

## SUPPLEMENTARY TABLES

**Table S1.** List of specimens of Braconidae and Chalcidoidea wasps associated with wild and cultivated olives in the Western Cape Province of South Africa, as deposited in the entomology collection at the Iziko South African Museum in Cape Town.

Species	Sex	Code
<i>Neochrysocharis formosus</i>	Female	SAM-HYM-P077293
<i>Neochrysocharis formosus</i>	Male	SAM-HYM-P087884
<i>Ormyrus</i> sp.	Male	SAM-HYM-P087883
<i>Ormyrus</i> sp.	Female	SAM-HYM-P077284
<i>Psytalia humilis</i>	Female	SAM-HYM-P080402
<i>Psytalia humilis</i>	Male	SAM-HYM-P080401
<i>Psytalia humilis</i>	Female	SAM-HYM-P087879
<i>Psytalia lounsburyi</i>	Female	SAM-HYM-P080405
<i>Psytalia lounsburyi</i>	Male	SAM-HYM-P080406
<i>Sycophila aethiopica</i>	Male	SAM-HYM-P077288
<i>Sycophila aethiopica</i>	Female	SAM-HYM-P087880
<i>Sycophila aethiopica</i>	Female	SAM-HYM-P087881
<i>Utetes africanus</i>	Female	SAM-HYM-P077287
<i>Utetes africanus</i>	Male	SAM-HYM-P077286
<i>Bracon celer</i>	Female	SAM-HYM-P077289
<i>Bracon celer</i>	Male	SAM-HYM-P077283
<i>Eupelmus spermophilus</i>	Female	SAM-HYM-P080403
<i>Eupelmus spermophilus</i>	Male	SAM-HYM-P080404
<i>Eurytoma oleae</i>	Female	SAM-HYM-P077290
<i>Eurytoma oleae</i>	Male	SAM-HYM-P080400
<i>Eurytoma varicolor</i>	Female	SAM-HYM-P077292
<i>Eurytoma varicolor</i>	Male	SAM-HYM-P077291

**Table S2.** List of primers used for the PCR amplification and bidirectional sequencing of the barcoding region of the *COI* gene in Braconidae and Chalcidoidea wasps reared from wild and cultivated olives in the Western Cape and Eastern Cape Provinces of South Africa. \*Previously published (Folmer et al, 1994); \*\*Developed in this study.

Primer	Primer sequence (5'-3')	Primer pair	PCR product (bp)
<b>LCO1490</b>	GGTCAACAAATCATAAAGATATTGG	1*	~ 710
<b>HCO2198</b>	TAAACTTCAGGGTGACCAAAAAATCA		
<b>Euryt-COI-F2</b>	GAATATGAGCAGGAATTTTAGG	2**	~ 650
<b>Euryt-COI-R2</b>	CCCCTGCAGGATCAAAAAATG		
<b>Eupel-COI-F</b>	GAATTTGAGCTGGAAGCTATGGG	3**	~ 650
<b>Eupel-COI-R</b>	GCTCCAGCTAATACAGGAAGTG		

**Table S3.** List of publicly available and new *COI* sequences of Braconidae and Chalcidoidea used in the NJ and ML analyses of wasps reared from wild and cultivated olives in the Western and the Eastern Cape Provinces of South Africa, with Genbank accession numbers and BOLD identification numbers. Sequences generated in this study are shown in **bold underlined**.

Species	Designation in tree	Genbank	BOLD ID
<b>Braconidae</b>			
<i>Bracon asphondyliae</i>	Bracon asphondyliae 1	LC020156.1	
<i>Bracon asphondyliae</i>	Bracon asphondyliae 2	LC020158.1	
<i>Bracon asphondyliae</i>	Bracon asphondyliae 3	LC020166.1	
<i>Bracon asphondyliae</i>	Bracon asphondyliae 4	LC020162.1	
<i>Bracon asphondyliae</i>	Bracon asphondyliae 5	LC020167.1	
<i>Bracon asphondyliae</i>	Bracon asphondyliae 6	LC020187.1	
<i>Bracon asphondyliae</i>	Bracon asphondyliae 7	LC020188.1	
<i>Bracon asphondyliae</i>	Bracon asphondyliae 8	LC020173.1	
<i>Bracon asphondyliae</i>	Bracon asphondyliae 9	LC020165.1	
<i>Bracon atrator</i>	Bracon atrator 1	KR888121.1	
<i>Bracon atrator</i>	Bracon atrator 2	KR888825.1	
<b><u>Bracon celer</u></b>	<b><u>Bracon celer BR02</u></b>	<b><u>MH841930</u></b>	<b><u>BRCN001-18</u></b>
<i>Bracon crassicornis</i>	Bracon crassicornis 1	KY835596.1	
<i>Bracon crassicornis</i>	Bracon crassicornis 2	KY842195.1	
<i>Bracon crassicornis</i>	Bracon crassicornis 3	KY845184.1	
<i>Bracon greeni</i>	Bracon greeni	KP055617.1	
<i>Bracon intercessor</i>	Bracon intercessor 1	KR794333.1	
<i>Bracon intercessor</i>	Bracon intercessor 2	KR888248.1	
<i>Bracon kopelkei</i>	Bracon kopelkei	KT599275.1	
<i>Bracon picticornis</i>	Bracon picticornis	KT599313.1	
<i>Bracon tamabae</i>	Bracon tamabae 1	LC020118.1	
<i>Bracon tamabae</i>	Bracon tamabae 2	LC020126.1	
<i>Psytalia carinata</i>	Psytalia carinata 1	KX503389.1	
<i>Psytalia carinata</i>	Psytalia carinata 2	KX503390.1	
<i>Psytalia carinata</i>	Psytalia carinata 3	KX503393.1	
<i>Psytalia carinata</i>	Psytalia carinata 4	KX503391.1	
<i>Psytalia carinata</i>	Psytalia carinata 5	KX503392.1	
<i>Psytalia carinata</i>	Psytalia carinata 6	KX503394.1	
<i>Psytalia cf. perproxima</i>	Psytalia cf. perproxima PFRJ-2008	EU761043.1	
<i>Psytalia concolor</i>	Psytalia concolor 1	EU761024.1	
<i>Psytalia concolor</i>	Psytalia concolor 2	EU761025.1	
<i>Psytalia concolor</i>	Psytalia concolor 3	EU761020.1	
<i>Psytalia concolor</i>	Psytalia concolor 4	EU761021.1	
<i>Psytalia concolor</i>	Psytalia concolor 5	EU761022.1	
<i>Psytalia concolor</i>	Psytalia concolor 6	EU761023.1	
<i>Psytalia cosyrae</i>	Psytalia cosyrae 1	EU761041.1	
<i>Psytalia cosyrae</i>	Psytalia cosyrae 2	EU761042.1	
<i>Psytalia cosyrae</i>	Psytalia cosyrae 3	EU761040.1	
<i>Psytalia cosyrae</i>	Psytalia cosyrae 4	EU761039.1	
<i>Psytalia fletcheri</i>	Psytalia fletcheri 1	KT595068.1	

<i>Psyttalia fletcheri</i>	Psyttalia fletcheri 2	KC662217.1	
<i>Psyttalia fletcheri</i>	Psyttalia fletcheri 4	KC662221.1	
<i>Psyttalia fletcheri</i>	Psyttalia fletcheri 5	KC662218.1	
<i>Psyttalia fletcheri</i>	Psyttalia fletcheri 6	KC662220.1	
<i>Psyttalia humilis</i>	Psyttalia humilis 1	EU761028.1	
<i>Psyttalia humilis</i>	Psyttalia humilis 2	EU761029.1	
<i>Psyttalia humilis</i>	Psyttalia humilis 3	EU761026.1	
<i>Psyttalia humilis</i>	Psyttalia humilis 5	EU761031.1	
<i>Psyttalia humilis</i>	Psyttalia humilis 6	EU761030.1	
<b><u>Psyttalia humilis</u></b>	<b><u>Psyttalia humilis PS24</u></b>	<b><u>MH841896</u></b>	<b><u>PSYT006-18</u></b>
<b><u>Psyttalia humilis</u></b>	<b><u>Psyttalia humilis PS25</u></b>	<b><u>MH841895</u></b>	<b><u>PSYT007-18</u></b>
<b><u>Psyttalia humilis</u></b>	<b><u>Psyttalia humilis PS29</u></b>	<b><u>MH841897</u></b>	<b><u>PSYT008-18</u></b>
<i>Psyttalia incisi</i>	Psyttalia incisi	JX240380.1	
<i>Psyttalia lounsburyi</i>	Psyttalia lounsburyi 1	GU725008.1	
<i>Psyttalia lounsburyi</i>	Psyttalia lounsburyi 13	GU725025.1	
<i>Psyttalia lounsburyi</i>	Psyttalia lounsburyi 14	GU725010.1	
<i>Psyttalia lounsburyi</i>	Psyttalia lounsburyi 16	GU725019.1	
<i>Psyttalia lounsburyi</i>	Psyttalia lounsburyi 18	GU725021.1	
<i>Psyttalia lounsburyi</i>	Psyttalia lounsburyi 19	GU725026.1	
<i>Psyttalia lounsburyi</i>	Psyttalia lounsburyi 24	GU725031.1	
<i>Psyttalia lounsburyi</i>	Psyttalia lounsburyi 25	EU761036.1	
<i>Psyttalia lounsburyi</i>	Psyttalia lounsburyi 26	EU761038.1	
<i>Psyttalia lounsburyi</i>	Psyttalia lounsburyi 27	EU761037.1	
<b><u>Psyttalia lounsburyi</u></b>	<b><u>Psyttalia lounsburyi PS05</u></b>	<b><u>MH841901</u></b>	<b><u>PSYT003-18</u></b>
<b><u>Psyttalia lounsburyi</u></b>	<b><u>Psyttalia lounsburyi PS19</u></b>	<b><u>MH841900</u></b>	<b><u>PSYT004-18</u></b>
<b><u>Psyttalia lounsburyi</u></b>	<b><u>Psyttalia lounsburyi PS20</u></b>	<b><u>MH841898</u></b>	<b><u>PSYT005-18</u></b>
<b><u>Psyttalia lounsburyi</u></b>	<b><u>Psyttalia lounsburyi PS40</u></b>	<b><u>MH841899</u></b>	<b><u>PSYT009-18</u></b>
<i>Psyttalia perproxima</i>	Psyttalia perproxima 1	EU761035.1	
<i>Psyttalia perproxima</i>	Psyttalia perproxima 2	EU761032.1	
<i>Psyttalia perproxima</i>	Psyttalia perproxima 4	EU761034.1	
<i>Psyttalia phaeostigma</i>	Psyttalia phaeostigma	EU761045.1	
<i>Psyttalia ponerophaga</i>	Psyttalia ponerophaga 1	EU761019.1	
<i>Psyttalia ponerophaga</i>	Psyttalia ponerophaga 2	EU761018.1	
<i>Psyttalia ponerophaga</i>	Psyttalia ponerophaga 3	EU761017.1	
<i>Psyttalia ponerophaga</i>	Psyttalia ponerophaga 4	EU761016.1	
<i>Psyttalia ponerophaga</i>	Psyttalia ponerophaga 5	EU761015.1	
<b><u>Utetes africanus</u></b>	<b><u>Utetes africanus UA77</u></b>	<b><u>MH917741</u></b>	<b><u>UTET010-17</u></b>
<b><u>Utetes africanus</u></b>	<b><u>Utetes africanus UA86</u></b>	<b><u>MH917742</u></b>	<b><u>UTET009-17</u></b>
<b><u>Utetes africanus</u></b>	<b><u>Utetes africanus UA92</u></b>	<b><u>MH917743</u></b>	<b><u>UTET008-17</u></b>
<b><u>Utetes africanus</u></b>	<b><u>Utetes africanus UA94</u></b>	<b><u>MH917744</u></b>	<b><u>UTET007-17</u></b>
<b><u>Utetes africanus</u></b>	<b><u>Utetes africanus UA95</u></b>	<b><u>MH917745</u></b>	<b><u>UTET006-17</u></b>
<b><u>Utetes africanus</u></b>	<b><u>Utetes africanus UA96</u></b>	<b><u>MH917746</u></b>	<b><u>UTET005-17</u></b>
<b><u>Utetes africanus</u></b>	<b><u>Utetes africanus UA97</u></b>	<b><u>MH917747</u></b>	<b><u>UTET004-17</u></b>
<b><u>Utetes africanus</u></b>	<b><u>Utetes africanus UA98</u></b>	<b><u>MH917748</u></b>	<b><u>UTET003-17</u></b>
<b><u>Utetes africanus</u></b>	<b><u>Utetes africanus UA98.1</u></b>	<b><u>MH917749</u></b>	<b><u>UTET002-17</u></b>
<b><u>Utetes africanus</u></b>	<b><u>Utetes africanus UA101</u></b>	<b><u>MH917750</u></b>	<b><u>UTET001-17</u></b>
<i>Utetes anastrephae</i>	Utetes anastrephae	KU511214.1	

