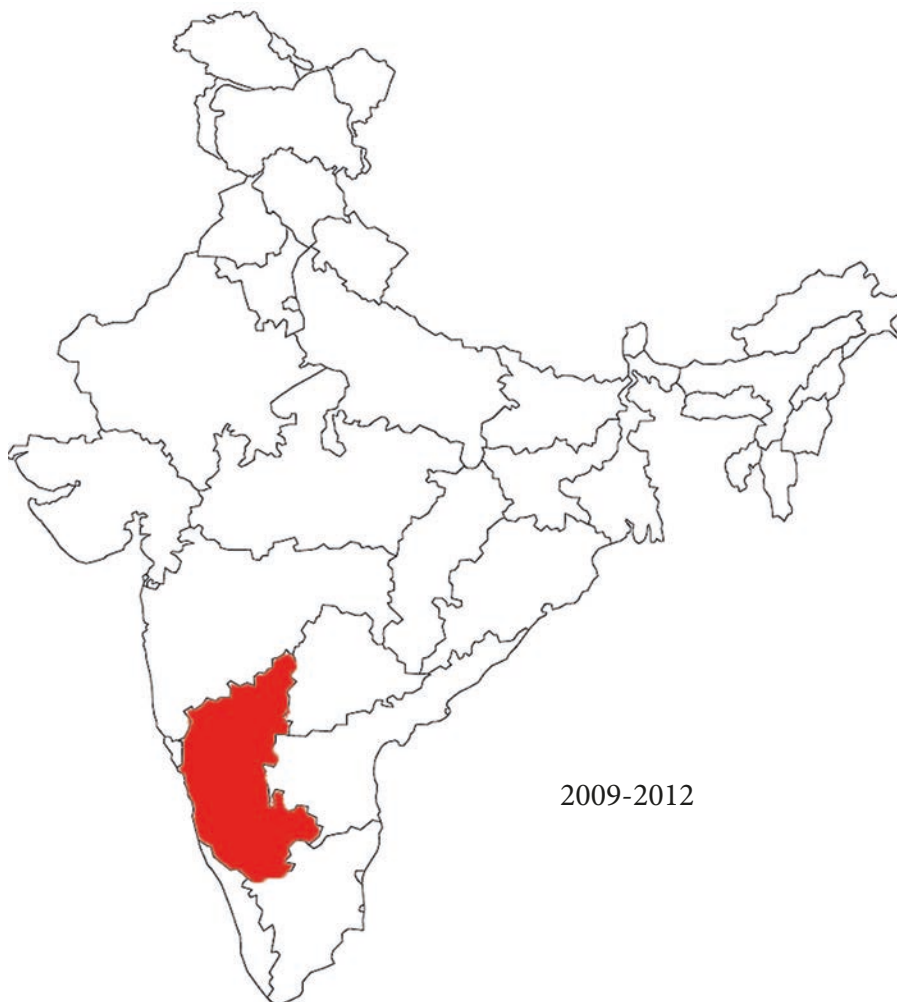


Official report on the sampling of the Sphingidae family in the state of Karnataka

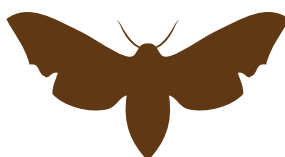


2009-2012

In cooperation with



Department of Studies in Sericulture
University of Mysore,
Mysore 570 006
Karnataka, India.
represented by
Prof. H.B. Manjunatha, Ph.D.



SPHINGIDAE MUSEUM

CZECH REPUBLIC

Sphingidae Museum in Orlov
Orlov 79
Příbram, 261 02
Czech republic
represented by
Tomáš Melichar

international
**BARCODE
OF LIFE**



International Barcode of Life
Biodiversity Institute of Ontario
University of Guelph
Guelph, Ontario N1G 2W1, Canada
represented by
Paul D.N. Hebert

Introduction

In 2008 year we have started the research of national parks Dandeli wildlife sanctuary, Anshi National Park and Bannerghatta National Park. This goes under guiding of The University of Mysore, Department of Studies in Sericulture with **professor Mr. H.B.Manjunatha, Ph.D.**, without whose help the project would not have happened, and The Sphingidae Museum Czech republic in Orlov with its employeys and members, the founder and head of the museum is a Czech entomologist **Mr. Tomáš Melichar** (member of the Czech Entomological Society at the Academy of Sciences of the Czech republic) above all, and next, The University in Ontario with its program Barcoding life heading by **Mr. Paul D.N. Hebert**.

The group Lepidoptera Sphingidae and its biodiversity was chosen for this research in representative resorts. The determination species in chosen group and classifying to system is the main part of biodiversity. The research is based on The Mysore University students terrain work and its application to practise. The Sphingidae Museum Czech republic elaborates and determinates particular species and gives logistic and finance to the whole project.

The University in Ontario processes genetic preparations and passes out the results compared with identical ones from Sout East Asia. The result of this work is the comparison of Indian Sphingidae species with ones in South East Asia, leadindg to the genetic tree, where, what population in the certain resort is endemic, or spread around the whole South East Asia, can be seen. Thanks to the cooperation of these three partners, very exacet results about population of Sphingidae family in certain resorts have been reached. These results, especially biodiversity of particular species and factors of species occurance in the seasons of the year, are continuously passed to caretaker governments and National parks managements.

This helps to Indian offices to know the quality of biotops and prevent them. And next the cooperation with Indian students brings complete view of environmental protection in Indian national parks. The goal of the project is knowledge of occurance and biodiversity of Sphingidae family in National parks in Karnataka in detail. This leads to final product that is the written document with accurancy of systematic classification of particular species, biodiversity and occurance in research areas. This brochure could eventually serve to students and institutions and those who are interested in this branch.

Tomas Melichar
Head of Sphingidae Museum in Orlov



SPHINGIDAE MUSEUM
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Visited localities



List of species recorded

Identification	Taxon
Stoll, 1781	<i>Acosmeryx anseus subdentata</i>
Boisduval, 1875	<i>Acosmeryx shervilli</i>
Hampson, 1907	<i>Agnosia microta</i>
Westwood, 1847	<i>Agnosia orneus</i>
Linnaeus, 1758	<i>Agrius convolvuli</i>
Fabricius, 1798	<i>Acherontia lachesis</i>
Westwood, 1848	<i>Acherontia styx</i>
Jordan, 1923	<i>Ambulyx aglaia</i>
Jordan, 1923	<i>Ambulyx belli</i>
Jordan, 1923	<i>Ambulyx matti</i>
Moore, 1858	<i>Ambulyx moorei</i>
Cramer, 1779	<i>Amplypterus panopus</i>
Eitschberger&Haxaire, 2006	<i>Angonyx krishna</i>
Cramer, 1777	<i>Cephonodes picus</i>
Walker, 1866	<i>Clanis bilineata</i>
Crameer, 1777	<i>Clanis phalaris</i>
Rothschild & Jordan, 1903	<i>Clanis titan</i>
Cramer, 1780	<i>Daphnis hypothous crameri</i>
Linnaeus, 1758	<i>Daphnis nerii</i>
Walker, 1856	<i>Dolbina inexacta</i>
Walker, 1856	<i>Enpinanga assamensis</i>
Rothschild & Jordan, 1903	<i>Eupanacra busiris atima</i>
Fabricius, 1775	<i>Hippotion boerhaviae</i>
Linnaeus, 1758	<i>Hippotion celerio</i>
Boisduval, 1875	<i>Hippotion echeclus</i>
Butler, 1877	<i>Hippotion rafflesii</i>
Fabricius, 1793	<i>Hippotion velox</i>
Esper, 1780	<i>Hyles livornica</i>
Swainson, 1821	<i>Macroglossum assimilis</i>
Linnaeus, 1758	<i>Macroglossum belis</i>
Walker, 1856	<i>Macroglossum divergens</i>
Butler, 1875	<i>Macroglossum troglodytus</i>
Walker, 1856	<i>Marumba dyras</i>
Rothschild & Jordan, 1903	<i>Marumba nympa</i>
Walker, 1856	<i>Meganoton nyctiphanes</i>
Fabricius, 1775	<i>Nephele hespera</i>
Cramer, 1779	<i>Pergesa acteus</i>
Cramer, 1777	<i>Polyptychus dentatus</i>
Moore, 1888	<i>Polyptychus trilineatus</i>
Eitschberger&Melichar, 2009	<i>Psilogramma manjunatha</i>
Eitschberger, 2001	<i>Psilogramma renerii</i>
Butler, 1875	<i>Rhagastis acuta</i>
Linnaeus, 1758	<i>Theretra alecto</i>
Drury, 1773	<i>Theretra clotho</i>
Fabricius, 1775	<i>Theretra gnoma</i>
Cramer, 1775	<i>Theretra lycetus</i>
Drury, 1773	<i>Theretra nessus</i>
Fabricius, 1775	<i>Theretra oldenlandiae</i>
Walker, 1856	<i>Theretra pallicosta</i>



Acosmeryx anceus subdentata (Rothschild & Jordan, 1903)

This subspecies *Acosmeryx anceus subdentatata* confirms the right taxonomical difference of population in SE Asia and it has been confirmed genetically. This *Acosmeryx* gives some accepted subspecies from South East Asia to Australia and has been divided to many subspecies when the subspecies *Subdentatus* has been described from standard locality – N India, Sambawa. Assumed extension of this subspecies and in the same population is all over Indian peninsula.

Acosmeryx shervilli (Boisduval, 1875)

Acosmeryx shervilli belongs to the large group of habitual very similar taxons, but genealogy shows local differences, vis *Acosmeryx tengarensis* (Brechlin x Kitching, 2007). Researching of population in state Karnataka shows generic differences among continental population SW Asia. The holotyp of this species has been described in Western India – West Bengal, Darjeeling. It is clear that it belongs to population from Nepal, Bhutan, Thailand, Laos, China. Genetic results show the difference above 2 per cent limit what according to the rules (Barcoding of Life Database –DNA) means species diversity. In this time the description of this new species is going to be done by the team of The Sphingidae Museum of The Czech Republic.

Agnosia microta (Hampson, 1907)

Population *Agnosia microta* is being compared now with population *Agnosia microta* in Sri Lanka. Genetic results of the preparation are not known yet, but we assume that they will be identical.



Agnosia orneus (Westwood, 1847)

There is not any comparable stuff of DNA except our specimen, nevertheless the right classification can be expected.

*Agrius convolvuli* (Linnaeus, 1758)

Agrius convolvuli confirms the taxon in genetic research due to its coincident populatin in Europe and Asia. This taxon changes its genealogy far in Australia.

*Acherontia lachesys* (Fabricius, 1798)

Confirms its taxon in population spread all over South East Asia as well. No genetic difference of standard staff – India has been found.



Acherontia styx (Westwood, 1847)

Confirms its taxon in population spread from the central to South East Asia. No genetic difference of standard staff – East India has been found.

Ambulyx aglaia

Ambulyx aglaia operates in contemporary taxon as *Ambulyx substrigilis aglaia* (Jordan, 1923). Under genetic appreciation of this taxon has been found that the difference from *Ambulyx substrigilis* (Westwood, 1847) with its subspecies is over generic diversity, and that is why it is possible to quit the taxonomic status of subspecies and to rise this taxon to species. Recently was this species synonymized by Ron Brechlyn from India – Tamil Nadu, description as *Ambulyx sinjaevi*. Nowadays the study of genital is being done and because there is generic difference from *Ambulyx substrigilis* perceptible so we are going to prepare introduction and publish this taxon as species *Ambulyx aglaia*.

Ambulyx belli (Jordan, 1923)

This is the typical endemit from South India and this species was confirmed by genetic results.



Ambulyx matti (Jordan, 1923)

Confirms its taxon in population spread from the central to South East Asia. No genetic difference of standard staff – East India has been found.

*Ambulyx moorei* (Moore, 1858)

This taxon was confirmed as right in determination and classification in taxonomy.

*Amplipterus panopus* (Cramer, 1779)

Amplipterus panopus shows trivial habitual differences and genetic results in comparison with species from SE Asia, but generic results show the separate population from S India. Nowadays this population is the subject of detailed research, by comparison of genital and other unchanging marks in the first place. At the difference of the population in South East Asia, the genetic results show up to generic differences. Without fail we can talk about subspecies. The collective of The Sphingidae museum Czech republic is providing the description of this taxon nowadays.



Angonyx krishna (Eitschberger & Haxaire, 2006)

Angonyx krishna shows endemite position in South India and the description of this taxon was right.

*Cephonodes picus* (Cramer, 1777)

This species shows generic diversity between continental South East Asia and Australia - Indonesian population. The holotype of this one was described from India – resort Tamil Nadu. The collective of The Spingidae Museum Czech republic is working on dividing this taxon.

*Clanis bilineata* (Walker, 1866)

The certain genetic difference has been shown by comparison the species with another one from S India nearby a standard locality, but it is not so much different to classify it as a new taxon. This species is variable enough and thus should be more exemplars for dividing this group.



Clanis phalaris (Cramer, 1777)

In this time this is being compared in genetic with Pakistan and Sri Lanka population. Genetic results are being elaborated and will be given in October of this year with great expectation!

*Clanis titan* (Rothschild & Jordan, 1903)

Genetic results are being elaborated and will be given in October of this year.

*Daphnis hypothous crameri* (Eitschberger & Melichar, 2010)

Daphnis hypothous crameri is a new taxon in the range of nomenclature which became by genetic comparison with standard staff locality (Seram, Ambom), where, due to generic results, was proved that the population in Molukas and South East Asia differs and shows up to generic differences. The authors of description (Eitschberger and Melichar) decided to introduce this population as subspecies only due to not big differences in genitals. Indian population is geneticaly the same as one in continental Asia.



***Daphnis nerii* (Linnaeus, 1758)**

Daphnis nerii was compared with the population in Afrika and Europe. This is seems to be a genetic unit where the genetic changes did not become.

***Dolbina inexacta* (Walker, 1856)**

Dolbina inexacta shows the genetic separation from the other population of Dolbinas and it is generic difference. Nowadays the description of this species is being done by collective of The Sphingidae Museum Czech republic and will be declared as a new one.

***Enpinanga assamensis* (Walker, 1856)**

The right determination and classification of this taxon was confirmed.



Eupanacra busiris atima (Rothschild & Jordan, 1915)

Genetic results confirm the difference of population and right incorporation of taxon as the different of continental Asia.

*Hippotion boerhaviae* (Fabricius, 1775)

This taxon was confirmed as right in determination and classification in taxonomy.

*Hippotion celerio* (Linnaeus, 1758)

This taxon was confirmed as right in determination and classification in taxonomy.



Hippotion rafflesi (Moore, 1858)



This taxon was confirmed as right in determination and classification in taxonomy.

Hippotion echeclus (Boisduval, 1875)



This taxon was confirmed as right in determination and classification in taxonomy.

Hippotion velox (Fabricius, 1793)



This taxon was confirmed as right in determination and classification in taxonomy.



Hyles livornica (Esper, 1780)

Genetic results are being elaborated and will be given in October of this year.



Macroglossum assimilis (Swainson, 1821)

This taxon was confirmed as right in determination and classification in taxonomy.



Macroglossum belis (Linnaeus, 1758)

This taxon was confirmed as right in determination and classification in taxonomy.



Macroglossum divergens (Walker, 1856)

This taxon was confirmed as right in determination and classification in taxonomy.

**Macroglossum troglodytus (Butler, 1875)**

This taxon was confirmed as right in determination and classification in taxonomy.

**Marumba dyras (Walker, 1856)**

On the base of genetic results is necessary to state that *Marumba dyras* in South India gives a few population. Its relationship with South East Asia population is evident, but now we can talk about separate population only, which were previously recognized as subspecies or other species, but these species were synonymised. Nowadays the collective of The Sphingidae Museum Czech republic makes every effort to reverse that status and this is the subject of another research and searchig for standard staff in museums and localities.



Marumba nympba (Rothschild & Jordan, 1903)

This taxon was confirmed as right in determination and classification in taxonomy.

**Meganoton nyctiphanes (Walker, 1856)**

On the base of genetic analysis this species shows generic diversity from the one from South West Asia. This taxon proofs separation from this population as well. Nowadays it is the subject of research, preparation of genitals and comparison exemplars from South East Asia. It is very complicated to determinate other difference than Genetic one, due to its almost the same habitual looks and very variable genital.

**Nephele hespera (Fabricius, 1775)**

This taxon was confirmed as right in determination and classification in taxonomy.



Pegesa acteus (Cramer, 1779)

Genetic analysis of this species shows generic diversity of continental population from Indonesian population. Unfortunately there is complication with location of standard staff, but certain indication points to Java. If it is confirm, the collective of The Sphingidae Museum Czech republic will declare it as a new species.

Polyptychus dentatus (Cramer, 1777)

This taxon was confirmed as right in determination and classification in taxonomy.

Polyptychus trilineatus (Moore, 1888)

Polyptychus trilineatus is very complicated species, where genealogy shows 3 population in the least. Nowadays this group is the subject of research due to necessity to get more standard staff and work in museums. For having accuracy it is necessary to get more staff from various areas in India as well as Sri Lanka.



***Psilogramma manjunataha* (Eitschberger & Melichar, 2011)**

This taxon was found as a synonymous to *Psilogramma* that has been described previously – *Psilogramma vates* (Butler, 1875) on the base of results which were done by genetic analysis and study of old descriptions.

***Psilogramma renerii* (Eitschberger, 2001)**

Psilogramma renerii shows endemite position in South India and the description of this taxon was right.

***Rhagastis acuta* (Walker, 1856)**

This taxon was confirmed as right in determination and classification in taxonomy.



***Theretra alecto* (Linnaeus, 1758)**

This taxon was confirmed as right in determination and classification in taxonomy.

***Theretra clotho* (Drury, 1773)**

Theretra clotho is the part of the large group of *Theretra clotho*, and in this time the research of particular populations in the whole South East Asia is being done. *Theretra clotho* can be said the typical representative of this species.

***Theretra gnoma* (Fabricius, 1775)**

Without any doubt *Theretra gnoma* is the separate species from *Theretra clotho*, which was confirmed by DNA analysis results.



Theretra lycetus (Cramer, 1775)

This taxon was confirmed as right in determination and classification in taxonomy.



Theretra nessus (Drury, 1773)

This taxon was confirmed as right in determination and classification in taxonomy.



Theretra oldenlandiae (Fabricius, 1775)

This taxon was confirmed as right in determination and classification in taxonomy.



Theretra palicosta (Walker, 1856)

This taxon was confirmed as right in determination and classification in taxonomy.



Diversity and localities of previous expeditions



Visited localities

2009

Locality	Continent/Ocean	Country	State/Province	Region	Sector	Exact Site	Latitude	Longitude	Elevation
Locality No. 1	Asia	India	Karnataka	Dandeli	Dandeli N.P., Anshi forest dept	Muppai point	15°1,615'N	74°21,423'E	700 m
Locality No. 2	Asia	India	Karnataka	Dandeli	Dandeli N.P.	Ulvi pargole point	14°48,508'N	76°65,120'E	592 m
Locality No. 3	Asia	India	Karnataka	Dandeli	Dandeli N.P.		15°9,866'N	74°37,511'E	465 m
Locality No. 4	Asia	India	Karnataka	Bannerghatta	Bannerghata N.P.				626 m
Locality No. 5	Asia	India	Karnataka	Bannerghatta	Bannerghata N.P.	Udige bande spot			940 m
Locality No. 6	Asia	India	Karnataka	Dandeli	Dandeli N.P.				

2011

Locality	Continent/Ocean	Country	State/Province	Region	Sector	Exact Site	Latitude	Longitude	Elevation
Locality No. 1	Asia	India	Karnataka	Dandeli	Dandeli N.P.	Paragole point	15° 9'51.96"N	74°37'30.66"E	465 m
Locality No. 2	Asia	India	Karnataka	Dandeli	Dandeli N.P.	Sanmug point	15° 5'43.37"N	74°36'16.22"E	592 m
Locality No. 3	Asia	India	Karnataka	Dandeli	Dandeli N.P., Anshi forest dept.	Muppai point	15° 1'38.21"N	74°21'24.40"E	610 m
Locality No. 4	Asia	India	Karnataka	Bannerghata	Bannerghata N.P.	Udige Bande watchtower	12°46'24.67"N	77°34'4.22"E	878 m
Locality No. 5	Asia	India	Karnataka	Bannerghata	Bannerghata N.P.	Bugarikal Betta	12°42'29.83"N	77°32'44.60"E	884 m



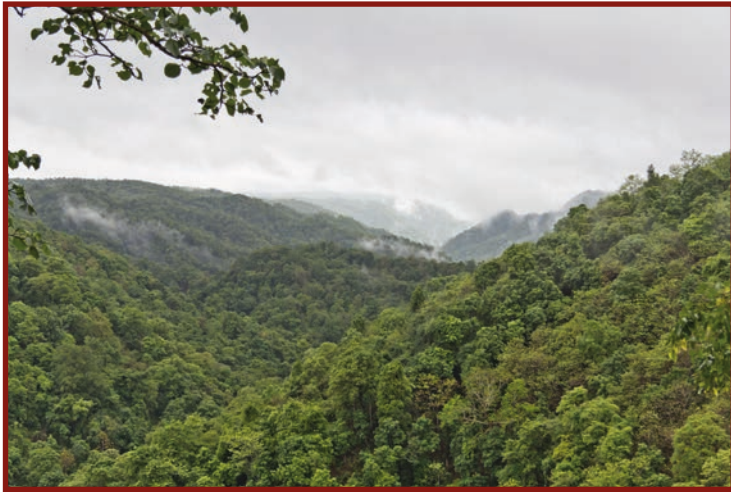
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Locality number : 1



Locality number : 2



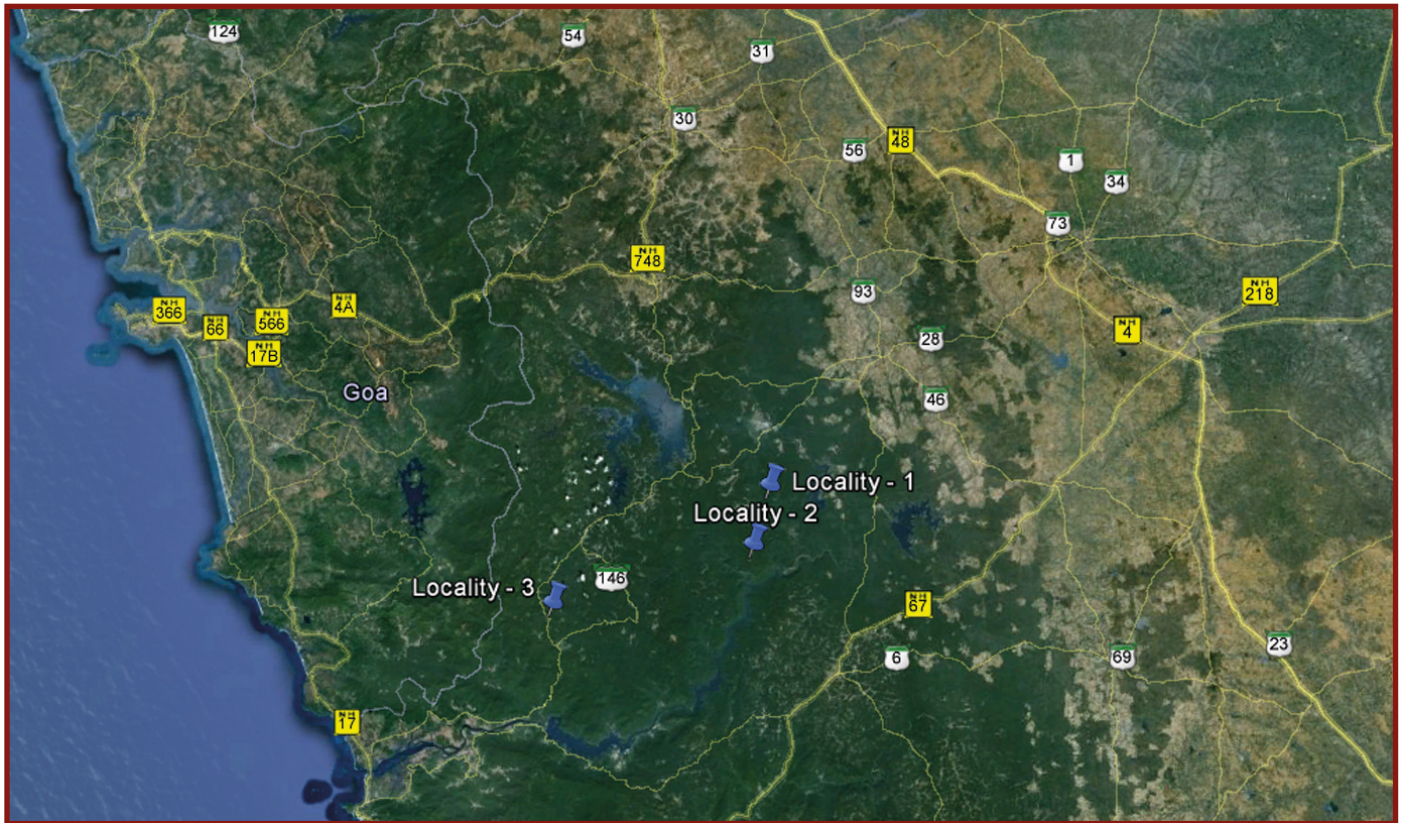
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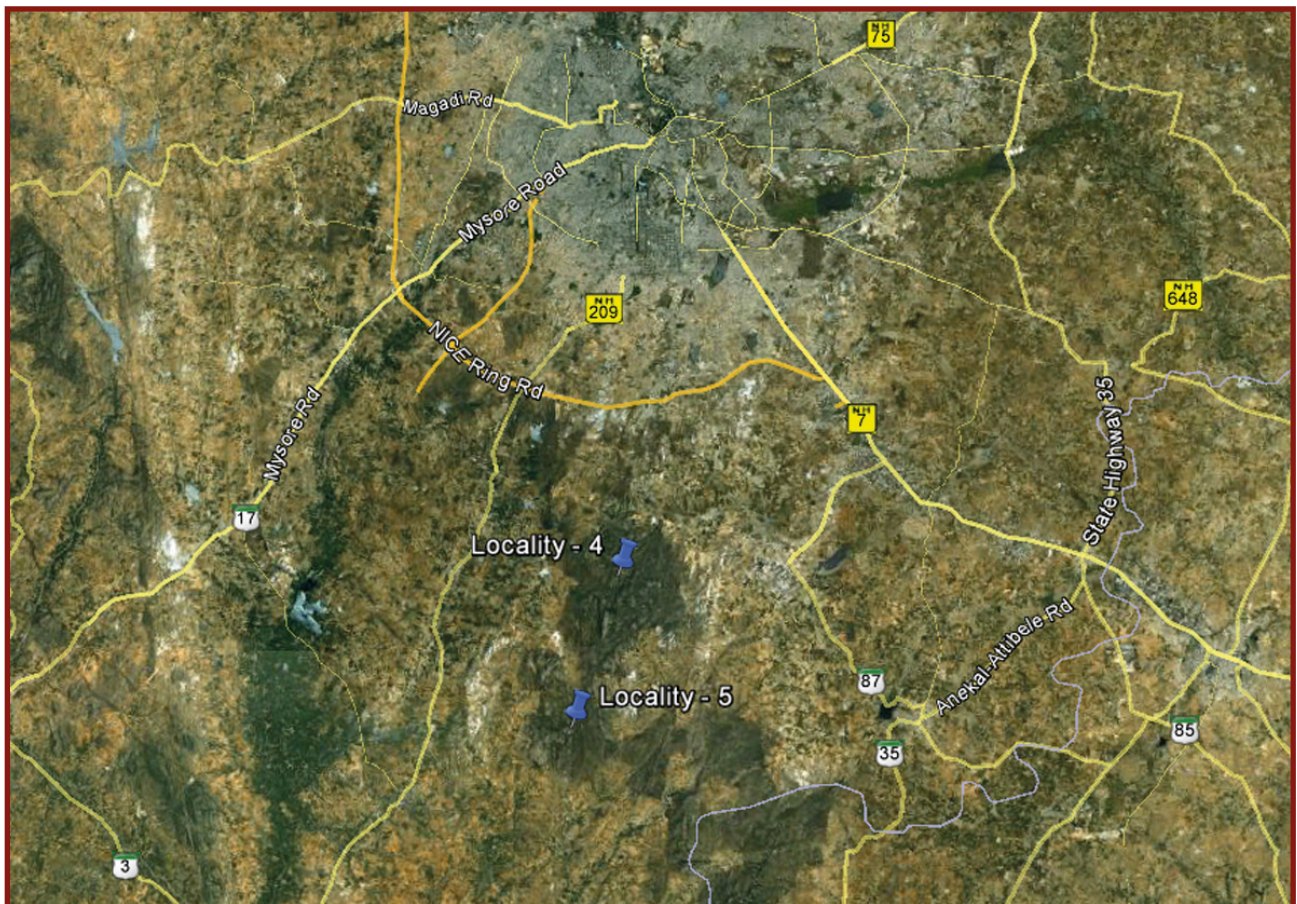
Locality number : 6



Locality number : 5



View on locality number : 1, 2 and 3



View on locality number : 4 and 5



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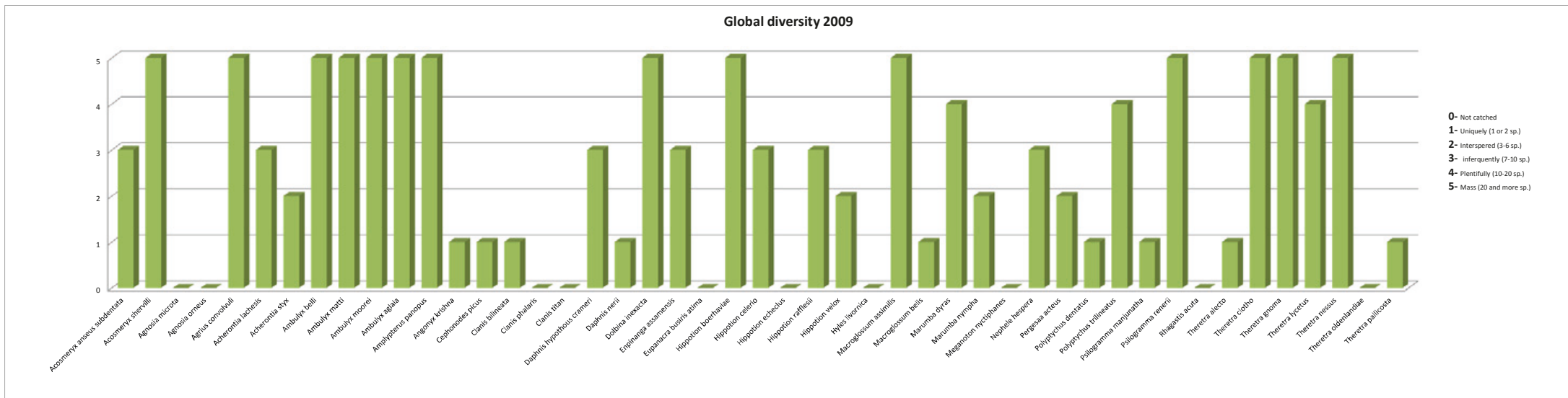
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Global diversity 2009



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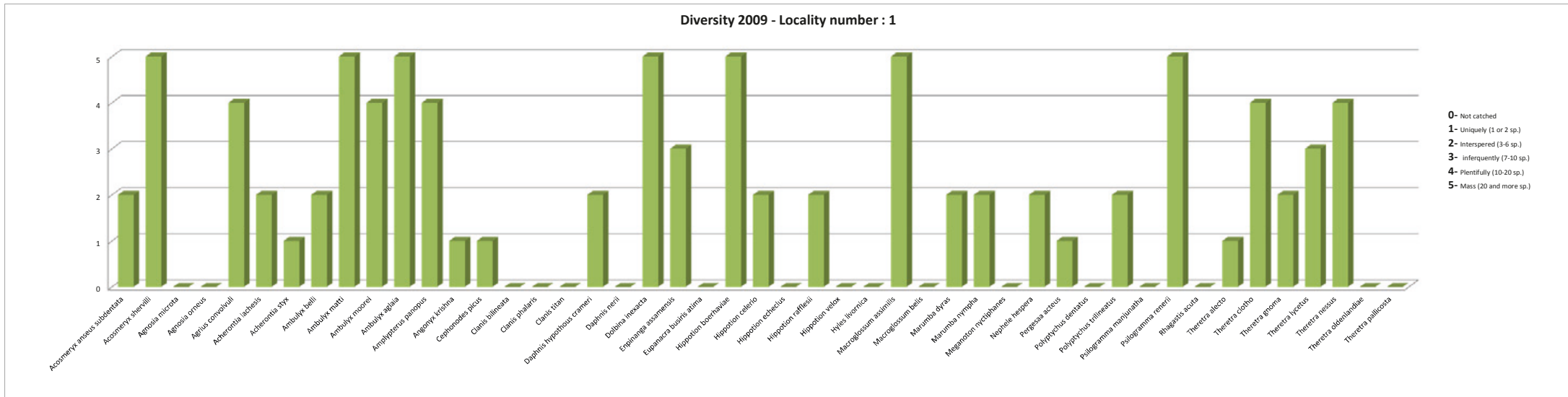
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Diversity 2009 - Locality number : 1



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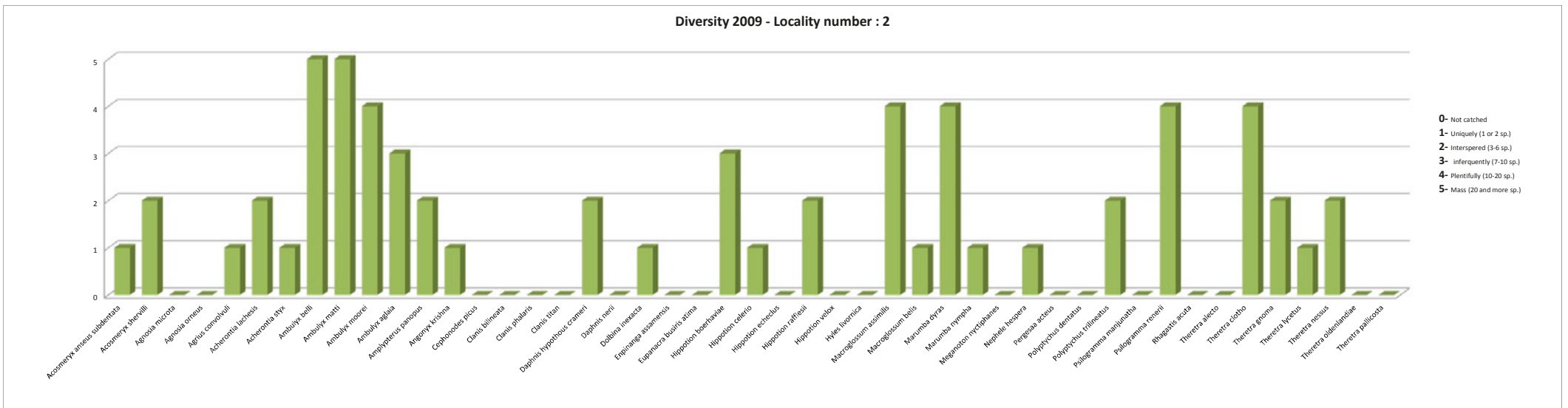
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Diversity 2009 - Locality number : 2



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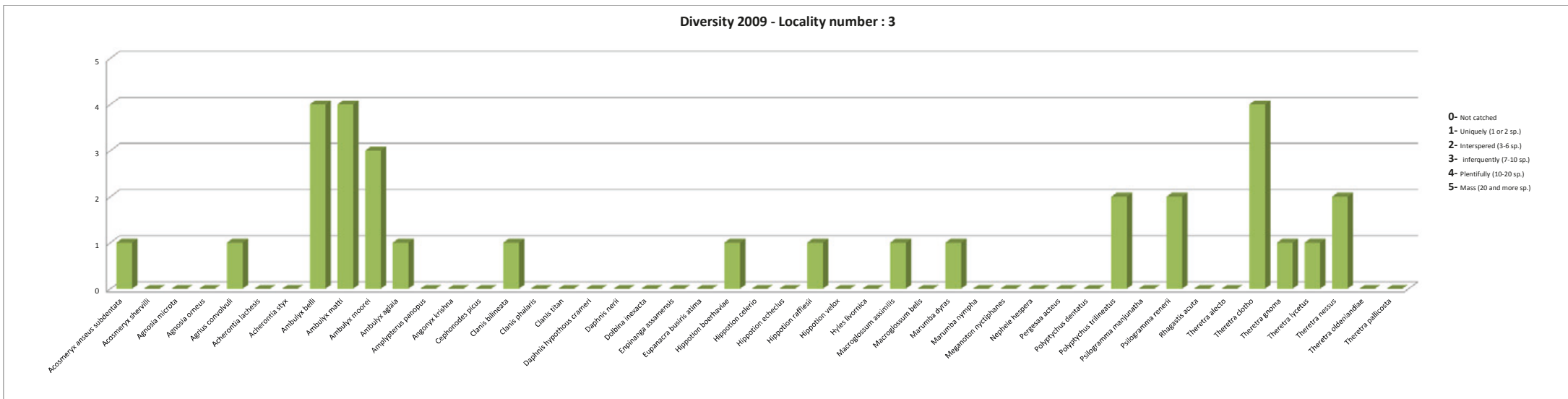
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Diversity 2009 - Locality number : 3



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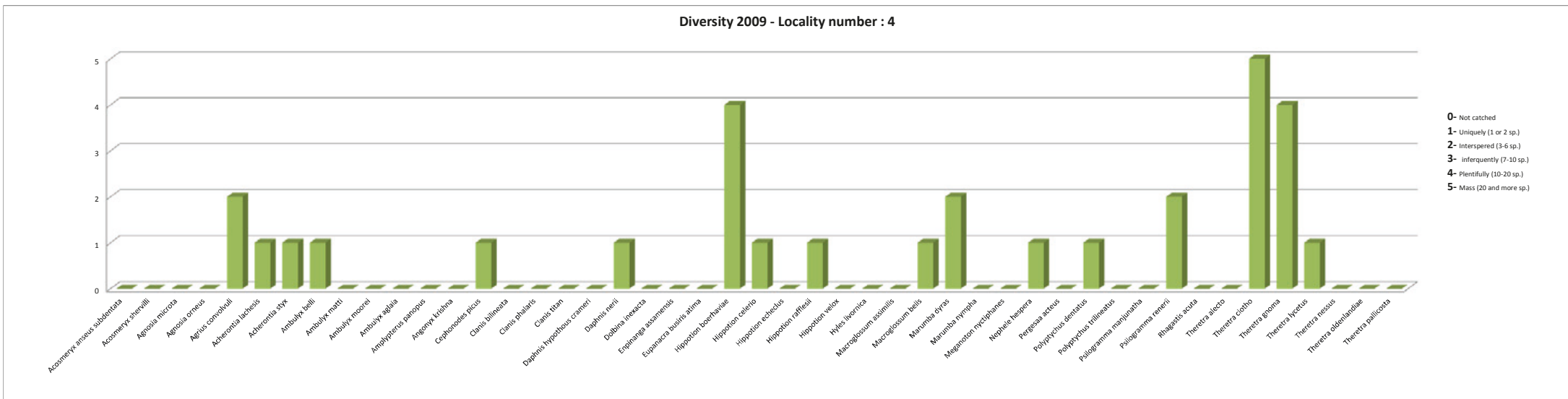
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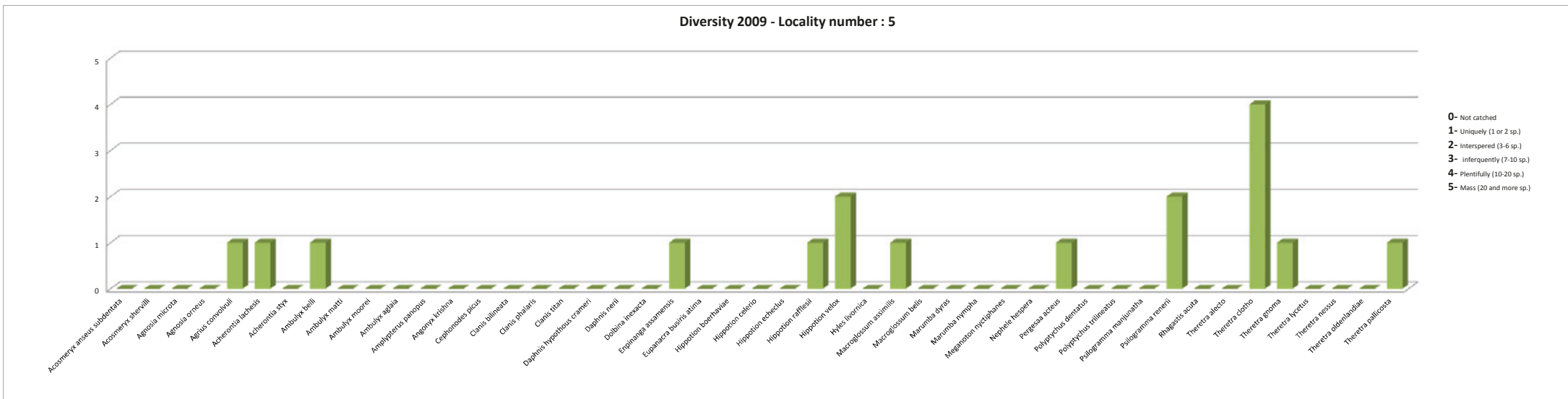
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Diversity 2009 - Locality number : 5



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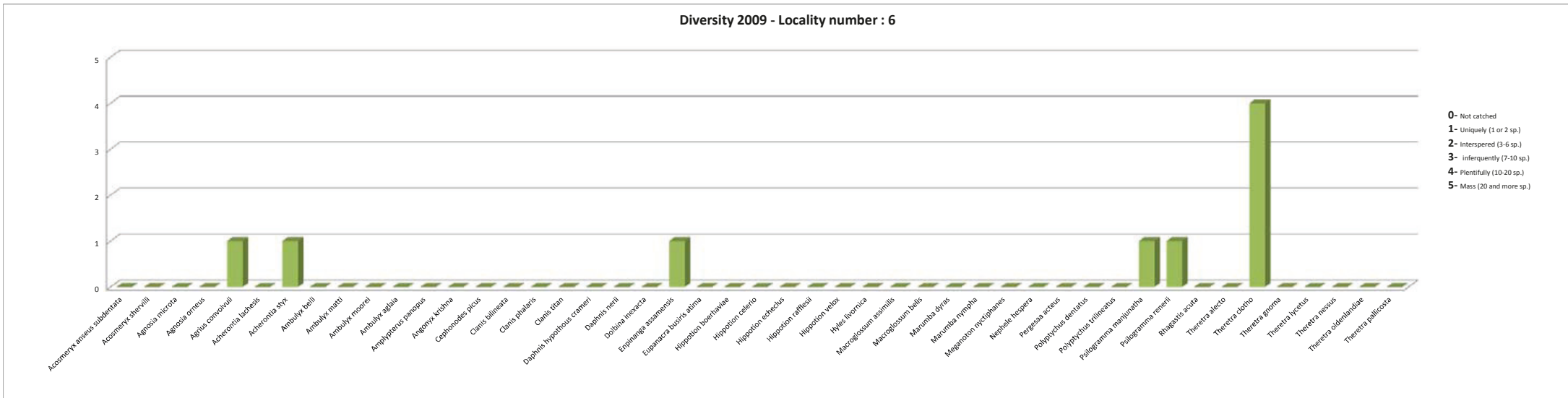
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Diversity 2009 - Locality number : 6



