

Supplementary Materials 3

The morphological characteristics used in the StarBEAST2 analysis. The files are formatted as nexus files.

A. Craw

```
#NEXUS
```

```
begin taxa;
```

```
  TITLE weevil;
```

```
  dimensions ntax=72;
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```
  taxlabels
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```
    L_huttoni_5
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    L_huttoni_6
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    L_huttoni_7
```

```
    L_huttoni_11
```

```
    L_huttoni_12
```

```
    L_huttoni_27
```

```
    H_tuberculatus_2_2007
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    H_tuberculatus_3_2007
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    H_tuberculatus_4_2007
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    H_tuberculatus_6_2007
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    H_tuberculatus_1_2009
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    H_tuberculatus_3_2009
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    H_tuberculatus_5_2009
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    H_tuberculatus_8_2009
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    H_tuberculatus_9_2009
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    H_tuberculatus_12_2009
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    H_tuberculatus_16_2009
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    H_tuberculatus_18_2009
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    H_tuberculatus_25_2009
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    H_tuberculatus_27_2009
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    H_tuberculatus_29_2009
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    H_tuberculatus_35_2009
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    H_tuberculatus_45_2009
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    H_tuberculatus_46_2009
```

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    H_tuberculatus_47_2009
```

```
    H_tuberculatus_1_2010
```

```
    H_tuberculatus_4_2010
```

```
    H_tuberculatus_6_2010
```

```
    H_tuberculatus_7_2010
```

```
    H_tuberculatus_10_2010
```

```
    H_tuberculatus_11_2010
```

H_tuberculatus_13_2010
H_tuberculatus_14_2010
H_tuberculatus_15_2010
H_tuberculatus_17_2010
H_tuberculatus_18_2010
H_tuberculatus_23_2010
H_tuberculatus_25_2010
H_tuberculatus_29_2010
H_tuberculatus_32_2010
H_tuberculatus_33_2010
H_tuberculatus_40_2010
H_tuberculatus_41_2010
H_stilbocarpae_1
H_stilbocarpae_2
H_spinipennis_A
H_spinipennis_B
H_spinipennis_C
H_spinipennis_D
H_spinipennis_E
H_spinipennis_F
H_spinipennis_G
H_spinipennis_H
H_spinipennis_I
H_spinipennis_J
H_spinipennis_M
H_spinipennis_N
H_spinipennis_O
H_spinipennis_1_1
H_spinipennis_1_2
H_spinipennis_1_3
H_spinipennis_1_4
H_spinipennis_2_1
H_spinipennis_2_2
H_spinipennis_3_1
H_spinipennis_4_2
H_spinipennis_4_3
H_spinipennis_6_1
H_spinipennis_6_2
H_spinipennis_6_3
H_pittospori_2009
H_pittospori_1981

;
end;

```

begin characters;
  TITLE crawl;
  LINK TAXA = weevil;
  dimensions nchar=13;
  format missing=? gap=- datatype=Standard SYMBOLS="012";
  CHARSTATE LABELS
    1      'Rostrum median carina' / present absent,
    2      'Postocular lobes' / present absent,
    3      'Pronatum lateral margins' / 0 1 2,
    4      'Pronatal disc' / punctate tubercles,
    5      'Metasternal margin' / fold tooth,
    6      'Mesepisternum' / 'no impression' 'distinct elongate impression',
    7      'Elytral scales' / scatter confined,
    8      'Elytral disc interval (3, 5, 7)' / 'flat to convex' tuberculate,
    9      'Mid-elytral declivity' / 'interval 3 flat to costate' 'tubercle on
interval 3',
    10     'Elytral declivity lateral margin' / 'without tubercle on interval 9'
'with tubercle on interval 9',
    11     'Femoral tooth' / present absent,
    12     'Male 5th ventrite' / 'not medio-apically emarginate' emarginate,
    13     'Female gonocoxites' / short long,
    ;

MATRIX
[          10      20 ]
[          .      . ]
L_huttoni_5          0000001000101
L_huttoni_6          0000001000101
L_huttoni_7          0000001000101
L_huttoni_11         0000001000101
L_huttoni_12         0000001000101
L_huttoni_27         0000001000101
H_tuberculatus_2_2007 0121110100100
H_tuberculatus_3_2007 0121110100100
H_tuberculatus_4_2007 0121110100100
H_tuberculatus_6_2007 0121110100100
H_tuberculatus_1_2009 0121110100100
H_tuberculatus_3_2009 0121110100100
H_tuberculatus_5_2009 0121110100100
H_tuberculatus_8_2009 0121110100100
H_tuberculatus_9_2009 0121110100100
H_tuberculatus_12_2009 0121110100100
H_tuberculatus_16_2009 0121110100100

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H_tuberculatus_18_2009	0121110100100
H_tuberculatus_25_2009	0121110100100
H_tuberculatus_27_2009	0121110100100
H_tuberculatus_29_2009	0121110100100
H_tuberculatus_35_2009	0121110100100
H_tuberculatus_45_2009	0121110100100
H_tuberculatus_46_2009	0121110100100
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H_tuberculatus_23_2010	0121110100100
H_tuberculatus_25_2010	0121110100100
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H_tuberculatus_33_2010	0121110100100
H_tuberculatus_40_2010	0121110100100
H_tuberculatus_41_2010	0121110100100
H_stilbocarpae_1	1121110111111
H_stilbocarpae_2	1121110111111
H_spinipennis_A	1121110111011
H_spinipennis_B	1121110111011
H_spinipennis_C	1121110111011
H_spinipennis_D	1121110111011
H_spinipennis_E	1121110111011
H_spinipennis_F	1121110111011
H_spinipennis_G	1121110111011
H_spinipennis_H	1121110111011
H_spinipennis_I	1121110111011
H_spinipennis_J	1121110111011
H_spinipennis_M	1121110111011
H_spinipennis_N	1121110111011
H_spinipennis_O	1121110111011
H_spinipennis_1_1	1121110111011
H_spinipennis_1_2	1121110111011