<i>Utetes canaliculatus</i>	Utetes canaliculatus 1	KT761291.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 2	KT761294.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 3	KT761315.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 4	KT761317.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 5	KT761318.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 6	KT761319.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 7	KT761320.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 8	KT761323.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 9	KT761316.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 10	KT761324.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 11	KT761326.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 12	KT761328.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 13	KT761341.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 14	KT761342.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 15	KT761347.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 17	KU511219.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 18	KT761354.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 19	KU511218.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 20	KT761379.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 21	KT761382.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 22	KT761385.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 23	KT761387.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 24	KT761396.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 25	KT761383.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 27	KT761344.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 28	KT761380.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 29	KT761381.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 30	KT761384.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 31	KT761397.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 32	KT761398.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 33	KT761399.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 34	KT761402.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 35	KT761419.1	
<i>Utetes canaliculatus</i>	Utetes canaliculatus 36	KT761420.1	
<i>Utetes frequens</i>	Utetes frequens 1	KU511228.1	
<i>Utetes frequens</i>	Utetes frequens 2	KU511217.1	
<i>Utetes frequens</i>	Utetes frequens 3	KU511225.1	
<i>Utetes juniperi</i>	Utetes juniperi	KU511215.1	
<i>Utetes magnus</i>	Utetes magnus	KX503395.1	
<i>Utetes rosicula</i>	Utetes rosicula	KU511226.1	
<i>Utetes tabellariae</i>	Utetes tabellariae	KU511223.1	
<b>Chalcidoidea</b>			
<i>Asecodes lucens</i>	Asecodes lucens 1	KC808618.1	
<i>Asecodes lucens</i>	Asecodes lucens 2	KC808623.1	
<i>Asecodes lucens</i>	Asecodes lucens 3	KC808626.1	
<i>Asecodes lucens</i>	Asecodes lucens 4	KC808627.1	
<i>Asecodes lucens</i>	Asecodes lucens 5	KC808628.1	

<i>Asecodes lucens</i>	Asecodes lucens 6	KC808631.1	
<i>Eupelmus acinellus</i>	Eupelmus acinellus 1	KJ018383.1	
<i>Eupelmus acinellus</i>	Eupelmus acinellus 2	KJ018384.1	
<i>Eupelmus annulatus</i>	Eupelmus annulatus 1	KJ018333.1	
<i>Eupelmus annulatus</i>	Eupelmus annulatus 2	KJ018363.1	
<i>Eupelmus annulatus</i>	Eupelmus annulatus 3	KJ018395.1	
<i>Eupelmus annulatus</i>	Eupelmus annulatus 5	KJ018379.1	
<i>Eupelmus annulatus</i>	Eupelmus annulatus 6	KJ018403.1	
<i>Eupelmus annulatus</i>	Eupelmus annulatus 7	KJ018438.1	
<i>Eupelmus atropurpureus</i>	Eupelmus atropurpureus	KR348771.1	
<i>Eupelmus azureus</i>	Eupelmus azureus 1	KJ018331.1	
<i>Eupelmus azureus</i>	Eupelmus azureus 2	KJ018399.1	
<i>Eupelmus azureus</i>	Eupelmus azureus 3	KJ018449.1	
<i>Eupelmus azureus</i>	Eupelmus azureus 4	KJ018448.1	
<i>Eupelmus azureus</i>	Eupelmus azureus 5	KR348769.1	
<i>Eupelmus azureus</i>	Eupelmus azureus 6	KJ018372.1	
<i>Eupelmus cerris</i>	Eupelmus cerris	KJ018335.1	
<i>Eupelmus cicadae</i>	Eupelmus cicadae	KT361610.1	
<i>Eupelmus confusus</i>	Eupelmus confusus 19	KJ018367.1	
<i>Eupelmus confusus</i>	Eupelmus confusus 22	KJ018345.1	
<i>Eupelmus confusus</i>	Eupelmus confusus 23	KJ018426.1	
<i>Eupelmus confusus</i>	Eupelmus confusus 24	KJ018352.1	
<i>Eupelmus confusus</i>	Eupelmus confusus 25	KJ018356.1	
<i>Eupelmus confusus</i>	Eupelmus confusus 26	KJ018392.1	
<i>Eupelmus cushmani</i>	Eupelmus cushmani	KF444812.1	
<i>Eupelmus falcatus</i>	Eupelmus falcatus	KR348749.1	
<i>Eupelmus fulvipes</i>	Eupelmus fulvipes 1	KJ018364.1	
<i>Eupelmus fulvipes</i>	Eupelmus fulvipes 2	KJ018464.1	
<i>Eupelmus fulvipes</i>	Eupelmus fulvipes 3	KJ018466.1	
<i>Eupelmus fuscipennis</i>	Eupelmus fuscipennis	KT361611.1	
<i>Eupelmus gemellus</i>	Eupelmus gemellus 1	KJ018338.1	
<i>Eupelmus gemellus</i>	Eupelmus gemellus 2	KJ018381.1	
<i>Eupelmus gemellus</i>	Eupelmus gemellus 3	KJ018405.1	
<i>Eupelmus gemellus</i>	Eupelmus gemellus 5	KJ018441.1	
<i>Eupelmus gemellus</i>	Eupelmus gemellus 6	KJ018344.1	
<i>Eupelmus gemellus</i>	Eupelmus gemellus 7	KJ018349.1	
<i>Eupelmus janstai</i>	Eupelmus janstai	KJ018330.1	
<i>Eupelmus juniperinus thuriferae</i>	Eupelmus juniperinus thuriferae	KR348746.1	
<i>Eupelmus kiefferi</i>	Eupelmus kiefferi 14	KJ018450.1	
<i>Eupelmus kiefferi</i>	Eupelmus kiefferi 15	KJ018414.1	
<i>Eupelmus kiefferi</i>	Eupelmus kiefferi 16	KJ018467.1	
<i>Eupelmus kiefferi</i>	Eupelmus kiefferi 17	KJ018355.1	
<i>Eupelmus kiefferi</i>	Eupelmus kiefferi 19	KJ018393.1	
<i>Eupelmus kiefferi</i>	Eupelmus kiefferi 20	KJ018397.1	
<i>Eupelmus linearis</i>	Eupelmus linearis 1	KJ018334.1	
<i>Eupelmus linearis</i>	Eupelmus linearis 2	KR348747.1	
<i>Eupelmus longicalvus</i>	Eupelmus longicalvus 1	KJ018327.1	

<i>Eupelmus longicalvus</i>	Eupelmus longicalvus 2	KJ018455.1	
<i>Eupelmus longicalvus</i>	Eupelmus longicalvus 3	KJ018457.1	
<i>Eupelmus longicalvus</i>	Eupelmus longicalvus 4	KJ018458.1	
<i>Eupelmus longicalvus</i>	Eupelmus longicalvus 5	KJ018418.1	
<i>Eupelmus longicalvus</i>	Eupelmus longicalvus 6	KJ018459.1	
<i>Eupelmus martellii</i>	Eupelmus martellii	KJ018468.1	
<i>Eupelmus matranus</i>	Eupelmus matranus	KR348759.1	
<i>Eupelmus microzonus</i>	Eupelmus microzonus	KR348754.1	
<i>Eupelmus minozonus</i>	Eupelmus minozonus 1	KJ018323.1	
<i>Eupelmus minozonus</i>	Eupelmus minozonus 2	KJ018325.1	
<i>Eupelmus minozonus</i>	Eupelmus minozonus 3	KJ018472.1	
<i>Eupelmus minozonus</i>	Eupelmus minozonus 4	KJ018324.1	
<i>Eupelmus minozonus</i>	Eupelmus minozonus 5	KJ018336.1	
<i>Eupelmus muellneri</i>	Eupelmus muellneri	KT361612.1	
<i>Eupelmus opacus</i>	Eupelmus opacus 1	KJ018434.1	
<i>Eupelmus opacus</i>	Eupelmus opacus 2	KJ018435.1	
<i>Eupelmus phragmitis</i>	Eupelmus phragmitis	KT361614.1	
<i>Eupelmus pini</i>	Eupelmus pini 1	KR348745.1	
<i>Eupelmus pini</i>	Eupelmus pini 2	KT352074.1	
<i>Eupelmus pistaciae</i>	Eupelmus pistaciae 1	KJ018321.1	
<i>Eupelmus pistaciae</i>	Eupelmus pistaciae 2	KJ018322.1	
<i>Eupelmus pistaciae</i>	Eupelmus pistaciae 3	KJ018444.1	
<i>Eupelmus priotoni</i>	Eupelmus priotoni	KJ018332.1	
<i>Eupelmus purpuricollis</i>	Eupelmus purpuricollis 1	KJ018460.1	
<i>Eupelmus purpuricollis</i>	Eupelmus purpuricollis 2	KJ018461.1	
<i>Eupelmus seculatus</i>	Eupelmus seculatus	KR348750.1	
<i>Eupelmus simizonus</i>	Eupelmus simizonus	KJ018388.1	
<b><u>Eupelmus spermophilus</u></b>	<b><u>Eupelmus spermophilus 10E</u></b>	<b><u>MH841924</u></b>	<b><u>EUPEL006-17</u></b>
<b><u>Eupelmus spermophilus</u></b>	<b><u>Eupelmus spermophilus 11E</u></b>	<b><u>MH841923</u></b>	<b><u>EUPEL007-17</u></b>
<b><u>Eupelmus spermophilus</u></b>	<b><u>Eupelmus spermophilus ES26</u></b>	<b><u>MH841920</u></b>	<b><u>EUPEL010-18</u></b>
<b><u>Eupelmus spermophilus</u></b>	<b><u>Eupelmus spermophilus ES94</u></b>	<b><u>MH841929</u></b>	<b><u>EUPEL001-17</u></b>
<b><u>Eupelmus spermophilus</u></b>	<b><u>Eupelmus spermophilus ES99</u></b>	<b><u>MH841927</u></b>	<b><u>EUPEL003-17</u></b>
<b><u>Eupelmus spermophilus</u></b>	<b><u>Eupelmus spermophilus ES100</u></b>	<b><u>MH841926</u></b>	<b><u>EUPEL004-17</u></b>
<b><u>Eupelmus spermophilus</u></b>	<b><u>Eupelmus spermophilus ES125</u></b>	<b><u>MH841919</u></b>	<b><u>EUPEL011-18</u></b>
<b><u>Eupelmus spermophilus</u></b>	<b><u>Eupelmus spermophilus EU02</u></b>	<b><u>MH841922</u></b>	<b><u>EUPEL008-17</u></b>
<b><u>Eupelmus spermophilus</u></b>	<b><u>Eupelmus spermophilus EU14</u></b>	<b><u>MH841921</u></b>	<b><u>EUPEL009-17</u></b>
<b><u>Eupelmus spermophilus</u></b>	<b><u>Eupelmus spermophilus EU95</u></b>	<b><u>MH841928</u></b>	<b><u>EUPEL002-17</u></b>
<i>Eupelmus testaceiventris</i>	Eupelmus testaceiventris	KR348748.1	
<i>Eupelmus tibicinis</i>	Eupelmus tibicinis 1	KJ018389.1	
<i>Eupelmus tibicinis</i>	Eupelmus tibicinis 2	KJ018390.1	
<i>Eupelmus tibicinis</i>	Eupelmus tibicinis 4	KJ018454.1	
<i>Eupelmus tremulae</i>	Eupelmus tremulae	KJ018446.1	
<i>Eupelmus urozonus</i>	Eupelmus urozonus 14	KR348766.1	
<i>Eupelmus urozonus</i>	Eupelmus urozonus 15	KR348763.1	
<i>Eupelmus urozonus</i>	Eupelmus urozonus 16	KJ018420.1	
<i>Eupelmus urozonus</i>	Eupelmus urozonus 17	KJ018326.1	
<i>Eupelmus urozonus</i>	Eupelmus urozonus 19	KJ018445.1	

