticulations;

{77 Pronotal_disc with_regular_isodiametric_mesh
 with_evident_transverse_microsculpture with_fine_transverse_lines
 glossy, _without_evident_microsculpture;
 {78 Pronotal_discal_surface without_microcuticular_patterns
 with_swirling_microcuticular_ridges;
 {79 Elytral_disc_microsculpture
 isodiametric_mesh, _may_be_in_transverse_rows transverse_mesh
 evident_transverse_lines not_evident, _surface_glossy;
 {80 Elytral_microsculpture_sculpticells moderately_raised_to_not_raised
 extensively_raised_into_granulate_microsculpture;
 {81 Elytral_disc without_window-like_ivory_spots with_apical_window-
 like_spot_each_elytron with_apical_and_basal_window-
 like_spot_each_elytron;
 {82 Environmental_patina absent present;
 {83 Male_abdominal_apical_setae 2_(1_on_each_side)
 4_(2(rarely_3)_on_each_side) 8_(4_on_each_side);
 {84 Female_apical_abdominal_setae 4_or_more_(2_or_more_each_side)
 2_(1_each_side);
 {85 Apical_visible_male_abdominal_ventrite_medially
 convex_to_slightly, _broadly_concave with_distinct, _deeper_notch-
 like_invagination;
 {86 Metacoxae trisetose bisetose;
 {87 Femora moderately_elongate extremely_elongate;
 {88 Femora concolorous_from_base_to_apex
 with_distinct, _paler_band_in_apical_half, _knees_dark_as_base
 with_apex_dark, _basal_1/2_-_4/5_pale;
 {89 Fourth_metatarsomere
 truncate_apically, _without_lateral_lobes_or_with_lobes_short, _obtuse
 lobate, _apical_lobes_half_as_long_but_shorter_than_mid-dorsal_length
 lobate, _apical_lobes_longer_than_mid-dorsal_length;
 {90 Dorsal_surface_of_tarsomeres setose, _setae_long
 sparsely_covered_with_short_setae glabrous;
 {91 Metatarsomere_5 with_2_rows_of_6-8_long_ventrolateral_setae_
 with_2_rows_of_4-5_long_ventrolateral_setae with_2_rows_of_3-
 (4)_long_ventrolateral_setae with_two_rows_of_3_short_ventrolateral_setae;
 {92 Abdominal_tergite_8 complete, _undivided_medially_by_membranous_cuticle
 divided_medially_by_narrowly_membranous_cuticle
 divided_medially_by_broadly_membranous_cuticle
 divided_medially_by_broad_membrane, _laterally_extended_as_flaps;
 {93 Male_tergite_VIII_apodemes narrow, _the_laterotergite_stalked
 broadly_triangular, _therefore_the_laterotergite_triangular;
 {94 Abdominal_tergite_8_sclerotized_margin not_incorporating_spiracle
 with_spiracle_incorporated;
 {95 Male_tergite_IX_ring_sclerite angulate_apically, _wishbone-shaped
 hemicircular_apically, _horseshoe-shaped;
 {96 Male_aedeagal_median_lobe gracile robust, _broad_dorsoventrally;
 {97 Aedeagal_median_lobe
 short_to_elongate_but_broader_basally_than_toward_apex
 elongate, _dorsal_and_ventral_surfaces_parallel_for_much_of_length;
 {98 Aedeagal_median_lobe_apex gradually_narrowed_apicad_ostium parallel-
 sided, _elongate_apicad_ostium parallel-
 sided_basally, _curved_into_a_hook_apically;
 {99 Male_aedeagal_median_lobe_apex evenly_attenuated_or_expanded
 sinuously_curved_ventrally, _the_apex_offset_to_shaft;

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{100 Male_aedeagal_median_lobe_apex
of_moderate_length,_attenuate_or_spoon-shaped
exceedingly_elongate,_porrect;
{101 Male_aedeagal_median_lobe_apex
attenuated,_evenly_or_not,_but_tip_acuminate moderately_broad,_tip_rounded
broadly_rounded,_spoon-shaped
broader_apically_with_basal_constriction,_spatula-shaped;
{102 Male_aedeagal_internal_sac evenly_spiculated
with_ventral_sclerotized_field_or_tooth
with_apical cockscomb_of_macrospicules with_apical_tooth-like_projection
with_dorsal_tooth;
{103 Female_abdominal_tergite_IX broadly_convex
narrowly_convex,_apex_tightly_rounded;
{104 Female_abdominal_tergum_X
broad,_broadly_extended_laterally_beyond_gonocoxites
narrow,_little_extended_beyond_gonocoxites;
{105 Female_bursa_copulatrix membranous
sclerotized_across_surface_but_translucent heavily_sclerotized,_opaque;
{106 Female_bursa_copulatrix membranous,_inner_surface_smooth
sparsely_covered_with_spicules_on_inner_surface
densely_covered_with_thin_or_thick_spicules_on_inner_surface;
{107 Female_bursa_copulatrix
vaselike,_common_oviduct_short_basad_spermatheca
basally_broad,_with_elongate_oviduct_basad_spermatheca
basally_broad,_rectum-like,_with_very_elongate_extension_to_sp_;
{108 Female_spermathecal_assembly
without_apical_bulb_basally_adjoining_basal_bulb
with_apical_bulb_present_basad_basal_bulb;
{109 Spermathecal_basal_bulb broadly_joined_to_spermathecal_sclerite
narrowly_joined_by_a_duct_to_spermathecal_sclerite;
{110 Spermathecal_gland_reservoir
globose_or_elongate,_not_divided_apically
linear,_divided_or_not_apically,_ductules_on_elongate_strand;
{111 Basal_gonocoxite_1 with_1-3_apical_fringe_setae with_5-
12_apical_fringe_setae with_14-16_apical_fringe_setae;
{112 Basal_gonocoxite_1
not_extended_medially_mesad_inner_margin_of_gonocoxite_2
convexly_extended_medially_mesad_inner_margin_of_gonocoxite_2;
{113 Basal_gonocoxite_1_basolateral_apodeme gradually_thinned_apically
very_thick_throughout_length,_bar-like;
{114 Apical_gonocoxite_2 with_2_(or_1)_lateral_ensiform_setae
with_3_lateral_ensiform_setae with_4-5_lateral_ensiform_setae;
{115 Lateral_ensiform_setae
arrayed_along_lateral_margin_of_apical_gonocoxite_2
grouped_near_apex_of_apical_gonocoxite_2;
{116 Apical_gonocoxite_2 acuminate_apically triangular,_rounded_apically;
{117 Gonocoxite_2 much_narrower_basally_than_length,_falciform
narrower_basally_than_length,_acuminate_to_triangular;
{118 Dorsal_ensiform_seta_of_gonocoxite_2 present absent;
{119 Zoogeographic_Region New_Caledonia New_Zealand Australia Asia
Africa_incl._Madagascar Palaearctic Neotropical Nearctic;
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tread 'wha' (0(1((((39(49(43(47(44(45(46 48)))))))(42(40
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62)))))))))((50(56(51 55)))(53(52 54)))))) * (0(1(((57((74((77 78)(75
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68))(64 65)))))(60(59(61 62)))))))))((53(52 54))(50(56(51 55))))))
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