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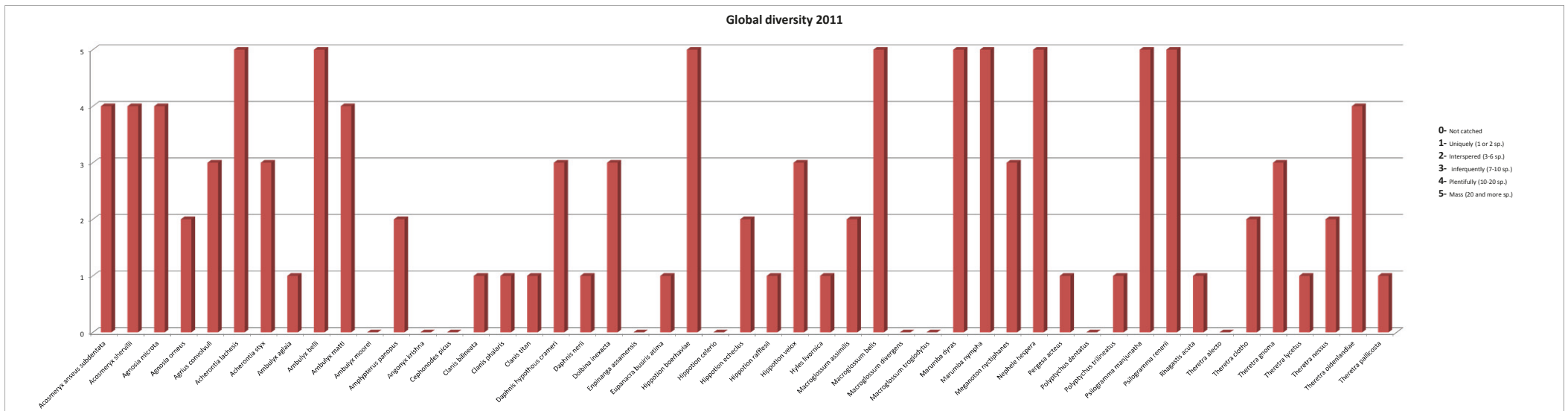
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Global diversity 2011



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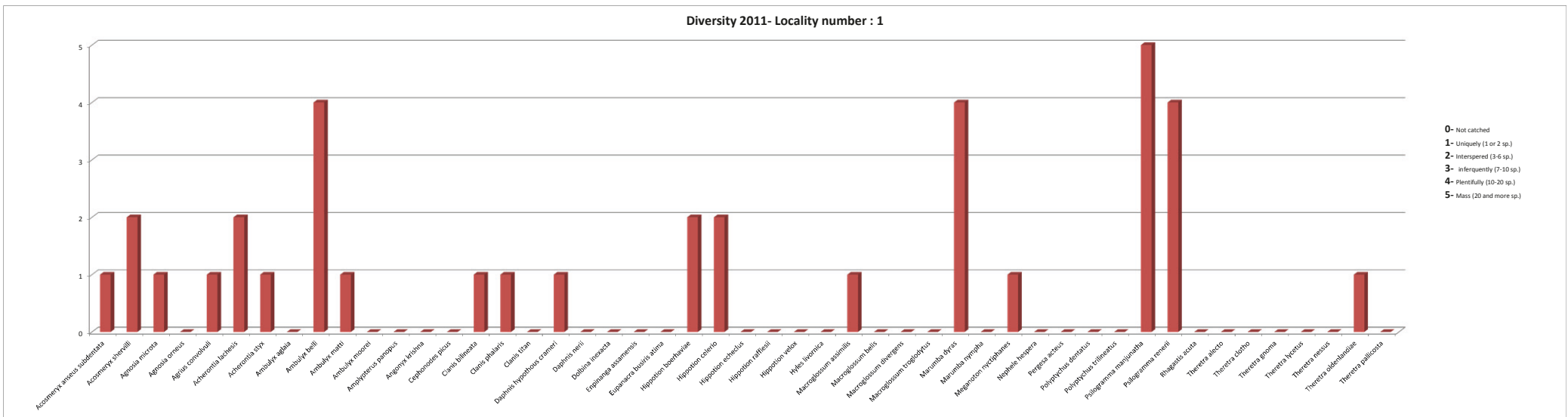
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Diversity 2011 - Locality number : 1



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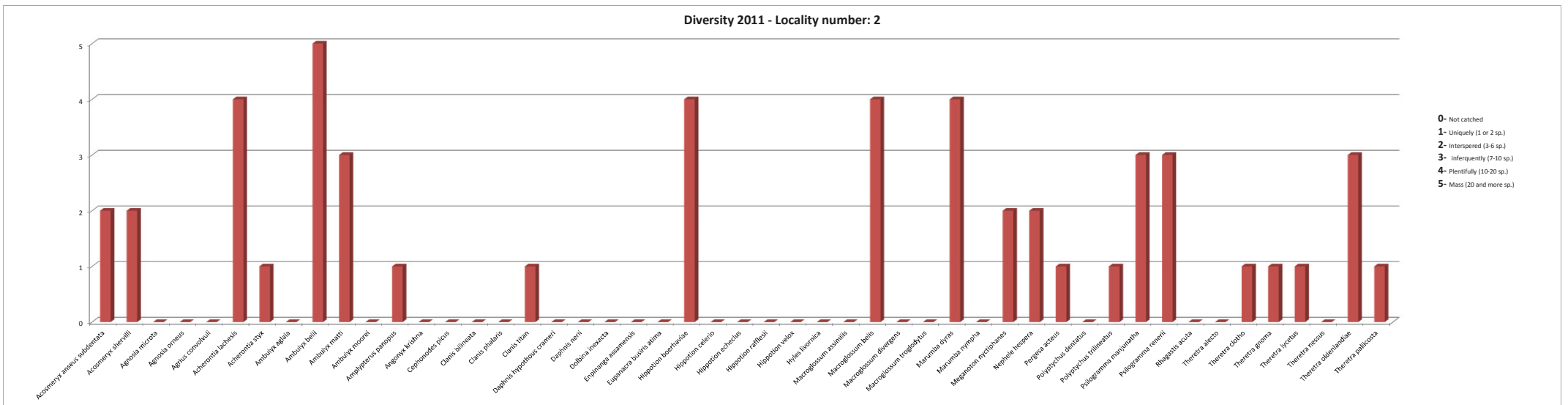
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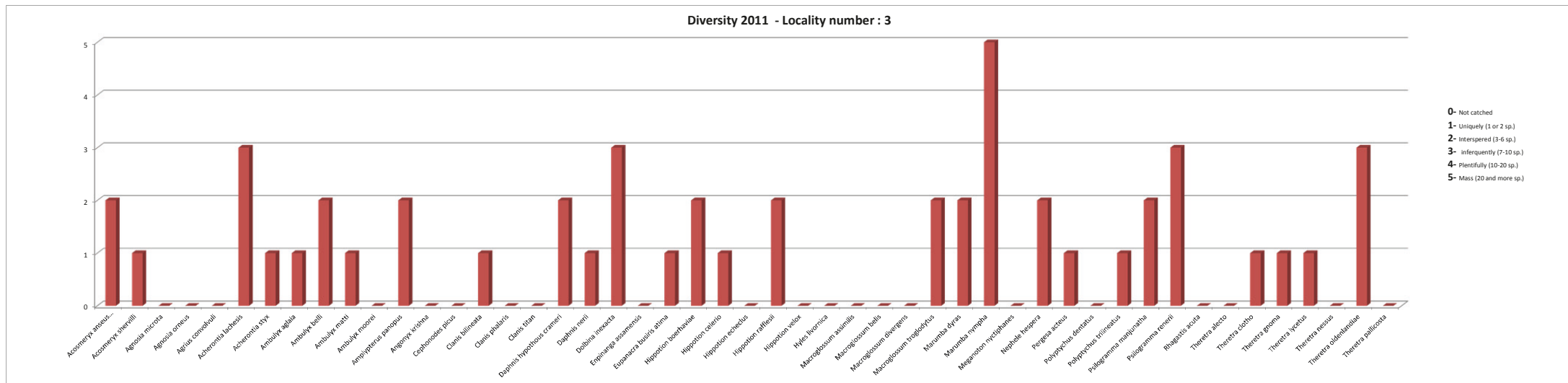
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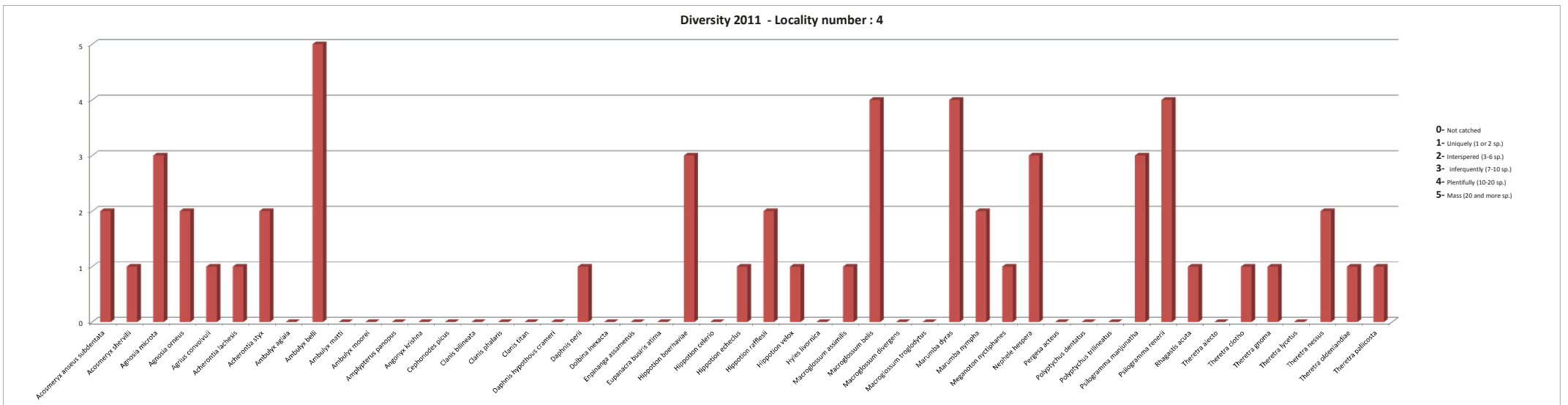
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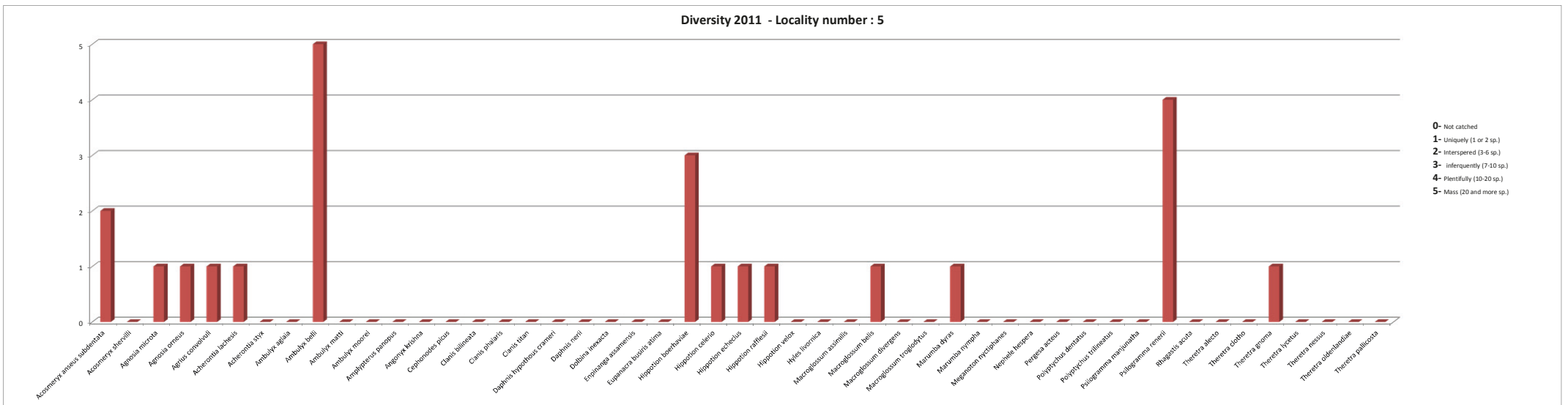
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E-mail: info@sphingidae-museum.com

Phone: (+420) 775 349 546

Diversity 2011 - Locality number : 5



SPHINGIDAE MUSEUM
CZECH REPUBLIC

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Phone: (+420) 775 349 546

DNA results and sequences





Acosmerys anceus subdentata
(Rothschild & Jordan, 1903)



BOLD TaxonID Tree

Project : SEARCH: Tax(Acosmeryx)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 167
Species count : 17
Genus count : 1
Family count : 1
Unidentified : 0



Acosmeryx pseudonaga|VAG-2032|Laos.Louangphrabang|070306a
 Acosmeryx pseudonaga|VAG-2051|China.Hainan|sp?- Ac ca 250207g
 Acosmeryx pseudonaga|VAG-2050|China.Hainan|sp?- Ac ca 250207f
 Acosmeryx pseudonaga|VAG-2049|China.Hainan|Ac ca 250207c
 Acosmeryx pseudonaga|VAG-2048|China.Hainan|Ac ca250207a
 Acosmeryx pseudonaga|VAG-2033|Laos.Louangphrabang|Ac sh 300106a
 Acosmeryx pseudonaga|VAG-2045|Thailand.Chiang Mai|Ac sh 050205c
 Acosmeryx pseudonaga|BC-Hax3325|India.Sikkim|
 Acosmeryx pseudonaga|BC-Hax3327|Malaysia|
 Acosmeryx pseudonaga|BC-Hax3326|Malaysia|
 Acosmeryx shervillii|BC-Mel1678|Thailand.Chiang Mai|
 Acosmeryx pseudonaga|BC-Mel2053|Indonesia|
 Acosmeryx pseudonaga|BC-Mel2052|Indonesia|
 Acosmeryx pseudonaga|VAG-2035|Indonesia.Jawa Timur|Ac ps 190602a
 Acosmeryx pseudonaga|BC-Hax3324|Malaysia|
 Acosmeryx pseudonaga|BC-EMEM0032|Malaysia.Perak|
 Acosmeryx beatae|BC-EMEM0011|Indonesia|Paratype
 Acosmeryx beatae|BC-Hax3343|Indonesia|
 Acosmeryx beatae|BC-Hax3341|Indonesia|
 Acosmeryx beatae|BC-Hax3342|Indonesia|
 Acosmeryx miskini|VAG-2023|Australia.New South Wales|Ac mi 250207a
 Acosmeryx miskini|VAG-2024|Australia.New South Wales|Ac mi 250207b
 Acosmeryx miskinoides|BC ZSM Lep 02168|Indonesia.Papua|
 Acosmeryx miskinoides|USNM ENT 196084|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM ENT 00196618|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM 196624|Papua New Guinea.Morobe|
 Acosmeryx miskinoides|VAG-2025|Papua New Guinea|Paratype
 Acosmeryx miskinoides|USNM 196623|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM ENT 196620|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM 196619|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM 196621|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM 196622|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM 196625|Papua New Guinea.Morobe|
 Acosmeryx miskinoides|USNM 196626|Papua New Guinea.Morobe|
 Acosmeryx miskinoides|USNM ENT 196050|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM ENT 00196083|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM ENT 196085|Papua New Guinea.Gulf|
 Acosmeryx shervillii|VAG-2026|Thailand.Chiang Mai|Ac so 090705a
 Acosmeryx shervillii|BC-Hax4473|China.Yunnan|
 Acosmeryx shervillii|BC-Hax5093|Laos.Khammouan|
 Acosmeryx shervillii|BC-Mel1674|Indonesia|
 Acosmeryx shervillii|BC-Hax3346|Indonesia|PT tenggarensis
 Acosmeryx tenggarensis|BC-Mel1672|Indonesia|
 Acosmeryx tenggarensis|BC-Mel1673|Indonesia|
 Acosmeryx tenggarensis|BC-Hax3344|Indonesia|
 Acosmeryx shervillii|BC-Mel1675|Indonesia.Sumatra|
 Acosmeryx tenggarensis|BC-Hax3345|Indonesia|Paratype
 Acosmeryx shervillii|BC-Mel1676|Indonesia.Sumatra|
 Acosmeryx tenggarensis|BC-Hax3347|Indonesia|Paratype
 Acosmeryx shervillii|BC-Mel1677|Indonesia.Bali|
 Acosmeryx shervillii|BC-Hax3323|Malaysia|
 Acosmeryx shervillii|BC-Hax3320|Indonesia.Bali|
 Acosmeryx shervillii|BC-Hax3321|Malaysia|
 Acosmeryx shervillii|BC-Hax3322|Malaysia|
 Acosmeryx shervillii|BC-Mel 1067|Indonesia|
 Acosmeryx shervillii|BC-Mel1414|India.Karnataka|
 Acosmeryx shervillii|BC-Mel1415|India.Karnataka|
 Acosmeryx shervillii|BC-Mel1416|India.Karnataka|
 Acosmeryx shervillii|BC-Mel1412|India.Karnataka|
 Acosmeryx shervillii|BC-Mel1413|India.Karnataka|
 Acosmeryx shervillii|BC-Mel 1064|India.Karnataka|
 Acosmeryx shervillii|BC-Mel 1044|India.Karnataka|
 Acosmeryx socrates|VAG-2017|Philippines.Panay|morph 3- Ac so 091306e
 Acosmeryx socrates|BC-Hax3351|Philippines.Mountain|
 Acosmeryx socrates|BC-Hax3348|Philippines.Mountain|
 Acosmeryx socrates|VAG-2018|Philippines.Panay|morph 3- Ac so 091206b
 Acosmeryx socrates|VAG-2015|Philippines.Panay|morph 1- Ac so 091206f
 Acosmeryx socrates|VAG-2019|Philippines.Leyte|morph 1- Ac so 090306b
 Acosmeryx socrates|BC-Hax3349|Philippines|
 Acosmeryx socrates|BC-Hax3350|Philippines|
 Acosmeryx castanea|VAG-2055|China.Sichuan|Ac ca 1d04m
 Acosmeryx castanea|VAG-2053|China.Qinghai|Ac ca 250207i
 Acosmeryx castanea|BC-Roug1217|China.Sichuan|
 Acosmeryx castanea|BC-Roug1216|China.Sichuan|
 Acosmeryx castanea|JCM-TWN-0033|China.Taiwan|
 Acosmeryx castanea|BC-Hax3335|China.Taiwan|
 Acosmeryx castanea|BC-Hax3333|China.Taiwan|
 Acosmeryx naga|VAG-2036|Vietnam|Ac na 251101a
 Acosmeryx naga hissarica|ZA-0004|Pakistan.Punjab|
 Acosmeryx naga hissarica|ZA-0005|Pakistan.Punjab|
 Acosmeryx naga hissarica|BC-Hax3332|Tajikistan|
 Acosmeryx naga|AYK-04-2570|Japan|
 Acosmeryx naga|VAG-2044|China.Guizhou|Ac na 020607a
 Acosmeryx naga|JCM-TWN-0035|China.Taiwan|



Acosmeryx naga|VAG-2044|China.Guizhou|Ac na 020607a
 Acosmeryx naga|JCM-TWN-0035|China.Taiwan|
 Acosmeryx naga|BC-Hax3329|China.Taiwan|
 Acosmeryx naga|BC-Hax3330|China.Taiwan|
 Acosmeryx sericeus|BC-Mell1573|China.Yunnan|
 Acosmeryx sericeus|BC-Mell1572|China.Yunnan|
 Acosmeryx sericeus|VAG-2031|Thailand.Chiang Mai|Ac se 090306a
 Acosmeryx sericeus|VAG-2029|China.Hainan|Ac se 250207b
 Acosmeryx sericeus|VAG-2030|China.Hainan|Ac se 250207a
 Acosmeryx sericeus|BC-Hax3310|China.Yunnan|
 Acosmeryx sericeus|BC-Mell1574|Vietnam|
 Acosmeryx sericeus|BC-Hax3309|Malaysia|
 Acosmeryx sericeus|BC-Hax3312|Malaysia|
 Acosmeryx sericeus|BC-Hax3308|Malaysia|
 Acosmeryx anceus|BC ZSM Lep 02201|Indonesia.Papua|
 Acosmeryx anceus|BC ZSM Lep 02200|Indonesia.Papua|
 Acosmeryx anceus|BC ZSM Lep 02170|Indonesia.Papua|
 Acosmeryx anceus|USNM ENT 00196629|Papua New Guinea.Morobe|
 Acosmeryx anceus|USNM ENT 00196633|Papua New Guinea.Gulf|
 Acosmeryx anceus|USNM ENT 00196635|Papua New Guinea.Gulf|
 Acosmeryx anceus|BC ZSM Lep 02444|Australia.Queensland|
 Acosmeryx anceus|USNM ENT 00196632|Papua New Guinea.Morobe|
 Acosmeryx anceus|USNM ENT 00196631|Papua New Guinea.Morobe|
 Acosmeryx anceus|USNM ENT 00196049|Papua New Guinea.Morobe|
 Acosmeryx anceus|BC ZSM Lep 01349|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01350|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02589|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02588|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 05811|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 08415|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 08417|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02590|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02632|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02390|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01332|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01366|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01347|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01367|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01333|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02631|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01364|Australia.Queensland|
 Acosmeryx anceus|BC-LTM-149|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01334|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01348|Australia.Queensland|
 Acosmeryx anceus|BC-Hax3352|Australia|
 Acosmeryx anceus|BC ZSM Lep 08418|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01365|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02587|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02586|Australia.Queensland|
 Acosmeryx anceus subdentata|BC-Hax3356|Timor-Leste.Lautem|
 Acosmeryx anceus subdentata|BC-Hax3357|Timor-Leste.Lautem|
 Acosmeryx anceus subdentata|VAG-2003|Indonesia|morph 2- An ac 310307a
 Acosmeryx anceus subdentata|VAG-2004|Indonesia|morph 2- An ac 280607a
 Acosmeryx anceus subdentata|VAG-2011|Philippines.Panay|morph 4a- Ac an 091206b
 Acosmeryx anceus subdentata|VAG-2012|Philippines.Panay|morph 4a- An an 091206c
 Acosmeryx anceus subdentata|VAG-2009|Philippines.Leyte|morph 4- Ac an 090306a
 Acosmeryx anceus subdentata|VAG-2010|Philippines.Leyte|morph 4- Ac an 090306j
 Acosmeryx anceus subdentata|BC-Hax3359|Philippines|
 Acosmeryx anceus subdentata|BC-Hax3354|Philippines.Mountain|
 Acosmeryx anceus subdentata|BC-Hax3358|Philippines|
 Acosmeryx anceus subdentata|BC-Hax3353|China.Yunnan|
 Acosmeryx anceus|BC-Mell1125|India.Karnataka|
 Acosmeryx anceus subdentata|MA05-08-31-14|India.Karnataka|
 Acosmeryx anceus subdentata|BC-Mel 1043|India.Karnataka|
 Acosmeryx anceus subdentata|VAG-2001|Thailand.Chiang Mai|crenulated wing- Ac an su 150205a
 Acosmeryx anceus|BC-LTM-148|Australia.Northern Territory|
 Acosmeryx anceus|USNM ENT 00196634|Papua New Guinea.Gulf|
 Acosmeryx anceus|USNM ENT 00196048|Papua New Guinea.Gulf|
 Acosmeryx anceus|USNM ENT 00196082|Papua New Guinea.Gulf|
 Acosmeryx anceus|BC-Hax4144|Australia|
 Acosmeryx omissa|BC-Hax3313|Thailand.Chiang Mai|
 Acosmeryx omissa|BC-Hax3314|Vietnam|
 Acosmeryx pseudomissa|VAG-2046|Vietnam|Ac so 1381m
 Acosmeryx pseudomissa|VAG-2052|China.Hainan|Ac ca 250207b
 Acosmeryx pseudomissa|BC-Hax3306|Malaysia|
 Acosmeryx pseudomissa|BC-Hax3304|Malaysia|
 Acosmeryx pseudomissa|BC-Hax3303|Malaysia|
 Acosmeryx pseudomissa|BC-Hax3305|Malaysia|
 Acosmeryx pseudomissa|BC-Hax3307|Malaysia|
 Acosmeryx formosana|BC-Hax3316|China.Taiwan|
 Acosmeryx formosana|JCM-TWN-0034|China.Taiwan|
 Acosmeryx sinjaevi|BC-Hax3337|China.Fujian|
 Acosmeryx sinjaevi|BC-Hax3336|China.Fujian|
 Acosmeryx formosana|BC-Hax3317|China.Taiwan|
 Acosmeryx sinjaevi|BC-EMEM0002|China.Hainan|Topotype





Specimen Identification Request

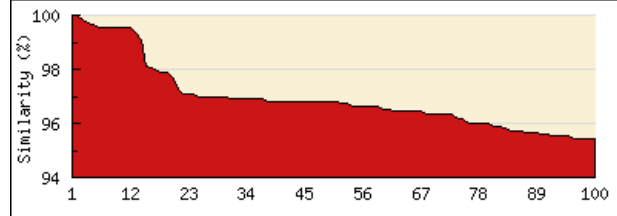
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceus</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.67
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.39
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	99.08
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	98.12
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	98.06
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	97.94
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	97.86
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	97.86
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>anceussubdentata</i>	97.71

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Acosmeryx shervilli
(Boisduval, 1875)



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Phone: (+420) 775 349 546

BOLD TaxonID Tree

Project : SEARCH: Tax(Acosmeryx)
Date : 24-April-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 167
Species count : 17
Genus count : 1
Family count : 1
Unidentified : 0



Acosmeryx pseudonaga|BC-Hax3327|Malaysia|
 Acosmeryx pseudonaga|BC-Hax3326|Malaysia|
 Acosmeryx pseudonaga|BC-Mel2053|Indonesia|
 Acosmeryx pseudonaga|BC-EMEM0032|Malaysia.Perak|
 Acosmeryx pseudonaga|BC-Mel2052|Indonesia|
 Acosmeryx pseudonaga|BC-Hax3324|Malaysia|
 Acosmeryx pseudonaga|BC-Mel1678|Thailand.Chiang Mai|
 Acosmeryx pseudonaga|VAG-2035|Indonesia.Jawa Timur|Ac ps 190602a
 Acosmeryx pseudonaga|VAG-2032|Laos.Louangphrabang|070306a
 Acosmeryx pseudonaga|VAG-2033|Laos.Louangphrabang|Ac sh 300106a
 Acosmeryx pseudonaga|BC-Hax3325|India.Sikkim|
 Acosmeryx pseudonaga|VAG-2045|Thailand.Chiang Mai|Ac sh 050205c
 Acosmeryx pseudonaga|VAG-2048|China.Hainan|Ac ca250207a
 Acosmeryx pseudonaga|VAG-2049|China.Hainan|Ac ca 250207c
 Acosmeryx pseudonaga|VAG-2050|China.Hainan|sp?- Ac ca 250207f
 Acosmeryx pseudonaga|VAG-2051|China.Hainan|sp?- Ac ca 250207g
 Acosmeryx beatae|BC-EMEM0011|Indonesia|Paratype
 Acosmeryx beatae|BC-Hax3342|Indonesia|
 Acosmeryx beatae|BC-Hax3341|Indonesia|
 Acosmeryx beatae|BC-Hax3343|Indonesia|
 Acosmeryx miskini|VAG-2023|Australia.New South Wales|Ac mi 250207a
 Acosmeryx miskini|VAG-2024|Australia.New South Wales|Ac mi 250207b
 Acosmeryx miskinoides|BC ZSM Lep 02168|Indonesia.Papua|
 Acosmeryx miskinoides|USNM ENT 196084|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM ENT 00196618|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM ENT 196085|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM 196624|Papua New Guinea.Morobe|
 Acosmeryx miskinoides|USNM ENT 00196083|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM 196623|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM ENT 196620|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM 196619|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM 196621|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM 196622|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|USNM 196625|Papua New Guinea.Morobe|
 Acosmeryx miskinoides|USNM 196626|Papua New Guinea.Morobe|
 Acosmeryx miskinoides|USNM ENT 196050|Papua New Guinea.Gulf|
 Acosmeryx miskinoides|VAG-2025|Papua New Guinea|Paratype
 Acosmeryx socrates|VAG-2017|Philippines.Panay|morph 3- Ac so 091306e
 Acosmeryx socrates|BC-Hax3351|Philippines.Mountain|
 Acosmeryx socrates|BC-Hax3348|Philippines.Mountain|
 Acosmeryx socrates|VAG-2018|Philippines.Panay|morph 3- Ac so 091206b
 Acosmeryx socrates|VAG-2015|Philippines.Panay|morph 1- Ac so 091206f
 Acosmeryx socrates|BC-Hax3349|Philippines|
 Acosmeryx socrates|BC-Hax3350|Philippines|
 Acosmeryx socrates|VAG-2019|Philippines.Leyte|morph 1- Ac so 090306b
 Acosmeryx shervillii|BC-Mel1414|India.Karnataka|
 Acosmeryx shervillii|BC-Mel1415|India.Karnataka|
 Acosmeryx shervillii|BC-Mel 1064|India.Karnataka|
 Acosmeryx shervillii|BC-Mel1416|India.Karnataka|
 Acosmeryx shervillii|BC-Mel 1044|India.Karnataka|
 Acosmeryx shervillii|BC-Mel1412|India.Karnataka|
 Acosmeryx shervillii|BC-Mel1413|India.Karnataka|
 Acosmeryx shervillii|BC-Hax5093|Laos.Khammouan|
 Acosmeryx shervillii|BC-Hax4473|China.Yunnan|
 Acosmeryx shervillii|VAG-2026|Thailand.Chiang Mai|Ac so 090705a
 Acosmeryx shervillii|BC-Mel1677|Indonesia.Bali|
 Acosmeryx shervillii|BC-Hax3323|Malaysia|
 Acosmeryx shervillii|BC-Hax3320|Indonesia.Bali|
 Acosmeryx shervillii|BC-Hax3321|Malaysia|
 Acosmeryx shervillii|BC-Hax3322|Malaysia|
 Acosmeryx shervillii|BC-Mel 1067|Indonesia|
 Acosmeryx shervillii|BC-Hax3346|Indonesia|PT tenggarensis
 Acosmeryx shervillii|BC-Mel1674|Indonesia|
 Acosmeryx tenggarensis|BC-Mel1672|Indonesia|
 Acosmeryx tenggarensis|BC-Hax3344|Indonesia|
 Acosmeryx tenggarensis|BC-Mel1675|Indonesia|
 Acosmeryx tenggarensis|BC-Hax3345|Indonesia|Paratype
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 Acosmeryx tenggarensis|BC-Hax3347|Indonesia|Paratype
 Acosmeryx tenggarensis|BC-Mel1673|Indonesia|
 Acosmeryx castanea|VAG-2055|China.Sichuan|Ac ca 1d04m
 Acosmeryx castanea|JCM-TWN-0033|China.Taiwan|
 Acosmeryx castanea|BC-Hax3335|China.Taiwan|
 Acosmeryx castanea|BC-Hax3333|China.Taiwan|
 Acosmeryx castanea|BC-Roug1217|China.Sichuan|
 Acosmeryx castanea|BC-Roug1216|China.Sichuan|
 Acosmeryx castanea|VAG-2053|China.Qinghai|Ac ca 250207i
 Acosmeryx naga hissarica|ZA-0004|Pakistan.Punjab|
 Acosmeryx naga hissarica|ZA-0005|Pakistan.Punjab|
 Acosmeryx naga hissarica|BC-Hax3332|Tajikistan|
 Acosmeryx naga|VAG-2036|Vietnam|Ac na 251101a
 Acosmeryx naga|AYK-04-2570|Japan|
 Acosmeryx naga|BC-Hax3330|China.Taiwan|
 Acosmeryx naga|JCM-TWN-0035|China.Taiwan|



Acosmeryx naga|BC-Hax3330|China.Taiwan|
 Acosmeryx naga|JCM-TWN-0035|China.Taiwan|
 Acosmeryx naga|BC-Hax3329|China.Taiwan|
 Acosmeryx naga|VAG-2044|China.Guizhou|Ac na 020607a
 Acosmeryx sericeus|BC-Hax3309|Malaysia|
 Acosmeryx sericeus|BC-Hax3312|Malaysia|
 Acosmeryx sericeus|BC-Hax3308|Malaysia|
 Acosmeryx sericeus|BC-Mell1574|Vietnam|
 Acosmeryx sericeus|BC-Hax3310|China.Yunnan|
 Acosmeryx sericeus|VAG-2029|China.Hainan|Ac se 250207b
 Acosmeryx sericeus|VAG-2030|China.Hainan|Ac se 250207a
 Acosmeryx sericeus|VAG-2031|Thailand.Chiang Mai|Ac se 090306a
 Acosmeryx sericeus|BC-Mell1572|China.Yunnan|
 Acosmeryx sericeus|BC-Mell1573|China.Yunnan|
 Acosmeryx anceus|BC ZSM Lep 02444|Australia.Queensland|
 Acosmeryx anceus|USNM ENT 00196632|Papua New Guinea.Morobe|
 Acosmeryx anceus|USNM ENT 00196631|Papua New Guinea.Morobe|
 Acosmeryx anceus|USNM ENT 00196049|Papua New Guinea.Morobe|
 Acosmeryx anceus|BC ZSM Lep 01349|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02589|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01350|Australia.Queensland|
 Acosmeryx anceus|USNM ENT 00196629|Papua New Guinea.Morobe|
 Acosmeryx anceus|USNM ENT 00196633|Papua New Guinea.Gulf|
 Acosmeryx anceus|USNM ENT 00196635|Papua New Guinea.Gulf|
 Acosmeryx anceus|BC ZSM Lep 02170|Indonesia.Papua|
 Acosmeryx anceus|BC ZSM Lep 02200|Indonesia.Papua|
 Acosmeryx anceus|BC ZSM Lep 02201|Indonesia.Papua|
 Acosmeryx anceus|BC ZSM Lep 02588|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 05811|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 08415|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 08417|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02590|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02632|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02390|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01332|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01366|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01347|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01367|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02631|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01333|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01364|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 08418|Australia.Queensland|
 Acosmeryx anceus|BC-Hax3352|Australia|
 Acosmeryx anceus|BC ZSM Lep 01348|Australia.Queensland|
 Acosmeryx anceus|BC-LTM-149|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01334|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 01365|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02587|Australia.Queensland|
 Acosmeryx anceus|BC ZSM Lep 02586|Australia.Queensland|
 Acosmeryx anceus subdentata|BC-Hax3356|Timor-Leste.Lautem|
 Acosmeryx anceus subdentata|BC-Hax3357|Timor-Leste.Lautem|
 Acosmeryx anceus subdentata|VAG-2003|Indonesia|morph 2- An ac 310307a
 Acosmeryx anceus subdentata|VAG-2004|Indonesia|morph 2- An ac 280607a
 Acosmeryx anceus subdentata|VAG-2011|Philippines.Panay|morph 4a- Ac an 091206b
 Acosmeryx anceus subdentata|VAG-2009|Philippines.Leyte|morph 4- Ac an 090306a
 Acosmeryx anceus subdentata|BC-Hax3359|Philippines|
 Acosmeryx anceus subdentata|BC-Hax3354|Philippines.Mountain|
 Acosmeryx anceus subdentata|BC-Hax3358|Philippines|
 Acosmeryx anceus subdentata|VAG-2010|Philippines.Leyte|morph 4- Ac an 090306j
 Acosmeryx anceus subdentata|VAG-2012|Philippines.Panay|morph 4a- An an 091206c
 Acosmeryx anceus subdentata|BC-Hax3353|China.Yunnan|
 Acosmeryx anceus subdentata|MA05-08-31-14|India.Karnataka|
 Acosmeryx anceus subdentata|BC-Mell1125|India.Karnataka|
 Acosmeryx anceus subdentata|BC-Mel 1043|India.Karnataka|
 Acosmeryx anceus subdentata|VAG-2001|Thailand.Chiang Mai|crenulated wing- Ac an su 150205a
 Acosmeryx anceus|BC-LTM-148|Australia.Northern Territory|
 Acosmeryx anceus|USNM ENT 00196634|Papua New Guinea.Gulf|
 Acosmeryx anceus|USNM ENT 00196048|Papua New Guinea.Gulf|
 Acosmeryx anceus|USNM ENT 00196082|Papua New Guinea.Gulf|
 Acosmeryx anceus|BC-Hax4144|Australia|
 Acosmeryx omissa|BC-Hax3313|Thailand.Chiang Mai|
 Acosmeryx omissa|BC-Hax3314|Vietnam|
 Acosmeryx pseudomissa|BC-Hax3306|Malaysia|
 Acosmeryx pseudomissa|BC-Hax3304|Malaysia|
 Acosmeryx pseudomissa|BC-Hax3303|Malaysia|
 Acosmeryx pseudomissa|BC-Hax3305|Malaysia|
 Acosmeryx pseudomissa|BC-Hax3307|Malaysia|
 Acosmeryx pseudomissa|VAG-2046|Vietnam|Ac so 1381m
 Acosmeryx pseudomissa|VAG-2052|China.Hainan|Ac ca 250207b
 Acosmeryx formosana|BC-Hax3316|China.Taiwan|
 Acosmeryx formosana|JCM-TWN-0034|China.Taiwan|
 Acosmeryx sinjaevi|BC-EMEM0002|China.Hainan|Topotype
 Acosmeryx formosana|BC-Hax3317|China.Taiwan|
 Acosmeryx sinjaevi|BC-Hax3336|China.Fujian|
 Acosmeryx sinjaevi|BC-Hax3337|China.Fujian|





Specimen Identification Request

Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :

Similarity scores of the top 100 matches

TOP 20 Matches :

Display option:

default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	97.71
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	97.71
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>tenggarensis</i>	97.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	97.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>shervillii</i>	97.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>tenggarensis</i>	97.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>tenggarensis</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>tenggarensis</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>tenggarensis</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>tenggarensis</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>tenggarensis</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>tenggarensis</i>	97.36
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acosmeryx	<i>tenggarensis</i>	97.36





Agrius convolvuli
(Linnaeus, 1758)



BOLD TaxonID Tree

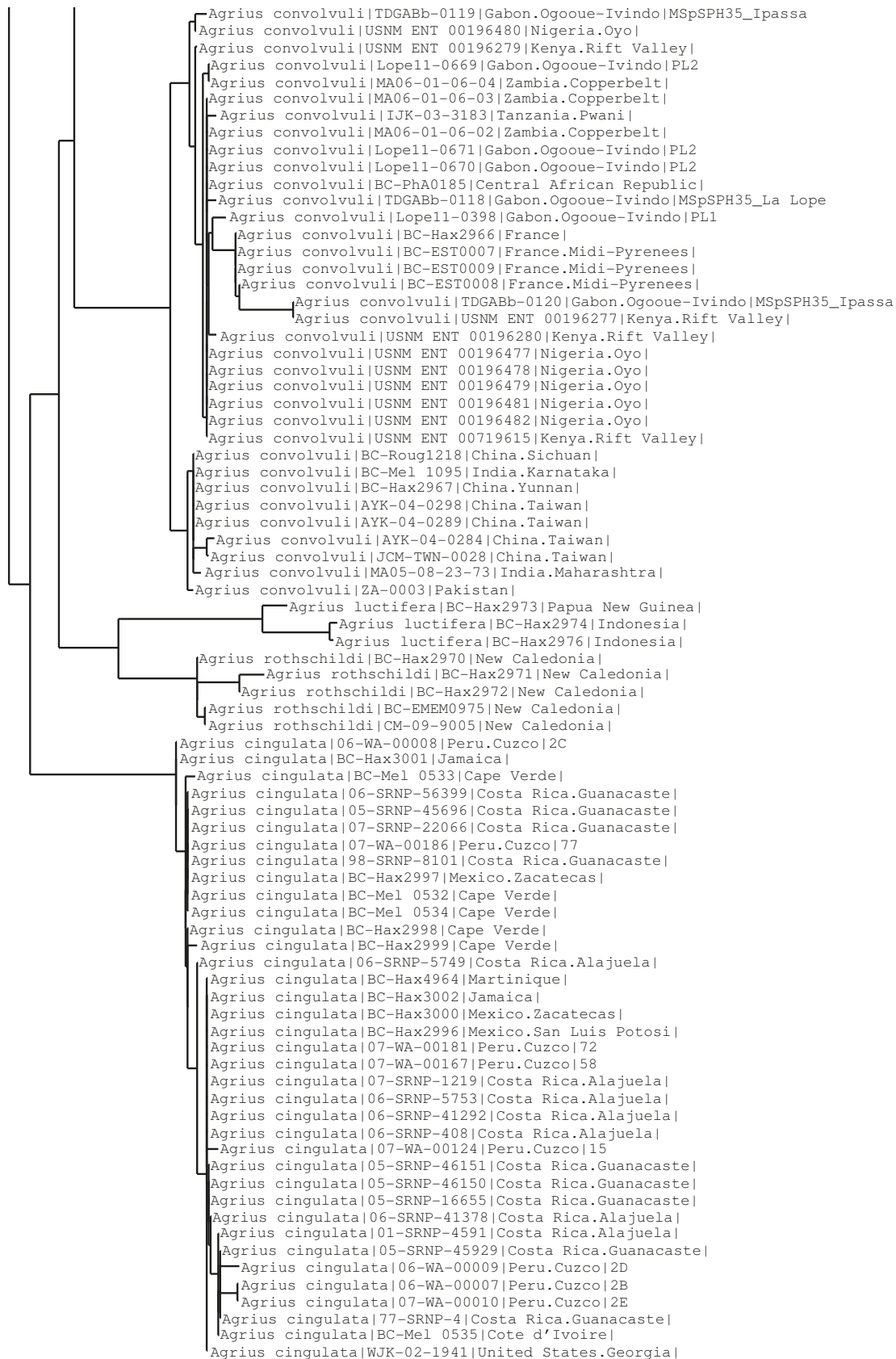
Project : SEARCH: Tax(Agrius)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 157
Species count : 5
Genus count : 1
Family count : 1
Unidentified : 0



Agrius godarti BC-Hax2977 Australia.Queensland
Agrius godarti BC-Hax2978 Australia.Queensland
Agrius convolvuli BC ZSM Lep 10892 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10638 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 01324 Australia.Queensland
Agrius convolvuli BC ZSM Lep 10994 Australia.Northern Territory
Agrius convolvuli MF-05-0017 Palau
Agrius convolvuli BC ZSM Lep 13276 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 13274 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 13248 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 13233 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 11027 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 11026 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 11013 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 11000 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10995 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10992 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10987 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 02536 Australia.Queensland
Agrius convolvuli BC ZSM Lep 02534 Australia.Queensland
Agrius convolvuli BC ZSM Lep 10512 Australia.Western Australia
Agrius convolvuli BC ZSM Lep 02400 Australia.Queensland
Agrius convolvuli BC ZSM Lep 10514 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10532 Australia.Western Australia
Agrius convolvuli BC ZSM Lep 10653 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10895 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10639 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10646 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10998 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 02532 Australia.Queensland
Agrius convolvuli BC ZSM Lep 10869 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 02210 Papua New Guinea.Central
Agrius convolvuli BC ZSM Lep 10531 Australia.Western Australia
Agrius convolvuli USNM ENT 00678977 Papua New Guinea.Madang SPH015
Agrius convolvuli BC ZSM Lep 10473 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10893 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 02531 Australia.Queensland
Agrius convolvuli BC ZSM Lep 02530 Australia.Queensland
Agrius convolvuli BC ZSM Lep 01362 Australia.Queensland
Agrius convolvuli BC ZSM Lep 10515 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10516 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10561 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10993 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10634 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10405 Australia.Western Australia
Agrius convolvuli BC ZSM Lep 10404 Australia.Western Australia
Agrius convolvuli BC ZSM Lep 10398 Australia.Western Australia
Agrius convolvuli BC ZSM Lep 10386 Australia.Western Australia
Agrius convolvuli BC ZSM Lep 10253 Australia.Queensland
Agrius convolvuli BC ZSM Lep 08416 Australia.Queensland
Agrius convolvuli BC ZSM Lep 02674 Australia.Queensland
Agrius convolvuli BC ZSM Lep 02535 Australia.Queensland
Agrius convolvuli BC ZSM Lep 02003 Australia.Queensland
Agrius convolvuli BC ZSM Lep 01999 Australia.Queensland
Agrius convolvuli BC ZSM Lep 11014 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 02399 Australia.Queensland
Agrius convolvuli BC ZSM Lep 10651 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 11001 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 02308 Australia.Queensland
Agrius convolvuli BC ZSM Lep 11002 Australia.Northern Territory
Agrius convolvuli BC-Hax2968 French Polynesia.Society Islands
Agrius convolvuli BC-Hax2969 French Polynesia.Society Islands
Agrius convolvuli BC ZSM Lep 11003 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 02494 Australia.Queensland
Agrius convolvuli BC ZSM Lep 13275 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10894 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10397 Australia.Western Australia
Agrius convolvuli BC ZSM Lep 10988 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10991 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10996 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 02533 Australia.Queensland
Agrius convolvuli BC ZSM Lep 10645 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 02673 Australia.Queensland
Agrius convolvuli BC ZSM Lep 08477 Australia.Queensland
Agrius convolvuli BC ZSM Lep 10999 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 10652 Australia.Northern Territory
Agrius convolvuli BC ZSM Lep 02585 Australia.Queensland
Agrius convolvuli TDGABb-0119 Gabon.Ogooue-Ivindo MSPSPH35_Ipassa
Agrius convolvuli USNM ENT 00196480 Nigeria.Oyo