H_spinipennis_1_3	1121110111011
H_spinipennis_1_4	1121110111011
H_spinipennis_2_1	1121110111011
H_spinipennis_2_2	1121110111011
H_spinipennis_3_1	1121110111011
H_spinipennis_4_2	1121110111011
H_spinipennis_4_3	1121110111011
H_spinipennis_6_1	1121110111011
H_spinipennis_6_2	1121110111011
H_spinipennis_6_3	1121110111011
H_pittospori_2009	0111110101001
H_pittospori_1981	0111110101001
;	
END;	

B. Kuschel

#NEXUS

begin taxa;

 TITLE weevil;

 dimensions ntax=72;

taxlabels

 L_huttoni_5

 L_huttoni_6

 L_huttoni_7

 L_huttoni_11

 L_huttoni_12

 L_huttoni_27

 H_tuberculatus_2_2007

 H_tuberculatus_3_2007

 H_tuberculatus_4_2007

 H_tuberculatus_6_2007

 H_tuberculatus_1_2009

 H_tuberculatus_3_2009

 H_tuberculatus_5_2009

 H_tuberculatus_8_2009

 H_tuberculatus_9_2009

 H_tuberculatus_12_2009

 H_tuberculatus_16_2009

 H_tuberculatus_18_2009

 H_tuberculatus_25_2009

 H_tuberculatus_27_2009

 H_tuberculatus_29_2009

 H_tuberculatus_35_2009

H_tuberculatus_45_2009
H_tuberculatus_46_2009
H_tuberculatus_47_2009
H_tuberculatus_1_2010
H_tuberculatus_4_2010
H_tuberculatus_6_2010
H_tuberculatus_7_2010
H_tuberculatus_10_2010
H_tuberculatus_11_2010
H_tuberculatus_13_2010
H_tuberculatus_14_2010
H_tuberculatus_15_2010
H_tuberculatus_17_2010
H_tuberculatus_18_2010
H_tuberculatus_23_2010
H_tuberculatus_25_2010
H_tuberculatus_29_2010
H_tuberculatus_32_2010
H_tuberculatus_33_2010
H_tuberculatus_40_2010
H_tuberculatus_41_2010
H_stilbocarpe_1
H_stilbocarpe_2
H_spinipennis_A
H_spinipennis_B
H_spinipennis_C
H_spinipennis_D
H_spinipennis_E
H_spinipennis_F
H_spinipennis_G
H_spinipennis_H
H_spinipennis_I
H_spinipennis_J
H_spinipennis_M
H_spinipennis_N
H_spinipennis_O
H_spinipennis_1_1
H_spinipennis_1_2
H_spinipennis_1_3
H_spinipennis_1_4
H_spinipennis_2_1
H_spinipennis_2_2
H_spinipennis_3_1
H_spinipennis_4_2
H_spinipennis_4_3
H_spinipennis_6_1

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H_spinipennis_6_2
H_spinipennis_6_3
H_pittospori_2009
H_pittospori_1981
;
end;
begin characters;
  TITLE kuschel;
  LINK TAXA = weevil;
  dimensions nchar=12;
  format missing=? gap=- datatype=Standard SYMBOLS="012";
  CHARSTATE LABELS
    1      'Prothorax aand elytra' / 'no tubercles' tubercles,
    2      'Ocular lobes' / 'weakly developed' 'strongly developed',
    3      'Metasternum' / 'without projecting tooth' 'with projecting tooth',
    4      'Prothorax' / 'wider than long' 'as long as wide',
    5      'Elytra' / 'rounded on side, widest near middle, no distinct humeral
tubercle' 'straight sides from base to middle, distinct humeral tubercle'
    6      '2nd segment funicle' / short long,
    7      'host plant' / Apiaceae Araliaceae Pittosporaceae,
    8      'female tergal pouches' / absent present,
    9      'male tegminal ring' / 'without teeth, parameres narrow' 'teeth on
anterior edge, parameres broad',
    10     'symbiotic pouches containing filamentous prokaryots' / absent
present,
    11     'endophallus apex inverted Ushape' / no yes,
    12     'elytra interval 3 declivity and interval 9' / 'no tubercle on interval 3
in declivity and no tubercle on interval 9' 'tubercle on interval 3 declivity and tubercle on interval
9',
    ;

MATRIX
[
      10      20 ]
[
      .      . ]
L_huttoni_5      000--10-000-
L_huttoni_6      000--10-000-
L_huttoni_7      000--10-000-
L_huttoni_11     000--10-000-
L_huttoni_12     000--10-000-
L_huttoni_27     000--10-000-
H_tuberculatus_2_2007 111000000010
H_tuberculatus_3_2007 111000000010
H_tuberculatus_4_2007 111000000010
H_tuberculatus_6_2007 111000000010
H_tuberculatus_1_2009 111000000010
H_tuberculatus_3_2009 111000000010

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H_tuberculatus_8_2009	111000000010
H_tuberculatus_9_2009	111000000010
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H_tuberculatus_18_2009	111000000010
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H_spinipennis_6_3	111000000011
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H_pittospori_1981	11111111210-
;	
END;	