<i>Eupelmus urozonus</i>	Eupelmus urozonus 20	KJ018398.1	
<i>Eupelmus vesicularis</i>	Eupelmus vesicularis	KR806659.1	
<i>Eupelmus vindex</i>	Eupelmus vindex 1	KR348744.1	
<i>Eupelmus vindex</i>	Eupelmus vindex 2	KR348767.1	
<i>Eupelmus vindex</i>	Eupelmus vindex 3	KR348768.1	
<i>Eupelmus vindex</i>	Eupelmus vindex 4	KT361613.1	
<i>Eurytoma aciculata</i>	Eurytoma aciculata	KT599266.1	
<i>Eurytoma aff. spongiosa</i>	Eurytoma aff. spongiosa 1 YMZ-2013 3	KC685205.1	
<i>Eurytoma aff. spongiosa</i>	Eurytoma aff. spongiosa 1 YMZ-2013 4	KC685223.1	
<i>Eurytoma aff. spongiosa</i>	Eurytoma aff. spongiosa 1 YMZ-2013 5	KC685217.1	
<i>Eurytoma aff. spongiosa</i>	Eurytoma aff. spongiosa 2 YMZ-2013	KC685284.1	
<i>Eurytoma afra</i>	Eurytoma afra 1	KC960030.1	
<i>Eurytoma afra</i>	Eurytoma afra 2	KC960031.1	
<i>Eurytoma arctica</i>	Eurytoma arctica 1	KC960077.1	
<i>Eurytoma arctica</i>	Eurytoma arctica 2	KC960080.1	
<i>Eurytoma arctica</i>	Eurytoma arctica 3	KC960081.1	
<i>Eurytoma arctica</i>	Eurytoma arctica 4	KC960078.1	
<i>Eurytoma arctica</i>	Eurytoma arctica 5	KC960079.1	
<i>Eurytoma discordans</i>	Eurytoma discordans	KC685118.1	
<i>Eurytoma gigantea</i>	Eurytoma gigantea	GQ374673.1	
<i>Eurytoma juniperina</i>	Eurytoma juniperina	KX885559.1	
<i>Eurytoma laricis</i>	Eurytoma laricis 1	KC960032.1	
<i>Eurytoma laricis</i>	Eurytoma laricis 2	KC960033.1	
<i>Eurytoma longavena</i>	Eurytoma longavena 1	KC685156.1	
<i>Eurytoma longavena</i>	Eurytoma longavena 2	KC685185.1	
<i>Eurytoma longavena</i>	Eurytoma longavena 3	KR887064.1	
<i>Eurytoma longavena</i>	Eurytoma longavena 4	KR786474.1	
<i>Eurytoma longavena</i>	Eurytoma longavena 5	KR879583.1	
<i>Eurytoma longavena</i>	Eurytoma longavena 6	KC685159.1	
<i>Eurytoma maura</i>	Eurytoma maura 1	KC960034.1	
<i>Eurytoma maura</i>	Eurytoma maura 2	KC960043.1	
<i>Eurytoma maura</i>	Eurytoma maura 3	KC960037.1	
<i>Eurytoma maura</i>	Eurytoma maura 4	KC960039.1	
<i>Eurytoma maura</i>	Eurytoma maura 5	KC960042.1	
<i>Eurytoma maura</i>	Eurytoma maura 6	KC960040.1	
<i>Eurytoma morio</i>	Eurytoma morio 1	KC960055.1	
<i>Eurytoma morio</i>	Eurytoma morio 2	KC960060.1	
<i>Eurytoma morio</i>	Eurytoma morio 3	KC960056.1	
<i>Eurytoma morio</i>	Eurytoma morio 4	KC960072.1	
<i>Eurytoma morio</i>	Eurytoma morio 5	KC960084.1	
<i>Eurytoma morio</i>	Eurytoma morio 6	KC960088.1	
<b><u><i>Eurytoma oleae</i></u></b>	<b><u>Eurytoma oleae EY25</u></b>	<b><u>MH841911</u></b>	<b><u>EURYT010-17</u></b>
<b><u><i>Eurytoma oleae</i></u></b>	<b><u>Eurytoma oleae EY01</u></b>	<b><u>MH841918</u></b>	<b><u>EURYT001-17</u></b>
<b><u><i>Eurytoma oleae</i></u></b>	<b><u>Eurytoma oleae EY02</u></b>	<b><u>MH841913</u></b>	<b><u>EURYT006-17</u></b>
<b><u><i>Eurytoma oleae</i></u></b>	<b><u>Eurytoma oleae EY03</u></b>	<b><u>MH841910</u></b>	<b><u>EURYT011-18</u></b>
<b><u><i>Eurytoma oleae</i></u></b>	<b><u>Eurytoma oleae EY04</u></b>	<b><u>MH841917</u></b>	<b><u>EURYT002-17</u></b>
<b><u><i>Eurytoma oleae</i></u></b>	<b><u>Eurytoma oleae EY06</u></b>	<b><u>MH841916</u></b>	<b><u>EURYT003-17</u></b>

<u><i>Eurytoma oleae</i></u>	<u><i>Eurytoma oleae</i> EY14</u>	<u>MH841915</u>	<u>EURYT004-17</u>
<u><i>Eurytoma oleae</i></u>	<u><i>Eurytoma oleae</i> EY20</u>	<u>MH841912</u>	<u>EURYT008-17</u>
<u><i>Eurytoma oleae</i></u>	<u><i>Eurytoma oleae</i> EY43</u>	<u>MH841914</u>	<u>EURYT005-17</u>
<i>Eurytoma striolata</i>	<i>Eurytoma striolata</i> 1	KC960024.1	
<i>Eurytoma striolata</i>	<i>Eurytoma striolata</i> 2	KC960049.1	
<i>Eurytoma striolata</i>	<i>Eurytoma striolata</i> 3	KC960082.1	
<i>Eurytoma striolata</i>	<i>Eurytoma striolata</i> 4	KC960073.1	
<i>Eurytoma striolata</i>	<i>Eurytoma striolata</i> 5	KC960046.1	
<i>Eurytoma striolata</i>	<i>Eurytoma striolata</i> 6	KC960070.1	
<u><i>Eurytoma varicolor</i></u>	<u><i>Eurytoma varicolor</i> EY52</u>	<u>MH841909</u>	<u>EURYT012-18</u>
<u><i>Eurytoma varicolor</i></u>	<u><i>Eurytoma varicolor</i> EY60</u>	<u>MH841908</u>	<u>EURYT013-18</u>
<u><i>Eurytoma varicolor</i></u>	<u><i>Eurytoma varicolor</i> EY68</u>	<u>MH841907</u>	<u>EURYT014-18</u>
<u><i>Eurytoma varicolor</i></u>	<u><i>Eurytoma varicolor</i> EY78</u>	<u>MH841906</u>	<u>EURYT015-18</u>
<u><i>Eurytoma varicolor</i></u>	<u><i>Eurytoma varicolor</i> EY79</u>	<u>MH841905</u>	<u>EURYT016-18</u>
<u><i>Eurytoma varicolor</i></u>	<u><i>Eurytoma varicolor</i> EY80</u>	<u>MH841904</u>	<u>EURYT017-18</u>
<i>Neochrysocharis clinias</i>	<i>Neochrysocharis clinias</i> HM365038	HM365038.1	
<i>Neochrysocharis formosus</i>	<i>Neochrysocharis formosus</i> HM365028	HM365028.1	
<u><i>Neochrysocharis formosus</i></u>	<u><i>Neochrysocharis formosus</i> Nf18</u>	<u>MH841903</u>	<u>NCHRY001-18</u>
<u><i>Neochrysocharis formosus</i></u>	<u><i>Neochrysocharis formosus</i> Nf21</u>	<u>MH841902</u>	<u>NCHRY002-18</u>
<u><i>Sycophila aethiopica</i></u>	<u><i>Sycophila aethiopica</i> SY50</u>	<u>MH841894</u>	<u>SYCPH001-18</u>
<i>Sycophila</i> sp.	<i>Sycophila</i> sp 1-ALT 1	FJ499752.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp 1-ALT 2	FJ499753.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp 1-BEN 9	FJ499757.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp 1-BEN 10	FJ499761.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp 1-MIC 1	FJ499772.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp 1-MIC 2	FJ499768.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 1-MIC 3	FJ499769.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 1-MIC 4	FJ499771.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 1-MIC 5	FJ499770.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 1-SUP 4	FJ499775.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 1-SUP 5	FJ499774.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 1-SUP 6	FJ499776.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-BEN 3	FJ499783.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-BEN 4	FJ499784.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-BEN 5	FJ499785.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-BEN 6	FJ499780.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-BEN 7	FJ499790.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-BEN 8	FJ499786.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-BEN 9	FJ499787.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-BEN 10	FJ499789.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-BEN 11	FJ499788.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-BEN 12	FJ499782.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-MIC 5	FJ499802.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-MIC 8	FJ499792.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 2-VIR 1	FJ499793.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 3 1-BEN 1	FJ499803.1	
<i>Sycophila</i> sp.	<i>Sycophila</i> sp_ 3 1-BEN 2	FJ499804.1	