Specimen Identification Request

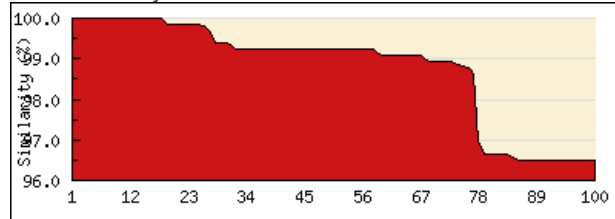
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Agrius	<i>convolvuli</i>	99.85

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Acherontia lachesys
(Fabricius, 1798)

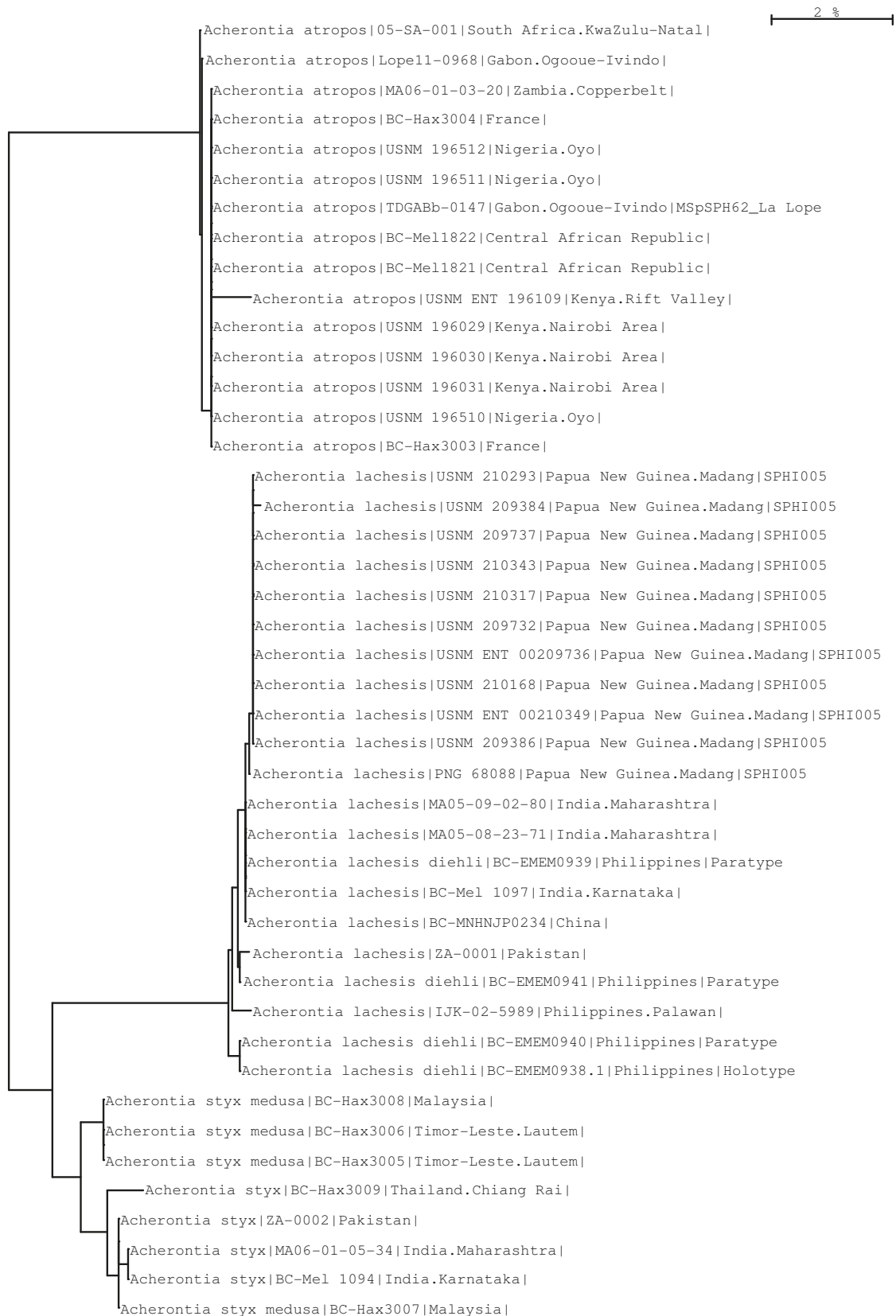


BOLD TaxonID Tree

Project : SEARCH: Tax(Acherontia)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 44
Species count : 5
Genus count : 1
Family count : 1
Unidentified : 0







Specimen Identification Request

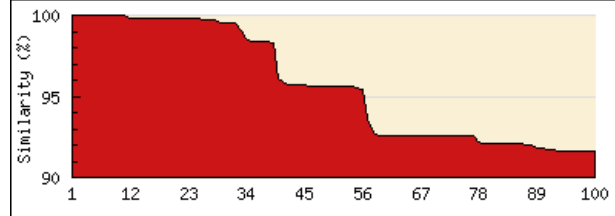
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesisdiehli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	99.84
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	99.84
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	99.84
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	99.84
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	99.84
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	99.84
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	99.84
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	99.84
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	<i>lachesis</i>	99.84

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Acherontia styx
(Westwood, 1847)

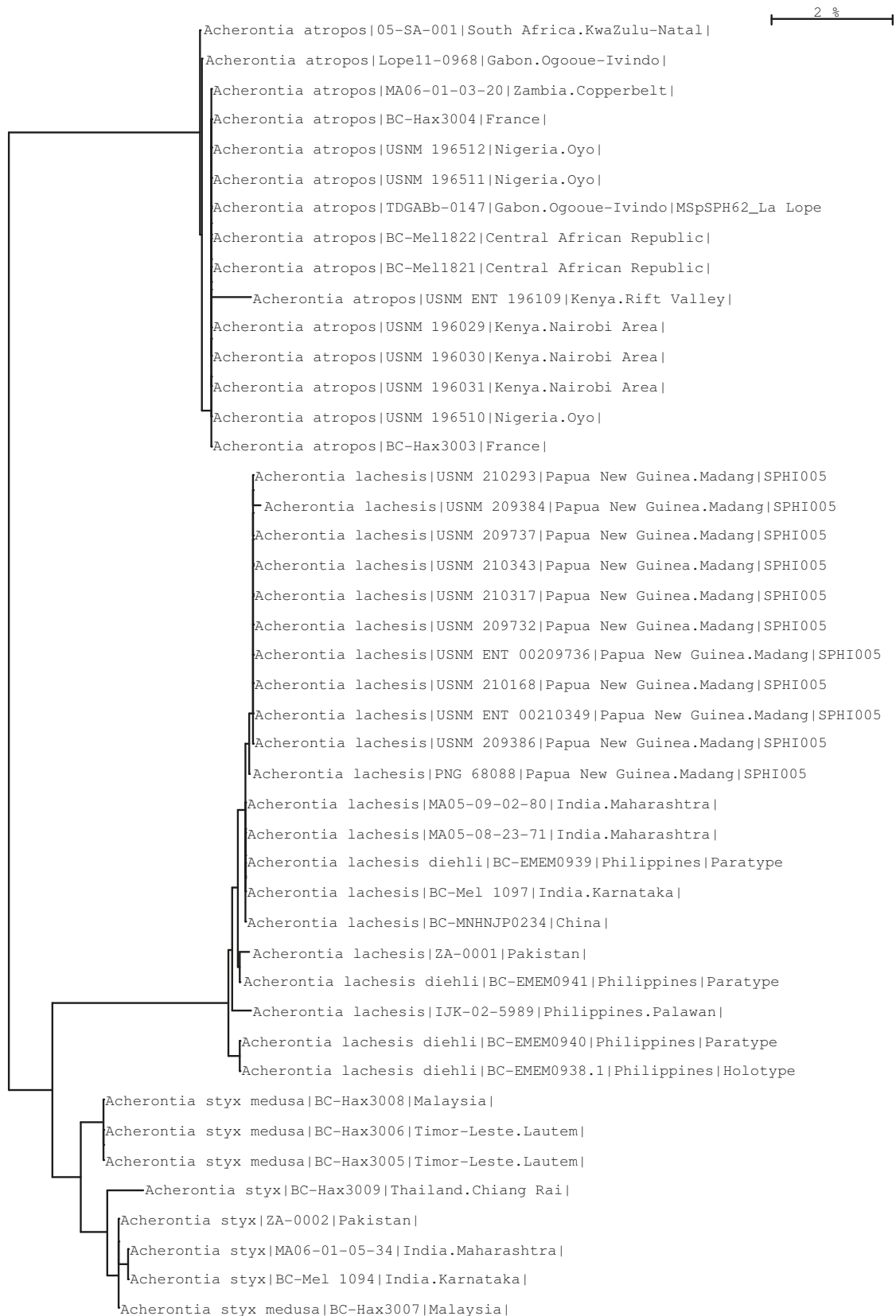


BOLD TaxonID Tree

Project : SEARCH: Tax(Acherontia)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 44
Species count : 5
Genus count : 1
Family count : 1
Unidentified : 0







Specimen Identification Request

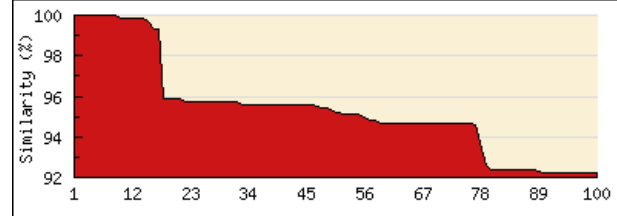
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styx	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styx	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styx	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styx	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styx	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styx	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styx	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styxWestwood	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styxWestwood	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styxWestwood	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styx	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styxmedusa	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styx	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styx	99.82
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styxWestwood	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styxmedusa	99.35
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	styx	99.33
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	lachesis	95.91
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	lachesisdiehli	95.87
Arthropoda	Insecta	Lepidoptera	Sphingidae	Acherontia	lachesisdiehli	95.87

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Ambulyx aglaia

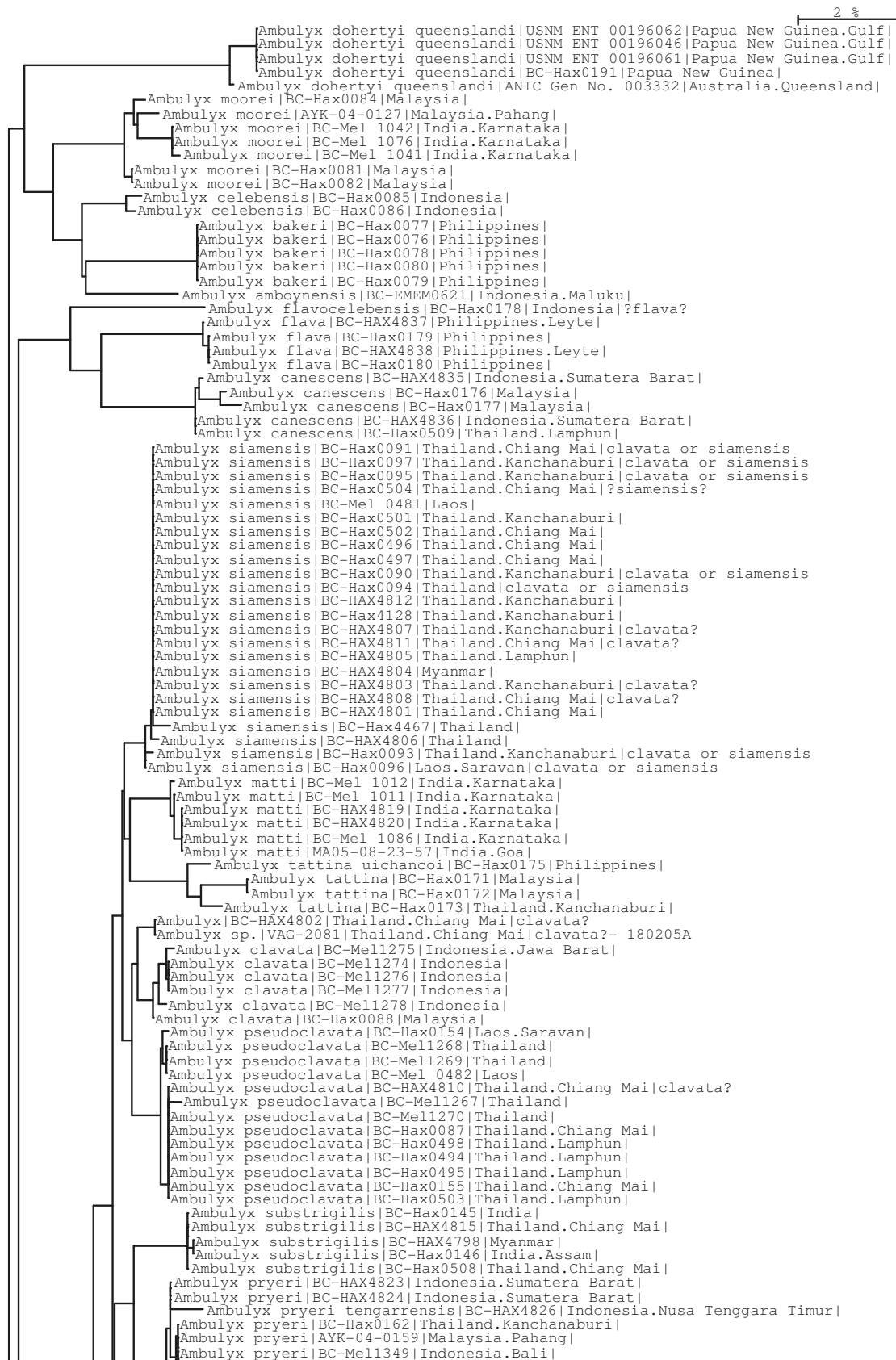


BOLD TaxonID Tree

Project : SEARCH: Tax(Ambulyx)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

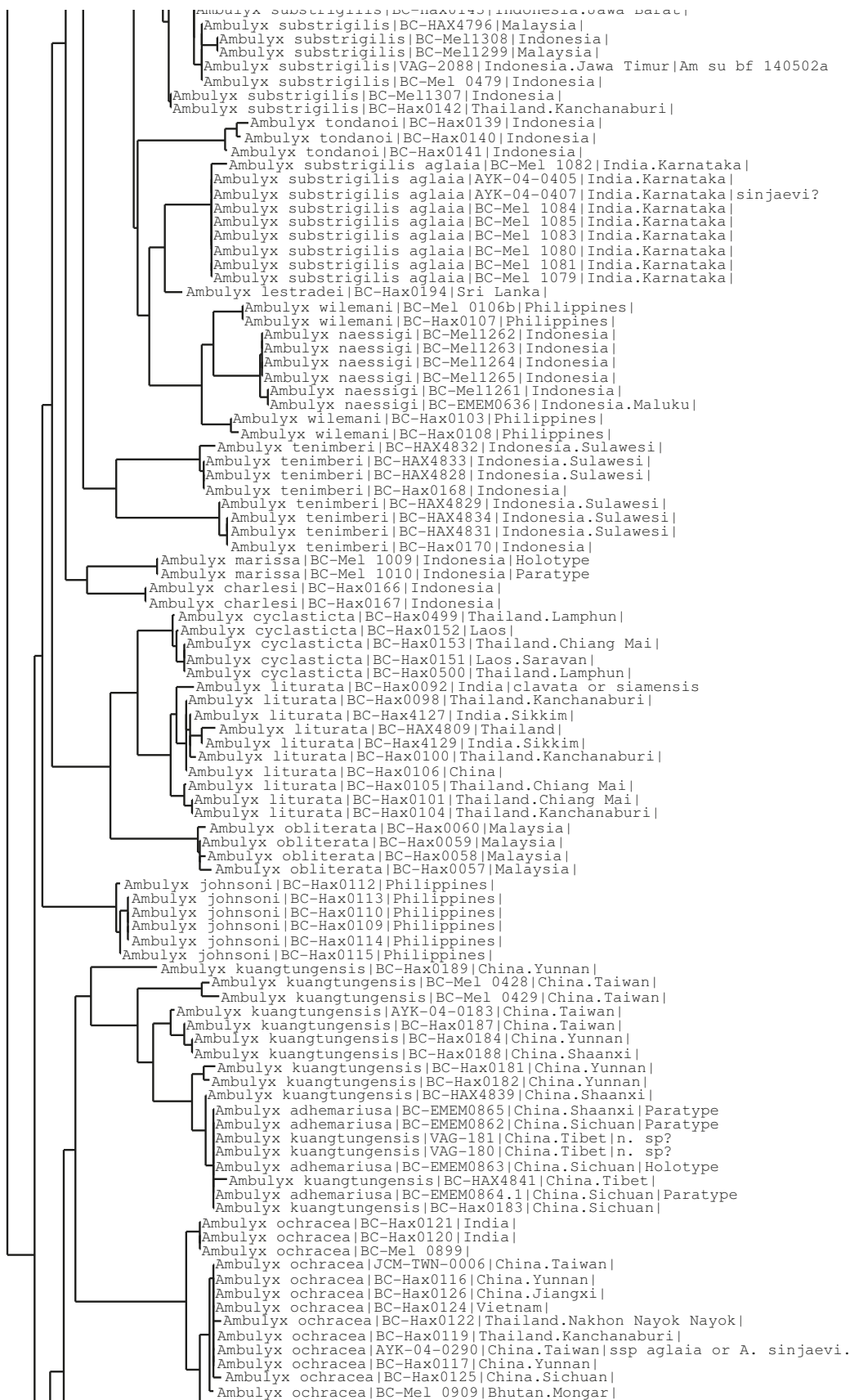
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Species count : 63
Genus count : 1
Family count : 1
Unidentified : 4

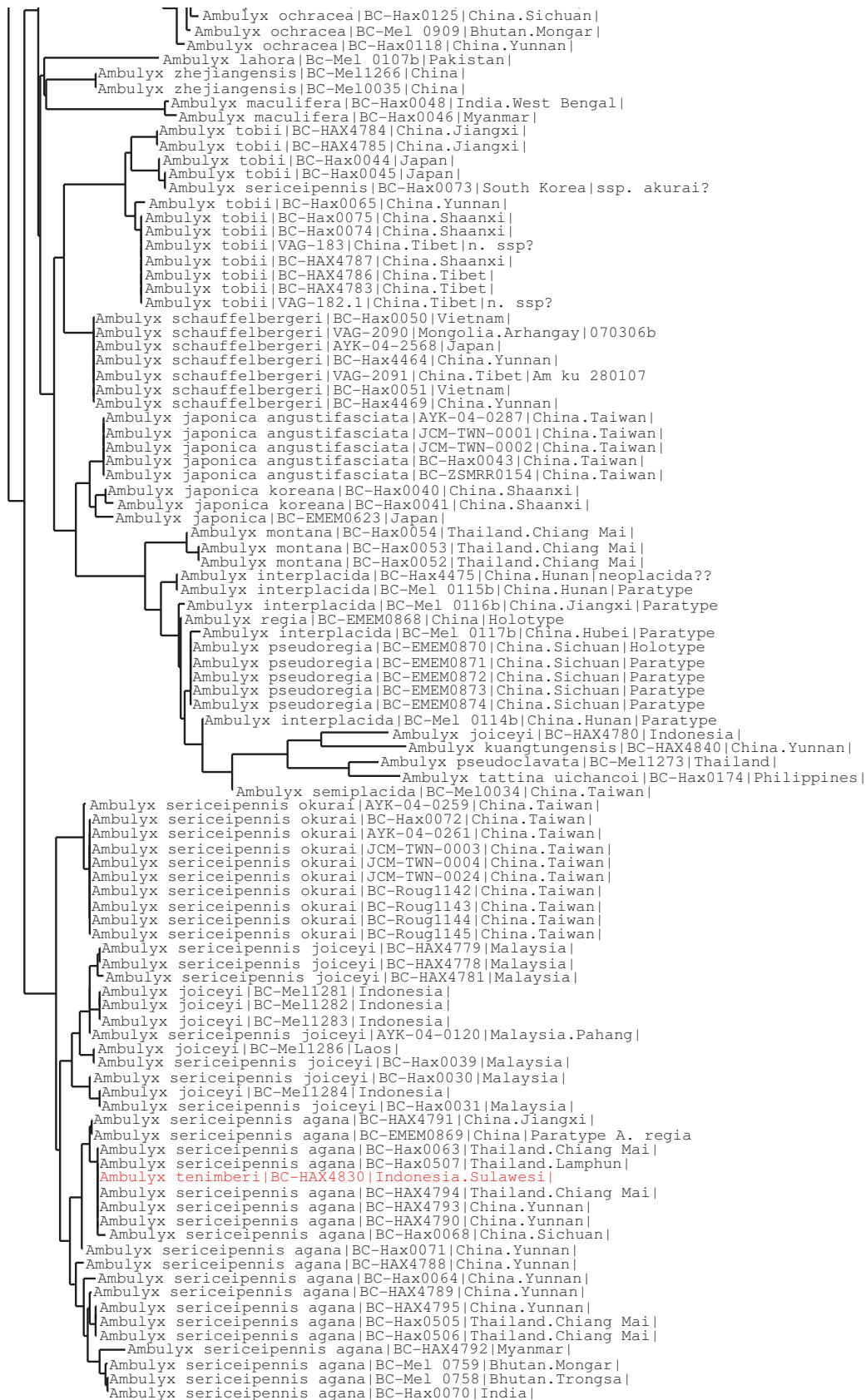


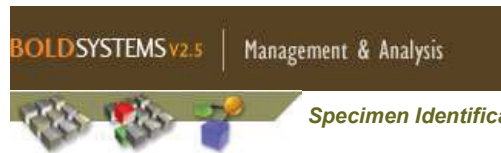


Ambulyx pryeri|AYK-04-0159|Malaysia.Pahang|
 Ambulyx pryeri|BC-Mell1349|Indonesia.Bali|
 Ambulyx pryeri|BC-Hax0163|Malaysia|
 Ambulyx pryeri|BC-Hax0165|Malaysia|
 Ambulyx pryeri|BC-Hax0164|Malaysia|
 Ambulyx inouei|BC-Hax0135|Indonesia|
 Ambulyx inouei|BC-Hax0136|Indonesia|
 Ambulyx inouei|BC-Hax0134|Indonesia|
 Ambulyx inouei|BC-Hax0137|Indonesia|
 Ambulyx inouei|BC-Hax0138|Indonesia|Paratype
 Ambulyx staudingeri|BC-Mell1204|Indonesia|
 Ambulyx staudingeri|BC-Mell1133|Indonesia|
 Ambulyx staudingeri|BC-Hax0158|Philippines.Benguet|
 Ambulyx staudingeri|BC-Hax0159|Philippines|
 Ambulyx staudingeri|BC-Hax0157|Philippines|
 Ambulyx phalaris|USNM ENT 00196044|Papua New Guinea.Gulf|
 Ambulyx phalaris|USNM ENT 00196063|Papua New Guinea.Gulf|
 Ambulyx phalaris|USNM ENT 00196045|Papua New Guinea.Gulf|
 Ambulyx phalaris|USNM ENT 196065|Papua New Guinea.Gulf|
 Ambulyx phalaris|BC-Hax0161|Indonesia|
 Ambulyx ceramensis|BC-Mell1314|Indonesia|
 Ambulyx ceramensis|BC-Mell1315|Indonesia|
 Ambulyx wildei|BC-Hax0192|Papua New Guinea.Morobe|
 Ambulyx ceramensis|VAG-2092|Indonesia|Am ce 220905a
 Ambulyx wildei|BC ZSM Lep 01978|Australia.Queensland|
 Ambulyx wildei|BC ZSM Lep 01343|Australia.Queensland|
 Ambulyx wildei|BC ZSM Lep 01998|Australia.Queensland|
 Ambulyx ceramensis|BC-Mell1316|Indonesia|
 Ambulyx ceramensis|BC-Mell1317|Indonesia|
 Ambulyx ceramensis|BC-Mell1318|Indonesia|
 Ambulyx wildei|BC ZSM Lep 01977|Australia.Queensland|
 Ambulyx wildei|BC ZSM Lep 01979|Australia.Queensland|
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 Ambulyx wildei|BC ZSM Lep 01997|Australia.Queensland|
 Ambulyx wildei|BC-ZSMRR0085|Australia.Queensland|
 Ambulyx wildei|BC-ZSMRR0086|Australia.Queensland|
 Ambulyx wildei|BC-ZSMRR0084|Australia.Queensland|
 Ambulyx auripennis|BC-Hax0156|Sri Lanka|
 Ambulyx belli|BC-Mel 0108b|India|
 Ambulyx belli|MA05-08-27-26|India.Maharashtra|
 Ambulyx belli|BC-HAX4822|India.Karnataka|
 Ambulyx belli|BC-HAX4821|India.Karnataka|
 Ambulyx belli|BC-Mel 0109b|India|
 Ambulyx belli|BC-Mel 0111b|India|
 Ambulyx belli|BC-Mel 0110b|India|
 Ambulyx jordani|BC-EMEM0602|Indonesia.Papua|
 Ambulyx bima|BC-Mell1289|Indonesia|
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 Ambulyx immaculata|BC-Hax0037|Philippines|
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 Ambulyx substrigilis|BC-Hax0149|Malaysia|
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 Ambulyx substrigilis|BC-Mell1310|Indonesia|
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 Ambulyx bima|BC-Mell1297|Indonesia|
 Ambulyx bima schmickae|BC-Hax0133|Indonesia|
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 Ambulyx substrigilis|BC-Hax5088|Laos.Houaphan|
 Ambulyx substrigilis|BC-Hax5089|Laos.Houaphan|
 Ambulyx andangi|BC-Mel 0104b|Indonesia|
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 Ambulyx andangi|BC-Mel 0103b|Indonesia|
 Ambulyx substrigilis|BC-HAX4799|Thailand.Kanchanaburi|
 Ambulyx clavata|BC-Mell1280|Malaysia.Perak|
 Ambulyx substrigilis|BC-HAX4797|Malaysia|
 Ambulyx substrigilis|BC-Mell1300|Indonesia.Sumatra|
 Ambulyx substrigilis|BC-Mell1301|Indonesia.Sumatra|
 Ambulyx|BC-Mell1141|Philippines.Palawan|
 Ambulyx|BC-Mell1142|Philippines.Palawan|
 Ambulyx|BC-Mell1143|Philippines.Palawan|
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PRINT | HELP

Specimen Identification Request

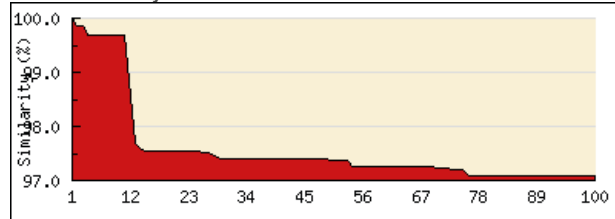
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>substrigilisaglaia</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>sinjaevi</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>sinjaevi</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>substrigilisaglaia</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>substrigilisaglaia</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>substrigilisaglaia</i>	99.69
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>lestradei</i>	98.57
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>bima</i>	97.55
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>substrigilis</i>	97.55

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WWW: www.sphingidae-museum.com

E-mail: info@sphingidae-museum.com

Phone: (+420) 775 349 546



Ambulyx belli
(Jordan, 1923)

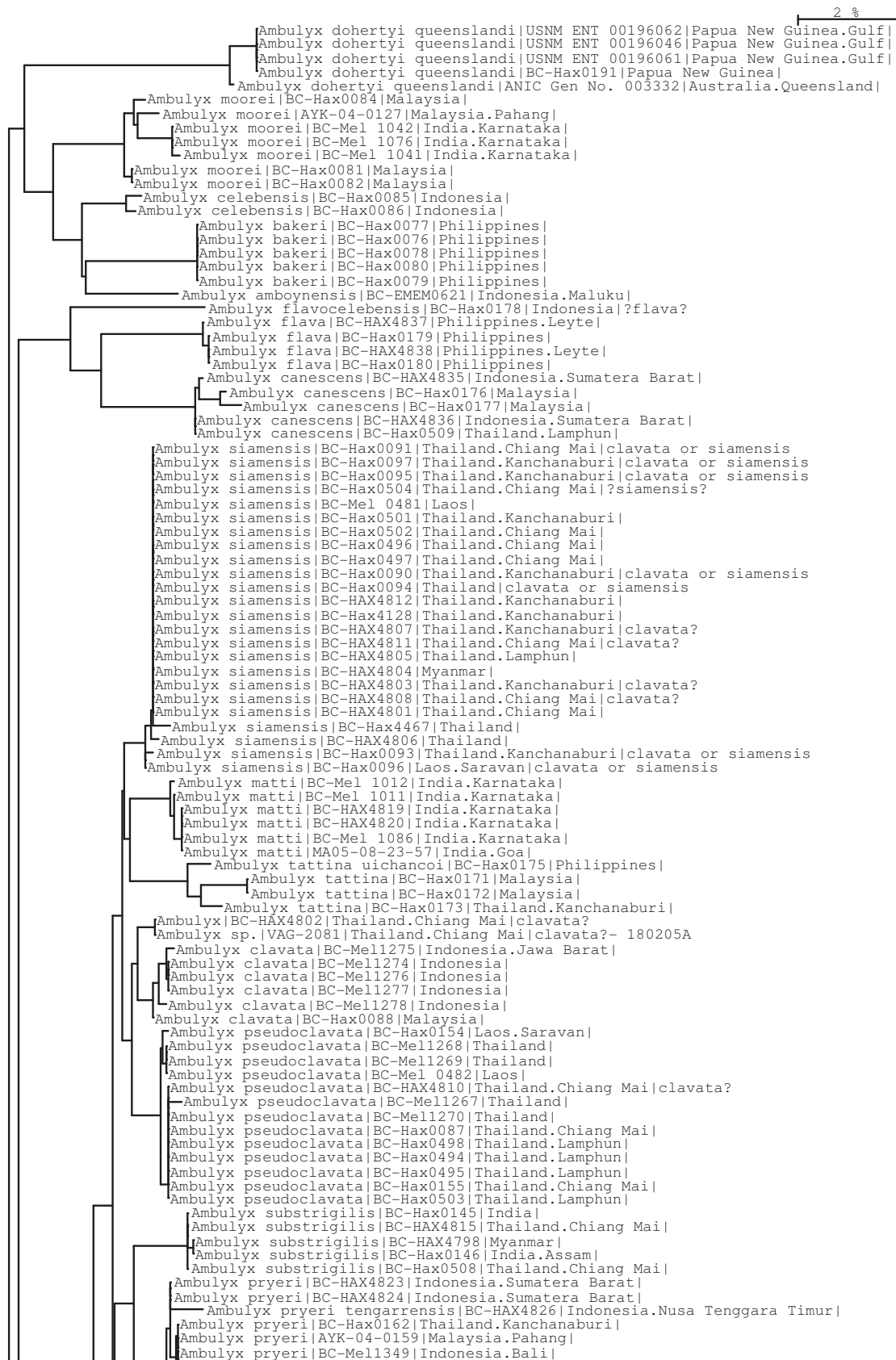


BOLD TaxonID Tree

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Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
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Filters : Length > 200
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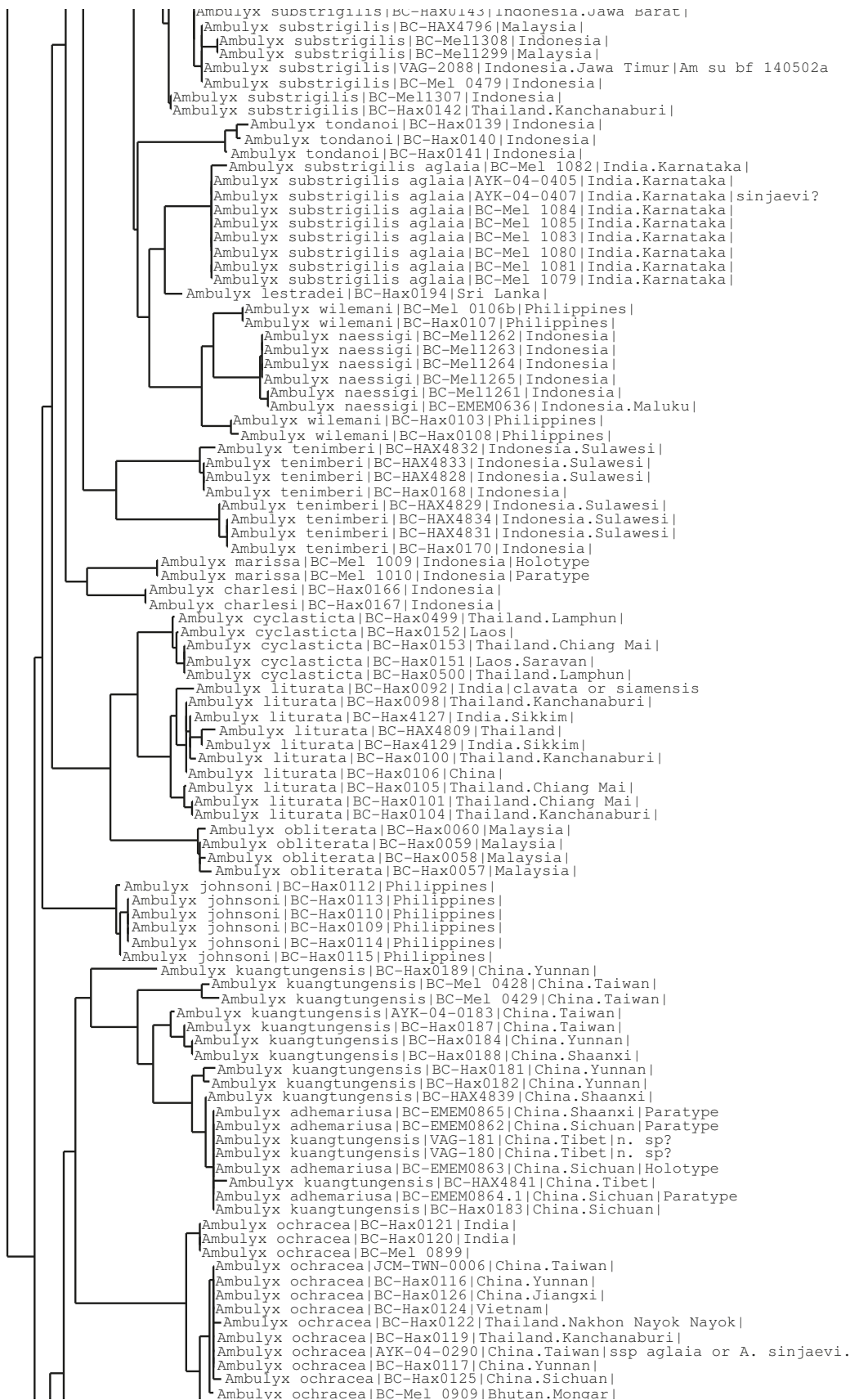
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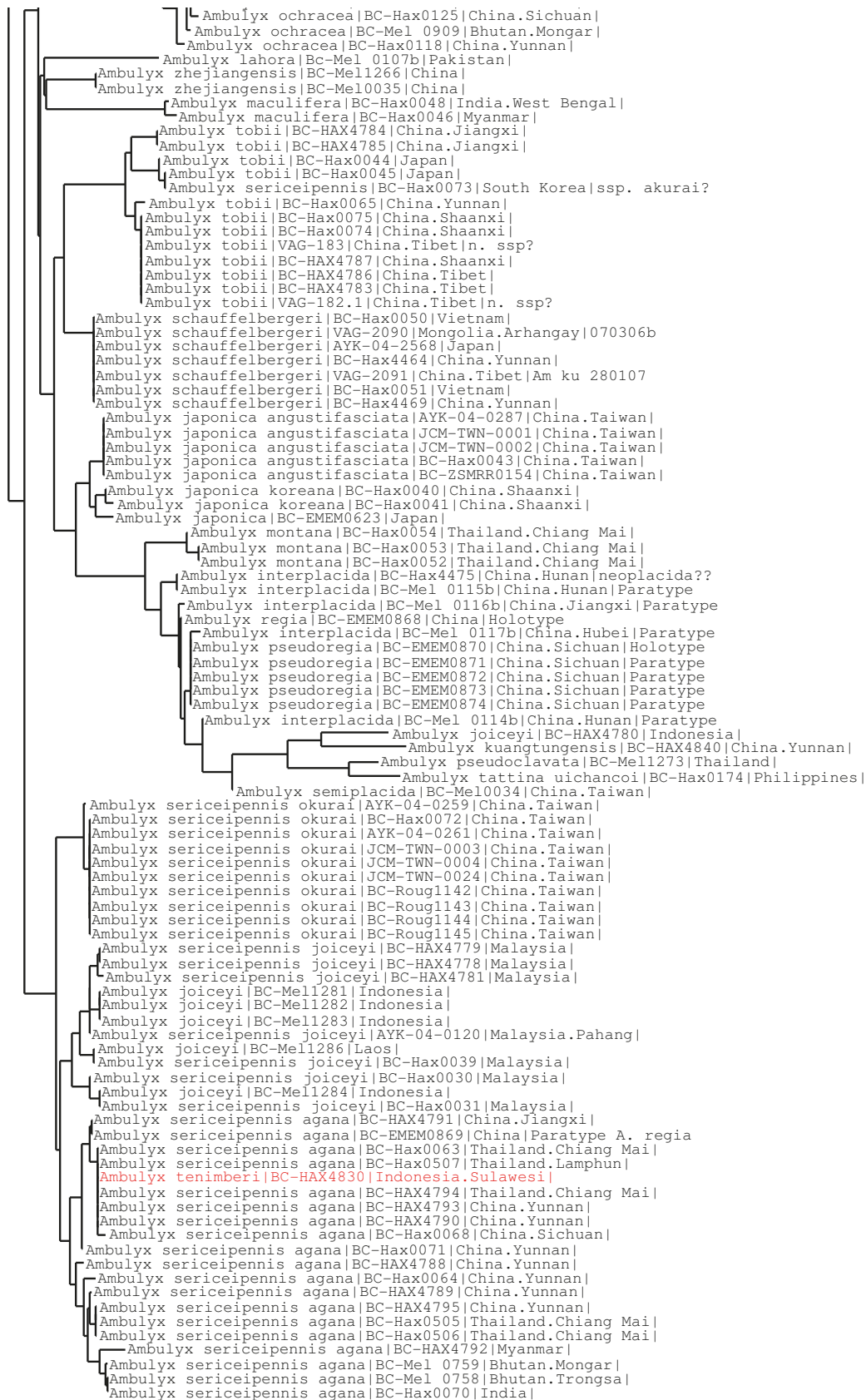




Ambulyx pryeri|AYK-04-0159|Malaysia.Pahang|
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 Ambulyx staudingeri|BC-Mell1204|Indonesia|
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 Ambulyx phalaris|USNM ENT 00196063|Papua New Guinea.Gulf|
 Ambulyx phalaris|USNM ENT 00196045|Papua New Guinea.Gulf|
 Ambulyx phalaris|USNM ENT 196065|Papua New Guinea.Gulf|
 Ambulyx phalaris|BC-Hax0161|Indonesia|
 Ambulyx ceramensis|BC-Mell1314|Indonesia|
 Ambulyx ceramensis|BC-Mell1315|Indonesia|
 Ambulyx wildei|BC-Hax0192|Papua New Guinea.Morobe|
 Ambulyx ceramensis|VAG-2092|Indonesia|Am ce 220905a
 Ambulyx wildei|BC ZSM Lep 01978|Australia.Queensland|
 Ambulyx wildei|BC ZSM Lep 01343|Australia.Queensland|
 Ambulyx wildei|BC ZSM Lep 01998|Australia.Queensland|
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 Ambulyx wildei|BC ZSM Lep 01980|Australia.Queensland|
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 Ambulyx wildei|BC-ZSMRR0086|Australia.Queensland|
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 Ambulyx immaculata|BC-Hax0037|Philippines|
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 Ambulyx bima schmickae|BC-Hax0133|Indonesia|
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 Ambulyx substrigilis|BC-Hax5088|Laos.Houaphan|
 Ambulyx substrigilis|BC-Hax5089|Laos.Houaphan|
 Ambulyx andangi|BC-Mel 0104b|Indonesia|
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 Ambulyx andangi|BC-Mel 0103b|Indonesia|
 Ambulyx substrigilis|BC-HAX4799|Thailand.Kanchanaburi|
 Ambulyx clavata|BC-Mell1280|Malaysia.Perak|
 Ambulyx substrigilis|BC-HAX4797|Malaysia|
 Ambulyx substrigilis|BC-Mell1300|Indonesia.Sumatra|
 Ambulyx substrigilis|BC-Mell1301|Indonesia.Sumatra|
 Ambulyx|BC-Mell1141|Philippines.Palawan|
 Ambulyx|BC-Mell1142|Philippines.Palawan|
 Ambulyx|BC-Mell1143|Philippines.Palawan|
 Ambulyx substrigilis|BC-Mell1298|Malaysia|
 Ambulyx substrigilis|BC-Mell1302|Indonesia.Bali|
 Ambulyx substrigilis|VAG-2083|Indonesia|Am cl 020607a
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 Ambulyx substrigilis|BC-Mell1304|Myanmar|
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 Ambulyx substrigilis|BC-Mell1313|India|
 Ambulyx substrigilis|BC-Mell1312|India|
 Ambulyx substrigilis|BC-Mell1311|India|
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Specimen Identification Request

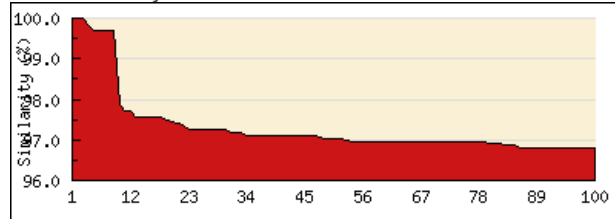
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	99.85
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Display option: default

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WWW: www.sphingidae-museum.com

E-mail: info@sphingidae-museum.com

Phone: (+420) 775 349 546



Ambulyx matti
(Jordan, 1923)

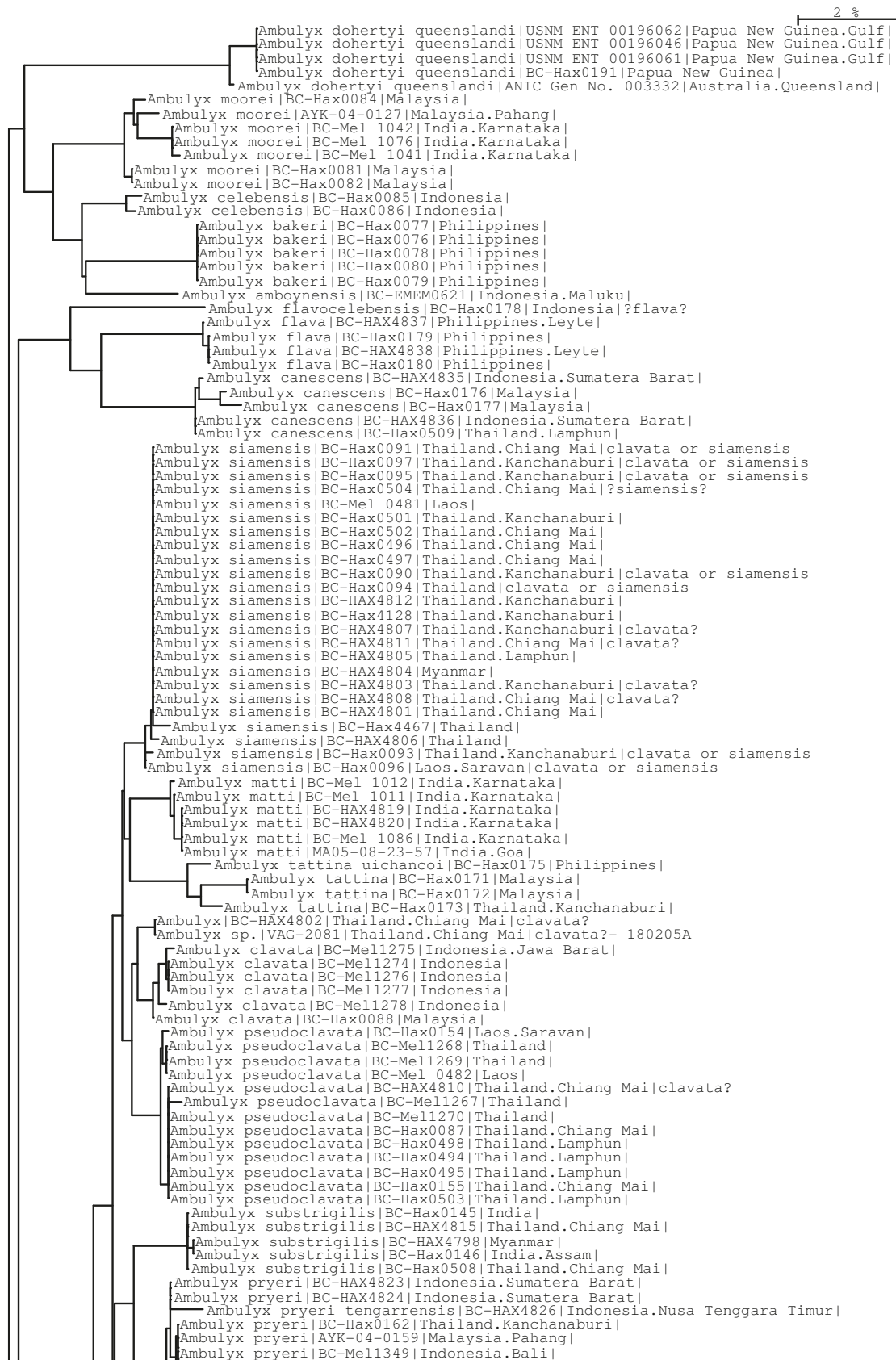


BOLD TaxonID Tree

Project : SEARCH: Tax(Ambulyx)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

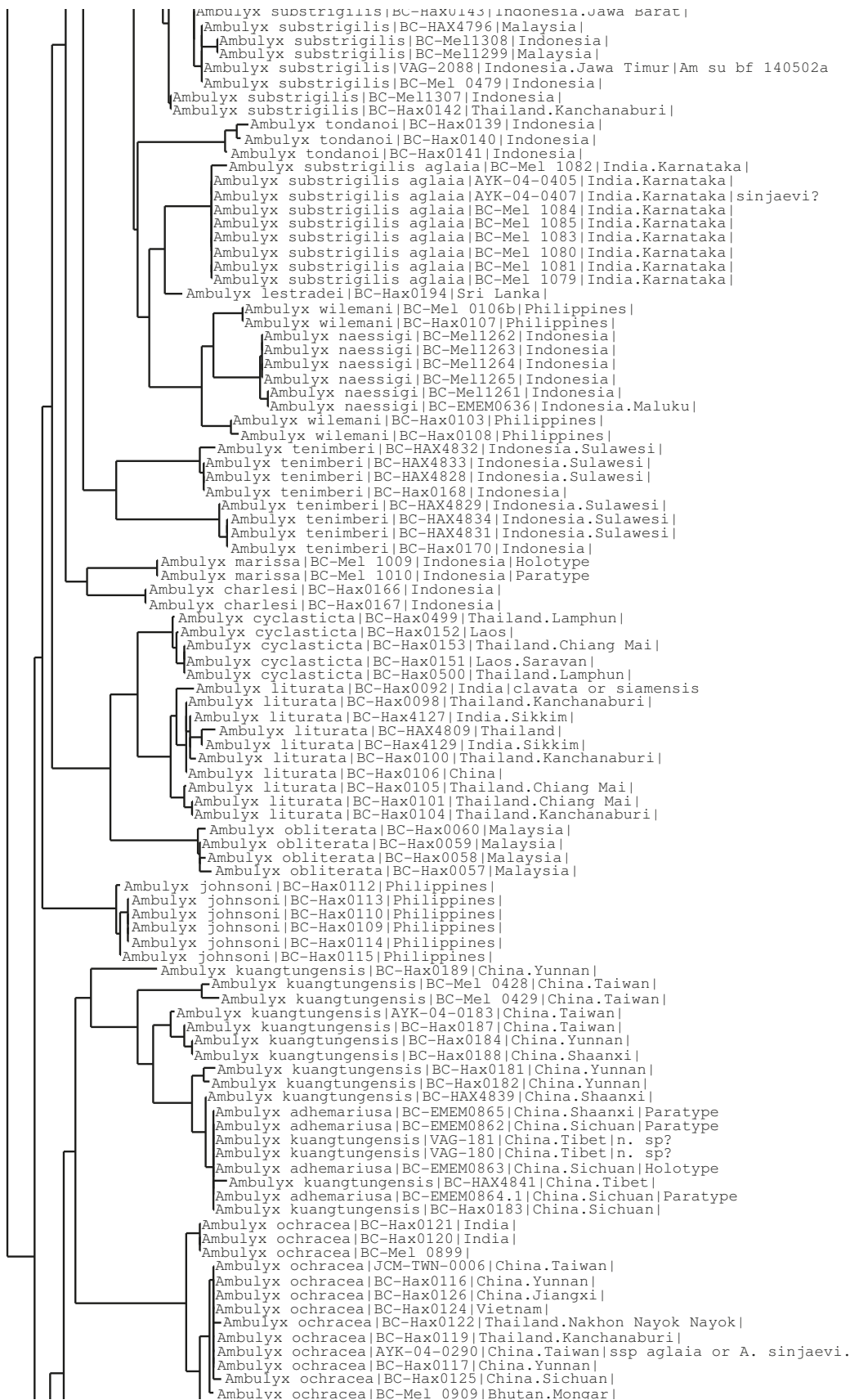
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Family count : 1
Unidentified : 4

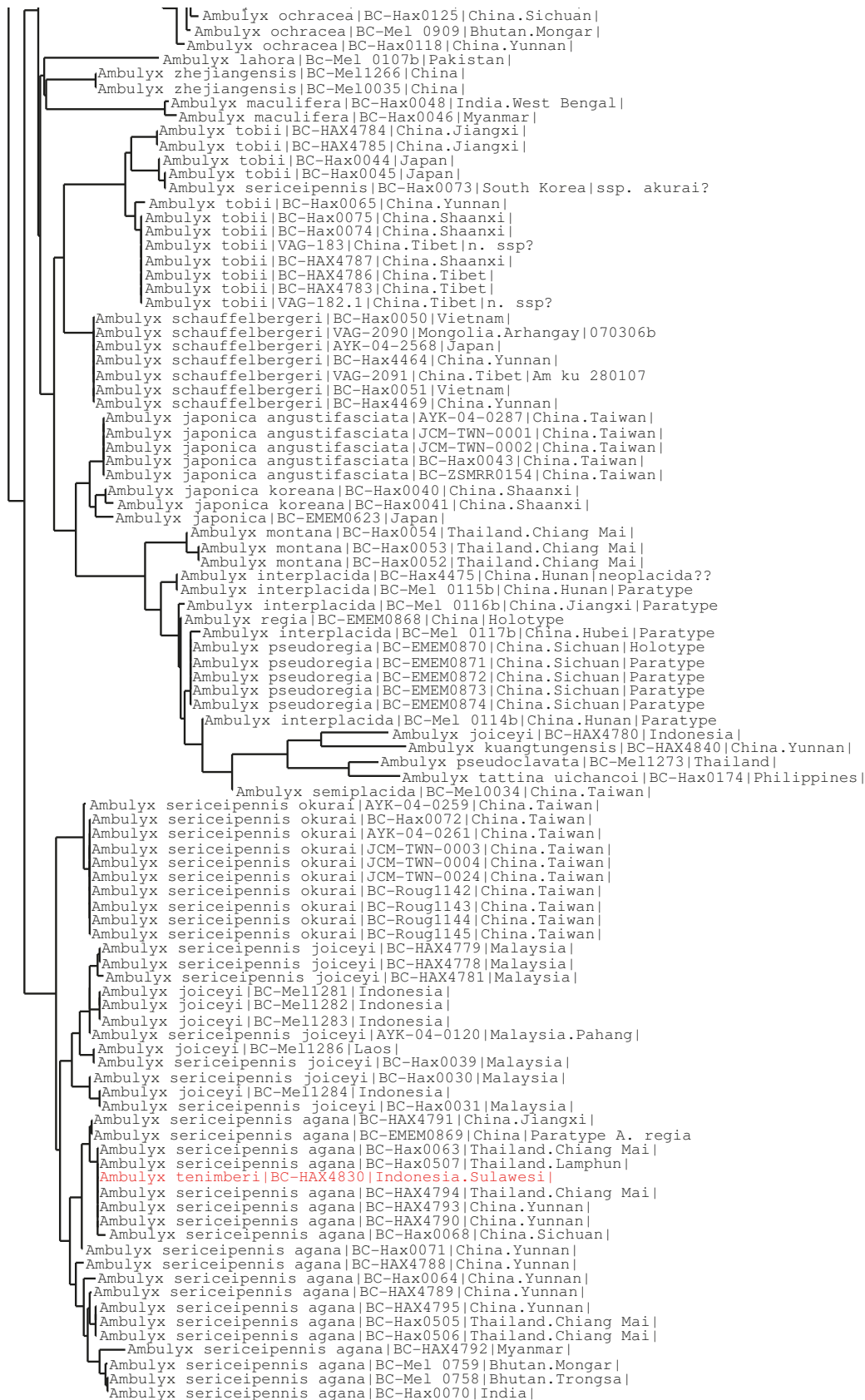




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 Ambulyx staudingeri|BC-Mell1204|Indonesia|
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 Ambulyx ceramensis|VAG-2092|Indonesia|Am ce 220905a
 Ambulyx wildei|BC ZSM Lep 01978|Australia.Queensland|
 Ambulyx wildei|BC ZSM Lep 01343|Australia.Queensland|
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 Ambulyx wildei|BC-ZSMRR0084|Australia.Queensland|
 Ambulyx auripennis|BC-Hax0156|Sri Lanka|
 Ambulyx belli|BC-Mel 0108b|India|
 Ambulyx belli|MA05-08-27-26|India.Maharashtra|
 Ambulyx belli|BC-HAX4822|India.Karnataka|
 Ambulyx belli|BC-HAX4821|India.Karnataka|
 Ambulyx belli|BC-Mel 0109b|India|
 Ambulyx belli|BC-Mel 0111b|India|
 Ambulyx belli|BC-Mel 0110b|India|
 Ambulyx jordani|BC-EMEM0602|Indonesia.Papua|
 Ambulyx bima|BC-Mell1289|Indonesia|
 Ambulyx bima|BC-Mell1290|Indonesia|
 Ambulyx bima|BC-Mell1291|Indonesia|
 Ambulyx immaculata|BC-Hax0033|Philippines|
 Ambulyx immaculata|BC-Hax0036|Philippines|
 Ambulyx immaculata|BC-Hax0037|Philippines|
 Ambulyx immaculata|BC-Hax0038|Philippines|
 Ambulyx substrigilis|BC-Hax0149|Malaysia|
 Ambulyx substrigilis|BC-HAX4816|Malaysia.Sabah|
 Ambulyx substrigilis|BC-Mell1310|Indonesia|
 Ambulyx substrigilis|BC-Mell1309|Indonesia|
 Ambulyx substrigilis|BC-HAX4817|Malaysia.Sabah|
 Ambulyx substrigilis|BC-Hax0150|Malaysia|
 Ambulyx bima|BC-Hax0131|Indonesia|
 Ambulyx bima|BC-Mell1589|Indonesia|
 Ambulyx bima|BC-Mell1590|Indonesia|
 Ambulyx bima|BC-Hax0128|Indonesia.Nusa Tenggara Barat|
 Ambulyx bima|BC-Hax0130|Indonesia|
 Ambulyx bima|BC-Hax0129|Indonesia.Nusa Tenggara Barat|
 Ambulyx bima|BC-Mell1591|Indonesia|
 Ambulyx bima|BC-Mell1295|Indonesia|
 Ambulyx bima|BC-Mell1296|Indonesia|
 Ambulyx bima|BC-Mell1292|Indonesia|
 Ambulyx bima|BC-Mell1294|Indonesia|
 Ambulyx bima|BC-Mell1297|Indonesia|
 Ambulyx bima schmickae|BC-Hax0133|Indonesia|
 Ambulyx bima schmickae|BC-Hax0132|Indonesia|
 Ambulyx substrigilis|BC-Hax5088|Laos.Houaphan|
 Ambulyx substrigilis|BC-Hax5089|Laos.Houaphan|
 Ambulyx andangi|BC-Mel 0104b|Indonesia|
 Ambulyx andangi|BC-Mel 0105b|Indonesia|
 Ambulyx andangi|BC-Mel 0103b|Indonesia|
 Ambulyx substrigilis|BC-HAX4799|Thailand.Kanchanaburi|
 Ambulyx clavata|BC-Mell1280|Malaysia.Perak|
 Ambulyx substrigilis|BC-HAX4797|Malaysia|
 Ambulyx substrigilis|BC-Mell1300|Indonesia.Sumatra|
 Ambulyx substrigilis|BC-Mell1301|Indonesia.Sumatra|
 Ambulyx|BC-Mell1141|Philippines.Palawan|
 Ambulyx|BC-Mell1142|Philippines.Palawan|
 Ambulyx|BC-Mell1143|Philippines.Palawan|
 Ambulyx substrigilis|BC-Mell1298|Malaysia|
 Ambulyx substrigilis|BC-Mell1302|Indonesia.Bali|
 Ambulyx substrigilis|VAG-2083|Indonesia|Am cl 020607a
 Ambulyx substrigilis|BC-HAX4818|Myanmar|
 Ambulyx substrigilis|BC-Mell1304|Myanmar|
 Ambulyx substrigilis|BC-Hax0147|Thailand.Kanchanaburi|
 Ambulyx substrigilis|BC-Mell1303|Indonesia.Bali|
 Ambulyx substrigilis|BC-Mell1313|India|
 Ambulyx substrigilis|BC-Mell1312|India|
 Ambulyx substrigilis|BC-Mell1311|India|
 Ambulyx substrigilis|BC-Hax0143|Indonesia.Jawa Barat|
 Ambulyx substrigilis|BC-HAX4796|Malaysia|









Specimen Identification Request

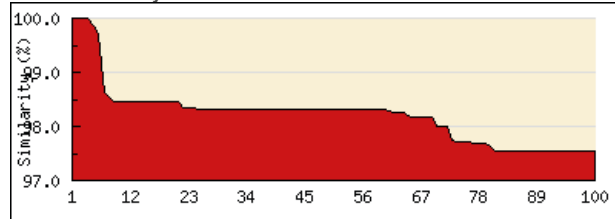
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>matti</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>matti</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>matti</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>matti</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>matti</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>matti</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>pseudoclavata</i>	98.62
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>siamensis</i>	98.53
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>pseudoclavata</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>pseudoclavata</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>pseudoclavata</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>pseudoclavata</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>pseudoclavata</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>pseudoclavata</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>pseudoclavata</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>siamensis</i>	98.47

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Ambulyx belli
(Jordan, 1923)

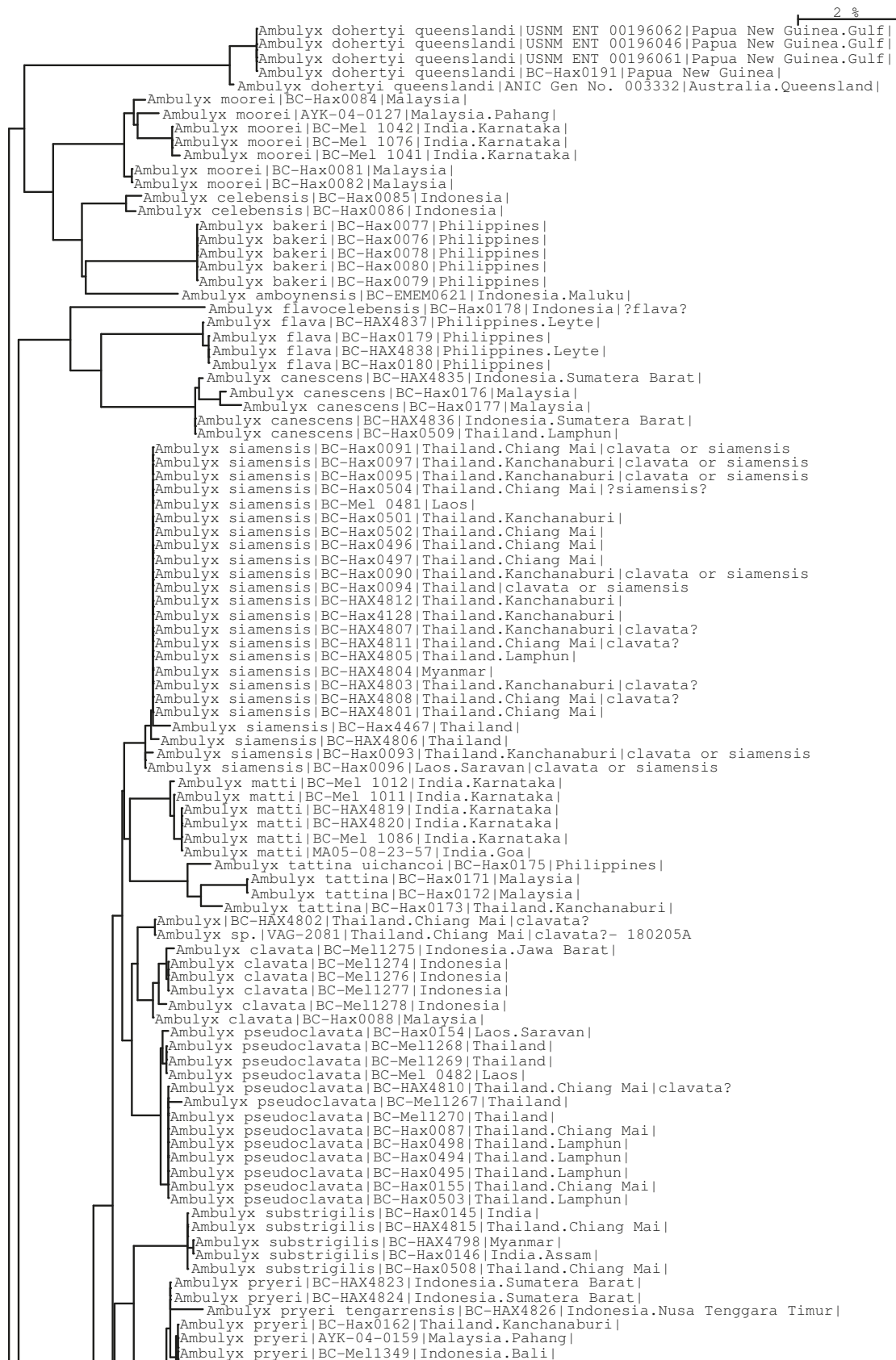


BOLD TaxonID Tree

Project : SEARCH: Tax(Ambulyx)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

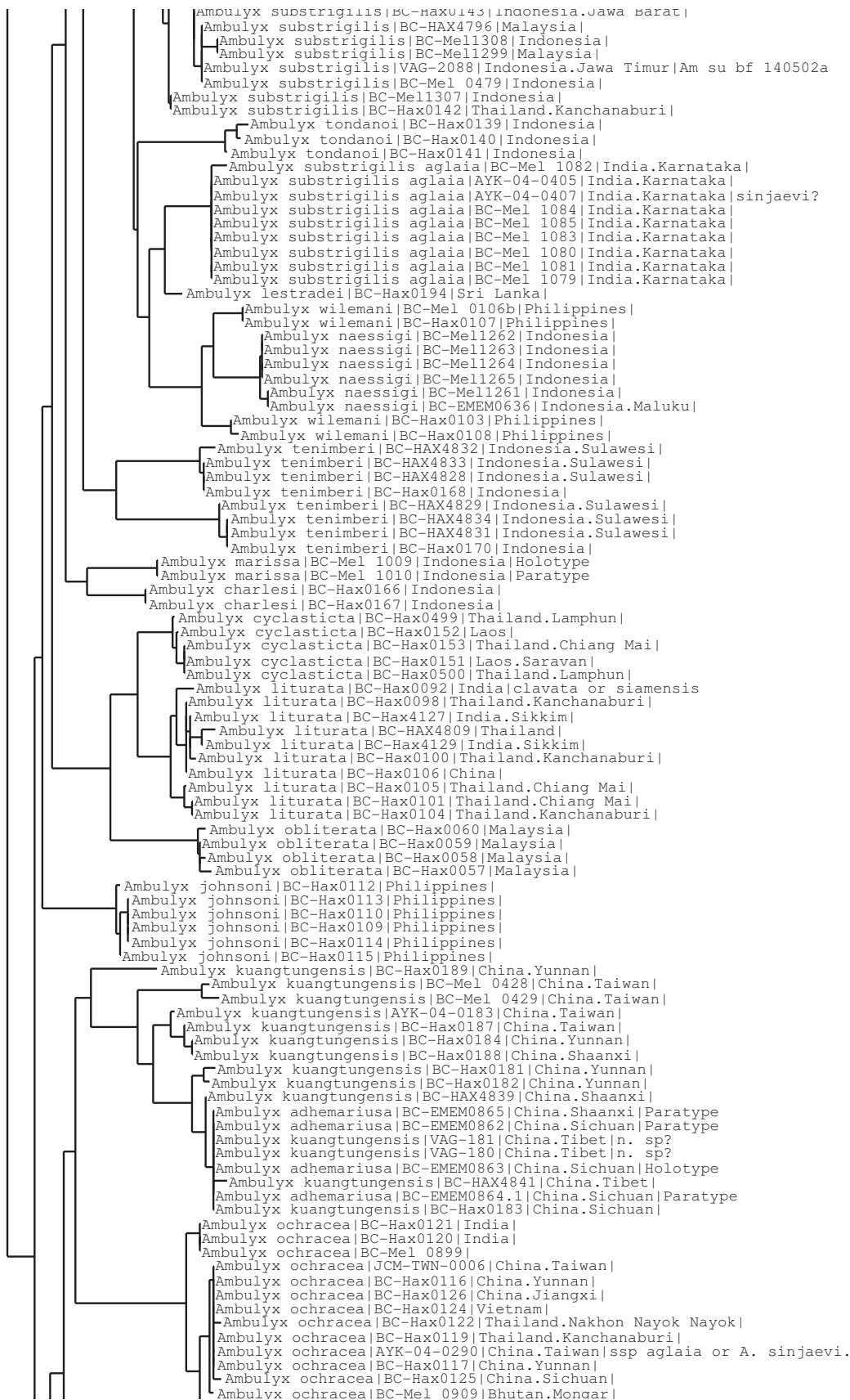
Sequence Count : 384
Species count : 63
Genus count : 1
Family count : 1
Unidentified : 4

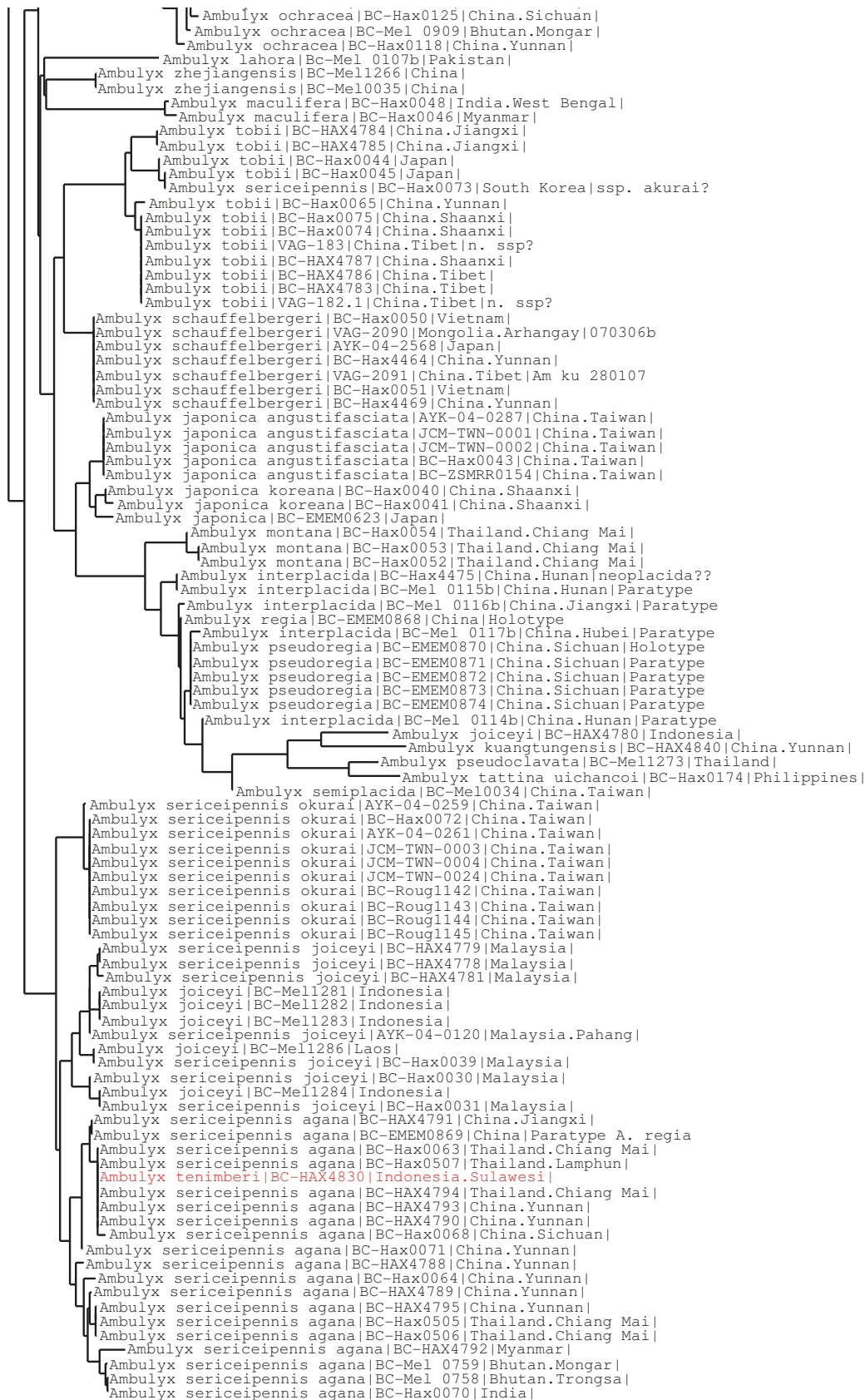




Ambulyx pryeri|AYK-04-0159|Malaysia.Pahang|
 Ambulyx pryeri|BC-Mell1349|Indonesia.Bali|
 Ambulyx pryeri|BC-Hax0163|Malaysia|
 Ambulyx pryeri|BC-Hax0165|Malaysia|
 Ambulyx pryeri|BC-Hax0164|Malaysia|
 Ambulyx inouei|BC-Hax0135|Indonesia|
 Ambulyx inouei|BC-Hax0136|Indonesia|
 Ambulyx inouei|BC-Hax0134|Indonesia|
 Ambulyx inouei|BC-Hax0137|Indonesia|
 Ambulyx inouei|BC-Hax0138|Indonesia|Paratype
 Ambulyx staudingeri|BC-Mell1204|Indonesia|
 Ambulyx staudingeri|BC-Mell1133|Indonesia|
 Ambulyx staudingeri|BC-Hax0158|Philippines.Benguet|
 Ambulyx staudingeri|BC-Hax0159|Philippines|
 Ambulyx staudingeri|BC-Hax0157|Philippines|
 Ambulyx phalaris|USNM ENT 00196044|Papua New Guinea.Gulf|
 Ambulyx phalaris|USNM ENT 00196063|Papua New Guinea.Gulf|
 Ambulyx phalaris|USNM ENT 00196045|Papua New Guinea.Gulf|
 Ambulyx phalaris|USNM ENT 196065|Papua New Guinea.Gulf|
 Ambulyx phalaris|BC-Hax0161|Indonesia|
 Ambulyx ceramensis|BC-Mell1314|Indonesia|
 Ambulyx ceramensis|BC-Mell1315|Indonesia|
 Ambulyx wildei|BC-Hax0192|Papua New Guinea.Morobe|
 Ambulyx ceramensis|VAG-2092|Indonesia|Am ce 220905a
 Ambulyx wildei|BC ZSM Lep 01978|Australia.Queensland|
 Ambulyx wildei|BC ZSM Lep 01343|Australia.Queensland|
 Ambulyx wildei|BC ZSM Lep 01998|Australia.Queensland|
 Ambulyx ceramensis|BC-Mell1316|Indonesia|
 Ambulyx ceramensis|BC-Mell1317|Indonesia|
 Ambulyx ceramensis|BC-Mell1318|Indonesia|
 Ambulyx wildei|BC ZSM Lep 01977|Australia.Queensland|
 Ambulyx wildei|BC ZSM Lep 01979|Australia.Queensland|
 Ambulyx wildei|BC ZSM Lep 01980|Australia.Queensland|
 Ambulyx wildei|BC ZSM Lep 01997|Australia.Queensland|
 Ambulyx wildei|BC-ZSMRR0085|Australia.Queensland|
 Ambulyx wildei|BC-ZSMRR0086|Australia.Queensland|
 Ambulyx wildei|BC-ZSMRR0084|Australia.Queensland|
 Ambulyx auripennis|BC-Hax0156|Sri Lanka|
 Ambulyx belli|BC-Mel 0108b|India|
 Ambulyx belli|MA05-08-27-26|India.Maharashtra|
 Ambulyx belli|BC-HAX4822|India.Karnataka|
 Ambulyx belli|BC-HAX4821|India.Karnataka|
 Ambulyx belli|BC-Mel 0109b|India|
 Ambulyx belli|BC-Mel 0111b|India|
 Ambulyx belli|BC-Mel 0110b|India|
 Ambulyx jordani|BC-EMEM0602|Indonesia.Papua|
 Ambulyx bima|BC-Mell1289|Indonesia|
 Ambulyx bima|BC-Mell1290|Indonesia|
 Ambulyx bima|BC-Mell1291|Indonesia|
 Ambulyx immaculata|BC-Hax0033|Philippines|
 Ambulyx immaculata|BC-Hax0036|Philippines|
 Ambulyx immaculata|BC-Hax0037|Philippines|
 Ambulyx immaculata|BC-Hax0038|Philippines|
 Ambulyx substrigilis|BC-Hax0149|Malaysia|
 Ambulyx substrigilis|BC-HAX4816|Malaysia.Sabah|
 Ambulyx substrigilis|BC-Mell1310|Indonesia|
 Ambulyx substrigilis|BC-Mell1309|Indonesia|
 Ambulyx substrigilis|BC-HAX4817|Malaysia.Sabah|
 Ambulyx substrigilis|BC-Hax0150|Malaysia|
 Ambulyx bima|BC-Hax0131|Indonesia|
 Ambulyx bima|BC-Mell1589|Indonesia|
 Ambulyx bima|BC-Mell1590|Indonesia|
 Ambulyx bima|BC-Hax0128|Indonesia.Nusa Tenggara Barat|
 Ambulyx bima|BC-Hax0130|Indonesia|
 Ambulyx bima|BC-Hax0129|Indonesia.Nusa Tenggara Barat|
 Ambulyx bima|BC-Mell1591|Indonesia|
 Ambulyx bima|BC-Mell1295|Indonesia|
 Ambulyx bima|BC-Mell1296|Indonesia|
 Ambulyx bima|BC-Mell1292|Indonesia|
 Ambulyx bima|BC-Mell1294|Indonesia|
 Ambulyx bima|BC-Mell1297|Indonesia|
 Ambulyx bima schmickae|BC-Hax0133|Indonesia|
 Ambulyx bima schmickae|BC-Hax0132|Indonesia|
 Ambulyx substrigilis|BC-Hax5088|Laos.Houaphan|
 Ambulyx substrigilis|BC-Hax5089|Laos.Houaphan|
 Ambulyx andangi|BC-Mel 0104b|Indonesia|
 Ambulyx andangi|BC-Mel 0105b|Indonesia|
 Ambulyx andangi|BC-Mel 0103b|Indonesia|
 Ambulyx substrigilis|BC-HAX4799|Thailand.Kanchanaburi|
 Ambulyx clavata|BC-Mell1280|Malaysia.Perak|
 Ambulyx substrigilis|BC-HAX4797|Malaysia|
 Ambulyx substrigilis|BC-Mell1300|Indonesia.Sumatra|
 Ambulyx substrigilis|BC-Mell1301|Indonesia.Sumatra|
 Ambulyx|BC-Mell1141|Philippines.Palawan|
 Ambulyx|BC-Mell1142|Philippines.Palawan|
 Ambulyx|BC-Mell1143|Philippines.Palawan|
 Ambulyx substrigilis|BC-Mell1298|Malaysia|
 Ambulyx substrigilis|BC-Mell1302|Indonesia.Bali|
 Ambulyx substrigilis|VAG-2083|Indonesia|Am cl 020607a
 Ambulyx substrigilis|BC-HAX4818|Myanmar|
 Ambulyx substrigilis|BC-Mell1304|Myanmar|
 Ambulyx substrigilis|BC-Hax0147|Thailand.Kanchanaburi|
 Ambulyx substrigilis|BC-Mell1303|Indonesia.Bali|
 Ambulyx substrigilis|BC-Mell1313|India|
 Ambulyx substrigilis|BC-Mell1312|India|
 Ambulyx substrigilis|BC-Mell1311|India|
 Ambulyx substrigilis|BC-Hax0143|Indonesia.Jawa Barat|
 Ambulyx substrigilis|BC-HAX4796|Malaysia|









Specimen Identification Request

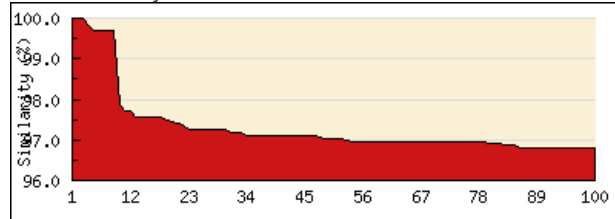
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>belli</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>auripennis</i>	97.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	97.71
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>auripennis</i>	97.71
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	97.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	97.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	97.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	97.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	97.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	97.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>lestradei</i>	97.49
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ambulyx	<i>clavata</i>	97.45

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SPHINGIDAE MUSEUM
CZECH REPUBLIC

Address: Orlov 79, Příbram 261 02, Czech republic

WWW: www.sphingidae-museum.com

E-mail: info@sphingidae-museum.com

Phone: (+420) 775 349 546



Amplypteus panopus
(Cramer, 1779)



SPHINGIDAE MUSEUM
CZECH REPUBLIC

Address: Orlov 79, Příbram 261 02, Czech republic

WWW: www.sphingidae-museum.com

E-mail: info@sphingidae-museum.com

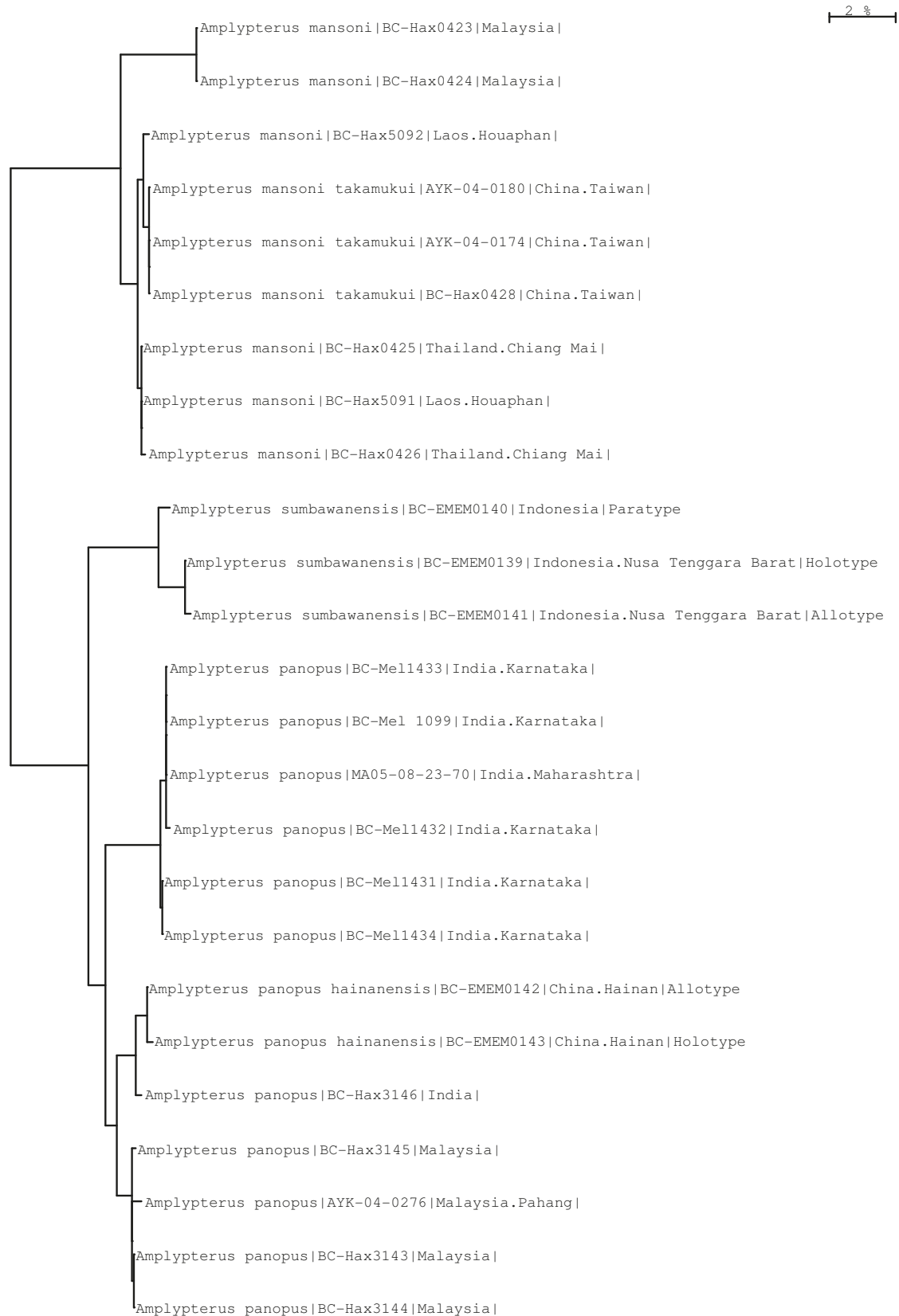
Phone: (+420) 775 349 546

BOLD TaxonID Tree

Project : SEARCH: Tax(Amplypterus)
Date : 25-April-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 25
Species count : 5
Genus count : 1
Family count : 1
Unidentified : 0







Specimen Identification Request

Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :

Similarity scores of the top 100 matches

TOP 20 Matches :

Display option:

default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Amplypterus	<i>panopus</i>	97.25





Angonyx krishna
(Eitschberger & Haxaire, 2006)



BOLD TaxonID Tree

Project : SEARCH: Tax(Angonyx)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 31
Species count : 6
Genus count : 1
Family count : 1
Unidentified : 1







Specimen Identification Request

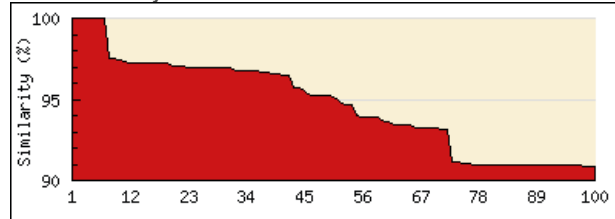
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>krishna</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>krishna</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>krishna</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>krishna</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>krishna</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>krishna</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>krishna</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>krishna</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.29
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Angonyx	<i>testacea</i>	97.09

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Cephonodes picus
(Cramer, 1777)

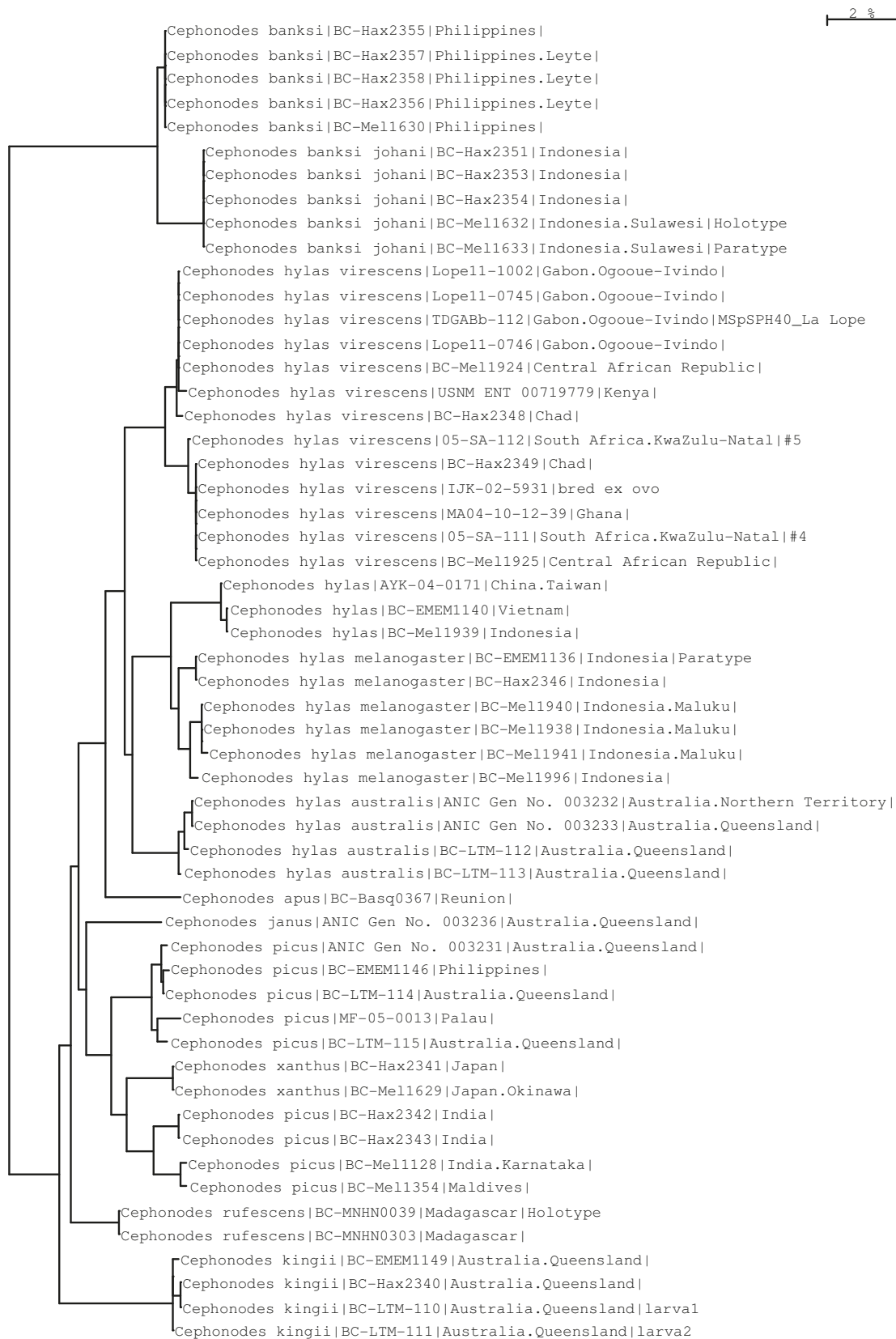


BOLD TaxonID Tree

Project : SEARCH: Tax(Cephonodes)
Date : 25-April-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 55
Species count : 12
Genus count : 1
Family count : 1
Unidentified : 0







Specimen Identification Request

Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :

Similarity scores of the top 100 matches

TOP 20 Matches :