<i>Sycophila</i> sp.	Sycophila sp_ 3 1-BEN 3	FJ499805.1	
<i>Sycophila</i> sp.	Sycophila sp_ 3-BEN 1	FJ499806.1	
<i>Sycophila</i> sp.	Sycophila sp_ 3-BEN 2	FJ499808.1	
<i>Sycophila</i> sp.	Sycophila sp_ 3-BEN 3	FJ499810.1	
<i>Sycophila</i> sp.	Sycophila sp_ 3-BEN 4	FJ499811.1	
<i>Sycophila</i> sp.	Sycophila sp_ 3-BEN 5	FJ499809.1	
<i>Sycophila</i> sp.	Sycophila sp_ 4-BEN 1	FJ499812.1	
<i>Sycophila</i> sp.	Sycophila sp_ 5-MIC 1	FJ499814.1	
<i>Sycophila</i> sp.	Sycophila sp_ 5-MIC 2	FJ499815.1	
<i>Sycophila</i> sp.	Sycophila sp_ 5-MIC 3	FJ499816.1	
<i>Sycophila</i> sp.	Sycophila sp_ M1-ALT	FJ499738.1	
<i>Sycophila</i> sp.	Sycophila sp_ M1-SUP 5	FJ499744.1	
<i>Sycophila</i> sp.	Sycophila sp_ M1-SUP 6	FJ499741.1	
<i>Sycophila</i> sp.	Sycophila sp_ M2-VIR 2	FJ499748.1	
<i>Sycophila</i> sp.	Sycophila sp_ M10-1-BEN 1	FJ499663.1	
<i>Sycophila</i> sp.	Sycophila sp_ M10-1-BEN 8	FJ499669.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-2-BEN 6	FJ499688.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-2-BEN 7	FJ499693.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-2-BEN 8	FJ499691.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-BEN 1	FJ499698.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-BEN 20	FJ499703.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-BEN 21	FJ499699.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-MIC 1	FJ499716.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-MIC 2	FJ499718.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-MIC 3	FJ499721.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-MIC 4	FJ499719.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-MIC 5	FJ499717.1	
<i>Sycophila</i> sp.	Sycophila sp_ M11-MIC 6	FJ499720.1	
<i>Sycophila</i> sp.	Sycophila sp_ M12-MIC 1	FJ499722.1	
<i>Sycophila</i> sp.	Sycophila sp_ M12-MIC 2	FJ499725.1	
<i>Sycophila</i> sp.	Sycophila sp_ M12-MIC 3	FJ499723.1	
<i>Sycophila</i> sp.	Sycophila sp_ M12-MIC 4	FJ499726.1	
<i>Sycophila</i> sp.	Sycophila sp_ M12-MIC 5	FJ499724.1	
<i>Sycophila</i> sp.	Sycophila sp_ M13-MIC 2	FJ499729.1	
<i>Sycophila</i> sp.	Sycophila sp_ M13-MIC 3	FJ499728.1	
<i>Sycophila</i> sp.	Sycophila sp_ M15-BEN 1	FJ499731.1	
<i>Sycophila</i> sp.	Sycophila sp_ M15-BEN 2	FJ499735.1	
<i>Sycophila</i> sp.	Sycophila sp_ M15-BEN 3	FJ499733.1	
<i>Sycophila</i> sp.	Sycophila sp_ M15-BEN 4	FJ499737.1	
<i>Sycophila</i> sp.	Sycophila sp_ M15-BEN 5	FJ499730.1	
<i>Sycophila</i> sp.	Sycophila sp_ M15-BEN 6	FJ499736.1	
<i>Sycophila</i> sp.	Sycophila sp_ M15-BEN 7	FJ499732.1	
<i>Sycophila</i> sp.	Sycophila sp_ M15-BEN 8	FJ499734.1	

**Table S4.** Number of tephritid flies, and braconid and chalcid adult specimens reared from wild and cultivated olives, and apparent parasitism and seed wasp estimates of infestation rates in 16 areas in the Western Cape and one area in the Eastern Cape (Grahamstown) Provinces of South Africa. AIR %\* - Apparent seed infestation rate, calculated as the total number of adult specimens of the particular species / total number of olives at each collection site and date. APR %\* - Apparent parasitism rate, calculated as the total number of adult braconid and *Neochrysocharis formosus* specimens / (total number of tephritid flies + total number of braconids + *N. formosus*) at each collection site and date. Nd – No data.

Olive collection areas	Olive collection (month-year)	Number of olives	Wild/Cultivated olives		Tephritid flies		Tephritid flies + Braconidae		Braconidae								Chalcidoidea													
					<i>Bactrocera oleae</i>	<i>Bactrocera biguttula</i>	n	AIR %*	<i>Bracon celer</i>		<i>Psytalia humilis</i>		<i>Psytalia lounsburyi</i>		<i>Utetes africanus</i>		<i>Neochrysocharis formosus</i>		<i>Eupelmus spermophilus</i>		<i>Eurytoma oleae</i>		<i>Eurytoma varicolor</i>		<i>Sycophila aethiopica</i>		<i>Ormyrus</i> sp.			
					n	n			n	APR %*	n	APR %*	n	APR %*	n	APR %*	n	APR %*	n	APR %*	n	APR %*	n	APR %*	n	APR %*	n	APR %*	n	APR %*
Bonnievale	Apr-16	1750	Wild	-	4	-	7	0.40	-	-	-	-	-	-	3	42.86	-	-	7	0.40	-	-	-	-	-	-	-	-	1	0.06
Brackenfell	Mar-16	2940	Wild	-	-	-	1	0.03	1	100.00	-	-	-	-	-	-	-	-	8	0.27	-	-	-	-	-	-	-	-	-	
Cape Town	Apr-16	900	Wild	-	21	-	24	2.67	-	-	2	8.33	1	4.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Franschoek	May-16	3700	Wild	-	150	-	153	4.14	-	-	-	-	-	-	3	1.96	-	-	-	-	-	-	-	-	-	-	-	-	-	
Grahamstown	Apr-16	2400	Wild	-	12	-	34	1.42	-	-	12	35.29	-	-	10	29.41	-	-	-	-	-	-	-	-	-	-	-	-	-	
McGregor	Apr-16	4100	Wild	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Paarl	Mar-16	2610	Wild	-	6	-	7	0.27	1	14.29	-	-	-	-	-	-	-	-	4	0.15	-	-	-	-	-	-	-	-	-	
Paarl	Apr-16	6650	Wild	-	103	-	165	2.48	13	7.88	3	1.82	2	1.21	21	12.73	23	13.94	4	0.06	-	-	-	-	-	-	-	-	-	
Paarl	May-16	4350	Wild	-	65	-	73	1.68	-	-	-	-	-	1	1.37	7	9.59	-	-	-	-	-	-	-	-	1	0.02	-	-	
Porterville	Mar-16	1645	Wild	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Riebeeck Kasteel	May-16	5000	Wild	-	78	-	81	1.62	-	-	2	2.47	1	1.23	-	-	-	-	2	0.04	-	-	-	2	0.04	-	-	-	-	
Riversdale	Apr-16	1900	Wild	-	10	-	17	0.89	-	-	-	-	-	-	7	41.18	-	-	2	0.11	36	1.89	2	0.11	4	0.21	15	0.79		
Somerset West	Apr-16	6450	Wild	-	32	-	38	0.59	1	2.63	-	-	-	-	5	13.16	-	-	97	1.50	17	0.26	15	0.23	5	0.08	14	0.22		
Stanford	Mar-16	1885	Wild	-	35	1	57	3.02	1	1.75	-	-	1	1.75	19	33.33	-	-	33	1.75	-	-	1	0.05	-	-	-	-	-	
Stanford	Sep-16	250	Wild	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	2.00	-	-	-	-	-	-	-	-	-	
Stellenbosch	Mar-16	14120	Wild	-	8	-	10	0.07	-	-	-	-	1	10.00	1	10.00	-	-	95	0.67	1	0.01	111	0.79	36	0.25	11	0.08		
Stellenbosch	Apr-16	9250	Wild	-	186	-	266	2.88	9	3.38	9	3.38	14	5.26	48	18.05	-	-	5	0.05	4	0.04	5	0.05	4	0.04	1	0.01		
Stellenbosch	Oct-16	755	Wild	-	-	-	5	0.66	-	-	-	-	-	-	5	100.00	-	-	54	7.15	-	-	-	-	-	-	4	0.53		
Swellendam	Apr-16	3400	Wild	-	13	-	14	0.41	-	-	-	-	-	1	7.14	-	-	1	0.03	-	-	-	-	-	-	-	1	0.03		
Tulbagh	Mar-16	805	Wild	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Worcester	Apr-16	2100	Wild	-	1	-	1	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Franschoek	Mar-16	366	-	Cultivated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0.55	-	-	-	-	-	-	-	-	-	
Malmesbury	May-16	500	-	Cultivated	3	-	3	0.60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
McGregor	Apr-16	901	-	Cultivated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Paarl	Apr-16	1256	-	Cultivated	63	-	66	5.25	2	3.03	-	-	1	1.52	-	-	-	-	1	0.08	-	-	-	-	-	-	-	-	-	
Porterville	Mar-16	169	-	Cultivated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Riebeeck Kasteel	May-16	28	-	Cultivated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Somerset West	Apr-16	1976	-	Cultivated	9	-	9	0.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Stellenbosch	Mar-16	961	-	Cultivated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.10	-	-	-	-	-	-	-	-	-	
Stellenbosch	Apr-16	264	-	Cultivated	71	-	71	26.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
All wild olives	-	76960	Wild	-	724	1	953	1.24	26	2.73	28	2.94	21	2.20	130	13.64	23	2.41	317	0.41	58	0.08	136	0.18	50	0.06	47	0.06		
All cultivated olives	-	6421	-	Cultivated	146	-	149	2.32	2	1.34	-	-	1	0.67	-	-	-	-	4	0.06	-	-	-	-	-	-	-	-	-	
Overall	-	83381	-	-	870	1	1102	1.32	28	2.54	28	2.54	22	2.00	130	11.80	23	2.09	321	0.38	58	0.07	136	0.16	50	0.06	47	0.06		

**Table S5.** Specimen data of Braconidae and Chalcidoidea adult specimens reared from wild and cultivated olives collected in 17 areas in the Western Cape and Eastern Cape Provinces of South Africa, and used for DNA barcoding and phylogenetic analyses. Geographic coordinates indicate the site of olive collection. Primer pair codes can be found in Table S1. Nd – No data.

Species	Sample code	Sex	Collection date	Area	GPS coordinates	Host	Primer pair (code)
<b>Braconidae</b>							
<i>Bracon celer</i>	Br02	F	07/04/2016	Paarl	33.6804° S, 18.9076° E	Cultivated	1
<i>Psytalia humilis</i>	Ps24	M	21/04/2016	Grahamstown	33.3195° S, 26.5193° E	Wild	1
<i>Psytalia humilis</i>	Ps25	M	21/04/2016	Grahamstown	33.3195° S, 26.5193° E	Wild	1
<i>Psytalia humilis</i>	Ps29	M	21/04/2016	Grahamstown	33.3195° S, 26.5193° E	Wild	1
<i>Psytalia lounsburyi</i>	Ps05	M	07/04/2016	Stellenbosch	33.9953° S, 18.8706° E	Wild	1
<i>Psytalia lounsburyi</i>	Ps19	F	07/05/2016	Stellenbosch	33.9953° S, 18.8706° E	Wild	1
<i>Psytalia lounsburyi</i>	Ps20	F	07/05/2016	Stellenbosch	33.9953° S, 18.8706° E	Wild	1
<i>Psytalia lounsburyi</i>	Ps40	F	07/04/2016	Stellenbosch	33.9953° S, 18.8706° E	Wild	1
<i>Utetes africanus</i>	Ua77	M	23/03/2015	Paarl	33.6804° S, 18.9076° E	Wild	1
<i>Utetes africanus</i>	Ua92	M	4/9/2016	Stellenbosch	33.9294° S, 18.8652° E	Wild	1
<i>Utetes africanus</i>	Ua94	F	27/04/2016	Bonnievale	33.9734° S, 20.1563° E	Wild	1
<i>Utetes africanus</i>	Ua95	F	27/04/2016	Bonnievale	33.9734° S, 20.1563° E	Wild	1
<i>Utetes africanus</i>	Ua96	F	19/04/2016	Somerset West	33.9734° S, 20.1563° E	Wild	1
<i>Utetes africanus</i>	Ua97	F	13/04/2015	Paarl	33.6804° S, 18.9076° E	Wild	1
<i>Utetes africanus</i>	Ua98	F	13/04/2015	Paarl	33.6804° S, 18.9076° E	Wild	1
<i>Utetes africanus</i>	Ua98.1	M	27/04/2016	Bonnievale	33.9734° S, 20.1563° E	Wild	1
<i>Utetes africanus</i>	Ua101	M	04/07/2016	Stellenbosch	33.9953° S, 18.8706° E	Wild	1
<b>Chalcidoidea</b>							
<i>Eupelmus spermophilus</i>	10E	Nd	24/02/2016	Paarl	33.6804° S, 18.9076° E	Cultivated	3
<i>Eupelmus spermophilus</i>	11E	Nd	24/02/2016	Stellenbosch	33.9953° S, 18.8706° E	Cultivated	3
<i>Eupelmus spermophilus</i>	Eu02	F	03/06/2015	Stellenbosch	33.9953° S, 18.8706° E	Wild	3
<i>Eupelmus spermophilus</i>	Eu14	M	03/06/2015	Stellenbosch	33.9953° S, 18.8706° E	Wild	3
<i>Eupelmus spermophilus</i>	Eu95	Nd	Nd	Nd	Nd	Nd	3
<i>Eupelmus spermophilus</i>	ES094	F	13/03/2016	Stellenbosch	33°56'23.0"S 18°52'14.6"E	Wild	3
<i>Eupelmus spermophilus</i>	ES099	F	13/03/2016	Somerset West	33.9734° S, 20.1563° E	Wild	3
<i>Eupelmus spermophilus</i>	ES100	F	13/03/2016	Somerset West	33.9734° S, 20.1563° E	Wild	3
<i>Eupelmus spermophilus</i>	ES125	F	15/03/2016	Paarl	33.7661° S, 18.9433° E	Wild	3
<i>Eupelmus spermophilus</i>	ES026	M	19/04/2016	Somerset West	33.9734° S, 20.1563° E	Wild	3
<i>Eurytoma oleae</i>	EY20	F	19/04/2016	Somerset West	33.9734° S, 20.1563° E	Wild	2
<i>Eurytoma oleae</i>	EY25	F	19/04/2016	Somerset West	33.9734° S, 20.1563° E	Wild	2
<i>Eurytoma oleae</i>	EY43	M	19/04/2016	Somerset West	33.9734° S, 20.1563° E	Wild	2
<i>Eurytoma oleae</i>	EY01	F	27/04/2016	Riversdale	34.0317° S, 21.2487° E	Wild	2
<i>Eurytoma oleae</i>	EY02	F	27/04/2016	Riversdale	34.0317° S, 21.2487° E	Wild	2
<i>Eurytoma oleae</i>	EY03	F	27/04/2016	Riversdale	34.0317° S, 21.2487° E	Wild	2
<i>Eurytoma oleae</i>	EY04	F	27/04/2016	Riversdale	34.0317° S, 21.2487° E	Wild	2

<i>Eurytoma oleae</i>	EY06	F	27/04/2016	Riversdale	34.0317° S, 21.2487° E	Wild	2
<i>Eurytoma oleae</i>	EY14	F	27/04/2016	Riversdale	34.0317° S, 21.2487° E	Wild	2
<i>Eurytoma varicolor</i>	EY52	M	13/03/2016	Stellenbosch	33°56'23.0"S 18°52'14.6"E	Wild	2
<i>Eurytoma varicolor</i>	EY60	Nd	13/03/2016	Stellenbosch	33°56'23.0"S 18°52'14.6"E	Wild	2
<i>Eurytoma varicolor</i>	EY68	Nd	13/03/2016	Stellenbosch	33°56'23.0"S 18°52'14.6"E	Wild	2
<i>Eurytoma varicolor</i>	EY78	F	13/03/2016	Stellenbosch	33°56'23.0"S 18°52'14.6"E	Wild	2
<i>Eurytoma varicolor</i>	EY79	F	13/03/2016	Stellenbosch	33°56'23.0"S 18°52'14.6"E	Wild	2
<i>Eurytoma varicolor</i>	EY80	Nd	13/03/2016	Stellenbosch	33°56'23.0"S 18°52'14.6"E	Wild	2
<i>Neochrysocharis formosus</i>	Nf18	Nd	07/04/2016	Paarl	33.6804° S, 18.9076° E	Wild	1
<i>Neochrysocharis formosus</i>	Nf21	Nd	07/04/2016	Paarl	33.6804° S, 18.9076° E	Wild	1
<i>Sycophila aethiopica</i>	SY50	Nd	19/04/2016	Somerset West	33.9734° S, 20.1563° E	Wild	1

**Table S6. a), b) and c)** Minimum, maximum and mean intraspecific p-distances (K2P) for *Psyttalia* species based on a 609 bp alignment of 63 COI sequences, with pairwise deletion of sites. n - Number of sequences used in estimates for each species; **d), e) and f)** Mean interspecific and intergroup p-distances (K2P) for *Psyttalia* species based on a 609 bp alignment of 63 COI sequences, with pairwise deletion of sites. Standard errors are shown above the diagonal.

**a) *Psyttalia* intraspecific genetic distances (%)**

	n	Min	Max	Mean
<i>P. carinata</i>	6	0.20	1.70	0.80 ± 0.002
<i>P. concolor</i>	6	0.00	0.70	0.30 ± 0.001
<i>P. fletcheri</i>	6	0.00	0.30	0.10 ± 0.001
<i>P. humilis</i>	9	0.00	1.30	0.80 ± 0.003
<i>P. lounsburyi</i>	31	0.00	1.30	0.50 ± 0.002
<i>P. ponerophaga</i>	5	0.30	0.80	0.50 ± 0.002

**b) *Psyttalia humilis* intraspecific genetic distances (%)**

	n	Min	Max	Mean
<i>P. humilis</i> (this study)	3	0.00	0.30	0.00 ± 0.001
<i>P. humilis</i> (Genbank)	6	0.00	1.30	0.70 ± 0.002

**c) *Psyttalia lounsburyi* intraspecific genetic distances (%)**

	n	Min	Max	Mean
<i>P. lounsburyi</i> (this study)	4	0.20	0.30	0.20 ± 0.001
<i>P. lounsburyi</i> (Genbank)	27	0.00	1.30	0.40 ± 0.001

**d) *Psyttalia* interspecific mean genetic distances (%)**

	1	2	3	4	5	6
<i>P. carinata</i>	–	0.014	0.017	0.015	0.014	0.012
<i>P. concolor</i>	12.50	–	0.014	0.008	0.012	0.013
<i>P. fletcheri</i>	16.30	12.40	–	0.015	0.014	0.017
<i>P. humilis</i>	13.20	13.20	13.00	–	0.012	0.014
<i>P. lounsburyi</i>	13.20	9.20	11.70	8.80	–	0.015
<i>P. ponerophaga</i>	8.30	11.50	16.00	12.20	13.40	–

**e) *Psyttalia humilis* intergroup mean genetic distances (%)**

	<i>P. humilis</i> (this study)
<i>P. humilis</i> (Genbank)	0.90 ± 0.003

**f) *Psyttalia lounsburyi* intergroup mean genetic distances (%)**

	<i>P. lounsburyi</i> (this study)
<i>P. lounsburyi</i> (Genbank)	0.60 ± 0.002

**Table S7. a)** Minimum, maximum and mean intraspecific p-distances (K2P) for two *Utetes* species based on a 515 bp alignment of COI sequences, with pairwise deletion of sites. n - Number of sequences used in estimates for each species; **b)** Mean interspecific p-distances (K2P) for *U. africanus* and three *U. canaliculatus* NJ clusters (see Fig. S3) based on a 515 bp alignment of COI sequences, with pairwise deletion of sites. Standard errors are shown above the diagonal.

**a) *Utetes* intraspecific genetic distances (%)**

	n	Min	Max	Mean
<i>U. africanus</i>	10	0.00	0.40	0.20 ± 0.001
<i>U. canaliculatus</i> (all sequences)	34	0.00	11.00	4.10 ± 0.005
<i>U. canaliculatus</i> (cluster 1)	18	0.00	0.90	0.4 ± 0.001
<i>U. canaliculatus</i> (cluster 2)	10	0.20	0.70	0.4 ± 0.001
<i>U. canaliculatus</i> (cluster 3)	6	0.20	0.90	0.3 ± 0.002

**b) *Utetes canaliculatus* interspecific mean genetic distances, by cluster (%)**

	<i>U. canaliculatus</i> (cluster 1)	<i>U. canaliculatus</i> (cluster 2)	<i>U. canaliculatus</i> (cluster 3)
<i>U. canaliculatus</i> (cluster 1)	-	0.043	0.013
<i>U. canaliculatus</i> (cluster 2)	0.90	-	0.014
<i>U. canaliculatus</i> (cluster 3)	8.80	10.40	-

**Table S8. a)** Minimum, maximum and mean intraspecific p-distances (K2P) for nine *Eupelmus* species based on a 532 bp alignment of 150 COI sequences, with pairwise deletion of sites. n - Number of sequences used in estimates for each species; **b)** Mean interspecific p-distances (K2P) for nine *Eupelmus* species based on a 532 bp alignment of 150 COI sequences, with pairwise deletion of sites. Standard errors are shown above the diagonal.

**a) *Eupelmus* intraspecific genetic distances (%)**

	n	Min	Max	Mean
<i>E. annulatus</i>	9	0.00	8.70	4.50 ± 0.007
<i>E. azureus</i>	10	0.20	5.60	2.59 ± 0.004
<i>E. confusus</i>	38	0.00	6.90	1.91 ± 0.003
<i>E. gemellus</i>	21	0.00	2.70	1.32 ± 0.003
<i>E. kiefferi</i>	25	0.00	5.50	1.62 ± 0.003
<i>E. longicalvus</i>	7	0.60	4.80	2.41 ± 0.004
<i>E. minozonus</i>	5	0.20	2.70	1.57 ± 0.004
<i>E. spermophilus</i>	10	0.40	2.30	1.12 ± 0.003
<i>E. urozonus</i>	25	0.20	4.00	1.61 ± 0.003

**b) *Eupelmus* interspecific mean genetic distances (%)**

	1	2	3	4	5	6	7	8	9
<i>E. annulatus</i>	–	0.016	0.016	0.013	0.016	0.015	0.017	0.018	0.016
<i>E. azureus</i>	13.40	–	0.015	0.015	0.016	0.015	0.016	0.018	0.016
<i>E. confusus</i>	13.80	13.80	–	0.014	0.016	0.012	0.014	0.017	0.014
<i>E. gemellus</i>	10.90	13.10	11.00	–	0.014	0.013	0.014	0.017	0.015
<i>E. kiefferi</i>	14.30	13.80	13.70	11.70	–	0.016	0.014	0.017	0.013
<i>E. longicalvus</i>	12.70	13.70	10.30	10.20	13.60	–	0.015	0.017	0.015
<i>E. minozonus</i>	15.80	15.40	12.10	11.90	12.20	12.30	–	0.017	0.011
<i>E. spermophilus</i>	17.00	16.90	15.90	15.90	16.10	15.50	15.10	–	0.017
<i>E. urozonus</i>	13.80	14.80	12.10	12.10	10.90	12.50	7.80	16.1	–

**Table S9. a)** Minimum, maximum and mean intraspecific p-distances (K2P) for seven *Eurytoma* species based on a 530 bp alignment of 74 COI sequences, with pairwise deletion of sites. n - Number of sequences used in estimates for each species; **b)** Mean interspecific p-distances (K2P) for seven *Eurytoma* species, based on a 532 bp alignment of 74 COI sequences, with pairwise deletion of sites. Standard errors are shown above the diagonal.