Display option:

default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>picus</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>picus</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>picus</i>	98.68
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>picus</i>	98.51
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>xanthus</i>	97.52
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>xanthus</i>	97.24
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>woodfordii</i>	96.64
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>picus</i>	96.48
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>picus</i>	96.48
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>picus</i>	96.48
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>picus</i>	96.37
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>janus</i>	96.33
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>picus</i>	96.33
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>rufescens</i>	96.26
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>janus</i>	96.2
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hemaris	<i>tityus</i>	96.04
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hemaris	<i>tityus</i>	96.04
Arthropoda	Insecta	Lepidoptera	Sphingidae	Cephonodes	<i>picus</i>	96.02
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hemaris	<i>staudingeri</i>	95.87





Clanis bilineata
(Walker, 1866)

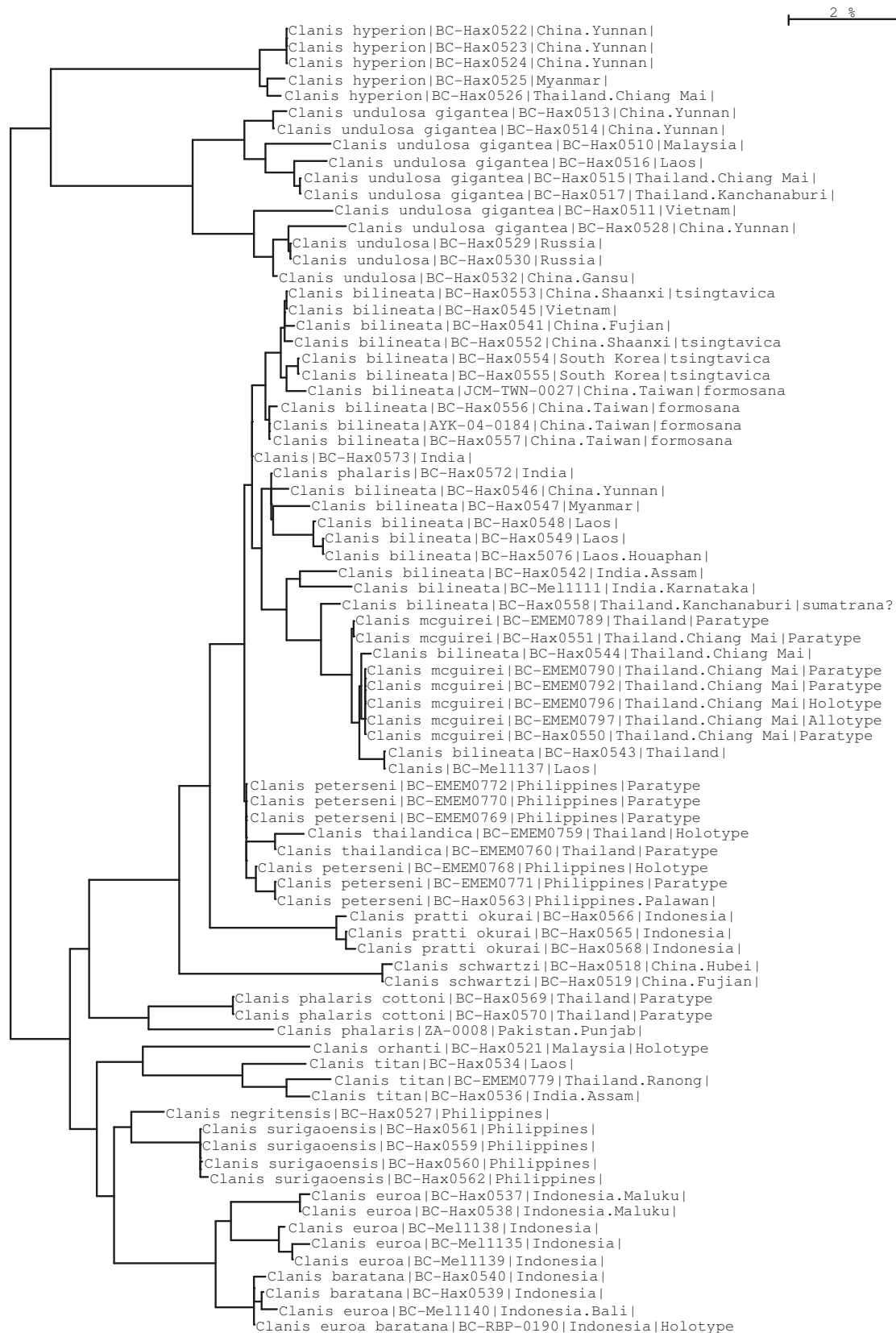


BOLD TaxonID Tree

Project : SEARCH: Tax(Clanis)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 80
Species count : 18
Genus count : 1
Family count : 1
Unidentified : 2







Specimen Identification Request

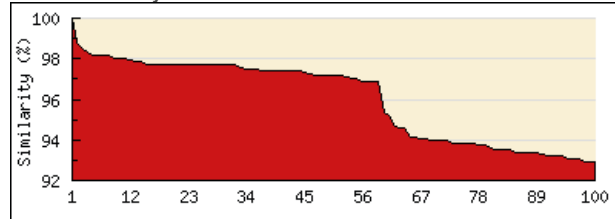
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	98.76
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	98.51
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	98.35
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	98.15
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>stenosema</i>	98.15
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>stenosema</i>	98.15
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>stenosema</i>	98.15
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>thailandica</i>	98.02
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>stenosema</i>	97.99
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>thailandica</i>	97.99
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	97.98
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>mcguirei</i>	97.84
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>mcguirei</i>	97.84
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	97.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	97.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	97.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	97.68
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	97.68
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clanis	<i>bilineata</i>	97.68

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Daphnis hypothous cramerii
(Eitschberger & Melichar, 2010)

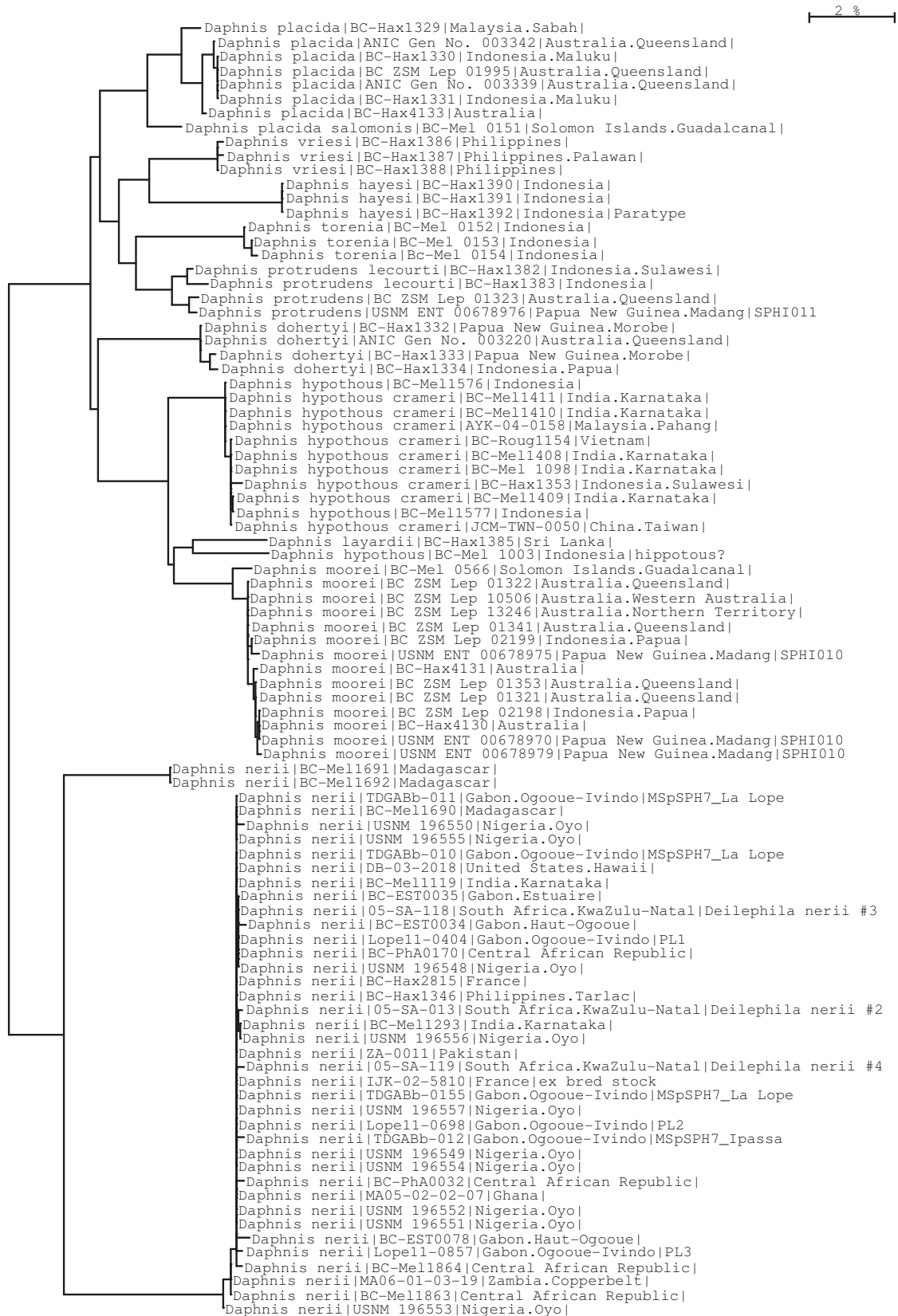


BOLD TaxonID Tree

Project : SEARCH: Tax(Daphnis)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 91
Species count : 13
Genus count : 1
Family count : 1
Unidentified : 0







Specimen Identification Request

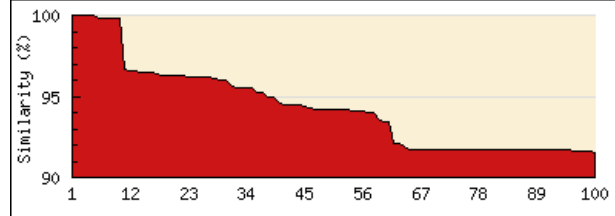
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>hypothouscrameri</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae			100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>hypothouscrameri</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>hypothouscrameri</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>hypothouscrameri</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>hypothouscrameri</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>hypothous</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>hypothouscrameri</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>hypothouscrameri</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>hypothouscrameri</i>	99.84
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>moorei</i>	96.65
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>hypothous</i>	96.57
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>layardii</i>	96.52
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>moorei</i>	96.48
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>moorei</i>	96.45
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>moorei</i>	96.44
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>moorei</i>	96.35
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>moorei</i>	96.33
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>moorei</i>	96.33
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>moorei</i>	96.32

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Daphnis nerii
(Linnaeus, 1758)

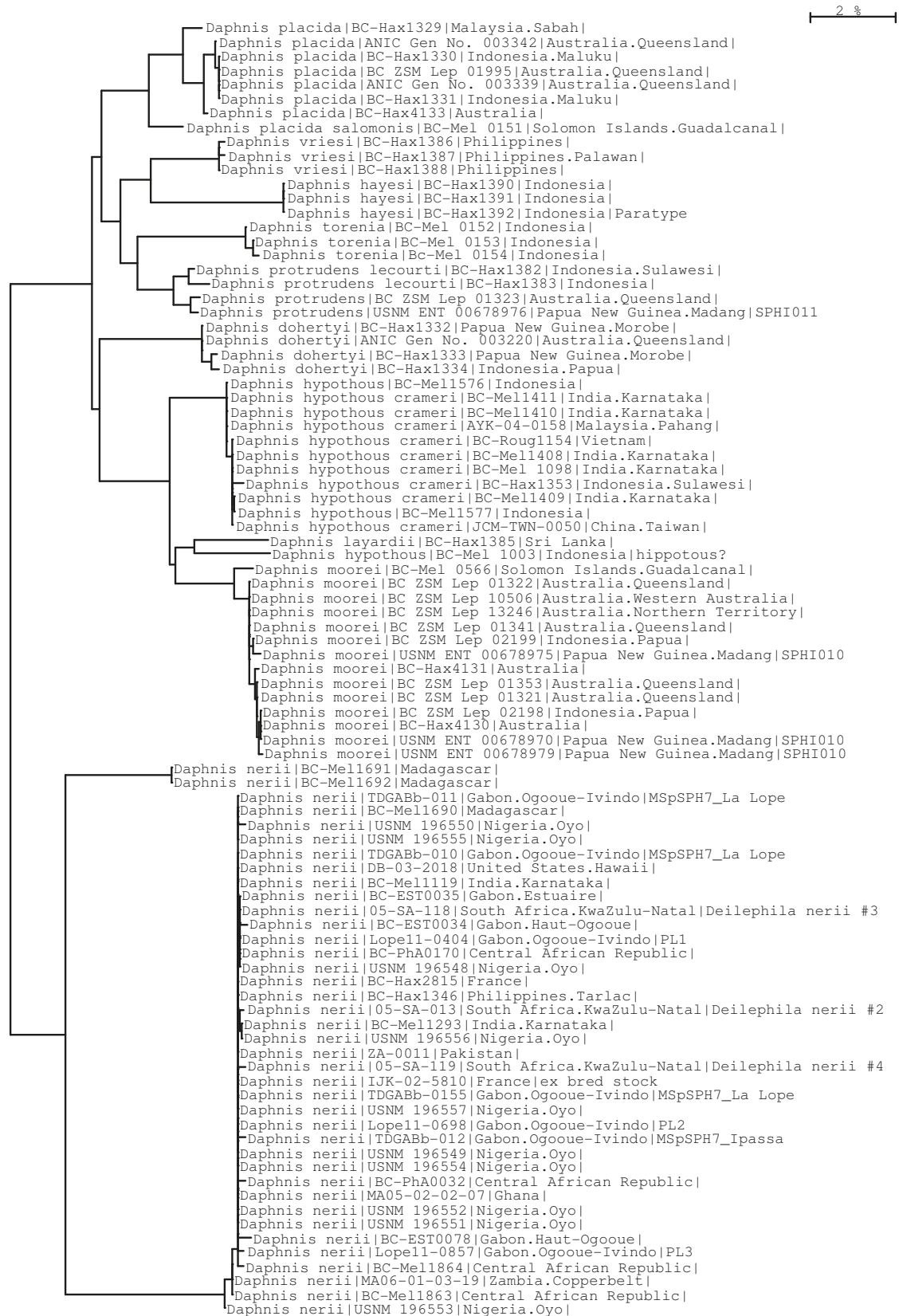


BOLD TaxonID Tree

Project : SEARCH: Tax(Daphnis)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 91
Species count : 13
Genus count : 1
Family count : 1
Unidentified : 0







Specimen Identification Request

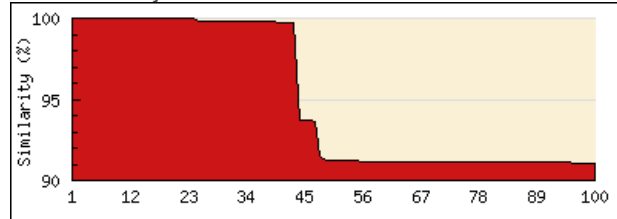
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Daphnis	<i>nerii</i>	100

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Dolbina inexacta
(Walker, 1856)

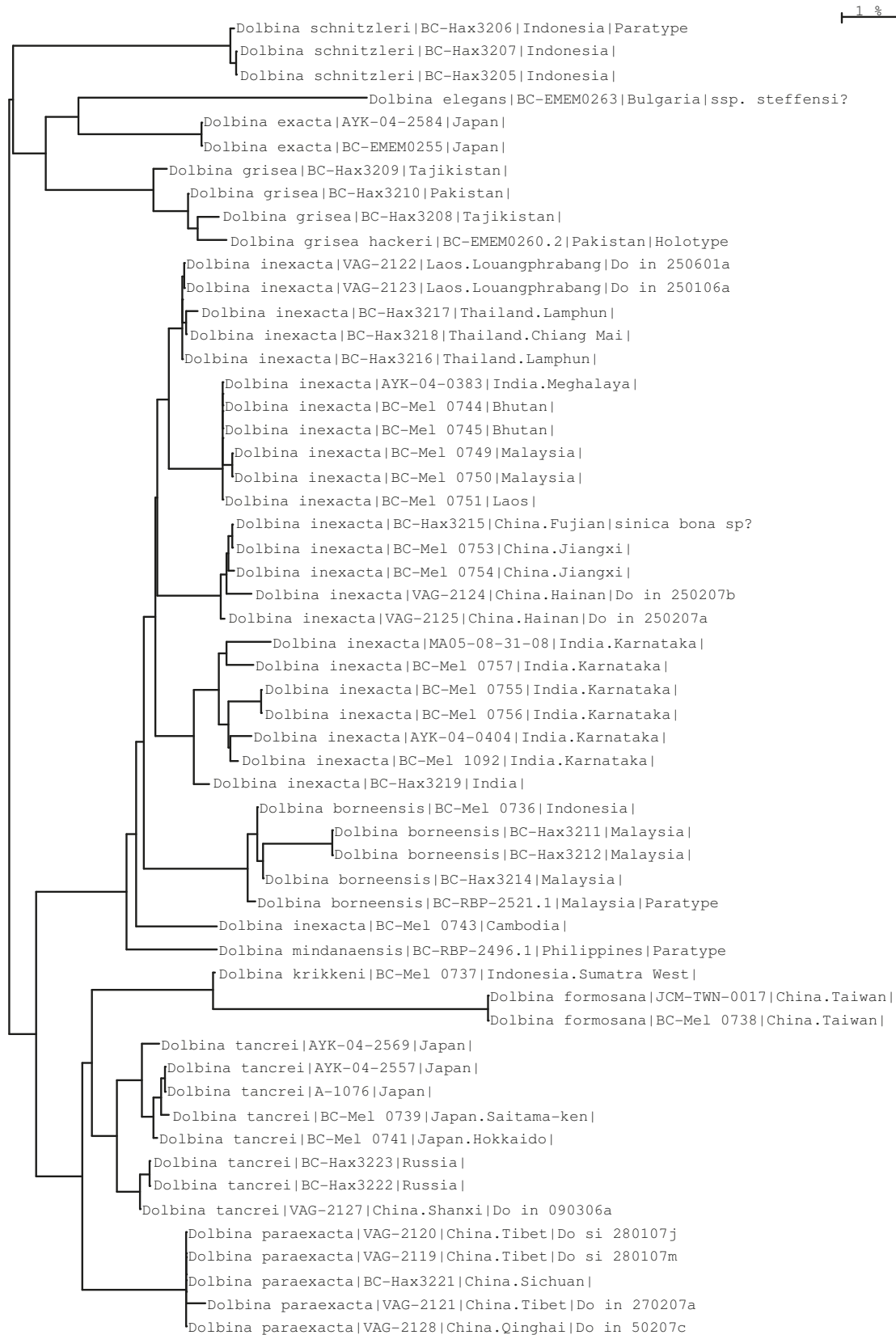


BOLD TaxonID Tree

Project : SEARCH: Tax(Dolbina)
Date : 25-April-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 56
Species count : 12
Genus count : 1
Family count : 1
Unidentified : 0







Specimen Identification Request

Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :

Similarity scores of the top 100 matches

TOP 20 Matches :

Display option:

default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	99.24
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	99.22
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	99.22
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	99.08
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.9
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.51
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.25
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.17
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.17
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Dolbina	<i>inexacta</i>	98.01





Enpinanga assamensis
(Walker, 1856)

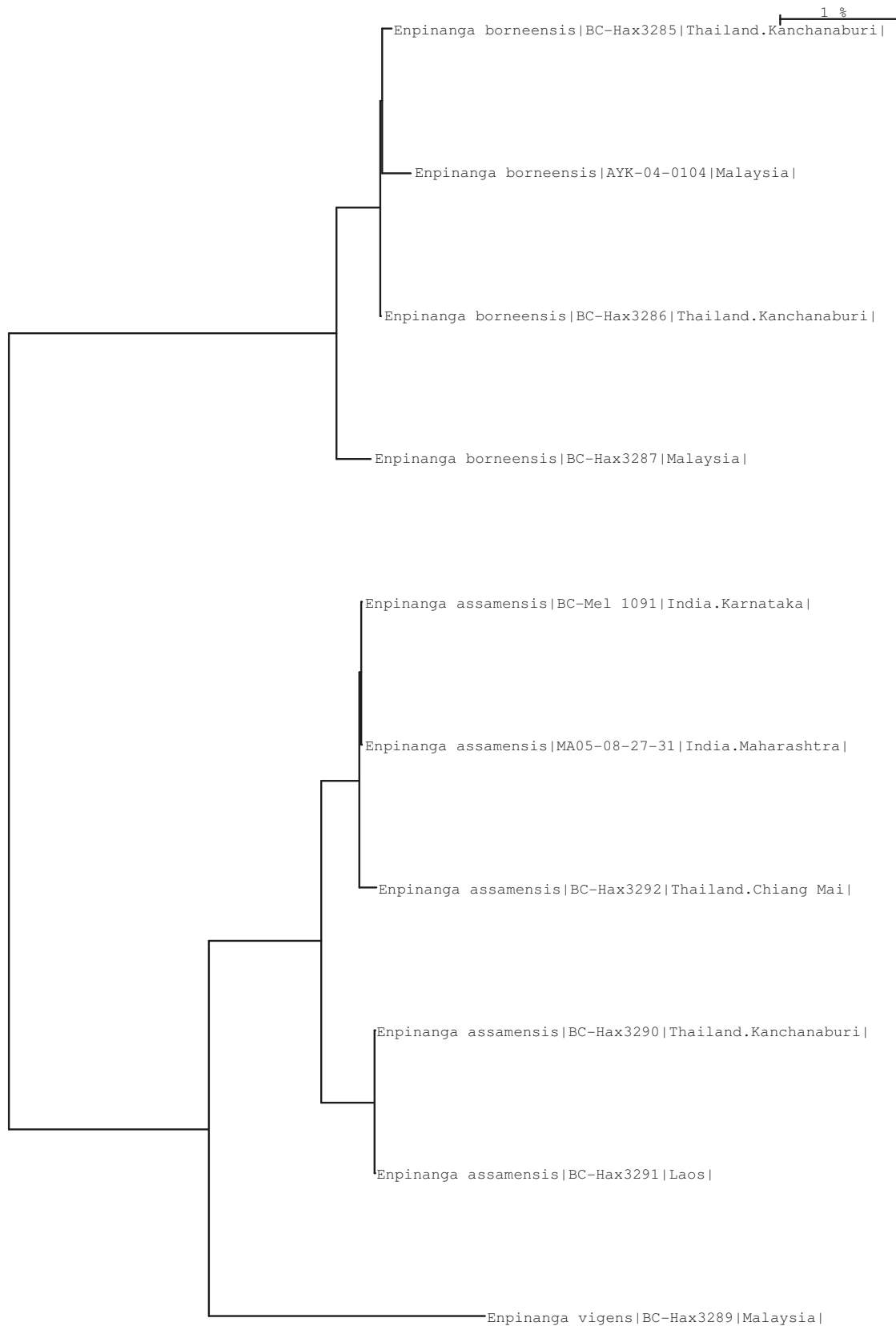


BOLD TaxonID Tree

Project : SEARCH: Tax(Enpinanga)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 10
Species count : 3
Genus count : 1
Family count : 1
Unidentified : 0







Specimen Identification Request

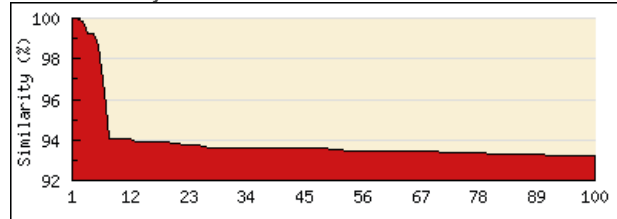
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Enpinanga	<i>assamensis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Enpinanga	<i>assamensis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Enpinanga	<i>assamensis</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Enpinanga	<i>assamensis</i>	99.24
Arthropoda	Insecta	Lepidoptera	Sphingidae	Enpinanga	<i>assamensis</i>	99.24
Arthropoda	Insecta	Lepidoptera	Sphingidae	Enpinanga	<i>assamensis</i>	98.62
Arthropoda	Insecta	Lepidoptera	Sphingidae	Enpinanga	<i>vigens</i>	96.33
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clarina	<i>kotschyi</i>	94.06
Arthropoda	Insecta	Lepidoptera	Sphingidae	Enpinanga	<i>borneensis</i>	94.06
Arthropoda	Insecta	Lepidoptera	Sphingidae	Enpinanga	<i>borneensis</i>	94.06
Arthropoda	Insecta	Lepidoptera	Sphingidae	Antinephele	<i>achlora</i>	94.06
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clarina	<i>kotschyi</i>	94.06
Arthropoda	Insecta	Lepidoptera	Sphingidae	Enpinanga	<i>borneensis</i>	93.89
Arthropoda	Insecta	Lepidoptera	Sphingidae	Antinephele	<i>achlora</i>	93.89
Arthropoda	Insecta	Lepidoptera	Sphingidae	Antinephele	<i>achlora</i>	93.88
Arthropoda	Insecta	Lepidoptera	Sphingidae	Antinephele	<i>achlora</i>	93.88
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clarina	<i>kotschyi</i>	93.88
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clarina	<i>kotschyi</i>	93.88
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clarina	<i>kotschyi</i>	93.88
Arthropoda	Insecta	Lepidoptera	Sphingidae	Clarina	<i>kotschyi</i>	93.88
Arthropoda	Insecta	Lepidoptera	Sphingidae	Ampelophaga	<i>nikolae</i>	93.8

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Hippotion boerhaviae
(Fabricius, 1775)



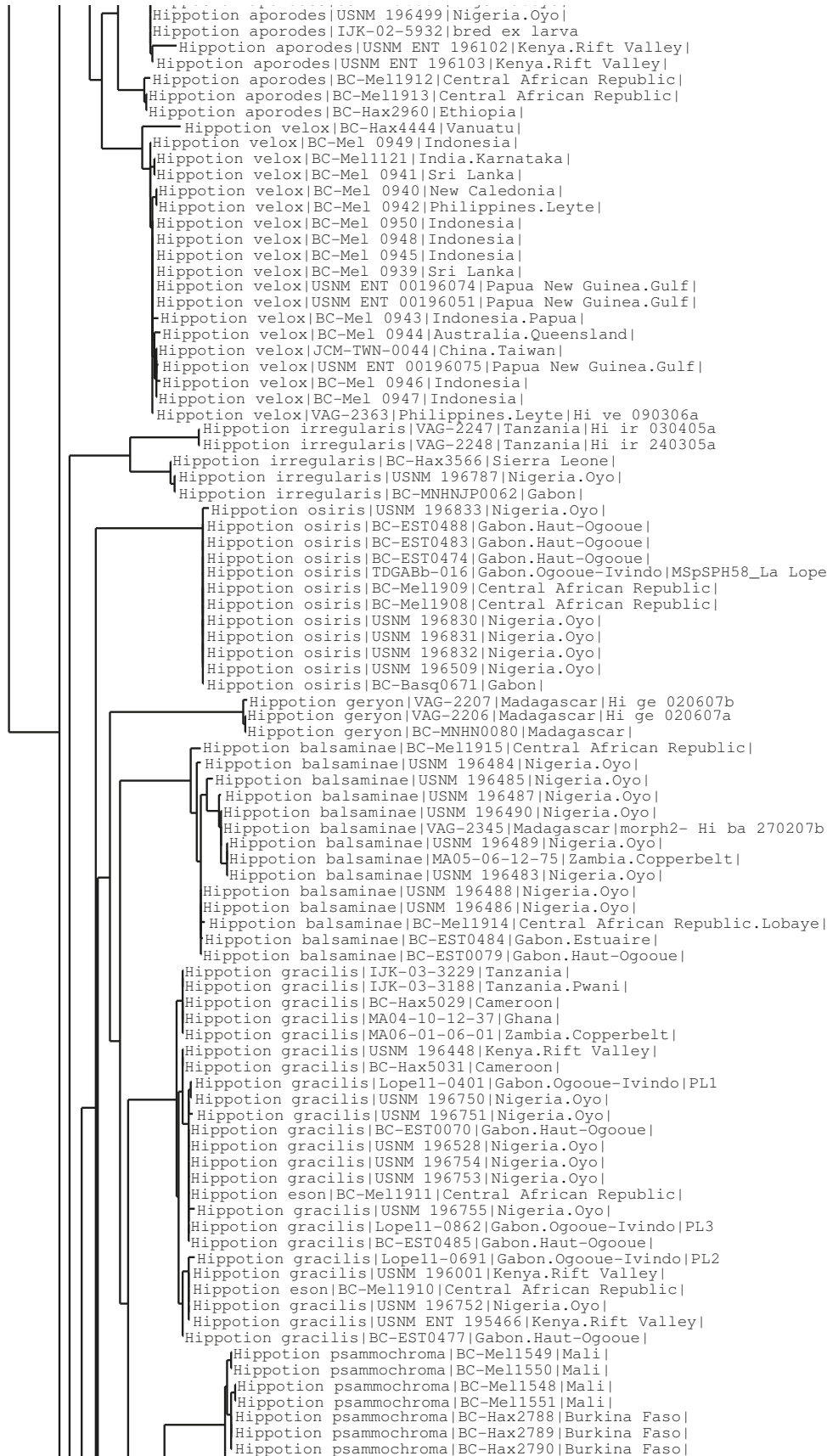
BOLD TaxonID Tree

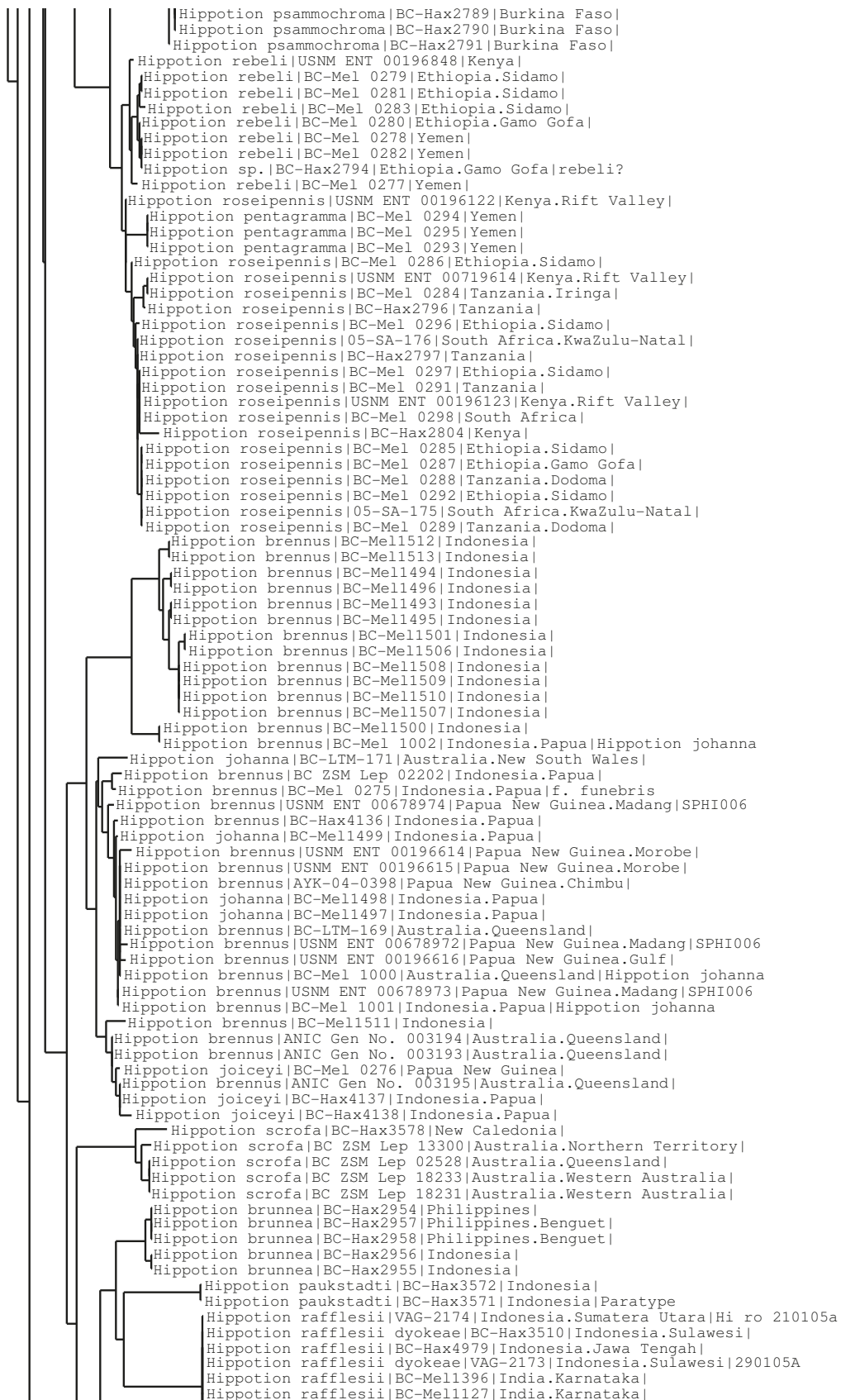
Project : SEARCH: Tax(Hippotion)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 353
Species count : 40
Genus count : 1
Family count : 1
Unidentified : 0









Hippotion rafflesii|BC-Mell127|India.Karnataka|
 Hippotion boerhaviae|BC-Mell661|Indonesia.Bali|
 Hippotion boerhaviae|BC-Mell1660|Indonesia.Bali|
 Hippotion boerhaviae|BC-Mell1665|Indonesia|
 Hippotion rafflesii|BC-Mell1397|India.Karnataka|
 Hippotion rafflesii|BC-Mell1398|India.Karnataka|
 Hippotion rafflesii|BC-Mell1399|India.Karnataka|
 Hippotion rafflesii|BC-Mell1400|India.Karnataka|
 Hippotion rafflesii|MA06-01-05-35|India.Maharashtra|
 Hippotion rafflesii|BC-Mel 1073|India.Karnataka|
 Hippotion rafflesii|BC-Mel 1071|India.Karnataka|
 Hippotion rafflesii dyokeae|BC-Hax3509|Indonesia.Sulawesi|
 Hippotion echeclus|VAG-2171|Philippines.Leyte|290105V
 Hippotion echeclus|BC-Hax3506|Malaysia|
 Hippotion echeclus|VAG-2172|Philippines.Leyte|Hi ec 090306c
 Hippotion boerhaviae|BC-Hax4967|New Caledonia|
 Hippotion boerhaviae|BC-Hax4968|New Caledonia|
 Hippotion rosetta|ANIC Gen No. 003256|Australia.Queensland|
 Hippotion rafflesii|BC-Hax3508|Vietnam|
 Hippotion rosetta|BC-LTM-172|Australia.Queensland|long horn
 Hippotion boerhaviae|BC-Mell1671|Australia|
 Hippotion rosetta|BC-Hax4140|Indonesia.Papua|
 Hippotion boerhaviae|BC-LTM-170|Australia.Queensland|
 Hippotion rosetta|ANIC Gen No. 003191|Australia.Queensland|
 Hippotion rosetta|ANIC Gen No. 003192|Australia.Queensland|
 Hippotion boerhaviae|MA05-08-23-74|India.Maharashtra|
 Hippotion boerhaviae|BC-Mell1117|India.Karnataka|
 Hippotion boerhaviae|BC-Mel 1070|India.Karnataka|
 Hippotion boerhaviae|BC-Mel 1054|India.Karnataka|
 Hippotion rosetta|VAG-2178|Philippines.Palawan|Hi ro 220905b
 Hippotion boerhaviae|BC-Hax5090|Laos.Khammouan|
 Hippotion boerhaviae|BC-Mell1667|India.Karnataka|
 Hippotion boerhaviae|BC-Mel 1072|India.Karnataka|
 Hippotion boerhaviae|BC-Mell1116|India.Karnataka|
 Hippotion rosetta|BC-Hax3501|Malaysia.Sabah|
 Hippotion boerhaviae|VAG-2177|Thailand.Chiang Mai|Hi ro 090705b
 Hippotion boerhaviae|BC-Mell1662|Indonesia.Bali|
 Hippotion boerhaviae|BC-Mell1663|Indonesia.Bali|
 Hippotion rosetta|VAG-2179|Indonesia.Sulawesi|Hi ro? 200602a
 Hippotion rosetta|BC-Hax3502|Philippines.Benguet|
 Hippotion rosetta|USNM ENT 00196446|Myanmar.Sagaing|Burma
 Hippotion rosetta|BC-LTM-173|Australia.Queensland|short horn
 Hippotion rosetta|BC-LTM-167|Australia.Queensland|black larva
 Hippotion rosetta|BC-LTM-168|Australia.Queensland|green larva
 Hippotion rosetta|ZA-0014|Pakistan.Sind|
 Hippotion boerhaviae|BC-Mell1664|Indonesia.Bali|
 Hippotion boerhaviae|BC-Mell1668|Philippines|
 Hippotion boerhaviae|BC-Mell1669|Philippines|
 Hippotion boerhaviae|BC-Mell1670|Australia|
 Hippotion boerhaviae|BC-Mell1118|India.Karnataka|
 Hippotion rosetta|VAG-2175|Philippines.Panay|Hi ro 091206b
 Hippotion rosetta|VAG-2180|Indonesia.Papua|Hi ra 220905a
 Hippotion rosetta|BC ZSM Lep 02680|Australia.Queensland|
 Hippotion rosetta|BC-Hax4139|Indonesia.Papua|
 Hippotion eson|Lopell-0689|Gabon.Ogooue-Ivindo|PL2
 Hippotion eson|TDGABb-030|Gabon.Ogooue-Ivindo|MSPSPH3_La Lope
 Hippotion eson|Lopell-0388|Gabon.Ogooue-Ivindo|PL1
 Hippotion eson|Lopell-0699|Gabon.Ogooue-Ivindo|PL2
 Hippotion eson|Lopell-0696|Gabon.Ogooue-Ivindo|PL2
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 Hippotion eson|BC-Hax5025|Cameroon|
 Hippotion eson|BC-Hax5028|Cameroon|
 Hippotion eson|USNM 196746|Nigeria.Oyo|
 Hippotion eson|USNM 196745|Nigeria.Oyo|
 Hippotion eson|USNM ENT 00196124|Kenya.Rift Valley|
 Hippotion eson|05-SA-132|South Africa.KwaZulu-Natal|Hippotion eson #1
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 Hippotion eson|BC-Hax5026|Cameroon|
 Hippotion eson|USNM 195998|Kenya.Nairobi Area|
 Hippotion eson|USNM 196527|Nigeria.Oyo|
 Hippotion eson|IJK-02-5838|Zimbabwe|
 Hippotion eson|TDGABb-028|Gabon.Ogooue-Ivindo|MSPSPH3_La Lope
 Hippotion eson|Lopell-0400|Gabon.Ogooue-Ivindo|PL1
 Hippotion eson|Lopell-0702|Gabon.Ogooue-Ivindo|PL2
 Hippotion eson|USNM 196747|Nigeria.Oyo|
 Hippotion eson|USNM 196748|Nigeria.Oyo|
 Hippotion eson|Lopell-0693|Gabon.Ogooue-Ivindo|PL2
 Hippotion eson|TDGABb-029|Gabon.Ogooue-Ivindo|MSPSPH3_La Lope
 Hippotion eson|USNM 196749|Nigeria.Oyo|
 Hippotion eson|05-SA-133|South Africa.KwaZulu-Natal|Hippotion eson #2
 Hippotion eson|05-SA-134|South Africa.KwaZulu-Natal|Hippotion eson #3
 Hippotion eson|05-SA-209|South Africa|
 Hippotion eson|BC-Basq0678|Gabon|
 Hippotion talboti|BC-Hax3562|Sao Tome and Principe|
 Hippotion talboti|BC-Hax3561|Sao Tome and Principe|
 Hippotion talboti|BC-Hax3564|Sao Tome and Principe|
 Hippotion talboti|BC-Hax3563|Sao Tome and Principe|
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Specimen Identification Request

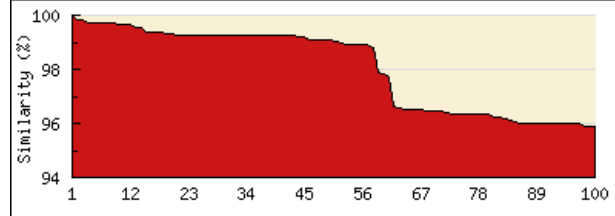
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

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Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>boerhaviae</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>boerhaviae</i>	99.85
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>rosetta</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>boerhaviae</i>	99.69
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>boerhaviae</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>boerhaviae</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>boerhaviae</i>	99.67
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>rosetta</i>	99.67
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>rosetta</i>	99.34

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Hippotion rafflesii
(Moore, 1858)