**a) *Eurytoma* intraspecific genetic distances (%)**

	n	Min	Max	Mean
<i>E. longavena</i>	11	0.00	1.30	0.40 ± 0.002
<i>E. arctica</i>	7	0.20	1.30	0.70 ± 0.033
<i>E. varicolor</i>	6	0.00	0.40	0.30 ± 0.001
<i>E. morio</i>	16	0.20	0.40	1.50 ± 0.004
<i>E. striolata</i>	15	0.20	1.30	1.00 ± 0.003
<i>E. oleae</i>	9	0.00	2.70	1.00 ± 0.003
<i>E. maura</i>	10	0.20	1.50	0.30 ± 0.001

**b) *Eurytoma* interspecific mean genetic distances (%)**

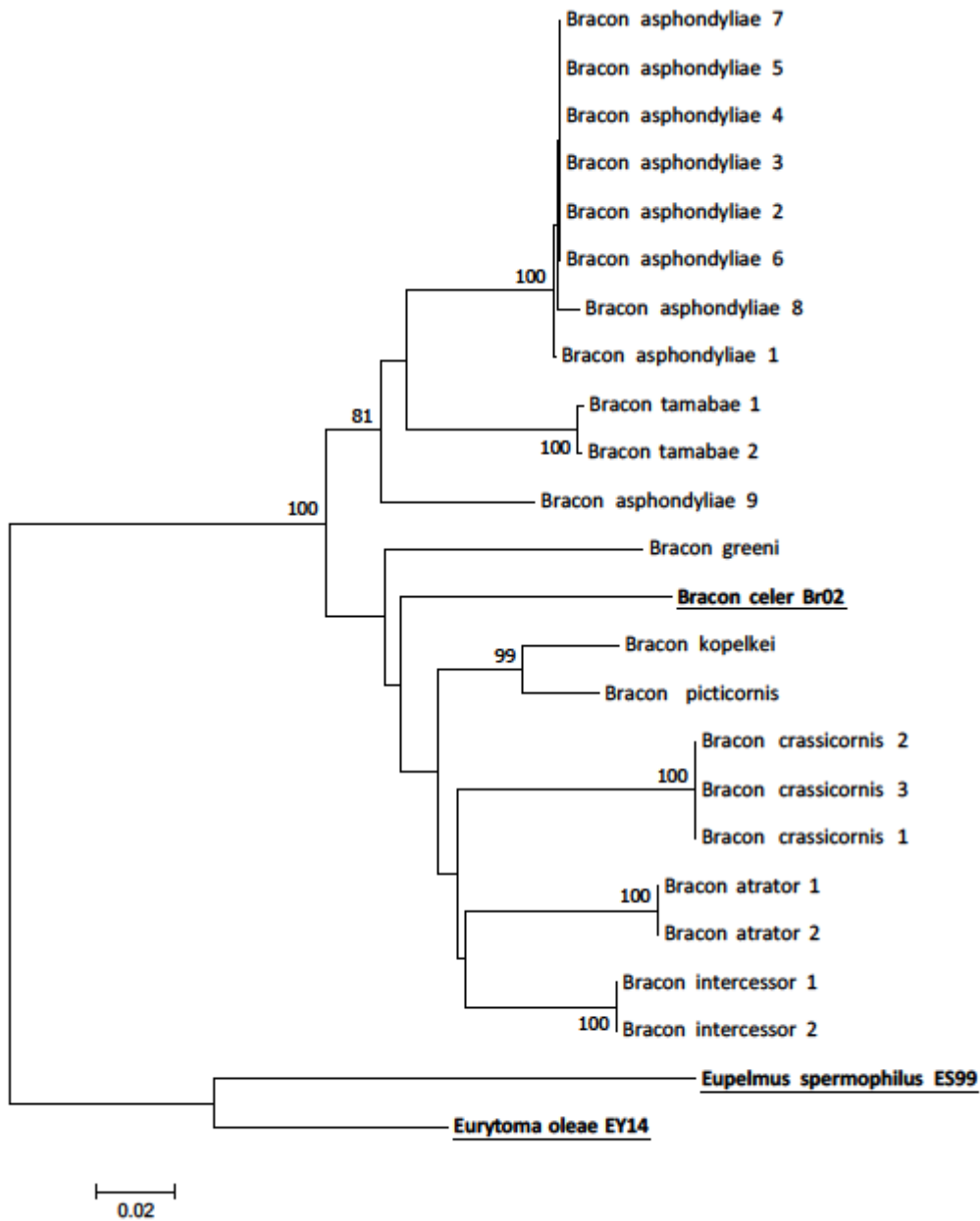
	<i>E. longavena</i>	<i>E. arctica</i>	<i>E. varicolor</i>	<i>E. morio</i>	<i>E. striolata</i>	<i>E. oleae</i>	<i>E. maura</i>
<i>E. longavena</i>	–	0.012	0.015	0.013	0.012	0.013	0.013
<i>E. arctica</i>	8.88	–	0.015	0.014	0.013	0.013	0.013
<i>E. varicolor</i>	16.35	17.16	–	0.016	0.016	0.016	0.016
<i>E. morio</i>	10.97	12.92	17.21	–	0.010	0.013	0.013
<i>E. striolata</i>	9.18	11.92	16.51	7.77	–	0.012	0.013
<i>E. oleae</i>	9.96	11.90	18.10	10.50	9.97	–	0.013
<i>E. maura</i>	11.58	12.20	17.75	11.96	11.55	12.26	–



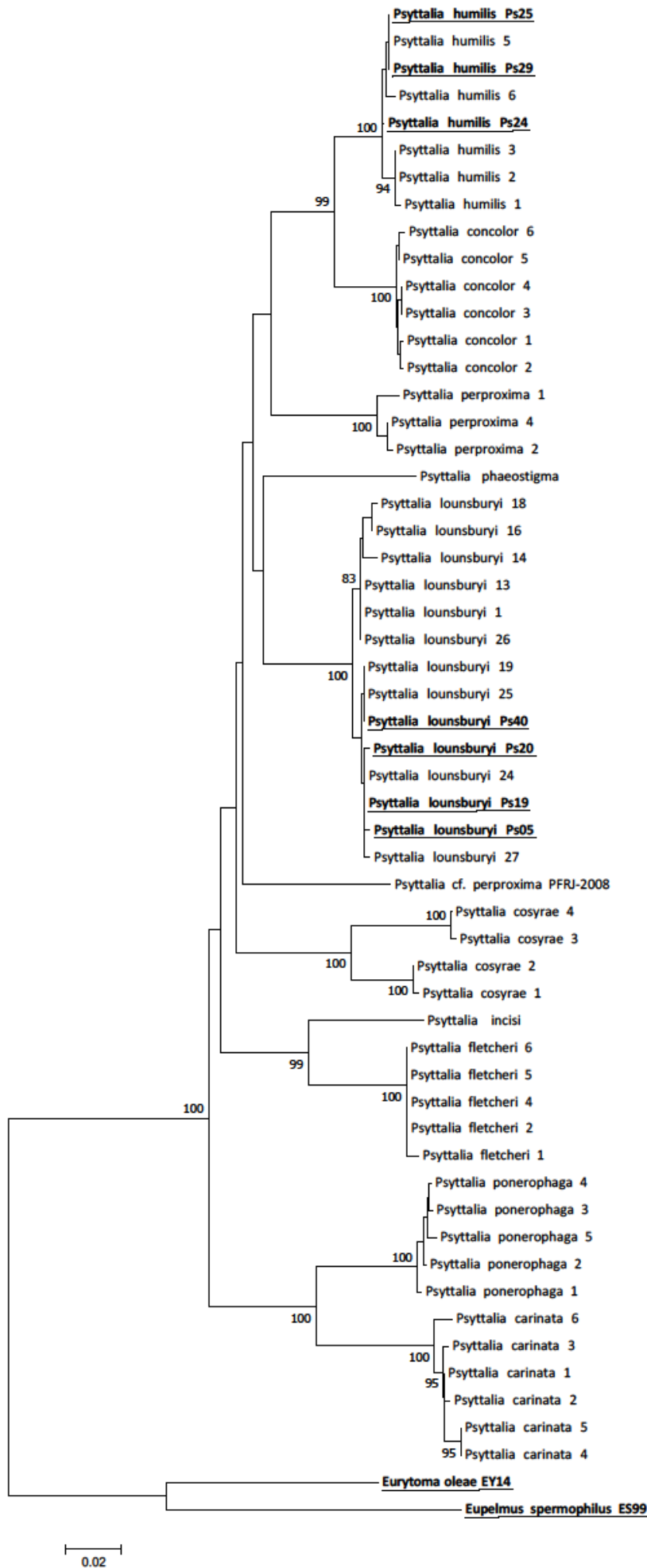
**Table S10.** Minimum, maximum and mean intraspecific p-distances (K2P) for *Neochrysocharis* based on 633 bp alignments of COI sequences, with pairwise deletion of sites. n - Number of sequences used in estimates for each group. na – not applicable.

	<b>n</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>
<b><i>Neochrysocharis formosus</i> (this study + Genbank)</b>	3	1.10	12.9	8.9 ± 0.009
<b><i>Neochrysocharis formosus</i> (this study)</b>	2	1.10	1.10	na

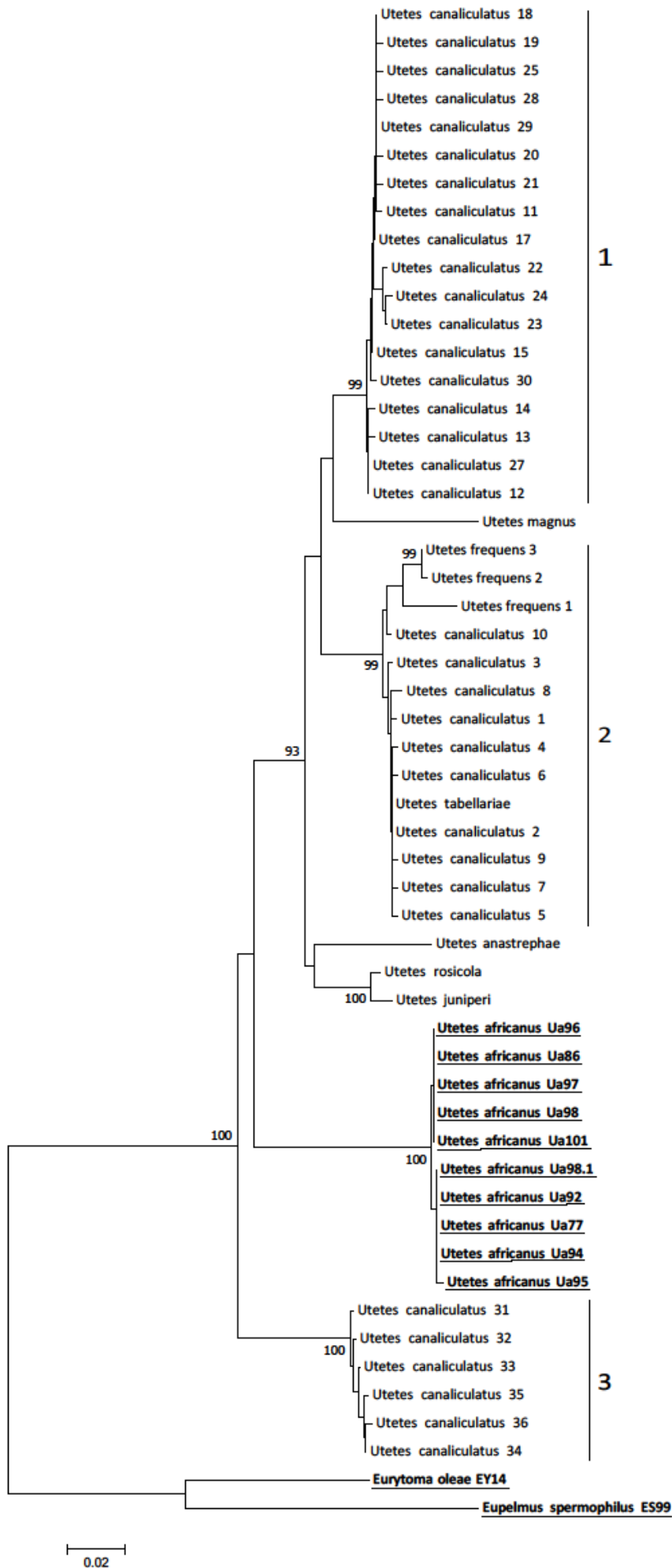
SUPPLEMENTARY FIGURES



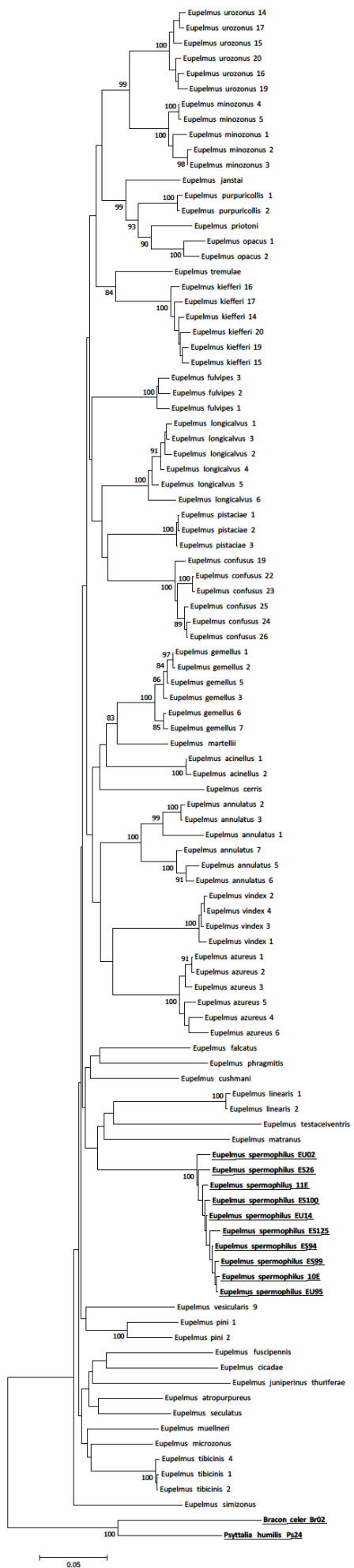
**Figure S1.** Neighbour-joining (K2P) tree of the *Bracon* genus, based on a 524 bp alignment of 22 COI sequences and two outgroups, with pairwise deletion of sites. Values indicate nodal bootstrap support (1,000 replicates). The scale bar represents the percentage of sequence divergence. Sequences generated in this study are shown in **bold underlined**.