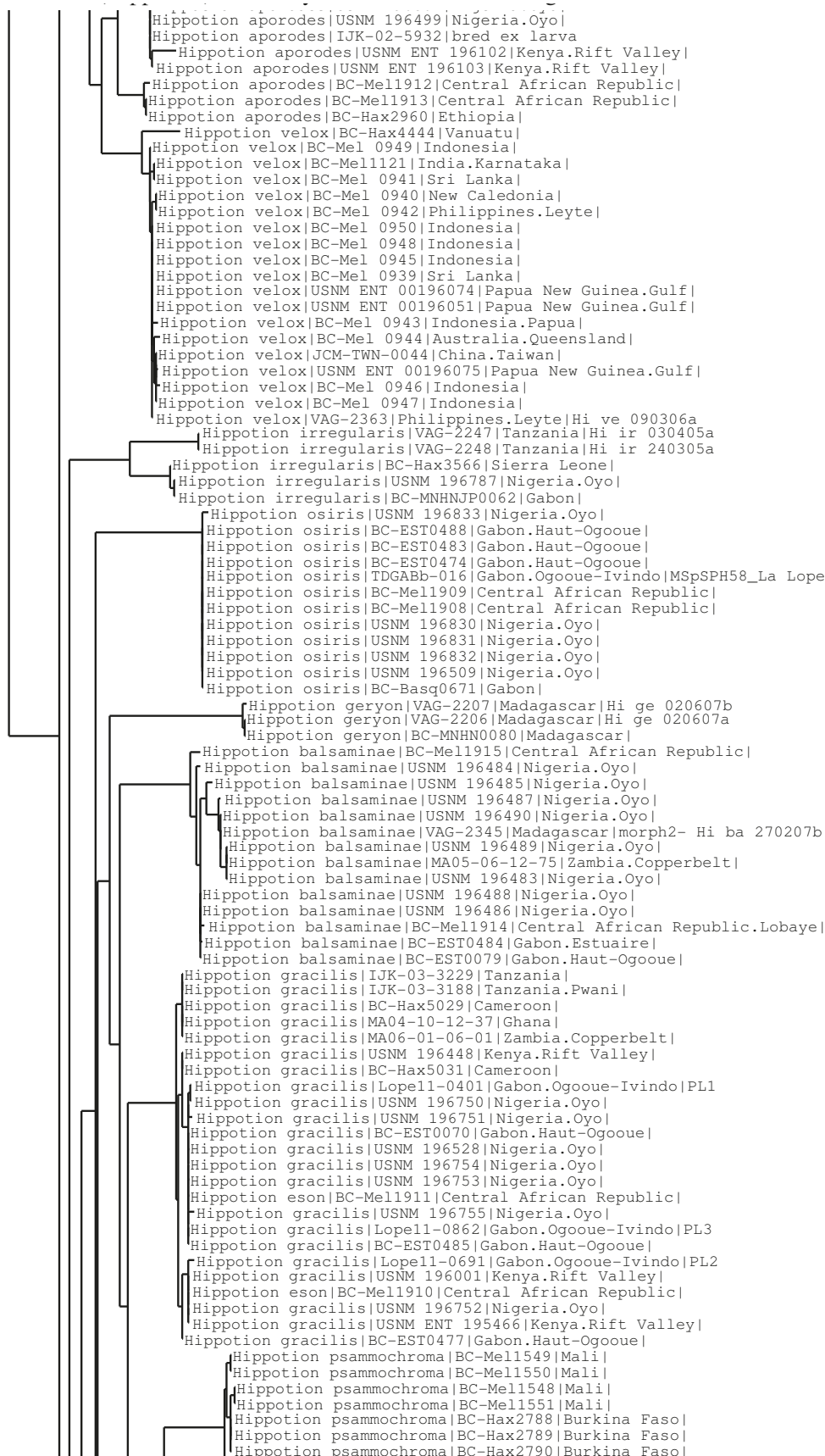
BOLD TaxonID Tree

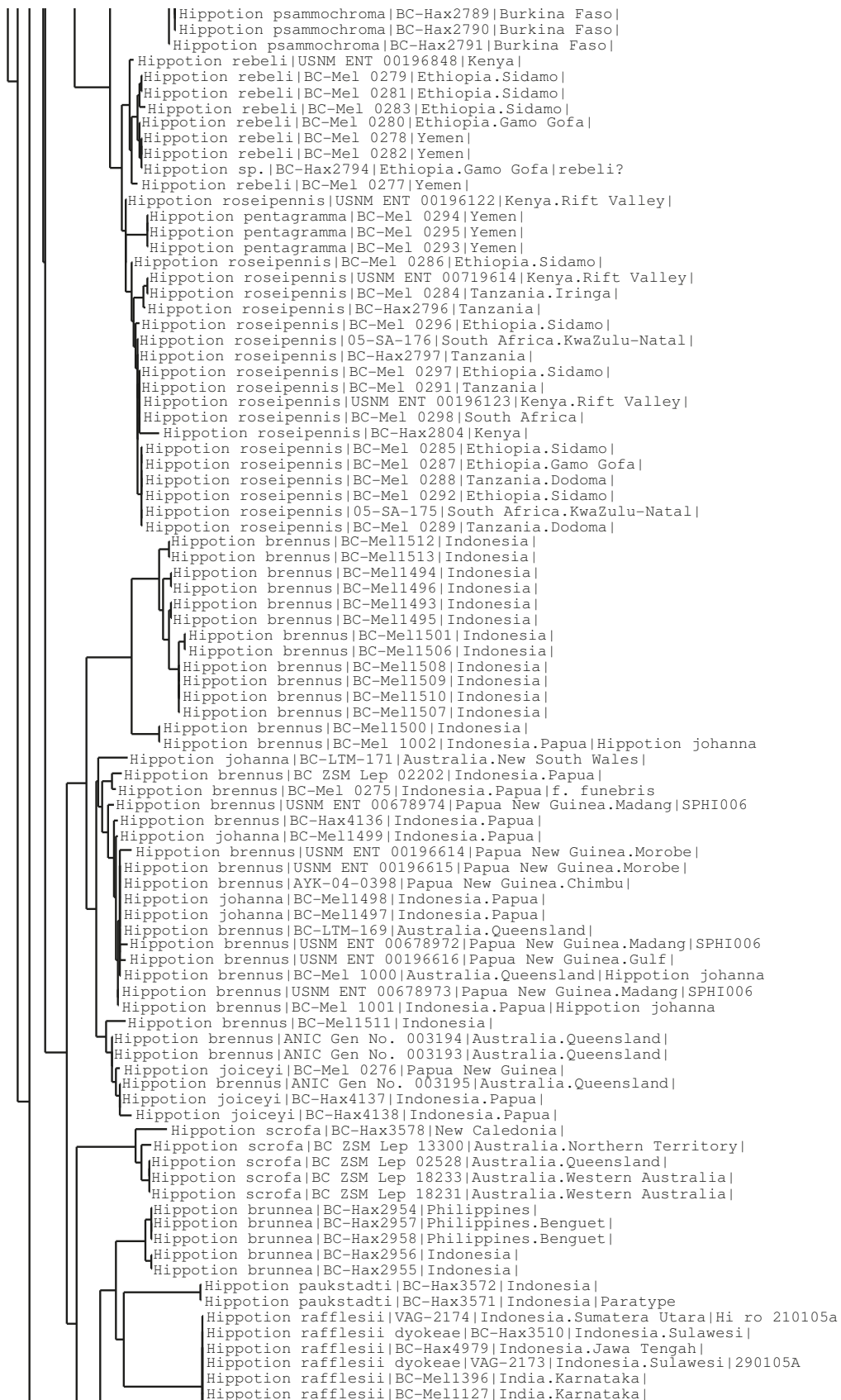
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Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 353
Species count : 40
Genus count : 1
Family count : 1
Unidentified : 0









Hippotion rafflesii|BC-Mell127|India.Karnataka|
 Hippotion boerhaviae|BC-Mell661|Indonesia.Bali|
 Hippotion boerhaviae|BC-Mell1660|Indonesia.Bali|
 Hippotion boerhaviae|BC-Mell1665|Indonesia|
 Hippotion rafflesii|BC-Mell1397|India.Karnataka|
 Hippotion rafflesii|BC-Mell1398|India.Karnataka|
 Hippotion rafflesii|BC-Mell1399|India.Karnataka|
 Hippotion rafflesii|BC-Mell1400|India.Karnataka|
 Hippotion rafflesii|MA06-01-05-35|India.Maharashtra|
 Hippotion rafflesii|BC-Mel 1073|India.Karnataka|
 Hippotion rafflesii|BC-Mel 1071|India.Karnataka|
 Hippotion rafflesii dyokeae|BC-Hax3509|Indonesia.Sulawesi|
 Hippotion echeclus|VAG-2171|Philippines.Leyte|290105V|
 Hippotion echeclus|BC-Hax3506|Malaysia|
 Hippotion echeclus|VAG-2172|Philippines.Leyte|Hi ec 090306c|
 Hippotion boerhaviae|BC-Hax4967|New Caledonia|
 Hippotion boerhaviae|BC-Hax4968|New Caledonia|
 Hippotion rosetta|ANIC Gen No. 003256|Australia.Queensland|
 Hippotion rafflesii|BC-Hax3508|Vietnam|
 Hippotion rosetta|BC-LTM-172|Australia.Queensland|long horn|
 Hippotion boerhaviae|BC-Mell1671|Australia|
 Hippotion rosetta|BC-Hax4140|Indonesia.Papua|
 Hippotion boerhaviae|BC-LTM-170|Australia.Queensland|
 Hippotion rosetta|ANIC Gen No. 003191|Australia.Queensland|
 Hippotion rosetta|ANIC Gen No. 003192|Australia.Queensland|
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 Hippotion boerhaviae|BC-Mell1117|India.Karnataka|
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 Hippotion boerhaviae|BC-Mel 1054|India.Karnataka|
 Hippotion rosetta|VAG-2178|Philippines.Palawan|Hi ro 220905b|
 Hippotion boerhaviae|BC-Hax5090|Laos.Khammouan|
 Hippotion boerhaviae|BC-Mell1667|India.Karnataka|
 Hippotion boerhaviae|BC-Mel 1072|India.Karnataka|
 Hippotion boerhaviae|BC-Mell1116|India.Karnataka|
 Hippotion rosetta|BC-Hax3501|Malaysia.Sabah|
 Hippotion boerhaviae|VAG-2177|Thailand.Chiang Mai|Hi ro 090705b|
 Hippotion boerhaviae|BC-Mell1662|Indonesia.Bali|
 Hippotion boerhaviae|BC-Mell1663|Indonesia.Bali|
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 Hippotion rosetta|BC-Hax3502|Philippines.Benguet|
 Hippotion rosetta|USNM ENT 00196446|Myanmar.Sagaing|Burma|
 Hippotion rosetta|BC-LTM-173|Australia.Queensland|short horn|
 Hippotion rosetta|BC-LTM-167|Australia.Queensland|black larva|
 Hippotion rosetta|BC-LTM-168|Australia.Queensland|green larva|
 Hippotion rosetta|ZA-0014|Pakistan.Sind|
 Hippotion boerhaviae|BC-Mell1664|Indonesia.Bali|
 Hippotion boerhaviae|BC-Mell1668|Philippines|
 Hippotion boerhaviae|BC-Mell1669|Philippines|
 Hippotion boerhaviae|BC-Mell1670|Australia|
 Hippotion boerhaviae|BC-Mell1118|India.Karnataka|
 Hippotion rosetta|VAG-2175|Philippines.Panay|Hi ro 091206b|
 Hippotion rosetta|VAG-2180|Indonesia.Papua|Hi ra 220905a|
 Hippotion rosetta|BC ZSM Lep 02680|Australia.Queensland|
 Hippotion rosetta|BC-Hax4139|Indonesia.Papua|
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 Hippotion eson|TDGABb-028|Gabon.Ogooue-Ivindo|MSPSPH3_La Lope|
 Hippotion eson|Lopell-0400|Gabon.Ogooue-Ivindo|PL1|
 Hippotion eson|Lopell-0702|Gabon.Ogooue-Ivindo|PL2|
 Hippotion eson|USNM 196747|Nigeria.Oyo|
 Hippotion eson|USNM 196748|Nigeria.Oyo|
 Hippotion eson|Lopell-0693|Gabon.Ogooue-Ivindo|PL2|
 Hippotion eson|TDGABb-029|Gabon.Ogooue-Ivindo|MSPSPH3_La Lope|
 Hippotion eson|USNM 196749|Nigeria.Oyo|
 Hippotion eson|05-SA-133|South Africa.KwaZulu-Natal|Hippotion eson #2|
 Hippotion eson|05-SA-134|South Africa.KwaZulu-Natal|Hippotion eson #3|
 Hippotion eson|05-SA-209|South Africa|
 Hippotion eson|BC-Basq0678|Gabon|
 Hippotion talboti|BC-Hax3562|Sao Tome and Principe|
 Hippotion talboti|BC-Hax3561|Sao Tome and Principe|
 Hippotion talboti|BC-Hax3564|Sao Tome and Principe|
 Hippotion talboti|BC-Hax3563|Sao Tome and Principe|
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Specimen Identification Request

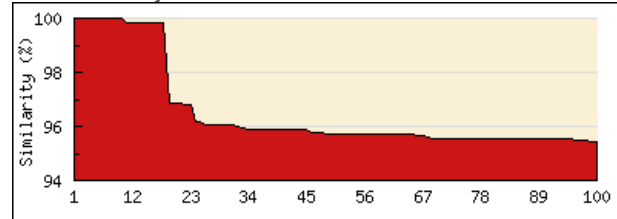
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>boerhaviae</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>boerhaviae</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>rafflesii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>rafflesiidyokeae</i>	100
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>rafflesiidyokeae</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>rafflesii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>rafflesii</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>rafflesii</i>	99.85
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>rafflesii</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>rosetta</i>	99.85
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>brunnea</i>	96.86
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>brunnea</i>	96.86

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Hippotion velox
(Fabricius, 1793)



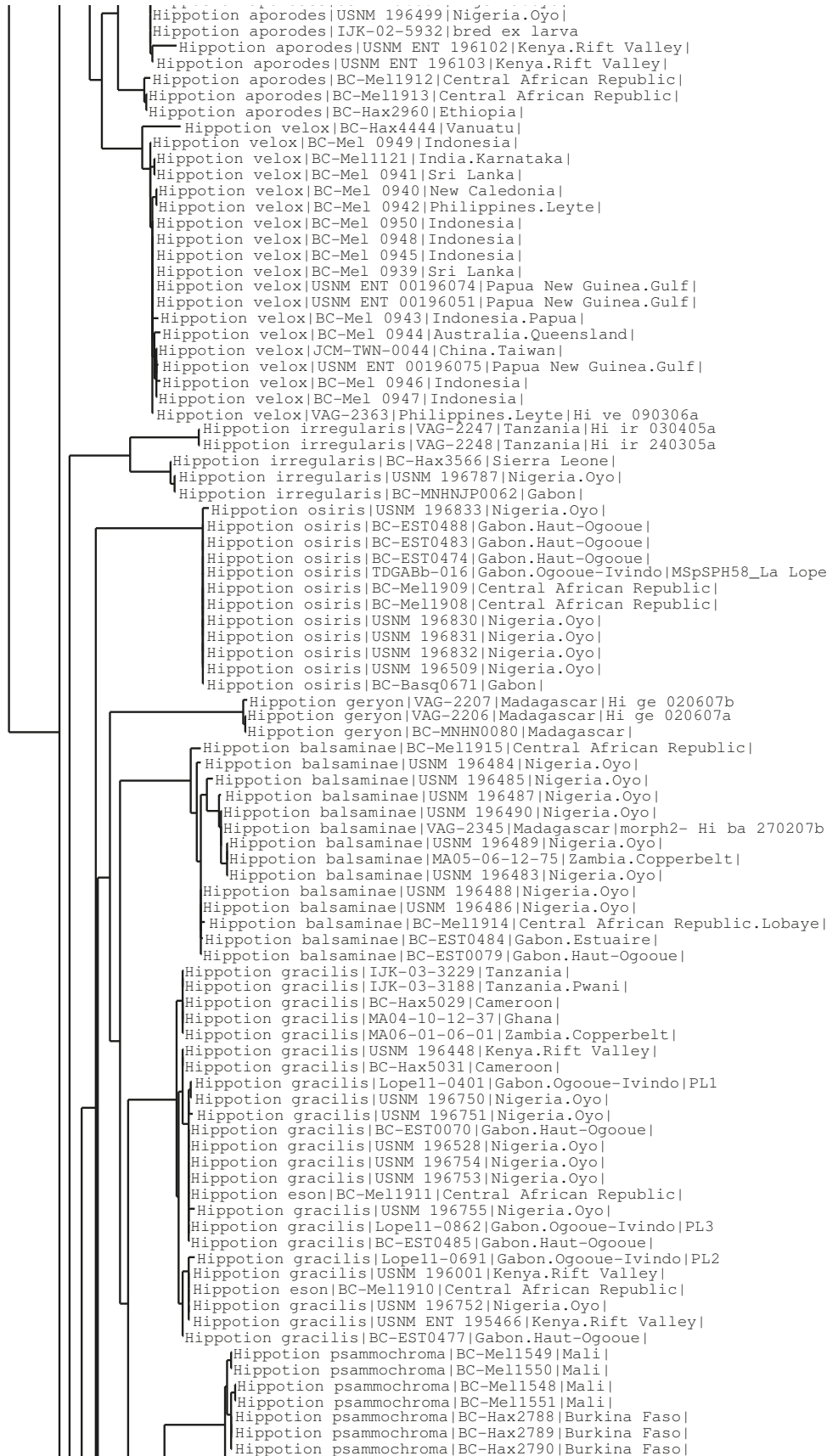
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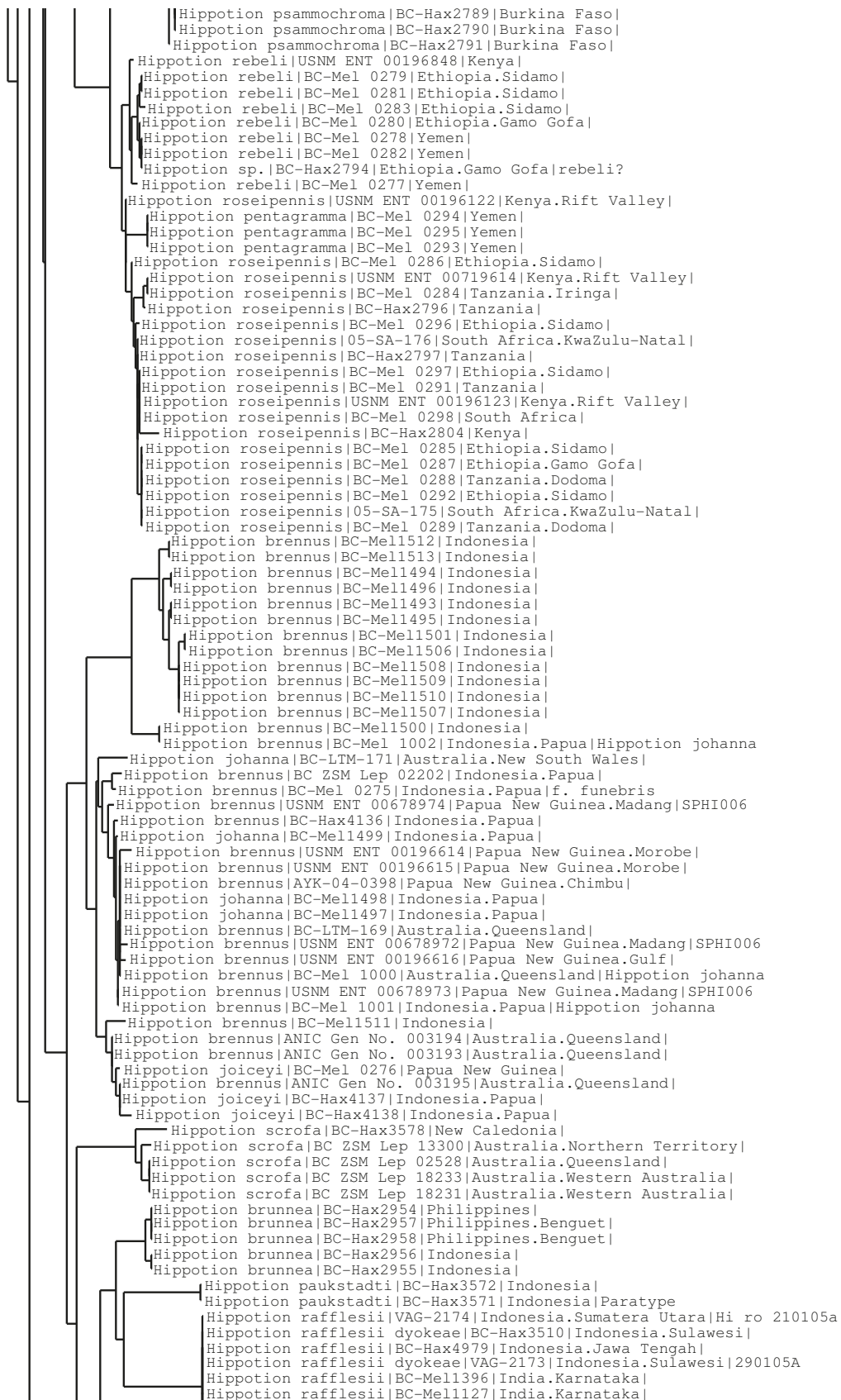
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Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 353
Species count : 40
Genus count : 1
Family count : 1
Unidentified : 0



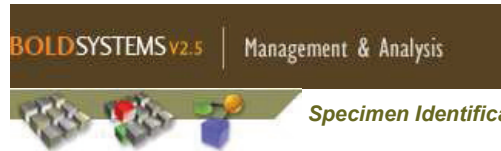






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 Hippotion boerhaviae|BC-Mell1665|Indonesia|
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 Hippotion rafflesii|BC-Mell1398|India.Karnataka|
 Hippotion rafflesii|BC-Mell1399|India.Karnataka|
 Hippotion rafflesii|BC-Mell1400|India.Karnataka|
 Hippotion rafflesii|MA06-01-05-35|India.Maharashtra|
 Hippotion rafflesii|BC-Mel 1073|India.Karnataka|
 Hippotion rafflesii|BC-Mel 1071|India.Karnataka|
 Hippotion rafflesii dyokeae|BC-Hax3509|Indonesia.Sulawesi|
 Hippotion echeclus|VAG-2171|Philippines.Leyte|290105V|
 Hippotion echeclus|BC-Hax3506|Malaysia|
 Hippotion echeclus|VAG-2172|Philippines.Leyte|Hi ec 090306c|
 Hippotion boerhaviae|BC-Hax4967|New Caledonia|
 Hippotion boerhaviae|BC-Hax4968|New Caledonia|
 Hippotion rosetta|ANIC Gen No. 003256|Australia.Queensland|
 Hippotion rafflesii|BC-Hax3508|Vietnam|
 Hippotion rosetta|BC-LTM-172|Australia.Queensland|long horn|
 Hippotion boerhaviae|BC-Mell1671|Australia|
 Hippotion rosetta|BC-Hax4140|Indonesia.Papua|
 Hippotion boerhaviae|BC-LTM-170|Australia.Queensland|
 Hippotion rosetta|ANIC Gen No. 003191|Australia.Queensland|
 Hippotion rosetta|ANIC Gen No. 003192|Australia.Queensland|
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 Hippotion boerhaviae|BC-Mel 1072|India.Karnataka|
 Hippotion boerhaviae|BC-Mell1116|India.Karnataka|
 Hippotion rosetta|BC-Hax3501|Malaysia.Sabah|
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 Hippotion boerhaviae|BC-Mell1662|Indonesia.Bali|
 Hippotion boerhaviae|BC-Mell1663|Indonesia.Bali|
 Hippotion rosetta|VAG-2179|Indonesia.Sulawesi|Hi ro? 200602a|
 Hippotion rosetta|BC-Hax3502|Philippines.Benguet|
 Hippotion rosetta|USNM ENT 00196446|Myanmar.Sagaing|Burma|
 Hippotion rosetta|BC-LTM-173|Australia.Queensland|short horn|
 Hippotion rosetta|BC-LTM-167|Australia.Queensland|black larva|
 Hippotion rosetta|BC-LTM-168|Australia.Queensland|green larva|
 Hippotion rosetta|ZA-0014|Pakistan.Sind|
 Hippotion boerhaviae|BC-Mell1664|Indonesia.Bali|
 Hippotion boerhaviae|BC-Mell1668|Philippines|
 Hippotion boerhaviae|BC-Mell1669|Philippines|
 Hippotion boerhaviae|BC-Mell1670|Australia|
 Hippotion boerhaviae|BC-Mell1118|India.Karnataka|
 Hippotion rosetta|VAG-2175|Philippines.Panay|Hi ro 091206b|
 Hippotion rosetta|VAG-2180|Indonesia.Papua|Hi ra 220905a|
 Hippotion rosetta|BC ZSM Lep 02680|Australia.Queensland|
 Hippotion rosetta|BC-Hax4139|Indonesia.Papua|
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 Hippotion eson|Lopell-0388|Gabon.Ogooue-Ivindo|PL1|
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 Hippotion eson|BC-Hax5025|Cameroon|
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 Hippotion eson|05-SA-132|South Africa.KwaZulu-Natal|Hippotion eson #1|
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 Hippotion eson|USNM 195998|Kenya.Nairobi Area|
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 Hippotion eson|TDGABb-028|Gabon.Ogooue-Ivindo|MSPSPH3_La Lope|
 Hippotion eson|Lopell-0400|Gabon.Ogooue-Ivindo|PL1|
 Hippotion eson|Lopell-0702|Gabon.Ogooue-Ivindo|PL2|
 Hippotion eson|USNM 196747|Nigeria.Oyo|
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 Hippotion eson|Lopell-0693|Gabon.Ogooue-Ivindo|PL2|
 Hippotion eson|TDGABb-029|Gabon.Ogooue-Ivindo|MSPSPH3_La Lope|
 Hippotion eson|USNM 196749|Nigeria.Oyo|
 Hippotion eson|05-SA-133|South Africa.KwaZulu-Natal|Hippotion eson #2|
 Hippotion eson|05-SA-134|South Africa.KwaZulu-Natal|Hippotion eson #3|
 Hippotion eson|05-SA-209|South Africa|
 Hippotion eson|BC-Basq0678|Gabon|
 Hippotion talboti|BC-Hax3562|Sao Tome and Principe|
 Hippotion talboti|BC-Hax3561|Sao Tome and Principe|
 Hippotion talboti|BC-Hax3564|Sao Tome and Principe|
 Hippotion talboti|BC-Hax3563|Sao Tome and Principe|
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 Hippotion talboti|BC-MNHJP0196|Sao Tome and Principe|





PRINT | HELP

Specimen Identification Request

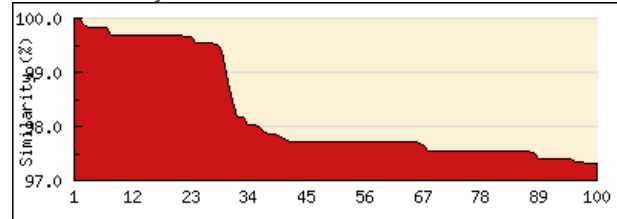
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.84
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.83
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.82
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hippotion	<i>velox</i>	99.69

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Macroglossum assimilis
(Swainson, 1821)

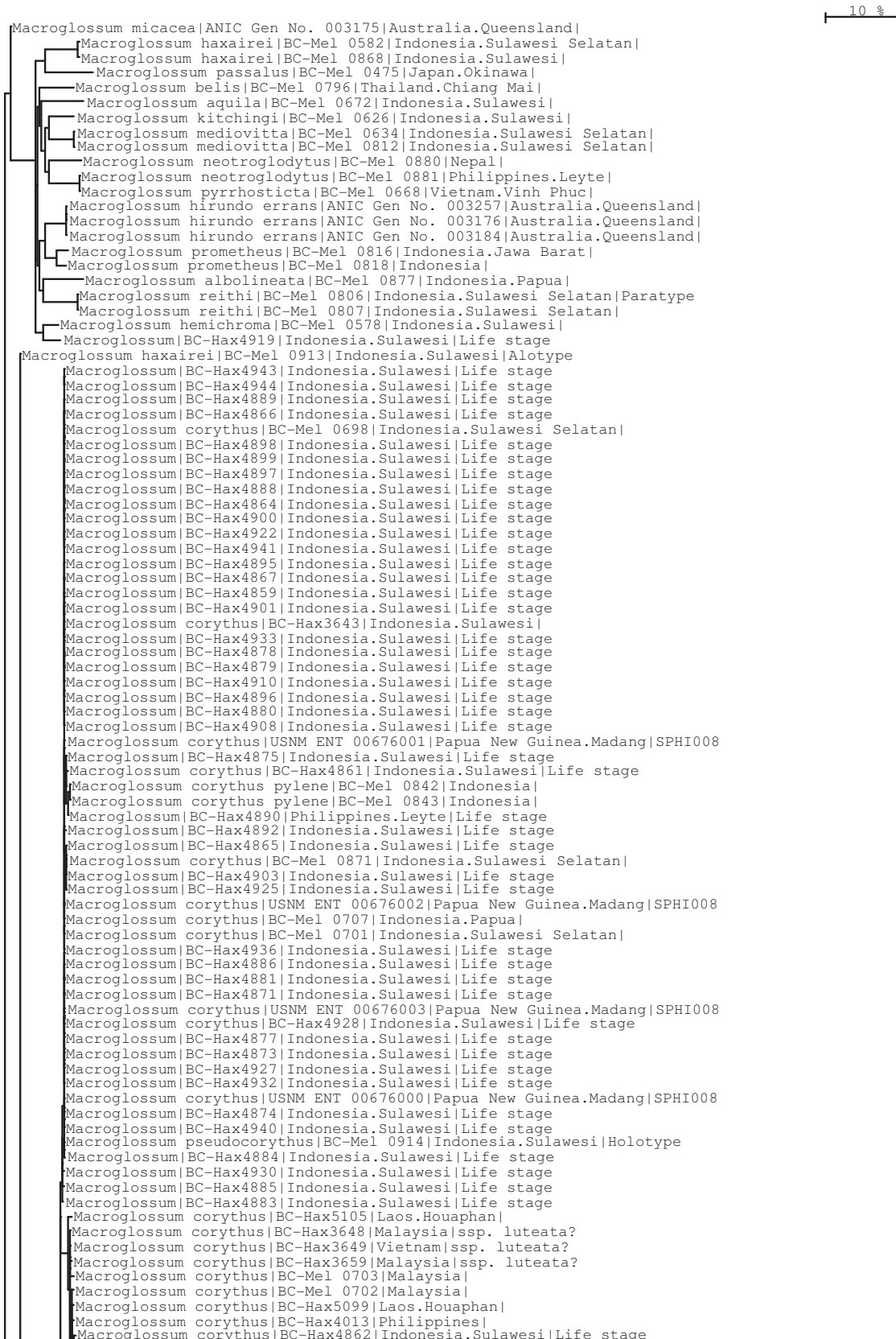


BOLD TaxonID Tree

Project : SEARCH: Tax(Macroglossum)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 629
Species count : 90
Genus count : 1
Family count : 1
Unidentified : 96





Macroglossum corythus|BC-Hax4013|Philippines|
 Macroglossum corythus|BC-Hax4862|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax5098|Laos.Houaphan|
 Macroglossum corythus|BC-Hax5106|Laos.Houaphan|
 Macroglossum|BC-Hax4916|Vietnam|Life stage
 Macroglossum corythus|BC-Mel 0704|China.Guangxi|
 Macroglossum|BC-Hax4891|Philippines.Leyte|Life stage
 Macroglossum|BC-Hax4914|Vietnam|Life stage
 Macroglossum|BC-Hax4938|Vietnam|Life stage
 Macroglossum corythus|BC-Mel 0699|Indonesia|
 Macroglossum corythus|BC-Mel 0700|Indonesia|
 Macroglossum|BC-Hax4911|Indonesia.Sulawesi|Life stage
 Macroglossum corythus lusteata|BC-Mel 0838|Indonesia.Sumatra|
 Macroglossum corythus|AYK-04-0380|India.Assam|
 Macroglossum corythus|MF-05-0015|Palau|ssp. luteata?
 Macroglossum|BC-Hax4905|Indonesia.Sulawesi|Life stage
 Macroglossum corythus pylene|BC-Mel 0840|Indonesia|
 Macroglossum corythus|BC-Mel 0710|Indonesia.Sulawesi Selatan|
 Macroglossum|BC-Hax4918|Laos|Life stage
 Macroglossum|BC-Hax4945|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4882|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4909|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4902|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0708|Indonesia|
 Macroglossum corythus lusteata|BC-Mel 0839|Indonesia.Sulawesi Selatan|
 Macroglossum corythus|ANIC Gen No. 003216|Australia.Queensland|
 Macroglossum|BC-Hax4887|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4942|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0705|Indonesia|
 Macroglossum corythus|BC-Mel 0706|Indonesia|
 Macroglossum pseudocorythus|BC-Mel 0915|Indonesia.Sulawesi|Alotype
 Macroglossum|BC-Hax4924|Indonesia.Sulawesi|Life stage
 Macroglossum corythus lusteata|BC-Mel 0836|Philippines.Leyte|
 Macroglossum|BC-Hax4937|Vietnam|Life stage
 Macroglossum corythus|AYK-04-0242|China.Taiwan|
 Macroglossum corythus lusteata|BC-Mel 0837|China.Taiwan|
 Macroglossum corythus|JCM-TWN-0038|China.Taiwan|ssp. luteata?
 Macroglossum corythus lusteata|BC-Mel 0833|Thailand.Chiang Mai|
 Macroglossum corythus lusteata|BC-Mel 0834|Vietnam|
 Macroglossum corythus|BC-Mel 0709|China.Guangxi|
 Macroglossum|BC-Hax4917|Vietnam|Life stage
 Macroglossum|BC-Hax4894|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4934|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax3638|Solomon Islands|
 Macroglossum corythus|BC-Mel 0696|Solomon Islands|
 Macroglossum corythus fulvicautata|BC-Mel 0821|Solomon Islands|
 Macroglossum corythus|BC-Mel1213|Solomon Islands|
 Macroglossum corythus fuscituta|BC-Mel 0870|New Caledonia|
 Macroglossum corythus|BC-Mel1214|Solomon Islands|
 Macroglossum corythus|BC-Hax3639|Solomon Islands|
 Macroglossum corythus|BC-Hax3640|Solomon Islands|
 Macroglossum corythus|BC-Mel 0697|Solomon Islands|
 Macroglossum tenebrosa|ANIC Gen No. 003229|Australia.Queensland|
 Macroglossum tenebrosa|ANIC Gen No. 003330|Australia.Queensland|
 Macroglossum tenebrosa|BC-LTM-100|Australia.Queensland|
 Macroglossum tenebrosa|BC-LTM-101|Australia.Queensland|
 Macroglossum tenebrosa|JP-05-0749|Australia.Queensland|
 Macroglossum tenebrosa|BC-Mel 0874|Indonesia.Papua|
 Macroglossum tenebrosa|BC-Hax3653|Indonesia|
 Macroglossum tenebrosa|BC-Hax3654|Indonesia|
 Macroglossum tenebrosa|BC-Hax3652|Indonesia|
 Macroglossum|BC-Hax3646|Indonesia.Sulawesi|
 Macroglossum sulawesica|BC-Mel 0471|Indonesia.Sulawesi|
 Macroglossum perplexum|BC-Mel 0930|Indonesia.Sulawesi Selatan|Holotype
 Macroglossum hemichroma|BC-Mel 0586|Indonesia.Sulawesi Selatan|
 Macroglossum sulai|BC-Mel 0980|Indonesia.Sulawesi|Paratype
 Macroglossum|BC-Hax4872|Indonesia.Sulawesi|Life stage
 Macroglossum hemichroma|BC-Mel 0579|Indonesia.Sulawesi|
 Macroglossum sulai|BC-Mel 0845|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0577|Indonesia.Sulawesi|
 Macroglossum perplexum|BC-Mel 0931|Indonesia.Sulawesi|Paratype
 Macroglossum sulai|BC-Mel 0844|Indonesia.Sulawesi|
 Macroglossum sulai|BC-Mel 0932|Indonesia.Sulawesi|Holotype
 Macroglossum sulai|BC-Hax4939|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4870|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Mel 0580|Indonesia.Sulawesi|Macroglossum sulawesica
 Macroglossum pyrrhosticta|BC-Mel1198|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel1197|China.Taiwan|
 Macroglossum saga|BC-Mel 0693|China.Hubei|
 Macroglossum saga|BC-Mel 0694|China.Guangxi|
 Macroglossum saga|BC-Mel 1056|China.Guangxi|
 Macroglossum saga|BC-Mel 1057|China.Guangxi|
 Macroglossum saga|BC-Mel 0788|Thailand.Nan|
 Macroglossum saga|BC-Hax4010|Malaysia|
 Macroglossum saga|BC-Hax3651|Thailand.Chiang Mai|
 Macroglossum saga|BC-Mel 0695|China.Hunan|
 Macroglossum saga|BC-Mel 1055|China|
 Macroglossum saga|BC-Hax3650|Thailand.Chiang Mai|
 Macroglossum semifasciata|BC-Hax3655|Thailand.Phrae|
 Macroglossum semifasciata|BC-Mel1199|Indonesia|
 Macroglossum semifasciata|BC-Hax3656|Thailand.Phrae|
 Macroglossum semifasciata|BC-EST0596|Thailand.Trat|
 Macroglossum semifasciata|BC-Hax3657|Thailand.Phrae|



Macroglossum semifasciata|BC-EST0596|Thailand.Trat|
 Macroglossum semifasciata|BC-Hax3657|Thailand.Phrae|
 Macroglossum semifasciata|BC-Mel 0988|Malaysia|
 Macroglossum semifasciata|BC-Mel1211|Indonesia.Bali|
 Macroglossum semifasciata|BC-Mel1212|Indonesia.Bali|
 Macroglossum semifasciata|BC-Mel 0989|Indonesia.Sumatra West|
 Macroglossum semifasciata|BC-Mel 0986|Indonesia.Sulawesi|
 Macroglossum BC-Mel 0902|Indonesia.Sulawesi Selatan|Macroglossum pseudonigellum- Holotype
 Macroglossum semifasciata|BC-Hax4952|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Hax4949|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Hax4946|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4947|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4931|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Mel 0985|Indonesia.Sulawesi|
 Macroglossum BC-Mel 0984|Indonesia.Sulawesi|Macroglossum pseudonigellum- Paratype
 Macroglossum nigellum|BC-Mel 0990|Indonesia.Sumatra West|
 Macroglossum nigellum speideli|BC-Mel 0861|Indonesia.Sulawesi Selatan|
 Macroglossum nigellum speideli|BC-Mel 0981|Indonesia.Sulawesi|Paratype
 Macroglossum nigellum speideli|BC-Mel 0901|Indonesia.Sulawesi|Holotype
 Macroglossum nigellum speideli|BC-Mel 0982|Indonesia.Sulawesi|Paratype
 Macroglossum nigellum|BC-Mel 0977|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0975|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0976|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0978|Indonesia.Sulawesi|
 Macroglossum nigellum speideli|BC-Mel 0900|Indonesia.Sulawesi|Alotype
 Macroglossum nigellum speideli|BC-Mel 0979|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Hax4024|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4025|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4026|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4027|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4948|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4950|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4951|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4893|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Mel 0983|Indonesia.Sulawesi|Macroglossum pseudonigellum- Paratype
 Macroglossum BC-Hax4923|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax5104|Laos.Houaphan|
 Macroglossum BC-Hax4015|Philippines|
 Macroglossum corythus|BC-Hax5102|Laos.Houaphan|
 Macroglossum BC-Hax4912|Vietnam|Life stage
 Macroglossum BC-Hax3658|Indonesia.Sulawesi|
 Macroglossum corythus lusteata|BC-Mel 0835|Laos|
 Macroglossum corythus lusteata|BC-Mel 0832|Indonesia.Jawa Barat|
 Macroglossum corythus|BC-Hax4863|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0581|Indonesia|
 Macroglossum BC-Hax4014|Philippines|
 Macroglossum BC-Hax4913|Vietnam|Life stage
 Macroglossum BC-Hax4915|Vietnam|Life stage
 Macroglossum sylvia|BC-Hax3641|Indonesia|
 Macroglossum pseudoluteata|BC-Mel 0906|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum pseudoluteata|BC-Mel 0905|Indonesia.Sulawesi|Holotype
 Macroglossum sylvia|BC-Hax3645|Indonesia|
 Macroglossum sylvia|BC-Hax3644|Indonesia|
 Macroglossum BC-Hax4869|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4921|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4935|Indonesia.Sulawesi|Life stage
 Macroglossum amoenum|BC-Mel 0938|Indonesia|
 Macroglossum heliophila divergens|BC-Mel 1069|India.Karnataka|
 Macroglossum heliophila|BC-Hax4008|Malaysia|
 Macroglossum fringilla|BC-Mel1357|Indonesia.Bali|
 Macroglossum fringilla|BC-Mel1358|Indonesia.Bali|
 Macroglossum heliophila|BC-Mel 0952|Vietnam|
 Macroglossum heliophila|BC-Mel 0473|Indonesia.Sumatra|
 Macroglossum heliophila|BC-Mel 0953|Indonesia|
 Macroglossum heliophila|BC-Hax4039|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0962|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Hax4038|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 1008|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0959|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0968|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0963|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0958|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0967|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0969|Indonesia.Sulawesi|
 Macroglossum BC-Hax4920|Indonesia.Sulawesi|Life stage
 Macroglossum melas pullius|US00455193|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00503995|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|84298|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00480608|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00459830|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|USNM ENT 00490591|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00455192|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00459522|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499573|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499555|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00506630|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00508535|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506420|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506560|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00505811|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00508338|Papua New Guinea.East Sepik|SPHI004



Macroglossum melas pullius|US00508338|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506685|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00459495|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00506661|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|USNM ENT 00731795|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|US00499385|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|67753|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00494185|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499193|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|86204|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|88905|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00503448|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|USNM ENT 00480610|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00480609|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|USNM ENT 00733433|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|USNM ENT 00733434|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|USNM ENT 00731791|Papua New Guinea.Chimbu|MOTH181
 Macroglossum arimasi|BC-Mel 0863|Philippines.Samar|
 Macroglossum arimasi|BC-Hax4052|Philippines|
 Macroglossum caldum philipinense|BC-Mel 0849|Indonesia.Sulawesi Selatan|
 Macroglossum melas pullius|US00499369|Papua New Guinea.Madang|SPHI004
 Macroglossum|USNM ENT 00733436|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731897|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731790|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731794|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00733435|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731792|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731793|Papua New Guinea.Chimbu|MOTH181
 Macroglossum clemensi|BC-Mel 0470|Indonesia.Sulawesi|
 Macroglossum clemensi|BC-Mel 0769|Indonesia.Sulawesi Selatan|Holotype
 Macroglossum hemichroma|BC-Mel 0855|Thailand.Chiang Mai|
 Macroglossum hemichroma|BC-Hax4029|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Mel 0571|Malaysia|
 Macroglossum hemichroma|BC-Mel 0575|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Mel 0576|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Mel 0574|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Hax4031|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Hax4028|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Mel 0572|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0573|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0854|Philippines.Bukidnon|
 Macroglossum hemichroma|BC-Hax4030|Indonesia.Sulawesi Utara|
 Macroglossum fritzei|BC-Hax4047|China|
 Macroglossum fritzei|BC-Hax4046|China|
 Macroglossum nycteris|BC-Hax3635|India|
 Macroglossum nycteris|BC-Hax3636|India|
 Macroglossum nycteris|ZA-0019|Pakistan|
 Macroglossum nycteris|BC-Hax3637|India|
 Macroglossum gyrans|BC-Hax3596|India|
 Macroglossum gyrans|BC-Hax3597|India|
 Macroglossum gyrans|BC-Hax3595|India|
 Macroglossum gyrans|BC-Mel1355|Maldives|
 Macroglossum gyrans|BC-Mel1353|Maldives|
 Macroglossum gyrans|BC-Mel 0764|India.Kerala|
 Macroglossum gyrans|BC-Mel 0763|Indonesia|
 Macroglossum gyrans|BC-Mel 0765|Thailand.Phrae|
 Macroglossum gyrans|BC-Mel 0766|Indonesia.Sulawesi Selatan|
 Macroglossum gyrans|BC-Hax4012|Laos|
 Macroglossum gyrans|BC-Hax3599|Thailand|
 Macroglossum kishidai|BC-Mel 0846|Indonesia.Sulawesi Selatan|
 Macroglossum kishidai|BC-Mel 0847|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum passalus|BC-Mel 0819|Laos|
 Macroglossum augarra|BC-Mel 0918|Indonesia.Papua|
 Macroglossum|BC-Mel1205|Laos|
 Macroglossum spilonotum|BC-Hax4006|Papua New Guinea|
 Macroglossum sitiene|BC-Hax3604|Thailand.Phrae|
 Macroglossum sitiene|BC-Hax3603|Myanmar|
 Macroglossum sitiene|BC-Mel1356|Maldives|
 Macroglossum sitiene|BC-Mel 0780|Laos|
 Macroglossum|BC-Mel1215|Indonesia|
 Macroglossum faro cottoni|BC-Hax4033|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4034|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4036|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4035|Indonesia.Sulawesi Utara|
 Macroglossum faro|BC-Mel 0916|Philippines.Leyte|Macroglossum leytensis- Holotype
 Macroglossum faro|BC-Mel 0917|Philippines.Leyte|Macroglossum leytensis- Alotype
 Macroglossum faro|BC-Mel1288|Indonesia|
 Macroglossum faro|BC-Mel 0937|Indonesia|
 Macroglossum faro|BC-Mel1287|Indonesia.Sumatra|
 Macroglossum faro|BC-Mel 0825|Laos|
 Macroglossum faro|BC-Hax4032|Laos|
 Macroglossum mitchellii imperator|BC-Hax3628|Vietnam|
 Macroglossum mitchellii imperator|AYK-04-0178|China.Taiwan|
 Macroglossum mitchellii imperator|BC-Hax3629|Malaysia|
 Macroglossum cadioui|BC-Mel 0773|Indonesia.Sulawesi|Paratype
 Macroglossum cadioui|BC-Hax4004|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Hax4001|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Hax4002|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Mel 0772|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum cadioui|BC-Hax4003|Indonesia.Sulawesi Utara|
 Macroglossum multifascia|BC-Mel 0770|Philippines.Samar|



Macroglossum multifascia|BC-Mel 0770|Philippines.Samar|
 Macroglossum multifascia|BC-Mel 0771|Indonesia.Sumatra|
 Macroglossum multifascia|BC-Hax4005|Malaysia|
 Macroglossum avicula|BC-Mel 0805|Indonesia.Jawa Barat|
 Macroglossum bombylans|AYK-04-0170|China.Taiwan|
 Macroglossum bombylans|AYK-04-0173|China.Taiwan|
 Macroglossum stellatarum|BC-EST0016|France.Midi-Pyrenees|
 Macroglossum stellatarum|IJK-02-5806|France.ex bred stock|
 Macroglossum stellatarum|BC ZSM Lep 21574|Germany.Bavaria|
 Macroglossum stellatarum|ZA-0020|Pakistan|
 Macroglossum stellatarum|BC-Hax3626|France|
 Macroglossum belis|BC-Hax5103|Laos.Houaphan|
 Macroglossum belis|BC-Hax3619|India|
 Macroglossum belis|BC-Hax5101|Laos.Houaphan|
 Macroglossum belis|ZA-0018|Pakistan|
 Macroglossum belis|AYK-04-0388|India.Andhra Pradesh|
 Macroglossum belis|BC-Mel 0692|India.Tamil Nadu|
 Macroglossum belis|BC-Hax4018|Thailand.Chiang Mai|
 Macroglossum belis|BC-Hax3620|Thailand.Phrae|
 Macroglossum belis|BC-Mel 0795|Thailand.Phrae|
 Macroglossum saga|BC-Mel1126|India.Karnataka|
 Macroglossum vacillans|ANIC Gen No. 003344|Australia.Queensland|
 Macroglossum vacillans|ANIC Gen No. 003345|Australia.Queensland|
 Macroglossum vacillans|BC-Mel 0664|Australia.Queensland|
 Macroglossum vacillans|BC-Mel 0662|Indonesia|
 Macroglossum vacillans|ANIC Gen No. 003238|Australia.Western Australia|
 Macroglossum vacillans|BC ZSM Lep 10457|Australia.Western Australia|
 Macroglossum vacillans|BC-Mel 0663|Indonesia|
 Macroglossum vacillans|BC ZSM Lep 10464|Australia.Northern Territory|
 Macroglossum vacillans|BC ZSM Lep 10470|Australia.Northern Territory|
 Macroglossum vacillans|BC-Mel 0661|Indonesia|
 Macroglossum vacillans|ANIC Gen No. 003177|Australia.Queensland|
 Macroglossum vacillans|BC-Hax3615|Australia.Queensland|
 Macroglossum vacillans|BC ZSM Lep 10570|Australia.Northern Territory|
 Macroglossum vacillans|BC ZSM Lep 02002|Australia.Queensland|
 Macroglossum vacillans|BC-Mel1192|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel1191|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel 0658|Indonesia.Sulawesi Selatan|
 Macroglossum vacillans|BC ZSM Lep 10533|Australia.Western Australia|
 Macroglossum vacillans|BC-Mel 0659|Indonesia|
 Macroglossum vacillans|BC ZSM Lep 13245|Australia.Northern Territory|
 Macroglossum vacillans|BC-Mel1193|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel 0660|Indonesia|
 Macroglossum vacillans|BC-Hax3616|Australia.Queensland|
 Macroglossum aquila|BC-Mel 0671|Indonesia|
 Macroglossum aquila|BC-Mel 0856|Indonesia.Sulawesi Selatan|
 Macroglossum aquila|BC-Mel 0857|Indonesia.Sulawesi|
 Macroglossum nemesis|BC-Hax4904|Indonesia.Sulawesi Life stage|
 Macroglossum nemesis|BC-Mel 0683|Vietnam.Vinh Phuc|
 Macroglossum nemesis|BC-Mel 0776|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0684|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0685|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0777|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Hax4049|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Hax4040|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0966|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Hax4041|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0630|Indonesia.Sumatra West|Macroglossum fringilla|
 Macroglossum heliophila|BC-Mel 0631|Indonesia.Sumatra West|Macroglossum fringilla|
 Macroglossum heliophila|BC-Mel 0632|Indonesia.Sumatra West|
 Macroglossum pyrhosticta|BC-Mel1324|Indonesia.Sumatra|
 Macroglossum lepidum|BC-Mel 0831|Philippines.Leyte|
 Macroglossum heliophila|BC-Mel 0964|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0965|Indonesia.Sulawesi|
 Macroglossum|BC-Hax4048|Indonesia.Sulawesi Utara|
 Macroglossum assimilis|BC-Mel 0775|Sri Lanka.Uva|
 Macroglossum assimilis|BC-Mel 1045|India.Karnataka|
 Macroglossum assimilis|BC-Mel1123|India.Karnataka|
 Macroglossum assimilis|AYK-04-0411|India|
 Macroglossum assimilis|BC-Mel 0774|Sri Lanka.Uva|
 Macroglossum assimilis|BC-Mel 1046|India.Karnataka|
 Macroglossum assimilis|MA05-09-02-81|India.Maharashtra|
 Macroglossum glaucoptera|BC-Mel 0790|Indonesia|
 Macroglossum loeffleri|BC-Mel 0907|Vietnam.Holotype|
 Macroglossum glaucoptera|BC-Mel 0670|Bhutan.Paro|
 Macroglossum glaucoptera|BC-Hax3609|Thailand.Phrae|
 Macroglossum glaucoptera|BC-Mel 0791|Indonesia.Sulawesi Selatan|
 Macroglossum loeffleri|BC-Mel 0908|Vietnam.Paratype|
 Macroglossum|BC-Mel 0903|Indonesia.Sulawesi|Macroglossum geofmartini- Holotype|
 Macroglossum prometheus|BC-Hax4019|Philippines|
 Macroglossum prometheus|BC-Mel 0691|Malaysia|
 Macroglossum prometheus lineata|ANIC Gen No. 003227|Australia.Queensland|
 Macroglossum prometheus lineata|USNM ENT 00676005|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676006|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676007|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676008|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|ANIC Gen No. 003226|Australia.Queensland|
 Macroglossum prometheus lineata|BC-LTM-103|Australia.Queensland|
 Macroglossum prometheus lineata|BC-LTM-102|Australia.Queensland|
 Macroglossum prometheus lineata|ANIC Gen No. 003228|Australia.Queensland|
 Macroglossum prometheus|BC-Hax4023|Indonesia.Sulawesi Utara|



Macroglossum prometheus|BC-Hax4023|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Mel 1007|Indonesia|
 Macroglossum prometheus|BC-Hax3600|Indonesia|
 Macroglossum prometheus|BC-Mel 0688|Indonesia|
 Macroglossum prometheus|BC-Mel 0689|Indonesia|
 Macroglossum paukstadorum|BC-Mel 0826|Indonesia|Paratype
 Macroglossum paukstadorum|BC-Mel 0934|Indonesia|Holotype
 Macroglossum prometheus|BC-Mel 0690|Indonesia|
 Macroglossum prometheus|BC-Hax4021|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Hax4022|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Mel 0687|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Hax3602|Indonesia|
 Macroglossum prometheus|BC-Mel 0686|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Mel 1004|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Hax3601|Indonesia|
 Macroglossum nubilum|BC-Hax4007|Papua New Guinea|
 Macroglossum nubilum|ANIC Gen No. 003222|Australia.Queensland|
 Macroglossum affictitia|BC-Hax3593|Thailand|
 Macroglossum affictitia|BC-Hax3594|Thailand.Phrae|
 Macroglossum affictitia|BC-Mel 0848|Thailand.Phrae|
 Macroglossum affictitia|BC-Hax4020|Thailand.Chiang Mai|
 Macroglossum reithi|BC-Hax4044|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4043|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4042|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4037|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Mel 0973|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0970|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0972|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0971|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0974|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Hax4045|Indonesia.Sulawesi Utara|
 Macroglossum schnitzleri|BC-Mel 0804|Indonesia|
 Macroglossum hirundo lifuensis|BC-Mel 0656|New Caledonia|
 Macroglossum hirundo lifuensis|BC-Mel 0657|New Caledonia|
 Macroglossum dohertyi doddi|BC-LTM-122|Australia.Queensland|
 Macroglossum dohertyi doddi|BC-LTM-123|Australia.Queensland|
 Macroglossum dohertyi|BC-Mel 0991|Indonesia.Papua|
 Macroglossum dohertyi|BC-Mel 0992|Indonesia.Papua|
 Macroglossum dohertyi|BC-Mel 0993|Indonesia|
 Macroglossum dohertyi|BC-Mel 0994|Indonesia|
 Macroglossum hirundo|MF-05-0018|Fiji|
 Macroglossum hirundo|BC-Mel 0935|Tonga|ssp vitiense
 Macroglossum moecki|BC-Mel 0998|Indonesia.Papua|
 Macroglossum moecki|BC-Mel 0999|Indonesia.Papua|
 Macroglossum hirundo errans|BC-Hax4011|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003185|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003329|Australia.Queensland|
 Macroglossum hirundo errans|BC-Mel 0652|Australia.Queensland|Macroglossum fringilla
 Macroglossum hirundo lifuensis|MF-05-0011|Vanuatu|
 Macroglossum hirundo lifuensis|MF-05-0028|Vanuatu|
 Macroglossum rectans|ANIC Gen No. 003221|Australia.Queensland|
 Macroglossum hirundo|BC-Mel 0461|Australia|
 Macroglossum rectans|ANIC Gen No. 003187|Australia.Queensland|
 Macroglossum rectans|ANIC Gen No. 003189|Australia.Queensland|
 Macroglossum rectans|ANIC Gen No. 003190|Australia.Queensland|
 Macroglossum rectans|BC-Mel 0654|Indonesia|
 Macroglossum rectans|BC-Mel 0655|Indonesia|
 Macroglossum hirundo|BC-Hax4017|French Polynesia|rectans?
 Macroglossum rectans|BC-Mel 0653|Indonesia|
 Macroglossum rectans|BC-Mel 0814|Indonesia|
 Macroglossum stevensi|BC-Mel 0997|Indonesia.Papua|
 Macroglossum stevensi|BC-Mel 0995|Indonesia.Papua|
 Macroglossum stevensi|BC-Mel 0996|Indonesia.Papua|
 Macroglossum kitchingi|BC-Hax4053|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Hax4056|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Hax4054|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Mel 0629|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0628|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0808|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0627|Indonesia.Sulawesi|
 Macroglossum kitchingi|BC-Hax4055|Indonesia.Sulawesi Utara|
 Macroglossum mediovitita|BC-Mel 0809|Indonesia.Jawa Barat|
 Macroglossum mediovitita|BC-Mel 0810|Philippines|
 Macroglossum mediovitita|BC-Hax4050|Indonesia.Sulawesi Utara|
 Macroglossum mediovitita|BC-Hax4051|Indonesia.Sulawesi Utara|
 Macroglossum neotroglodytus|BC-Mel 0472|China.Guangxi|
 Macroglossum neotroglodytus|BC-Mel 0883|Laos|
 Macroglossum neotroglodytus|BC-Hax5096|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax5097|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax5095|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax3610|Malaysia|
 Macroglossum pyrrhosticta|BC-Mel 0797|Laos|
 Macroglossum pyrrhosticta|BC-Mel1320|Indonesia|
 Macroglossum pyrrhosticta|BC-Mel1322|Indonesia|
 Macroglossum pyrrhosticta|BC-Mel1323|Indonesia.Bali|
 Macroglossum pyrrhosticta|BC-Mel1327|Indonesia.Bali|
 Macroglossum pyrrhosticta|BC-Mel1328|Indonesia.Bali|
 Macroglossum pyrrhosticta|IJK-04-0002|China|
 Macroglossum pyrrhosticta|BC-Mel 0955|China.Guangxi|
 Macroglossum pyrrhosticta|BC-Mel 0957|China.Guangxi|
 Macroglossum pyrrhosticta|BC-Mel 0799|Thailand.Phrae|
 Macroglossum pyrrhosticta|TCM-TM1-0038|China.Taiwan|



Macroglossum pyrrhosticta|BC-Mel 0799|Thailand.Phrae|
 Macroglossum pyrrhosticta|JCM-TWN-0039|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel 0852|Philippines.Samar|
 Macroglossum pyrrhosticta|BC-Mel 0800|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel 0667|Japan.Yamanashi-ken|
 Macroglossum pyrrhosticta|BC-Mel 0669|Bhutan.Parol|
 Macroglossum pyrrhosticta|BC-Mel 0798|Nepal|
 Macroglossum pyrrhosticta|BC-Mel 0851|Philippines.Samar|
 Macroglossum pyrrhosticta|BC-Mel 0954|China.Yunnan|
 Macroglossum pyrrhosticta|BC-Mel 0956|China.Hunan|
 Macroglossum pyrrhosticta|DB-03-2017|United States.Hawaii|
 Macroglossum pyrrhosticta|BC-Mel1351|Thailand.Chiang Mai|
 Macroglossum pyrrhosticta|BC-Mel1319|Indonesia.Sumatra|
 Macroglossum variegatum|BC-Hax3606|Thailand.Phrae|
 Macroglossum variegatum|BC-Mel 0787|Nepal|
 Macroglossum variegatum|BC-Mel 0853|Indonesia.Sumatra|
 Macroglossum variegatum|BC-Mel 0786|Laos|
 Macroglossum variegatum|BC-Mel 0960|Malaysia|
 Macroglossum variegatum|BC-Hax3605|Thailand.Phrae|
 Macroglossum variegatumJH01|BC-Hax3634|Philippines|
 Macroglossum limata|BC-Mel 0644|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0645|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0647|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0802|Indonesia.Sulawesi Selatan|
 Macroglossum limata|BC-Mel 0646|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0801|Thailand.Puket|
 Macroglossum limata|BC-Mel 0803|Indonesia.Sumatra|
 Macroglossum limata|BC-Hax3607|Malaysia|
 Macroglossum troglodytus|ANIC Gen No. 003212|Australia.Queensland|
 Macroglossum insipida|BC-Mel 0675|Indonesia.Sulawesi Selatan|
 Macroglossum insipida|BC-Mel 0676|Indonesia.Sulawesi Selatan|
 Macroglossum insipida|BC-Hax3631|Indonesia|
 Macroglossum insipida|BC-Hax3632|Indonesia|
 Macroglossum insipida|BC-Mel 0887|Indonesia.Papua|
 Macroglossum insipida|BC-Mel 0884|Philippines.Leyte|
 Macroglossum insipida|BC-Hax3633|Philippines|
 Macroglossum insipida|BC-Mel 1068|India.Karnataka|
 Macroglossum vicinum piepersi|BC-Mel 0651|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0635|Indonesia.Sumatra West|
 Macroglossum pyrrhosticta|BC-Mel1321|Indonesia|
 Macroglossum insipida|BC-Mel 0637|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0638|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0779|Indonesia.Sumatra|
 Macroglossum vicinum piepersi|BC-Mel 0650|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0649|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0648|Indonesia.Sumatra West|
 Macroglossum neotroglodytus|BC-Hax5100|Laos.Khammouan|
 Macroglossum neotroglodytus|AYK-04-0381|India.Assam|
 Macroglossum insipida|BC-Mel 0643|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0641|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0640|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0639|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0636|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0642|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum vicinum piepersi|BC-Mel 0476|
 Macroglossum insipida papuana|89084|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|84093|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|USNM ENT 00676004|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|83080|Papua New Guinea.Madang|SPHI009
 Macroglossum alcedo|BC-LTM-121|Australia.Queensland|
 Macroglossum alcedo|BC-JT-23M|Australia.Queensland|
 Macroglossum pyrrhosticta|BC-Mel1325|Indonesia.Sumatra|
 Macroglossum vicinum piepersi|BC-Hax4009|Malaysia|
 Macroglossum|BC-Mel 0951|Malaysia.Sabah|
 Macroglossum pachycerus|BC-Mel 0477|Madagascar|
 Macroglossum pachycerus|BC-Basq0552|Madagascar|
 Macroglossum meeki|BC-Mel 0875|Indonesia.Papua|
 Macroglossum trochilus|BC-MNHJJP0127|Malawi|
 Macroglossum aesalon|BC-Basq0561|Madagascar|
 Macroglossum milvus|BC-EST0584|Reunion|
 Macroglossum milvus|BC-Hax3612|Reunion|
 Macroglossum milvus|BC-Hax3611|Reunion|
 Macroglossum melanoleuca|BC-Mel 0878|Indonesia|Holotype
 Macroglossum micacea|ANIC Gen No. 003203|Australia.Queensland|
 Macroglossum napolovi|BC-Mel 0864|Vietnam|Paratype
 Macroglossum napolovi|BC-Mel 0927|Vietnam|Holotype
 Macroglossum napolovi|BC-Mel 0928|Vietnam|Alotype
 Macroglossum kadneri|BC-Mel 0924|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum kadneri|BC-Mel 0921|Indonesia.Sulawesi|Holotype
 Macroglossum palawana|BC-Mel 0926|Philippines.Palawan|Alotype
 Macroglossum trigi|BC-Mel 0920|Indonesia.Sulawesi|Paratype
 Macroglossum kadneri|BC-Mel 0922|Indonesia.Sulawesi|Paratype
 Macroglossum kadneri|BC-Mel 0923|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum palawana|BC-Mel 0925|Philippines.Palawan|Holotype
 Macroglossum trigi|BC-Mel 0919|Indonesia.Sulawesi|Holotype
 Macroglossum|BC-Hax4907|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4929|Indonesia.Sulawesi|Life stage
 Macroglossum haxairei|BC-Hax4860|Indonesia.Sulawesi|Paratype
 Macroglossum haxairei|BC-Mel 0911|Indonesia.Sulawesi|Paratype
 Macroglossum eggeri|BC-Mel 0912|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum eggeri|BC-Mel 0910|Indonesia.Sulawesi|Holotype





Specimen Identification Request

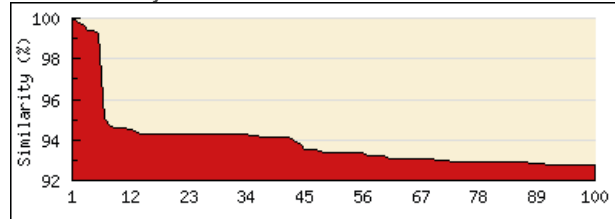
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>assimilis</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>assimilis</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>assimilis</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>assimilis</i>	99.39
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>assimilis</i>	99.37
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>assimilis</i>	99.23
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>glaucoptera</i>	95.02
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>glaucoptera</i>	94.78
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>loeffleri</i>	94.62
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum		94.62
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>melaspullius</i>	94.57
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>loeffleri</i>	94.5
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>glaucoptera</i>	94.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>melaspullius</i>	94.32
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>melaspullius</i>	94.32
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>melaspullius</i>	94.32
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>melaspullius</i>	94.32
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>melaspullius</i>	94.32
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>melaspullius</i>	94.32
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>melaspullius</i>	94.32

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Macroglossum belis
(Linnaeus, 1758)



BOLD TaxonID Tree

Project : SEARCH: Tax(Macroglossum)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 629
Species count : 90
Genus count : 1
Family count : 1
Unidentified : 96



MacroGLOSSUM micacea|ANIC Gen No. 003175|Australia.Queensland|
 MacroGLOSSUM haxairei|BC-Mel 0582|Indonesia.Sulawesi Selatan|
 MacroGLOSSUM haxairei|BC-Mel 0868|Indonesia.Sulawesi|
 MacroGLOSSUM passalus|BC-Mel 0475|Japan.Okinawa|
 MacroGLOSSUM belis|BC-Mel 0796|Thailand.Chiang Mai|
 MacroGLOSSUM aquila|BC-Mel 0672|Indonesia.Sulawesi|
 MacroGLOSSUM kitchingi|BC-Mel 0626|Indonesia.Sulawesi|
 MacroGLOSSUM mediiovitta|BC-Mel 0634|Indonesia.Sulawesi Selatan|
 MacroGLOSSUM mediiovitta|BC-Mel 0812|Indonesia.Sulawesi Selatan|
 MacroGLOSSUM neotroglodytus|BC-Mel 0880|Nepal|
 MacroGLOSSUM neotroglodytus|BC-Mel 0881|Philippines.Leyte|
 MacroGLOSSUM pyrrhosticta|BC-Mel 0668|Vietnam.Vinh Phuc|
 MacroGLOSSUM hirundo errans|ANIC Gen No. 003257|Australia.Queensland|
 MacroGLOSSUM hirundo errans|ANIC Gen No. 003176|Australia.Queensland|
 MacroGLOSSUM hirundo errans|ANIC Gen No. 003184|Australia.Queensland|
 MacroGLOSSUM prometheus|BC-Mel 0816|Indonesia.Jawa Barat|
 MacroGLOSSUM prometheus|BC-Mel 0818|Indonesia|
 MacroGLOSSUM albolineata|BC-Mel 0877|Indonesia.Papua|
 MacroGLOSSUM reithi|BC-Mel 0806|Indonesia.Sulawesi Selatan|Paratype
 MacroGLOSSUM reithi|BC-Mel 0807|Indonesia.Sulawesi Selatan|
 MacroGLOSSUM hemichroma|BC-Mel 0578|Indonesia.Sulawesi|
 MacroGLOSSUM|BC-Hax4919|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM haxairei|BC-Mel 0913|Indonesia.Sulawesi|Alotype
 MacroGLOSSUM|BC-Hax4943|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4944|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4889|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4866|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM corythus|BC-Mel 0698|Indonesia.Sulawesi Selatan|
 MacroGLOSSUM|BC-Hax4898|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4899|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4897|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4888|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4864|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4900|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4922|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4941|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4895|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4867|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4859|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4901|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM corythus|BC-Hax3643|Indonesia.Sulawesi|
 MacroGLOSSUM|BC-Hax4933|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4878|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4879|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4910|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4896|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4880|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4908|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM corythus|USNM ENT 00676001|Papua New Guinea.Madang|SPHI008
 MacroGLOSSUM|BC-Hax4875|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM corythus|BC-Hax4861|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM corythus pylene|BC-Mel 0842|Indonesia|
 MacroGLOSSUM corythus pylene|BC-Mel 0843|Indonesia|
 MacroGLOSSUM|BC-Hax4890|Philippines.Leyte|Life stage
 MacroGLOSSUM|BC-Hax4892|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4865|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM corythus|BC-Mel 0871|Indonesia.Sulawesi Selatan|
 MacroGLOSSUM|BC-Hax4903|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4925|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM corythus|USNM ENT 00676002|Papua New Guinea.Madang|SPHI008
 MacroGLOSSUM corythus|BC-Mel 0707|Indonesia.Papua|
 MacroGLOSSUM corythus|BC-Mel 0701|Indonesia.Sulawesi Selatan|
 MacroGLOSSUM|BC-Hax4936|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4886|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4881|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4871|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM corythus|USNM ENT 00676003|Papua New Guinea.Madang|SPHI008
 MacroGLOSSUM corythus|BC-Hax4928|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4877|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4873|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4927|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4932|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM corythus|USNM ENT 00676000|Papua New Guinea.Madang|SPHI008
 MacroGLOSSUM|BC-Hax4874|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4940|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM pseudocorythus|BC-Mel 0914|Indonesia.Sulawesi|Holotype
 MacroGLOSSUM|BC-Hax4884|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4930|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4885|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM|BC-Hax4883|Indonesia.Sulawesi|Life stage
 MacroGLOSSUM corythus|BC-Hax5105|Laos.Houaphan|
 MacroGLOSSUM corythus|BC-Hax3648|Malaysia|ssp. luteata?
 MacroGLOSSUM corythus|BC-Hax3649|Vietnam|ssp. luteata?
 MacroGLOSSUM corythus|BC-Hax3659|Malaysia|ssp. luteata?
 MacroGLOSSUM corythus|BC-Mel 0703|Malaysia|
 MacroGLOSSUM corythus|BC-Mel 0702|Malaysia|
 MacroGLOSSUM corythus|BC-Hax5099|Laos.Houaphan|
 MacroGLOSSUM corythus|BC-Hax4013|Philippines|
 MacroGLOSSUM corvthus|BC-Hax4862|Indonesia.Sulawesi|Life stage



Macroglossum corythus|BC-Hax4013|Philippines|
 Macroglossum corythus|BC-Hax4862|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax5098|Laos.Houaphan|
 Macroglossum corythus|BC-Hax5106|Laos.Houaphan|
 Macroglossum|BC-Hax4916|Vietnam|Life stage
 Macroglossum corythus|BC-Mel 0704|China.Guangxi|
 Macroglossum|BC-Hax4891|Philippines.Leyte|Life stage
 Macroglossum|BC-Hax4914|Vietnam|Life stage
 Macroglossum|BC-Hax4938|Vietnam|Life stage
 Macroglossum corythus|BC-Mel 0699|Indonesia|
 Macroglossum corythus|BC-Mel 0700|Indonesia|
 Macroglossum|BC-Hax4911|Indonesia.Sulawesi|Life stage
 Macroglossum corythus lusteata|BC-Mel 0838|Indonesia.Sumatra|
 Macroglossum corythus|AYK-04-0380|India.Assam|
 Macroglossum corythus|MF-05-0015|Palau|ssp. luteata?
 Macroglossum|BC-Hax4905|Indonesia.Sulawesi|Life stage
 Macroglossum corythus pylene|BC-Mel 0840|Indonesia|
 Macroglossum corythus|BC-Mel 0710|Indonesia.Sulawesi Selatan|
 Macroglossum|BC-Hax4918|Laos|Life stage
 Macroglossum|BC-Hax4945|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4882|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4909|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4902|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0708|Indonesia|
 Macroglossum corythus lusteata|BC-Mel 0839|Indonesia.Sulawesi Selatan|
 Macroglossum corythus|ANIC Gen No. 003216|Australia.Queensland|
 Macroglossum|BC-Hax4887|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4942|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0705|Indonesia|
 Macroglossum corythus|BC-Mel 0706|Indonesia|
 Macroglossum pseudocorythus|BC-Mel 0915|Indonesia.Sulawesi|Alotype
 Macroglossum|BC-Hax4924|Indonesia.Sulawesi|Life stage
 Macroglossum corythus lusteata|BC-Mel 0836|Philippines.Leyte|
 Macroglossum|BC-Hax4937|Vietnam|Life stage
 Macroglossum corythus|AYK-04-0242|China.Taiwan|
 Macroglossum corythus lusteata|BC-Mel 0837|China.Taiwan|
 Macroglossum corythus|JCM-TWN-0038|China.Taiwan|ssp. luteata?
 Macroglossum corythus lusteata|BC-Mel 0833|Thailand.Chiang Mai|
 Macroglossum corythus lusteata|BC-Mel 0834|Vietnam|
 Macroglossum corythus|BC-Mel 0709|China.Guangxi|
 Macroglossum|BC-Hax4917|Vietnam|Life stage
 Macroglossum|BC-Hax4894|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4934|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax3638|Solomon Islands|
 Macroglossum corythus|BC-Mel 0696|Solomon Islands|
 Macroglossum corythus fulvicautata|BC-Mel 0821|Solomon Islands|
 Macroglossum corythus|BC-Mel1213|Solomon Islands|
 Macroglossum corythus fuscituta|BC-Mel 0870|New Caledonia|
 Macroglossum corythus|BC-Mel1214|Solomon Islands|
 Macroglossum corythus|BC-Hax3639|Solomon Islands|
 Macroglossum corythus|BC-Hax3640|Solomon Islands|
 Macroglossum corythus|BC-Mel 0697|Solomon Islands|
 Macroglossum tenebrosa|ANIC Gen No. 003229|Australia.Queensland|
 Macroglossum tenebrosa|ANIC Gen No. 003330|Australia.Queensland|
 Macroglossum tenebrosa|BC-LTM-100|Australia.Queensland|
 Macroglossum tenebrosa|BC-LTM-101|Australia.Queensland|
 Macroglossum tenebrosa|JP-05-0749|Australia.Queensland|
 Macroglossum tenebrosa|BC-Mel 0874|Indonesia.Papua|
 Macroglossum tenebrosa|BC-Hax3653|Indonesia|
 Macroglossum tenebrosa|BC-Hax3654|Indonesia|
 Macroglossum tenebrosa|BC-Hax3652|Indonesia|
 Macroglossum|BC-Hax3646|Indonesia.Sulawesi|
 Macroglossum sulawesica|BC-Mel 0471|Indonesia.Sulawesi|
 Macroglossum perplexum|BC-Mel 0930|Indonesia.Sulawesi Selatan|Holotype
 Macroglossum hemichroma|BC-Mel 0586|Indonesia.Sulawesi Selatan|
 Macroglossum sulai|BC-Mel 0980|Indonesia.Sulawesi|Paratype
 Macroglossum|BC-Hax4872|Indonesia.Sulawesi|Life stage
 Macroglossum hemichroma|BC-Mel 0579|Indonesia.Sulawesi|
 Macroglossum sulai|BC-Mel 0845|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0577|Indonesia.Sulawesi|
 Macroglossum perplexum|BC-Mel 0931|Indonesia.Sulawesi|Paratype
 Macroglossum sulai|BC-Mel 0844|Indonesia.Sulawesi|
 Macroglossum sulai|BC-Mel 0932|Indonesia.Sulawesi|Holotype
 Macroglossum sulai|BC-Hax4939|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4870|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Mel 0580|Indonesia.Sulawesi|Macroglossum sulawesica
 Macroglossum pyrrhosticta|BC-Mel1198|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel1197|China.Taiwan|
 Macroglossum saga|BC-Mel 0693|China.Hubei|
 Macroglossum saga|BC-Mel 0694|China.Guangxi|
 Macroglossum saga|BC-Mel 1056|China.Guangxi|
 Macroglossum saga|BC-Mel 1057|China.Guangxi|
 Macroglossum saga|BC-Mel 0788|Thailand.Nan|
 Macroglossum saga|BC-Hax4010|Malaysia|
 Macroglossum saga|BC-Hax3651|Thailand.Chiang Mai|
 Macroglossum saga|BC-Mel 0695|China.Hunan|
 Macroglossum saga|BC-Mel 1055|China|
 Macroglossum saga|BC-Hax3650|Thailand.Chiang Mai|
 Macroglossum semifasciata|BC-Hax3655|Thailand.Phrae|
 Macroglossum semifasciata|BC-Mel1199|Indonesia|
 Macroglossum semifasciata|BC-Hax3656|Thailand.Phrae|
 Macroglossum semifasciata|BC-EST0596|Thailand.Trat|
 Macroglossum semifasciata|BC-Hax3657|Thailand.Phrae|



Macroglossum semifasciata|BC-EST0596|Thailand.Trat|
 Macroglossum semifasciata|BC-Hax3657|Thailand.Phrae|
 Macroglossum semifasciata|BC-Mel 0988|Malaysia|
 Macroglossum semifasciata|BC-Mel1211|Indonesia.Bali|
 Macroglossum semifasciata|BC-Mel1212|Indonesia.Bali|
 Macroglossum semifasciata|BC-Mel 0989|Indonesia.Sumatra West|
 Macroglossum semifasciata|BC-Mel 0986|Indonesia.Sulawesi|
 Macroglossum BC-Mel 0902|Indonesia.Sulawesi Selatan|Macroglossum pseudonigellum- Holotype
 Macroglossum semifasciata|BC-Hax4952|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Hax4949|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Hax4946|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4947|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4931|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Mel 0985|Indonesia.Sulawesi|
 Macroglossum BC-Mel 0984|Indonesia.Sulawesi|Macroglossum pseudonigellum- Paratype
 Macroglossum nigellum|BC-Mel 0990|Indonesia.Sumatra West|
 Macroglossum nigellum speideli|BC-Mel 0861|Indonesia.Sulawesi Selatan|
 Macroglossum nigellum speideli|BC-Mel 0981|Indonesia.Sulawesi|Paratype
 Macroglossum nigellum speideli|BC-Mel 0901|Indonesia.Sulawesi|Holotype
 Macroglossum nigellum speideli|BC-Mel 0982|Indonesia.Sulawesi|Paratype
 Macroglossum nigellum|BC-Mel 0977|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0975|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0976|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0978|Indonesia.Sulawesi|
 Macroglossum nigellum speideli|BC-Mel 0900|Indonesia.Sulawesi|Alotype
 Macroglossum nigellum speideli|BC-Mel 0979|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Hax4024|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4025|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4026|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4027|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4948|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4950|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4951|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4893|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Mel 0983|Indonesia.Sulawesi|Macroglossum pseudonigellum- Paratype
 Macroglossum BC-Hax4923|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax5104|Laos.Houaphan|
 Macroglossum BC-Hax4015|Philippines|
 Macroglossum corythus|BC-Hax5102|Laos.Houaphan|
 Macroglossum BC-Hax4912|Vietnam|Life stage
 Macroglossum BC-Hax3658|Indonesia.Sulawesi|
 Macroglossum corythus lusteata|BC-Mel 0835|Laos|
 Macroglossum corythus lusteata|BC-Mel 0832|Indonesia.Jawa Barat|
 Macroglossum corythus|BC-Hax4863|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0581|Indonesia|
 Macroglossum BC-Hax4014|Philippines|
 Macroglossum BC-Hax4913|Vietnam|Life stage
 Macroglossum BC-Hax4915|Vietnam|Life stage
 Macroglossum sylvia|BC-Hax3641|Indonesia|
 Macroglossum pseudoluteata|BC-Mel 0906|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum pseudoluteata|BC-Mel 0905|Indonesia.Sulawesi|Holotype
 Macroglossum sylvia|BC-Hax3645|Indonesia|
 Macroglossum sylvia|BC-Hax3644|Indonesia|
 Macroglossum BC-Hax4869|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4921|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4935|Indonesia.Sulawesi|Life stage
 Macroglossum amoenum|BC-Mel 0938|Indonesia|
 Macroglossum heliophila divergens|BC-Mel 1069|India.Karnataka|
 Macroglossum heliophila|BC-Hax4008|Malaysia|
 Macroglossum fringilla|BC-Mel1357|Indonesia.Bali|
 Macroglossum fringilla|BC-Mel1358|Indonesia.Bali|
 Macroglossum heliophila|BC-Mel 0952|Vietnam|
 Macroglossum heliophila|BC-Mel 0473|Indonesia.Sumatra|
 Macroglossum heliophila|BC-Mel 0953|Indonesia|
 Macroglossum heliophila|BC-Hax4039|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0962|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Hax4038|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 1008|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0959|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0968|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0963|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0958|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0967|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0969|Indonesia.Sulawesi|
 Macroglossum BC-Hax4920|Indonesia.Sulawesi|Life stage
 Macroglossum melas pullius|US00455193|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00503995|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|84298|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00480608|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00459830|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|USNM ENT 00490591|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00455192|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00459522|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499573|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499555|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00506630|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00508535|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506420|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506560|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00505811|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00508338|Papua New Guinea.East Sepik|SPHI004



Macroglossum melas pullius|US00508338|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506685|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00459495|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00506661|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|USNM ENT 00731795|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|US00499385|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|67753|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00494185|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499193|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|86204|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|88905|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00503448|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|USNM ENT 00480610|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00480609|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|USNM ENT 00733433|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|USNM ENT 00733434|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|USNM ENT 00731791|Papua New Guinea.Chimbu|MOTH181
 Macroglossum arimasi|BC-Mel 0863|Philippines.Samar|
 Macroglossum arimasi|BC-Hax4052|Philippines|
 Macroglossum caldum philipinense|BC-Mel 0849|Indonesia.Sulawesi Selatan|
 Macroglossum melas pullius|US00499369|Papua New Guinea.Madang|SPHI004
 Macroglossum|USNM ENT 00733436|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731897|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731790|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731794|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00733435|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731792|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731793|Papua New Guinea.Chimbu|MOTH181
 Macroglossum clemensi|BC-Mel 0470|Indonesia.Sulawesi|
 Macroglossum clemensi|BC-Mel 0769|Indonesia.Sulawesi Selatan|Holotype
 Macroglossum hemichroma|BC-Mel 0855|Thailand.Chiang Mai|
 Macroglossum hemichroma|BC-Hax4029|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Mel 0571|Malaysia|
 Macroglossum hemichroma|BC-Mel 0575|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Mel 0576|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Mel 0574|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Hax4031|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Hax4028|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Mel 0572|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0573|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0854|Philippines.Bukidnon|
 Macroglossum hemichroma|BC-Hax4030|Indonesia.Sulawesi Utara|
 Macroglossum fritzei|BC-Hax4047|China|
 Macroglossum fritzei|BC-Hax4046|China|
 Macroglossum nycteris|BC-Hax3635|India|
 Macroglossum nycteris|BC-Hax3636|India|
 Macroglossum nycteris|ZA-0019|Pakistan|
 Macroglossum nycteris|BC-Hax3637|India|
 Macroglossum gyrans|BC-Hax3596|India|
 Macroglossum gyrans|BC-Hax3597|India|
 Macroglossum gyrans|BC-Hax3595|India|
 Macroglossum gyrans|BC-Mel1355|Maldives|
 Macroglossum gyrans|BC-Mel1353|Maldives|
 Macroglossum gyrans|BC-Mel 0764|India.Kerala|
 Macroglossum gyrans|BC-Mel 0763|Indonesia|
 Macroglossum gyrans|BC-Mel 0765|Thailand.Phrae|
 Macroglossum gyrans|BC-Mel 0766|Indonesia.Sulawesi Selatan|
 Macroglossum gyrans|BC-Hax4012|Laos|
 Macroglossum gyrans|BC-Hax3599|Thailand|
 Macroglossum kishidai|BC-Mel 0846|Indonesia.Sulawesi Selatan|
 Macroglossum kishidai|BC-Mel 0847|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum passalus|BC-Mel 0819|Laos|
 Macroglossum augarra|BC-Mel 0918|Indonesia.Papua|
 Macroglossum|BC-Mel1205|Laos|
 Macroglossum spilonotum|BC-Hax4006|Papua New Guinea|
 Macroglossum sitiene|BC-Hax3604|Thailand.Phrae|
 Macroglossum sitiene|BC-Hax3603|Myanmar|
 Macroglossum sitiene|BC-Mel1356|Maldives|
 Macroglossum sitiene|BC-Mel 0780|Laos|
 Macroglossum|BC-Mel1215|Indonesia|
 Macroglossum faro cottoni|BC-Hax4033|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4034|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4036|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4035|Indonesia.Sulawesi Utara|
 Macroglossum faro|BC-Mel 0916|Philippines.Leyte|Macroglossum leytensis- Holotype
 Macroglossum faro|BC-Mel 0917|Philippines.Leyte|Macroglossum leytensis- Alotype
 Macroglossum faro|BC-Mel1288|Indonesia|
 Macroglossum faro|BC-Mel 0937|Indonesia|
 Macroglossum faro|BC-Mel1287|Indonesia.Sumatra|
 Macroglossum faro|BC-Mel 0825|Laos|
 Macroglossum faro|BC-Hax4032|Laos|
 Macroglossum mitchellii imperator|BC-Hax3628|Vietnam|
 Macroglossum mitchellii imperator|AYK-04-0178|China.Taiwan|
 Macroglossum mitchellii imperator|BC-Hax3629|Malaysia|
 Macroglossum cadioui|BC-Mel 0773|Indonesia.Sulawesi|Paratype
 Macroglossum cadioui|BC-Hax4004|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Hax4001|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Hax4002|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Mel 0772|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum cadioui|BC-Hax4003|Indonesia.Sulawesi Utara|
 Macroglossum multifascia|BC-Mel 0770|Philippines.Samar|



Macroglossum multifascia|BC-Mel 0770|Philippines.Samar|
 Macroglossum multifascia|BC-Mel 0771|Indonesia.Sumatra|
 Macroglossum multifascia|BC-Hax4005|Malaysia|
 Macroglossum avicula|BC-Mel 0805|Indonesia.Jawa Barat|
 Macroglossum bombylans|AYK-04-0170|China.Taiwan|
 Macroglossum bombylans|AYK-04-0173|China.Taiwan|
 Macroglossum stellatarum|BC-EST0016|France.Midi-Pyrenees|
 Macroglossum stellatarum|IJK-02-5806|France.ex bred stock|
 Macroglossum stellatarum|BC ZSM Lep 21574|Germany.Bavaria|
 Macroglossum stellatarum|ZA-0020|Pakistan|
 Macroglossum stellatarum|BC-Hax3626|France|
 Macroglossum belis|BC-Hax5103|Laos.Houaphan|
 Macroglossum belis|BC-Hax3619|India|
 Macroglossum belis|BC-Hax5101|Laos.Houaphan|
 Macroglossum belis|ZA-0018|Pakistan|
 Macroglossum belis|AYK-04-0388|India.Andhra Pradesh|
 Macroglossum belis|BC-Mel 0692|India.Tamil Nadu|
 Macroglossum belis|BC-Hax4018|Thailand.Chiang Mai|
 Macroglossum belis|BC-Hax3620|Thailand.Phrae|
 Macroglossum belis|BC-Mel 0795|Thailand.Phrae|
 Macroglossum saga|BC-Mel1126|India.Karnataka|
 Macroglossum vacillans|ANIC Gen No. 003344|Australia.Queensland|
 Macroglossum vacillans|ANIC Gen No. 003345|Australia.Queensland|
 Macroglossum vacillans|BC-Mel 0664|Australia.Queensland|
 Macroglossum vacillans|BC-Mel 0662|Indonesia|
 Macroglossum vacillans|ANIC Gen No. 003238|Australia.Western Australia|
 Macroglossum vacillans|BC ZSM Lep 10457|Australia.Western Australia|
 Macroglossum vacillans|BC-Mel 0663|Indonesia|
 Macroglossum vacillans|BC ZSM Lep 10464|Australia.Northern Territory|
 Macroglossum vacillans|BC ZSM Lep 10470|Australia.Northern Territory|
 Macroglossum vacillans|BC-Mel 0661|Indonesia|
 Macroglossum vacillans|ANIC Gen No. 003177|Australia.Queensland|
 Macroglossum vacillans|BC-Hax3615|Australia.Queensland|
 Macroglossum vacillans|BC ZSM Lep 10570|Australia.Northern Territory|
 Macroglossum vacillans|BC ZSM Lep 02002|Australia.Queensland|
 Macroglossum vacillans|BC-Mel1192|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel1191|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel 0658|Indonesia.Sulawesi Selatan|
 Macroglossum vacillans|BC ZSM Lep 10533|Australia.Western Australia|
 Macroglossum vacillans|BC-Mel 0659|Indonesia|
 Macroglossum vacillans|BC ZSM Lep 13245|Australia.Northern Territory|
 Macroglossum vacillans|BC-Mel1193|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel 0660|Indonesia|
 Macroglossum vacillans|BC-Hax3616|Australia.Queensland|
 Macroglossum aquila|BC-Mel 0671|Indonesia|
 Macroglossum aquila|BC-Mel 0856|Indonesia.Sulawesi Selatan|
 Macroglossum aquila|BC-Mel 0857|Indonesia.Sulawesi|
 Macroglossum nemesis|BC-Hax4904|Indonesia.Sulawesi Life stage|
 Macroglossum nemesis|BC-Mel 0683|Vietnam.Vinh Phuc|
 Macroglossum nemesis|BC-Mel 0776|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0684|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0685|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0777|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Hax4049|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Hax4040|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0966|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Hax4041|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0630|Indonesia.Sumatra West|Macroglossum fringilla|
 Macroglossum heliophila|BC-Mel 0631|Indonesia.Sumatra West|Macroglossum fringilla|
 Macroglossum heliophila|BC-Mel 0632|Indonesia.Sumatra West|
 Macroglossum pyrhosticta|BC-Mel11324|Indonesia.Sumatra|
 Macroglossum lepidum|BC-Mel 0831|Philippines.Leyte|
 Macroglossum heliophila|BC-Mel 0964|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0965|Indonesia.Sulawesi|
 Macroglossum|BC-Hax4048|Indonesia.Sulawesi Utara|
 Macroglossum assimilis|BC-Mel 0775|Sri Lanka.Uva|
 Macroglossum assimilis|BC-Mel 1045|India.Karnataka|
 Macroglossum assimilis|BC-Mel1123|India.Karnataka|
 Macroglossum assimilis|AYK-04-0411|India|
 Macroglossum assimilis|BC-Mel 0774|Sri Lanka.Uva|
 Macroglossum assimilis|BC-Mel 1046|India.Karnataka|
 Macroglossum assimilis|MA05-09-02-81|India.Maharashtra|
 Macroglossum glaucoptera|BC-Mel 0790|Indonesia|
 Macroglossum loeffleri|BC-Mel 0907|Vietnam.Holotype|
 Macroglossum glaucoptera|BC-Mel 0670|Bhutan.Parol|
 Macroglossum glaucoptera|BC-Hax3609|Thailand.Phrae|
 Macroglossum glaucoptera|BC-Mel 0791|Indonesia.Sulawesi Selatan|
 Macroglossum loeffleri|BC-Mel 0908|Vietnam.Paratype|
 Macroglossum|BC-Mel 0903|Indonesia.Sulawesi|Macroglossum geofmartini- Holotype|
 Macroglossum prometheus|BC-Hax4019|Philippines|
 Macroglossum prometheus|BC-Mel 0691|Malaysia|
 Macroglossum prometheus lineata|ANIC Gen No. 003227|Australia.Queensland|
 Macroglossum prometheus lineata|USNM ENT 00676005|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676006|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676007|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676008|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|ANIC Gen No. 003226|Australia.Queensland|
 Macroglossum prometheus lineata|BC-LTM-103|Australia.Queensland|
 Macroglossum prometheus lineata|BC-LTM-102|Australia.Queensland|
 Macroglossum prometheus lineata|ANIC Gen No. 003228|Australia.Queensland|
 Macroglossum prometheus|BC-Hax4023|Indonesia.Sulawesi Utara|