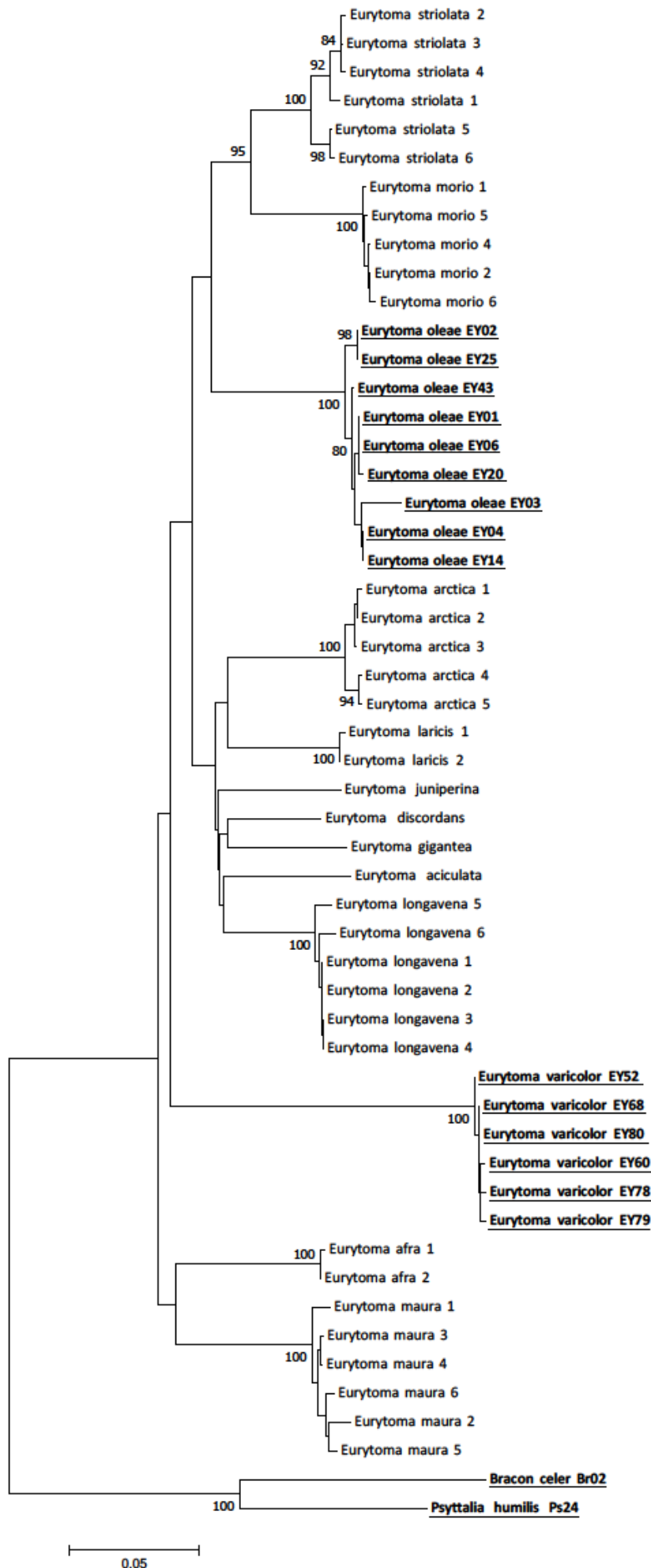
**Figure S2.** Neighbour-joining (K2P) tree of the *Psyttalia* genus, based on a 524 bp alignment of 54 COI sequences and two outgroups, with pairwise deletion of sites. Values indicate nodal bootstrap support (1,000 replicates). The scale bar represents the percentage of sequence divergence. Sequences generated in this study are shown in **bold underlined**.



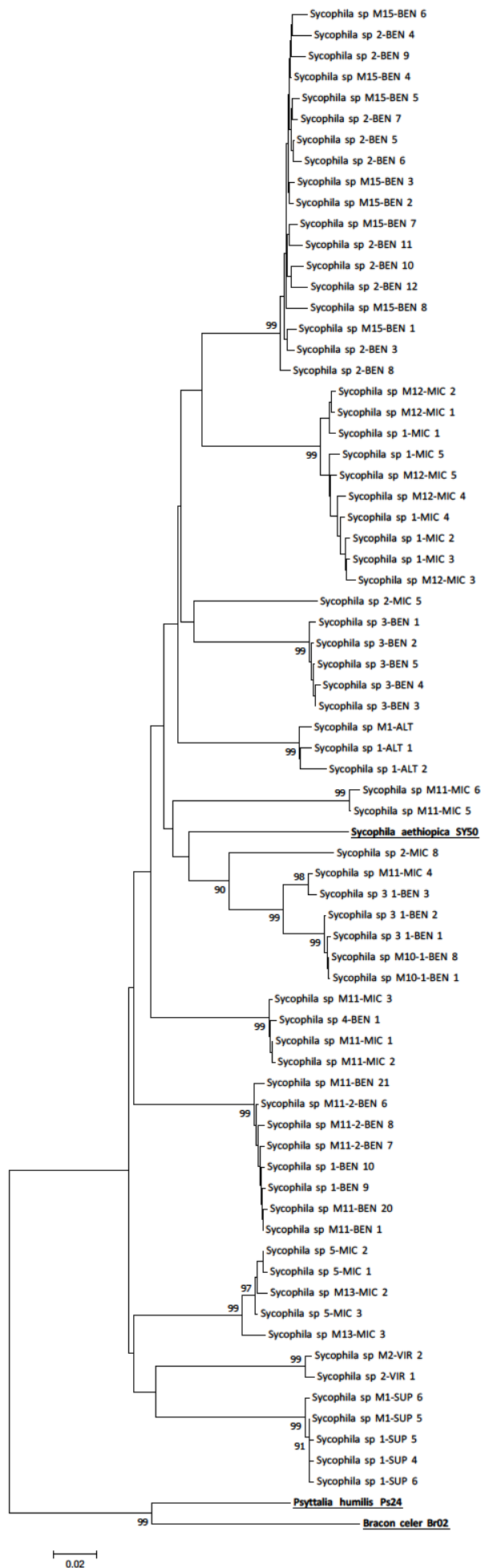
**Figure S3.** Neighbour-joining (K2P) tree of the *Utetes* genus, based on a 485 bp alignment of 52 COI sequences and two outgroups, with pairwise deletion of sites. Values indicate nodal bootstrap support (1,000 replicates). The scale bar represents the percentage of sequence divergence. Sequences generated in this study are shown in **bold underlined**.



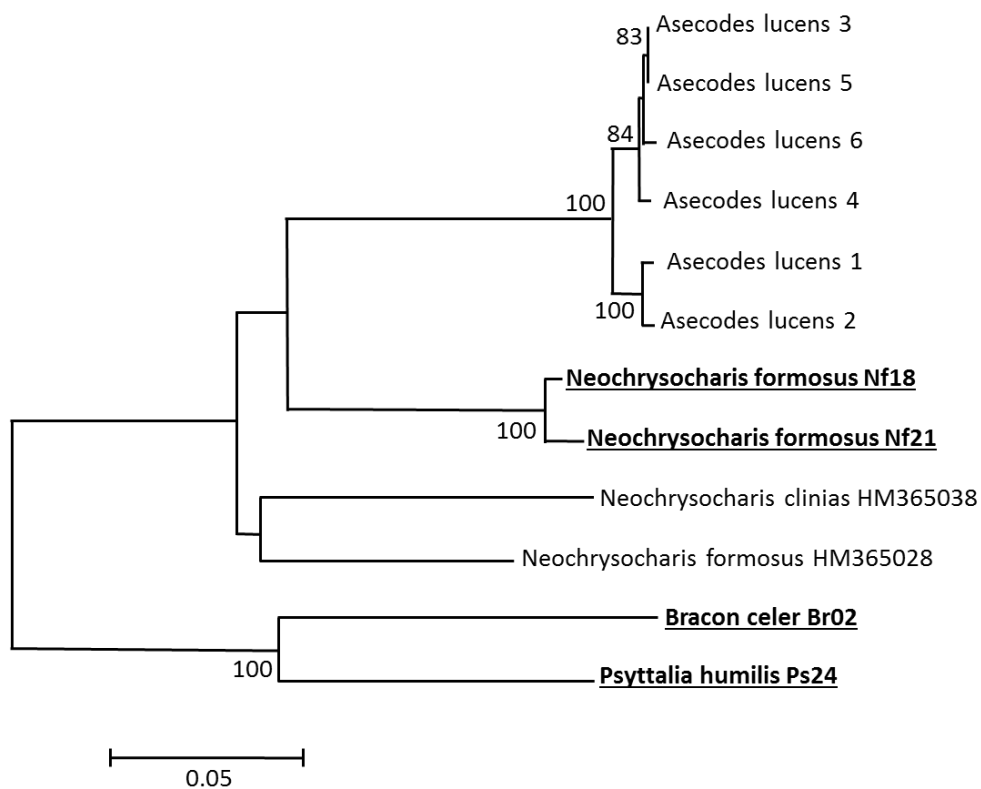
**Figure S4.** Neighbour-joining (K2P) tree of the *Eupelmus* genus, based on a 545 bp alignment of 99 COI sequences and two outgroups, with pairwise deletion of sites. Values indicate nodal bootstrap support (1,000 replicates). The scale bar represents the percentage of sequence divergence. Sequences generated in this study are shown in **bold underlined**.



**Figure S5.** Neighbour-joining (K2P) tree of the *Eurytoma* genus, based on a 536 bp alignment of 51 COI sequences and two outgroups, with pairwise deletion of sites. Values indicate nodal bootstrap support (1,000 replicates). The scale bar represents the percentage of sequence divergence. Sequences generated in this study are shown in **bold underlined**.

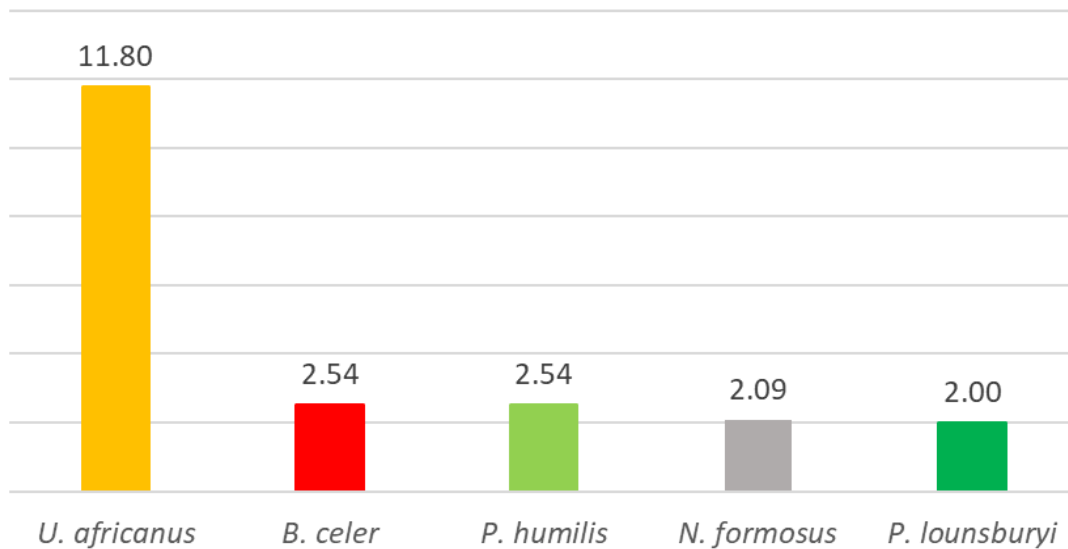


**Figure S6.** Neighbour-joining (K2P) tree of the *Sycophila* genus, based on a 549 bp alignment of 71 COI sequences and two outgroups, with pairwise deletion of sites. Values indicate nodal bootstrap support (1,000 replicates). The scale bar represents the percentage of sequence divergence. Sequences generated in this study are shown in **bold underlined**.

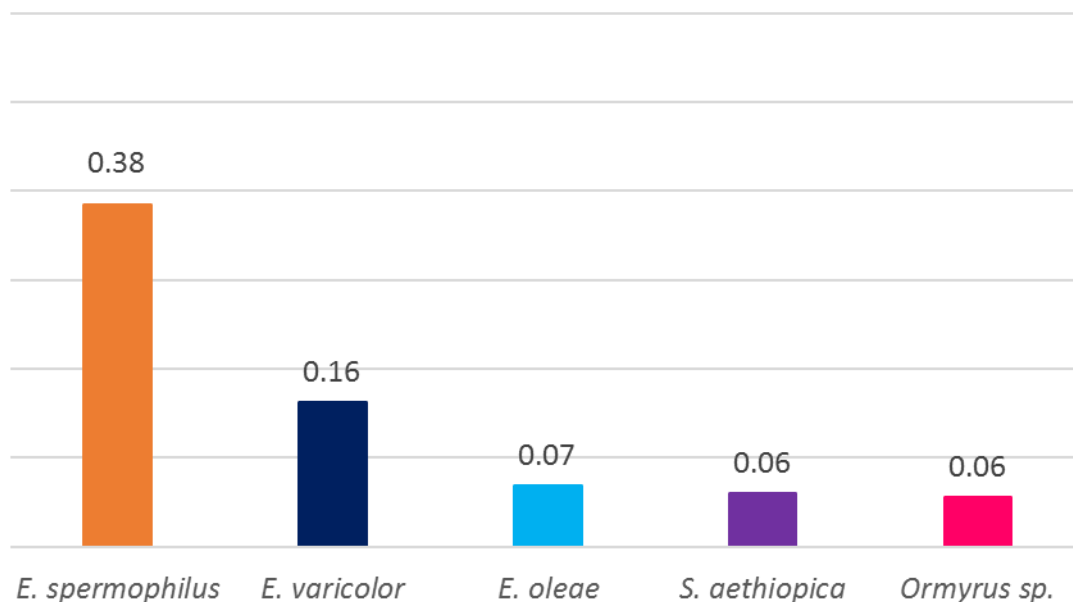


**Figure S7.** Neighbour-joining (K2P) tree of the *Neochrysocharis* genus and the sister group *Asecodes lucens*, based on a 561 bp alignment of 10 COI sequences and two outgroups, with pairwise deletion of sites. Values indicate nodal bootstrap support (1,000 replicates). The scale bar represents the percentage of sequence divergence. Sequences generated in this study are shown in **bold underlined**.

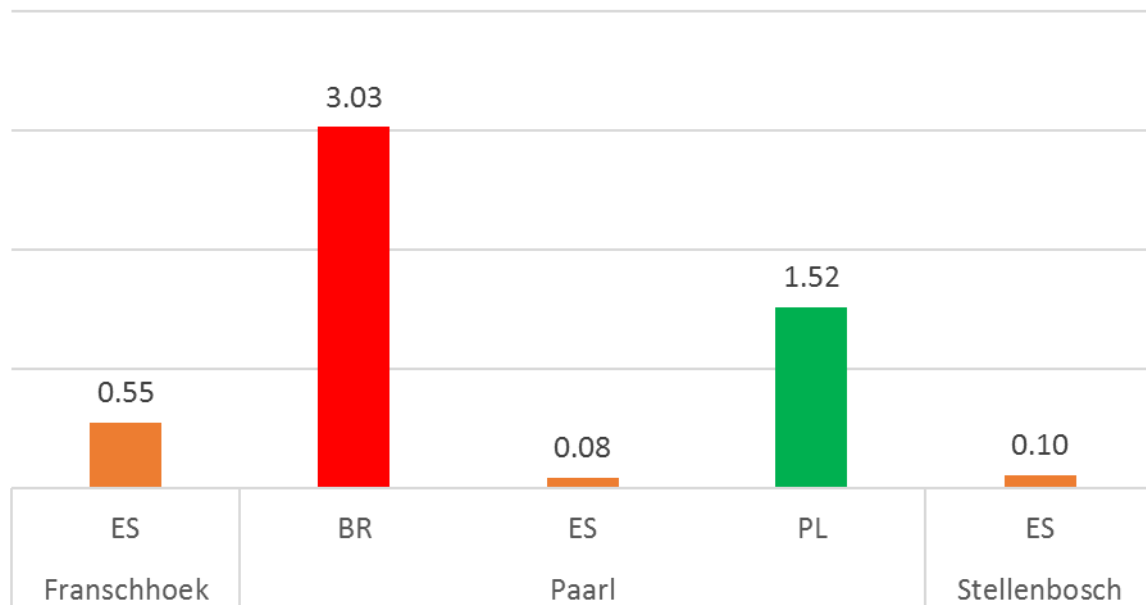




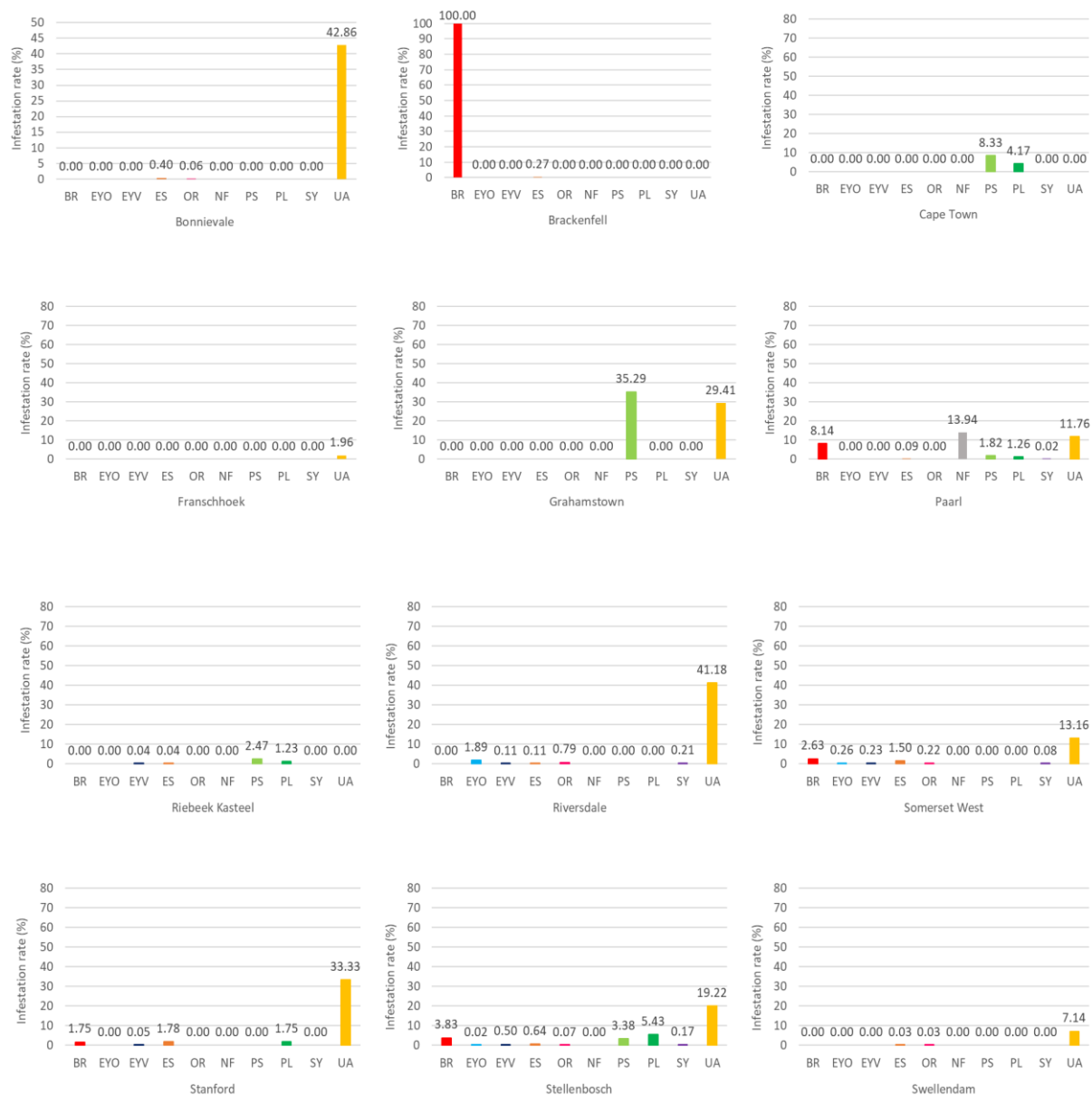
**Figure S8a.** Overall apparent parasitism rate (%) in wild and cultivated olives collected across all 17 areas in the Western Cape and the Eastern Cape Provinces of South Africa. Overall apparent parasitism rate = total number of adult braconid and *Neochrysocharis formosus*\* specimens / (total number of tephritid flies + the total number of adult braconid and *N. formosus*\* specimens). \**Neochrysocharis formosus* is a chalcid wasp with a parasitoid lifestyle.



**Figure S8b.** Overall apparent seed infestation rate (%) in wild and cultivated olives collected across all 17 areas in the Western Cape and the Eastern Cape Provinces of South Africa. Overall apparent seed infestation rate = total number of adult chalcid specimens / total number of wild and cultivated olives.



**Figure S9.** Apparent parasitism and apparent seed infestation rates (%) in **cultivated olives** collected from three areas in the Western Cape Province of South Africa. Apparent parasitism rate = number of adult braconid specimens / (number of tephritid flies + number of adult braconid specimens). Apparent seed infestation rate = number of adult chalcid specimens / number of cultivated olives. *Bracon celer* (BR) and *Psytalia lounsburyi* (PL) are braconid wasps. *Eupelmus spermophilus* (ES) is a chalcid wasp.



**Figure S10.** Apparent parasitism and seed infestation rates (%) in **wild olives** collected from 11 areas in the Western Cape Province and one area in the Eastern Cape Province of South Africa. Apparent parasitism rate = number of adult braconid and *Neochrysocharis formosus*\* specimens / (number of tephritid flies + number of adult braconid and *N. formosus*\* specimens). Apparent seed infestation rate = number of adult chalcid specimens / number of wild olives. *Bracon celer* (BR), *Psytalia humilis* (PS), *Psytalia lounsburyi* (PL) and *Utetes africanus* (UA) are braconid wasps. *Eupelmus spermophilus* (ES), *Eurytoma oleae* (EYO), *Eurytoma varicolor* (EYV), *Sycophila aethiopica* (SY) and *Ormyrus* sp. (OR) are chalcid wasps. \**Neochrysocharis formosus* (NF) is a chalcid wasp with a parasitoid lifestyle.