Macroglossum prometheus|BC-Hax4023|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Mel 1007|Indonesia|
 Macroglossum prometheus|BC-Hax3600|Indonesia|
 Macroglossum prometheus|BC-Mel 0688|Indonesia|
 Macroglossum prometheus|BC-Mel 0689|Indonesia|
 Macroglossum paukstadorum|BC-Mel 0826|Indonesia|Paratype
 Macroglossum paukstadorum|BC-Mel 0934|Indonesia|Holotype
 Macroglossum prometheus|BC-Mel 0690|Indonesia|
 Macroglossum prometheus|BC-Hax4021|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Hax4022|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Mel 0687|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Hax3602|Indonesia|
 Macroglossum prometheus|BC-Mel 0686|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Mel 1004|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Hax3601|Indonesia|
 Macroglossum nubilum|BC-Hax4007|Papua New Guinea|
 Macroglossum nubilum|ANIC Gen No. 003222|Australia.Queensland|
 Macroglossum affictitia|BC-Hax3593|Thailand|
 Macroglossum affictitia|BC-Hax3594|Thailand.Phrae|
 Macroglossum affictitia|BC-Mel 0848|Thailand.Phrae|
 Macroglossum affictitia|BC-Hax4020|Thailand.Chiang Mai|
 Macroglossum reithi|BC-Hax4044|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4043|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4042|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4037|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Mel 0973|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0970|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0972|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0971|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0974|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Hax4045|Indonesia.Sulawesi Utara|
 Macroglossum schnitzleri|BC-Mel 0804|Indonesia|
 Macroglossum hirundo lifuensis|BC-Mel 0656|New Caledonia|
 Macroglossum hirundo lifuensis|BC-Mel 0657|New Caledonia|
 Macroglossum dohertyi doddi|BC-LTM-122|Australia.Queensland|
 Macroglossum dohertyi doddi|BC-LTM-123|Australia.Queensland|
 Macroglossum dohertyi|BC-Mel 0991|Indonesia.Papua|
 Macroglossum dohertyi|BC-Mel 0992|Indonesia.Papua|
 Macroglossum dohertyi|BC-Mel 0993|Indonesia|
 Macroglossum dohertyi|BC-Mel 0994|Indonesia|
 Macroglossum hirundo|MF-05-0018|Fiji|
 Macroglossum hirundo|BC-Mel 0935|Tonga|ssp vitiense
 Macroglossum moeckii|BC-Mel 0998|Indonesia.Papua|
 Macroglossum moeckii|BC-Mel 0999|Indonesia.Papua|
 Macroglossum hirundo errans|BC-Hax4011|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003185|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003329|Australia.Queensland|
 Macroglossum hirundo errans|BC-Mel 0652|Australia.Queensland|Macroglossum fringilla
 Macroglossum hirundo lifuensis|MF-05-0011|Vanuatu|
 Macroglossum hirundo lifuensis|MF-05-0028|Vanuatu|
 Macroglossum rectans|ANIC Gen No. 003221|Australia.Queensland|
 Macroglossum hirundo|BC-Mel 0461|Australia|
 Macroglossum rectans|ANIC Gen No. 003187|Australia.Queensland|
 Macroglossum rectans|ANIC Gen No. 003189|Australia.Queensland|
 Macroglossum rectans|ANIC Gen No. 003190|Australia.Queensland|
 Macroglossum rectans|BC-Mel 0654|Indonesia|
 Macroglossum rectans|BC-Mel 0655|Indonesia|
 Macroglossum hirundo|BC-Hax4017|French Polynesia|rectans?
 Macroglossum rectans|BC-Mel 0653|Indonesia|
 Macroglossum rectans|BC-Mel 0814|Indonesia|
 Macroglossum stevensi|BC-Mel 0997|Indonesia.Papua|
 Macroglossum stevensi|BC-Mel 0995|Indonesia.Papua|
 Macroglossum stevensi|BC-Mel 0996|Indonesia.Papua|
 Macroglossum kitchingi|BC-Hax4053|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Hax4056|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Hax4054|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Mel 0629|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0628|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0808|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0627|Indonesia.Sulawesi|
 Macroglossum kitchingi|BC-Hax4055|Indonesia.Sulawesi Utara|
 Macroglossum mediovitita|BC-Mel 0809|Indonesia.Jawa Barat|
 Macroglossum mediovitita|BC-Mel 0810|Philippines|
 Macroglossum mediovitita|BC-Hax4050|Indonesia.Sulawesi Utara|
 Macroglossum mediovitita|BC-Hax4051|Indonesia.Sulawesi Utara|
 Macroglossum neotroglodytus|BC-Mel 0472|China.Guangxi|
 Macroglossum neotroglodytus|BC-Mel 0883|Laos|
 Macroglossum neotroglodytus|BC-Hax5096|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax5097|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax5095|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax3610|Malaysia|
 Macroglossum pyrrhosticta|BC-Mel 0797|Laos|
 Macroglossum pyrrhosticta|BC-Mel1320|Indonesia|
 Macroglossum pyrrhosticta|BC-Mel1322|Indonesia|
 Macroglossum pyrrhosticta|BC-Mel1323|Indonesia.Bali|
 Macroglossum pyrrhosticta|BC-Mel1327|Indonesia.Bali|
 Macroglossum pyrrhosticta|BC-Mel1328|Indonesia.Bali|
 Macroglossum pyrrhosticta|IJK-04-0002|China|
 Macroglossum pyrrhosticta|BC-Mel 0955|China.Guangxi|
 Macroglossum pyrrhosticta|BC-Mel 0957|China.Guangxi|
 Macroglossum pyrrhosticta|BC-Mel 0799|Thailand.Phrae|
 Macroglossum pyrrhosticta|TCM-TM-0038|China.Taiwan|



Macroglossum pyrrhosticta|BC-Mel 0799|Thailand.Phrae|
 Macroglossum pyrrhosticta|JCM-TWN-0039|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel 0852|Philippines.Samar|
 Macroglossum pyrrhosticta|BC-Mel 0800|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel 0667|Japan.Yamanashi-ken|
 Macroglossum pyrrhosticta|BC-Mel 0669|Bhutan.Parol|
 Macroglossum pyrrhosticta|BC-Mel 0798|Nepal|
 Macroglossum pyrrhosticta|BC-Mel 0851|Philippines.Samar|
 Macroglossum pyrrhosticta|BC-Mel 0954|China.Yunnan|
 Macroglossum pyrrhosticta|BC-Mel 0956|China.Hunan|
 Macroglossum pyrrhosticta|DB-03-2017|United States.Hawaii|
 Macroglossum pyrrhosticta|BC-Mel1351|Thailand.Chiang Mai|
 Macroglossum pyrrhosticta|BC-Mel1319|Indonesia.Sumatra|
 Macroglossum variegatum|BC-Hax3606|Thailand.Phrae|
 Macroglossum variegatum|BC-Mel 0787|Nepal|
 Macroglossum variegatum|BC-Mel 0853|Indonesia.Sumatra|
 Macroglossum variegatum|BC-Mel 0786|Laos|
 Macroglossum variegatum|BC-Mel 0960|Malaysia|
 Macroglossum variegatum|BC-Hax3605|Thailand.Phrae|
 Macroglossum variegatumJH01|BC-Hax3634|Philippines|
 Macroglossum limata|BC-Mel 0644|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0645|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0647|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0802|Indonesia.Sulawesi Selatan|
 Macroglossum limata|BC-Mel 0646|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0801|Thailand.Puket|
 Macroglossum limata|BC-Mel 0803|Indonesia.Sumatra|
 Macroglossum limata|BC-Hax3607|Malaysia|
 Macroglossum troglodytus|ANIC Gen No. 003212|Australia.Queensland|
 Macroglossum insipida|BC-Mel 0675|Indonesia.Sulawesi Selatan|
 Macroglossum insipida|BC-Mel 0676|Indonesia.Sulawesi Selatan|
 Macroglossum insipida|BC-Hax3631|Indonesia|
 Macroglossum insipida|BC-Hax3632|Indonesia|
 Macroglossum insipida|BC-Mel 0887|Indonesia.Papua|
 Macroglossum insipida|BC-Mel 0884|Philippines.Leyte|
 Macroglossum insipida|BC-Hax3633|Philippines|
 Macroglossum insipida|BC-Mel 1068|India.Karnataka|
 Macroglossum vicinum piepersi|BC-Mel 0651|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0635|Indonesia.Sumatra West|
 Macroglossum pyrrhosticta|BC-Mel1321|Indonesia|
 Macroglossum insipida|BC-Mel 0637|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0638|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0779|Indonesia.Sumatra|
 Macroglossum vicinum piepersi|BC-Mel 0650|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0649|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0648|Indonesia.Sumatra West|
 Macroglossum neotroglodytus|BC-Hax5100|Laos.Khammouan|
 Macroglossum neotroglodytus|AYK-04-0381|India.Assam|
 Macroglossum insipida|BC-Mel 0643|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0641|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0640|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0639|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0636|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0642|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum vicinum piepersi|BC-Mel 0476|
 Macroglossum insipida papuana|89084|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|84093|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|USNM ENT 00676004|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|83080|Papua New Guinea.Madang|SPHI009
 Macroglossum alcedo|BC-LTM-121|Australia.Queensland|
 Macroglossum alcedo|BC-JT-23M|Australia.Queensland|
 Macroglossum pyrrhosticta|BC-Mel1325|Indonesia.Sumatra|
 Macroglossum vicinum piepersi|BC-Hax4009|Malaysia|
 Macroglossum|BC-Mel 0951|Malaysia.Sabah|
 Macroglossum pachycerus|BC-Mel 0477|Madagascar|
 Macroglossum pachycerus|BC-Basq0552|Madagascar|
 Macroglossum meeki|BC-Mel 0875|Indonesia.Papua|
 Macroglossum trochilus|BC-MNHJJP0127|Malawi|
 Macroglossum aesalon|BC-Basq0561|Madagascar|
 Macroglossum milvus|BC-EST0584|Reunion|
 Macroglossum milvus|BC-Hax3612|Reunion|
 Macroglossum milvus|BC-Hax3611|Reunion|
 Macroglossum melanoleuca|BC-Mel 0878|Indonesia|Holotype
 Macroglossum micacea|ANIC Gen No. 003203|Australia.Queensland|
 Macroglossum napolovi|BC-Mel 0864|Vietnam|Paratype
 Macroglossum napolovi|BC-Mel 0927|Vietnam|Holotype
 Macroglossum napolovi|BC-Mel 0928|Vietnam|Alotype
 Macroglossum kadneri|BC-Mel 0924|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum kadneri|BC-Mel 0921|Indonesia.Sulawesi|Holotype
 Macroglossum palawana|BC-Mel 0926|Philippines.Palawan|Alotype
 Macroglossum trigi|BC-Mel 0920|Indonesia.Sulawesi|Paratype
 Macroglossum kadneri|BC-Mel 0922|Indonesia.Sulawesi|Paratype
 Macroglossum kadneri|BC-Mel 0923|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum palawana|BC-Mel 0925|Philippines.Palawan|Holotype
 Macroglossum trigi|BC-Mel 0919|Indonesia.Sulawesi|Holotype
 Macroglossum|BC-Hax4907|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4929|Indonesia.Sulawesi|Life stage
 Macroglossum haxairei|BC-Hax4860|Indonesia.Sulawesi|Paratype
 Macroglossum haxairei|BC-Mel 0911|Indonesia.Sulawesi|Paratype
 Macroglossum eggeri|BC-Mel 0912|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum eggeri|BC-Mel 0910|Indonesia.Sulawesi|Holotype





Specimen Identification Request

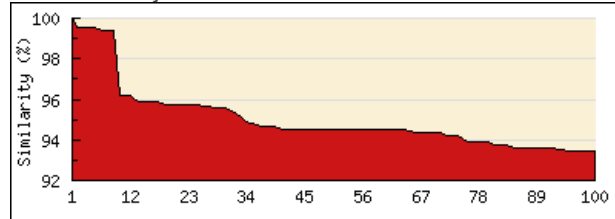
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>saga</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>belis</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>belis</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>belis</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>belis</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>belis</i>	99.5
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>belis</i>	99.39
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>belis</i>	99.39
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>belis</i>	99.39
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vacillans</i>	96.2
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vacillans</i>	96.2
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vacillans</i>	96.2
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vacillans</i>	95.97
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vacillans</i>	95.91
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vacillans</i>	95.91
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vacillans</i>	95.87
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vacillans</i>	95.87
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vacillans</i>	95.77
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vacillans</i>	95.73
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vacillans</i>	95.72

Display option: default

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Macroglossum divergens
(Walker, 1856)



BOLD TaxonID Tree

Project : SEARCH: Tax(Macroglossum)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 629
Species count : 90
Genus count : 1
Family count : 1
Unidentified : 96



10 %

Macroglossum micacea|ANIC Gen No. 003175|Australia.Queensland|
 Macroglossum haxairei|BC-Mel 0582|Indonesia.Sulawesi Selatan|
 Macroglossum haxairei|BC-Mel 0868|Indonesia.Sulawesi|
 Macroglossum passalus|BC-Mel 0475|Japan.Okinawa|
 Macroglossum belis|BC-Mel 0796|Thailand.Chiang Mai|
 Macroglossum aquila|BC-Mel 0672|Indonesia.Sulawesi|
 Macroglossum kitchingi|BC-Mel 0626|Indonesia.Sulawesi|
 Macroglossum mediiovitta|BC-Mel 0634|Indonesia.Sulawesi Selatan|
 Macroglossum mediiovitta|BC-Mel 0812|Indonesia.Sulawesi Selatan|
 Macroglossum neotroglodytus|BC-Mel 0880|Nepal|
 Macroglossum neotroglodytus|BC-Mel 0881|Philippines.Leyte|
 Macroglossum pyrrhosticta|BC-Mel 0668|Vietnam.Vinh Phuc|
 Macroglossum hirundo errans|ANIC Gen No. 003257|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003176|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003184|Australia.Queensland|
 Macroglossum prometheus|BC-Mel 0816|Indonesia.Jawa Barat|
 Macroglossum prometheus|BC-Mel 0818|Indonesia|
 Macroglossum albolineata|BC-Mel 0877|Indonesia.Papua|
 Macroglossum reithi|BC-Mel 0806|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum reithi|BC-Mel 0807|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0578|Indonesia.Sulawesi|
 Macroglossum|BC-Hax4919|Indonesia.Sulawesi|Life stage
 Macroglossum haxairei|BC-Mel 0913|Indonesia.Sulawesi|Alotype
 Macroglossum|BC-Hax4943|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4944|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4889|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4866|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0698|Indonesia.Sulawesi Selatan|
 Macroglossum|BC-Hax4898|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4899|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4897|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4888|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4864|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4900|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4922|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4941|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4895|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4867|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4859|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4901|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax3643|Indonesia.Sulawesi|
 Macroglossum|BC-Hax4933|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4878|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4879|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4910|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4896|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4880|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4908|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|USNM ENT 00676001|Papua New Guinea.Madang|SPHI008
 Macroglossum|BC-Hax4875|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax4861|Indonesia.Sulawesi|Life stage
 Macroglossum corythus pylene|BC-Mel 0842|Indonesia|
 Macroglossum corythus pylene|BC-Mel 0843|Indonesia|
 Macroglossum|BC-Hax4890|Philippines.Leyte|Life stage
 Macroglossum|BC-Hax4892|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4865|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0871|Indonesia.Sulawesi Selatan|
 Macroglossum|BC-Hax4903|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4925|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|USNM ENT 00676002|Papua New Guinea.Madang|SPHI008
 Macroglossum corythus|BC-Mel 0707|Indonesia.Papua|
 Macroglossum corythus|BC-Mel 0701|Indonesia.Sulawesi Selatan|
 Macroglossum|BC-Hax4936|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4886|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4881|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4871|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|USNM ENT 00676003|Papua New Guinea.Madang|SPHI008
 Macroglossum corythus|BC-Hax4928|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4877|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4873|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4927|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4932|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|USNM ENT 00676000|Papua New Guinea.Madang|SPHI008
 Macroglossum|BC-Hax4874|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4940|Indonesia.Sulawesi|Life stage
 Macroglossum pseudocorythus|BC-Mel 0914|Indonesia.Sulawesi|Holotype
 Macroglossum|BC-Hax4884|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4930|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4885|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4883|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax5105|Laos.Houaphan|
 Macroglossum corythus|BC-Hax3648|Malaysia|ssp. luteata?
 Macroglossum corythus|BC-Hax3649|Vietnam|ssp. luteata?
 Macroglossum corythus|BC-Hax3659|Malaysia|ssp. luteata?
 Macroglossum corythus|BC-Mel 0703|Malaysia|
 Macroglossum corythus|BC-Mel 0702|Malaysia|
 Macroglossum corythus|BC-Hax5099|Laos.Houaphan|
 Macroglossum corythus|BC-Hax4013|Philippines|
 Macroglossum corvthus|BC-Hax4862|Indonesia.Sulawesi|Life stage



Macroglossum corythus|BC-Hax4013|Philippines|
 Macroglossum corythus|BC-Hax4862|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax5098|Laos.Houaphan|
 Macroglossum corythus|BC-Hax5106|Laos.Houaphan|
 Macroglossum|BC-Hax4916|Vietnam|Life stage
 Macroglossum corythus|BC-Mel 0704|China.Guangxi|
 Macroglossum|BC-Hax4891|Philippines.Leyte|Life stage
 Macroglossum|BC-Hax4914|Vietnam|Life stage
 Macroglossum|BC-Hax4938|Vietnam|Life stage
 Macroglossum corythus|BC-Mel 0699|Indonesia|
 Macroglossum corythus|BC-Mel 0700|Indonesia|
 Macroglossum|BC-Hax4911|Indonesia.Sulawesi|Life stage
 Macroglossum corythus lusteata|BC-Mel 0838|Indonesia.Sumatra|
 Macroglossum corythus|AYK-04-0380|India.Assam|
 Macroglossum corythus|MF-05-0015|Palau|ssp. luteata?
 Macroglossum|BC-Hax4905|Indonesia.Sulawesi|Life stage
 Macroglossum corythus pylene|BC-Mel 0840|Indonesia|
 Macroglossum corythus|BC-Mel 0710|Indonesia.Sulawesi Selatan|
 Macroglossum|BC-Hax4918|Laos|Life stage
 Macroglossum|BC-Hax4945|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4882|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4909|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4902|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0708|Indonesia|
 Macroglossum corythus lusteata|BC-Mel 0839|Indonesia.Sulawesi Selatan|
 Macroglossum corythus|ANIC Gen No. 003216|Australia.Queensland|
 Macroglossum|BC-Hax4887|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4942|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0705|Indonesia|
 Macroglossum corythus|BC-Mel 0706|Indonesia|
 Macroglossum pseudocorythus|BC-Mel 0915|Indonesia.Sulawesi|Alotype
 Macroglossum|BC-Hax4924|Indonesia.Sulawesi|Life stage
 Macroglossum corythus lusteata|BC-Mel 0836|Philippines.Leyte|
 Macroglossum|BC-Hax4937|Vietnam|Life stage
 Macroglossum corythus|AYK-04-0242|China.Taiwan|
 Macroglossum corythus lusteata|BC-Mel 0837|China.Taiwan|
 Macroglossum corythus|JCM-TWN-0038|China.Taiwan|ssp. luteata?
 Macroglossum corythus lusteata|BC-Mel 0833|Thailand.Chiang Mai|
 Macroglossum corythus lusteata|BC-Mel 0834|Vietnam|
 Macroglossum corythus|BC-Mel 0709|China.Guangxi|
 Macroglossum|BC-Hax4917|Vietnam|Life stage
 Macroglossum|BC-Hax4894|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4934|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax3638|Solomon Islands|
 Macroglossum corythus|BC-Mel 0696|Solomon Islands|
 Macroglossum corythus fulvicautata|BC-Mel 0821|Solomon Islands|
 Macroglossum corythus|BC-Mel1213|Solomon Islands|
 Macroglossum corythus fuscituta|BC-Mel 0870|New Caledonia|
 Macroglossum corythus|BC-Mel1214|Solomon Islands|
 Macroglossum corythus|BC-Hax3639|Solomon Islands|
 Macroglossum corythus|BC-Hax3640|Solomon Islands|
 Macroglossum corythus|BC-Mel 0697|Solomon Islands|
 Macroglossum tenebrosa|ANIC Gen No. 003229|Australia.Queensland|
 Macroglossum tenebrosa|ANIC Gen No. 003330|Australia.Queensland|
 Macroglossum tenebrosa|BC-LTM-100|Australia.Queensland|
 Macroglossum tenebrosa|BC-LTM-101|Australia.Queensland|
 Macroglossum tenebrosa|JP-05-0749|Australia.Queensland|
 Macroglossum tenebrosa|BC-Mel 0874|Indonesia.Papua|
 Macroglossum tenebrosa|BC-Hax3653|Indonesia|
 Macroglossum tenebrosa|BC-Hax3654|Indonesia|
 Macroglossum tenebrosa|BC-Hax3652|Indonesia|
 Macroglossum|BC-Hax3646|Indonesia.Sulawesi|
 Macroglossum sulawesica|BC-Mel 0471|Indonesia.Sulawesi|
 Macroglossum perplexum|BC-Mel 0930|Indonesia.Sulawesi Selatan|Holotype
 Macroglossum hemichroma|BC-Mel 0586|Indonesia.Sulawesi Selatan|
 Macroglossum sulai|BC-Mel 0980|Indonesia.Sulawesi|Paratype
 Macroglossum|BC-Hax4872|Indonesia.Sulawesi|Life stage
 Macroglossum hemichroma|BC-Mel 0579|Indonesia.Sulawesi|
 Macroglossum sulai|BC-Mel 0845|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0577|Indonesia.Sulawesi|
 Macroglossum perplexum|BC-Mel 0931|Indonesia.Sulawesi|Paratype
 Macroglossum sulai|BC-Mel 0844|Indonesia.Sulawesi|
 Macroglossum sulai|BC-Mel 0932|Indonesia.Sulawesi|Holotype
 Macroglossum sulai|BC-Hax4939|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4870|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Mel 0580|Indonesia.Sulawesi|Macroglossum sulawesica
 Macroglossum pyrrhosticta|BC-Mel1198|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel1197|China.Taiwan|
 Macroglossum saga|BC-Mel 0693|China.Hubei|
 Macroglossum saga|BC-Mel 0694|China.Guangxi|
 Macroglossum saga|BC-Mel 1056|China.Guangxi|
 Macroglossum saga|BC-Mel 1057|China.Guangxi|
 Macroglossum saga|BC-Mel 0788|Thailand.Nan|
 Macroglossum saga|BC-Hax4010|Malaysia|
 Macroglossum saga|BC-Hax3651|Thailand.Chiang Mai|
 Macroglossum saga|BC-Mel 0695|China.Hunan|
 Macroglossum saga|BC-Mel 1055|China|
 Macroglossum saga|BC-Hax3650|Thailand.Chiang Mai|
 Macroglossum semifasciata|BC-Hax3655|Thailand.Phrae|
 Macroglossum semifasciata|BC-Mel1199|Indonesia|
 Macroglossum semifasciata|BC-Hax3656|Thailand.Phrae|
 Macroglossum semifasciata|BC-EST0596|Thailand.Trat|
 Macroglossum semifasciata|BC-Hax3657|Thailand.Phrae|



Macroglossum semifasciata|BC-EST0596|Thailand.Trat|
 Macroglossum semifasciata|BC-Hax3657|Thailand.Phrae|
 Macroglossum semifasciata|BC-Mel 0988|Malaysia|
 Macroglossum semifasciata|BC-Mel1211|Indonesia.Bali|
 Macroglossum semifasciata|BC-Mel1212|Indonesia.Bali|
 Macroglossum semifasciata|BC-Mel 0989|Indonesia.Sumatra West|
 Macroglossum semifasciata|BC-Mel 0986|Indonesia.Sulawesi|
 Macroglossum BC-Mel 0902|Indonesia.Sulawesi Selatan|Macroglossum pseudonigellum- Holotype
 Macroglossum semifasciata|BC-Hax4952|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Hax4949|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Hax4946|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4947|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4931|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Mel 0985|Indonesia.Sulawesi|
 Macroglossum BC-Mel 0984|Indonesia.Sulawesi|Macroglossum pseudonigellum- Paratype
 Macroglossum nigellum|BC-Mel 0990|Indonesia.Sumatra West|
 Macroglossum nigellum speideli|BC-Mel 0861|Indonesia.Sulawesi Selatan|
 Macroglossum nigellum speideli|BC-Mel 0981|Indonesia.Sulawesi|Paratype
 Macroglossum nigellum speideli|BC-Mel 0901|Indonesia.Sulawesi|Holotype
 Macroglossum nigellum speideli|BC-Mel 0982|Indonesia.Sulawesi|Paratype
 Macroglossum nigellum|BC-Mel 0977|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0975|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0976|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0978|Indonesia.Sulawesi|
 Macroglossum nigellum speideli|BC-Mel 0900|Indonesia.Sulawesi|Alotype
 Macroglossum nigellum speideli|BC-Mel 0979|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Hax4024|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4025|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4026|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4027|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4948|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4950|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4951|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4893|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Mel 0983|Indonesia.Sulawesi|Macroglossum pseudonigellum- Paratype
 Macroglossum BC-Hax4923|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax5104|Laos.Houaphan|
 Macroglossum BC-Hax4015|Philippines|
 Macroglossum corythus|BC-Hax5102|Laos.Houaphan|
 Macroglossum BC-Hax4912|Vietnam|Life stage
 Macroglossum BC-Hax3658|Indonesia.Sulawesi|
 Macroglossum corythus lusteata|BC-Mel 0835|Laos|
 Macroglossum corythus lusteata|BC-Mel 0832|Indonesia.Jawa Barat|
 Macroglossum corythus|BC-Hax4863|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0581|Indonesia|
 Macroglossum BC-Hax4014|Philippines|
 Macroglossum BC-Hax4913|Vietnam|Life stage
 Macroglossum BC-Hax4915|Vietnam|Life stage
 Macroglossum sylvia|BC-Hax3641|Indonesia|
 Macroglossum pseudoluteata|BC-Mel 0906|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum pseudoluteata|BC-Mel 0905|Indonesia.Sulawesi|Holotype
 Macroglossum sylvia|BC-Hax3645|Indonesia|
 Macroglossum sylvia|BC-Hax3644|Indonesia|
 Macroglossum BC-Hax4869|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4921|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4935|Indonesia.Sulawesi|Life stage
 Macroglossum amoenum|BC-Mel 0938|Indonesia|
 Macroglossum heliophila divergens|BC-Mel 1069|India.Karnataka|
 Macroglossum heliophila|BC-Hax4008|Malaysia|
 Macroglossum fringilla|BC-Mel1357|Indonesia.Bali|
 Macroglossum fringilla|BC-Mel1358|Indonesia.Bali|
 Macroglossum heliophila|BC-Mel 0952|Vietnam|
 Macroglossum heliophila|BC-Mel 0473|Indonesia.Sumatra|
 Macroglossum heliophila|BC-Mel 0953|Indonesia|
 Macroglossum heliophila|BC-Hax4039|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0962|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Hax4038|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 1008|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0959|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0968|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0963|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0958|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0967|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0969|Indonesia.Sulawesi|
 Macroglossum BC-Hax4920|Indonesia.Sulawesi|Life stage
 Macroglossum melas pullius|US00455193|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00503995|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|84298|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00480608|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00459830|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|USNM ENT 00490591|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00455192|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00459522|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499573|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499555|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00506630|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00508535|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506420|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506560|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00505811|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00508338|Papua New Guinea.East Sepik|SPHI004



Macroglossum melas pullius|US00508338|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506685|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00459495|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00506661|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|USNM ENT 00731795|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|US00499385|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|67753|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00494185|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499193|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|86204|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|88905|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00503448|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|USNM ENT 00480610|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00480609|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|USNM ENT 00733433|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|USNM ENT 00733434|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|USNM ENT 00731791|Papua New Guinea.Chimbu|MOTH181
 Macroglossum arimasi|BC-Mel 0863|Philippines.Samar|
 Macroglossum arimasi|BC-Hax4052|Philippines|
 Macroglossum caldum philipinense|BC-Mel 0849|Indonesia.Sulawesi Selatan|
 Macroglossum melas pullius|US00499369|Papua New Guinea.Madang|SPHI004
 Macroglossum|USNM ENT 00733436|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731897|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731790|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731794|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00733435|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731792|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731793|Papua New Guinea.Chimbu|MOTH181
 Macroglossum clemensi|BC-Mel 0470|Indonesia.Sulawesi|
 Macroglossum clemensi|BC-Mel 0769|Indonesia.Sulawesi Selatan|Holotype
 Macroglossum hemichroma|BC-Mel 0855|Thailand.Chiang Mai|
 Macroglossum hemichroma|BC-Hax4029|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Mel 0571|Malaysia|
 Macroglossum hemichroma|BC-Mel 0575|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Mel 0576|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Mel 0574|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Hax4031|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Hax4028|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Mel 0572|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0573|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0854|Philippines.Bukidnon|
 Macroglossum hemichroma|BC-Hax4030|Indonesia.Sulawesi Utara|
 Macroglossum fritzei|BC-Hax4047|China|
 Macroglossum fritzei|BC-Hax4046|China|
 Macroglossum nycteris|BC-Hax3635|India|
 Macroglossum nycteris|BC-Hax3636|India|
 Macroglossum nycteris|ZA-0019|Pakistan|
 Macroglossum nycteris|BC-Hax3637|India|
 Macroglossum gyrans|BC-Hax3596|India|
 Macroglossum gyrans|BC-Hax3597|India|
 Macroglossum gyrans|BC-Hax3595|India|
 Macroglossum gyrans|BC-Mel1355|Maldives|
 Macroglossum gyrans|BC-Mel1353|Maldives|
 Macroglossum gyrans|BC-Mel 0764|India.Kerala|
 Macroglossum gyrans|BC-Mel 0763|Indonesia|
 Macroglossum gyrans|BC-Mel 0765|Thailand.Phræ|
 Macroglossum gyrans|BC-Mel 0766|Indonesia.Sulawesi Selatan|
 Macroglossum gyrans|BC-Hax4012|Laos|
 Macroglossum gyrans|BC-Hax3599|Thailand|
 Macroglossum kishidai|BC-Mel 0846|Indonesia.Sulawesi Selatan|
 Macroglossum kishidai|BC-Mel 0847|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum passalus|BC-Mel 0819|Laos|
 Macroglossum augarra|BC-Mel 0918|Indonesia.Papua|
 Macroglossum|BC-Mel1205|Laos|
 Macroglossum spilonotum|BC-Hax4006|Papua New Guinea|
 Macroglossum sitiene|BC-Hax3604|Thailand.Phræ|
 Macroglossum sitiene|BC-Hax3603|Myanmar|
 Macroglossum sitiene|BC-Mel1356|Maldives|
 Macroglossum sitiene|BC-Mel 0780|Laos|
 Macroglossum|BC-Mel1215|Indonesia|
 Macroglossum faro cottoni|BC-Hax4033|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4034|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4036|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4035|Indonesia.Sulawesi Utara|
 Macroglossum faro|BC-Mel 0916|Philippines.Leyte|Macroglossum leytensis- Holotype
 Macroglossum faro|BC-Mel 0917|Philippines.Leyte|Macroglossum leytensis- Alotype
 Macroglossum faro|BC-Mel1288|Indonesia|
 Macroglossum faro|BC-Mel 0937|Indonesia|
 Macroglossum faro|BC-Mel1287|Indonesia.Sumatra|
 Macroglossum faro|BC-Mel 0825|Laos|
 Macroglossum faro|BC-Hax4032|Laos|
 Macroglossum mitchellii imperator|BC-Hax3628|Vietnam|
 Macroglossum mitchellii imperator|AYK-04-0178|China.Taiwan|
 Macroglossum mitchellii imperator|BC-Hax3629|Malaysia|
 Macroglossum cadioui|BC-Mel 0773|Indonesia.Sulawesi|Paratype
 Macroglossum cadioui|BC-Hax4004|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Hax4001|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Hax4002|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Mel 0772|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum cadioui|BC-Hax4003|Indonesia.Sulawesi Utara|
 Macroglossum multifascia|BC-Mel 0770|Philippines.Samar|



Macroglossum multifascia|BC-Mel 0770|Philippines.Samar|
 Macroglossum multifascia|BC-Mel 0771|Indonesia.Sumatra|
 Macroglossum multifascia|BC-Hax4005|Malaysia|
 Macroglossum avicula|BC-Mel 0805|Indonesia.Jawa Barat|
 Macroglossum bombylans|AYK-04-0170|China.Taiwan|
 Macroglossum bombylans|AYK-04-0173|China.Taiwan|
 Macroglossum stellatarum|BC-EST0016|France.Midi-Pyrenees|
 Macroglossum stellatarum|IJK-02-5806|France.ex bred stock|
 Macroglossum stellatarum|BC ZSM Lep 21574|Germany.Bavaria|
 Macroglossum stellatarum|ZA-0020|Pakistan|
 Macroglossum stellatarum|BC-Hax3626|France|
 Macroglossum belis|BC-Hax5103|Laos.Houaphan|
 Macroglossum belis|BC-Hax3619|India|
 Macroglossum belis|BC-Hax5101|Laos.Houaphan|
 Macroglossum belis|ZA-0018|Pakistan|
 Macroglossum belis|AYK-04-0388|India.Andhra Pradesh|
 Macroglossum belis|BC-Mel 0692|India.Tamil Nadu|
 Macroglossum belis|BC-Hax4018|Thailand.Chiang Mai|
 Macroglossum belis|BC-Hax3620|Thailand.Phrae|
 Macroglossum belis|BC-Mel 0795|Thailand.Phrae|
 Macroglossum saga|BC-Mel1126|India.Karnataka|
 Macroglossum vacillans|ANIC Gen No. 003344|Australia.Queensland|
 Macroglossum vacillans|ANIC Gen No. 003345|Australia.Queensland|
 Macroglossum vacillans|BC-Mel 0664|Australia.Queensland|
 Macroglossum vacillans|BC-Mel 0662|Indonesia|
 Macroglossum vacillans|ANIC Gen No. 003238|Australia.Western Australia|
 Macroglossum vacillans|BC ZSM Lep 10457|Australia.Western Australia|
 Macroglossum vacillans|BC-Mel 0663|Indonesia|
 Macroglossum vacillans|BC ZSM Lep 10464|Australia.Northern Territory|
 Macroglossum vacillans|BC ZSM Lep 10470|Australia.Northern Territory|
 Macroglossum vacillans|BC-Mel 0661|Indonesia|
 Macroglossum vacillans|ANIC Gen No. 003177|Australia.Queensland|
 Macroglossum vacillans|BC-Hax3615|Australia.Queensland|
 Macroglossum vacillans|BC ZSM Lep 10570|Australia.Northern Territory|
 Macroglossum vacillans|BC ZSM Lep 02002|Australia.Queensland|
 Macroglossum vacillans|BC-Mel1192|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel1191|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel 0658|Indonesia.Sulawesi Selatan|
 Macroglossum vacillans|BC ZSM Lep 10533|Australia.Western Australia|
 Macroglossum vacillans|BC-Mel 0659|Indonesia|
 Macroglossum vacillans|BC ZSM Lep 13245|Australia.Northern Territory|
 Macroglossum vacillans|BC-Mel1193|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel 0660|Indonesia|
 Macroglossum vacillans|BC-Hax3616|Australia.Queensland|
 Macroglossum aquila|BC-Mel 0671|Indonesia|
 Macroglossum aquila|BC-Mel 0856|Indonesia.Sulawesi Selatan|
 Macroglossum aquila|BC-Mel 0857|Indonesia.Sulawesi|
 Macroglossum nemesis|BC-Hax4904|Indonesia.Sulawesi Life stage|
 Macroglossum nemesis|BC-Mel 0683|Vietnam.Vinh Phuc|
 Macroglossum nemesis|BC-Mel 0776|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0684|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0685|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0777|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Hax4049|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Hax4040|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0966|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Hax4041|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0630|Indonesia.Sumatra West|Macroglossum fringilla|
 Macroglossum heliophila|BC-Mel 0631|Indonesia.Sumatra West|Macroglossum fringilla|
 Macroglossum heliophila|BC-Mel 0632|Indonesia.Sumatra West|
 Macroglossum pyrhosticta|BC-Mel11324|Indonesia.Sumatra|
 Macroglossum lepidum|BC-Mel 0831|Philippines.Leyte|
 Macroglossum heliophila|BC-Mel 0964|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0965|Indonesia.Sulawesi|
 Macroglossum|BC-Hax4048|Indonesia.Sulawesi Utara|
 Macroglossum assimilis|BC-Mel 0775|Sri Lanka.Uva|
 Macroglossum assimilis|BC-Mel 1045|India.Karnataka|
 Macroglossum assimilis|BC-Mel1123|India.Karnataka|
 Macroglossum assimilis|AYK-04-0411|India|
 Macroglossum assimilis|BC-Mel 0774|Sri Lanka.Uva|
 Macroglossum assimilis|BC-Mel 1046|India.Karnataka|
 Macroglossum assimilis|MA05-09-02-81|India.Maharashtra|
 Macroglossum glaucoptera|BC-Mel 0790|Indonesia|
 Macroglossum loeffleri|BC-Mel 0907|Vietnam.Holotype|
 Macroglossum glaucoptera|BC-Mel 0670|Bhutan.Paro|
 Macroglossum glaucoptera|BC-Hax3609|Thailand.Phrae|
 Macroglossum glaucoptera|BC-Mel 0791|Indonesia.Sulawesi Selatan|
 Macroglossum loeffleri|BC-Mel 0908|Vietnam.Paratype|
 Macroglossum|BC-Mel 0903|Indonesia.Sulawesi|Macroglossum geofmartini- Holotype|
 Macroglossum prometheus|BC-Hax4019|Philippines|
 Macroglossum prometheus|BC-Mel 0691|Malaysia|
 Macroglossum prometheus lineata|ANIC Gen No. 003227|Australia.Queensland|
 Macroglossum prometheus lineata|USNM ENT 00676005|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676006|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676007|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676008|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|ANIC Gen No. 003226|Australia.Queensland|
 Macroglossum prometheus lineata|BC-LTM-103|Australia.Queensland|
 Macroglossum prometheus lineata|BC-LTM-102|Australia.Queensland|
 Macroglossum prometheus lineata|ANIC Gen No. 003228|Australia.Queensland|
 Macroglossum prometheus|BC-Hax4023|Indonesia.Sulawesi Utara|

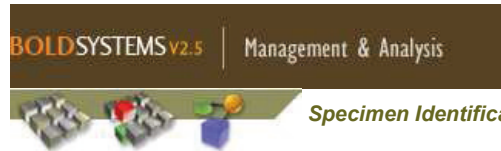


Macroglossum prometheus|BC-Hax4023|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Mel 1007|Indonesia|
 Macroglossum prometheus|BC-Hax3600|Indonesia|
 Macroglossum prometheus|BC-Mel 0688|Indonesia|
 Macroglossum prometheus|BC-Mel 0689|Indonesia|
 Macroglossum paukstadorum|BC-Mel 0826|Indonesia|Paratype
 Macroglossum paukstadorum|BC-Mel 0934|Indonesia|Holotype
 Macroglossum prometheus|BC-Mel 0690|Indonesia|
 Macroglossum prometheus|BC-Hax4021|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Hax4022|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Mel 0687|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Hax3602|Indonesia|
 Macroglossum prometheus|BC-Mel 0686|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Mel 1004|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Hax3601|Indonesia|
 Macroglossum nubilum|BC-Hax4007|Papua New Guinea|
 Macroglossum nubilum|ANIC Gen No. 003222|Australia.Queensland|
 Macroglossum affictitia|BC-Hax3593|Thailand|
 Macroglossum affictitia|BC-Hax3594|Thailand.Phrae|
 Macroglossum affictitia|BC-Mel 0848|Thailand.Phrae|
 Macroglossum affictitia|BC-Hax4020|Thailand.Chiang Mai|
 Macroglossum reithi|BC-Hax4044|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4043|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4042|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4037|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Mel 0973|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0970|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0972|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0971|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0974|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Hax4045|Indonesia.Sulawesi Utara|
 Macroglossum schnitzleri|BC-Mel 0804|Indonesia|
 Macroglossum hirundo lifuensis|BC-Mel 0656|New Caledonia|
 Macroglossum hirundo lifuensis|BC-Mel 0657|New Caledonia|
 Macroglossum dohertyi doddi|BC-LTM-122|Australia.Queensland|
 Macroglossum dohertyi doddi|BC-LTM-123|Australia.Queensland|
 Macroglossum dohertyi|BC-Mel 0991|Indonesia.Papua|
 Macroglossum dohertyi|BC-Mel 0992|Indonesia.Papua|
 Macroglossum dohertyi|BC-Mel 0993|Indonesia|
 Macroglossum dohertyi|BC-Mel 0994|Indonesia|
 Macroglossum hirundo|MF-05-0018|Fiji|
 Macroglossum hirundo|BC-Mel 0935|Tonga|ssp vitiense
 Macroglossum moeckii|BC-Mel 0998|Indonesia.Papua|
 Macroglossum moeckii|BC-Mel 0999|Indonesia.Papua|
 Macroglossum hirundo errans|BC-Hax4011|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003185|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003329|Australia.Queensland|
 Macroglossum hirundo errans|BC-Mel 0652|Australia.Queensland|Macroglossum fringilla
 Macroglossum hirundo lifuensis|MF-05-0011|Vanuatu|
 Macroglossum hirundo lifuensis|MF-05-0028|Vanuatu|
 Macroglossum rectans|ANIC Gen No. 003221|Australia.Queensland|
 Macroglossum hirundo|BC-Mel 0461|Australia|
 Macroglossum rectans|ANIC Gen No. 003187|Australia.Queensland|
 Macroglossum rectans|ANIC Gen No. 003189|Australia.Queensland|
 Macroglossum rectans|ANIC Gen No. 003190|Australia.Queensland|
 Macroglossum rectans|BC-Mel 0654|Indonesia|
 Macroglossum rectans|BC-Mel 0655|Indonesia|
 Macroglossum hirundo|BC-Hax4017|French Polynesia|rectans?
 Macroglossum rectans|BC-Mel 0653|Indonesia|
 Macroglossum rectans|BC-Mel 0814|Indonesia|
 Macroglossum stevensi|BC-Mel 0997|Indonesia.Papua|
 Macroglossum stevensi|BC-Mel 0995|Indonesia.Papua|
 Macroglossum stevensi|BC-Mel 0996|Indonesia.Papua|
 Macroglossum kitchingi|BC-Hax4053|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Hax4056|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Hax4054|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Mel 0629|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0628|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0808|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0627|Indonesia.Sulawesi|
 Macroglossum kitchingi|BC-Hax4055|Indonesia.Sulawesi Utara|
 Macroglossum mediovitita|BC-Mel 0809|Indonesia.Jawa Barat|
 Macroglossum mediovitita|BC-Mel 0810|Philippines|
 Macroglossum mediovitita|BC-Hax4050|Indonesia.Sulawesi Utara|
 Macroglossum mediovitita|BC-Hax4051|Indonesia.Sulawesi Utara|
 Macroglossum neotroglodytus|BC-Mel 0472|China.Guangxi|
 Macroglossum neotroglodytus|BC-Mel 0883|Laos|
 Macroglossum neotroglodytus|BC-Hax5096|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax5097|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax5095|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax3610|Malaysia|
 Macroglossum pyrrhosticta|BC-Mel 0797|Laos|
 Macroglossum pyrrhosticta|BC-Mel1320|Indonesia|
 Macroglossum pyrrhosticta|BC-Mel1322|Indonesia|
 Macroglossum pyrrhosticta|BC-Mel1323|Indonesia.Bali|
 Macroglossum pyrrhosticta|BC-Mel1327|Indonesia.Bali|
 Macroglossum pyrrhosticta|BC-Mel1328|Indonesia.Bali|
 Macroglossum pyrrhosticta|IJK-04-0002|China|
 Macroglossum pyrrhosticta|BC-Mel 0955|China.Guangxi|
 Macroglossum pyrrhosticta|BC-Mel 0957|China.Guangxi|
 Macroglossum pyrrhosticta|BC-Mel 0799|Thailand.Phrae|
 Macroglossum pyrrhosticta|TCM-TM-0038|China.Taiwan|



Macroglossum pyrrhosticta|BC-Mel 0799|Thailand.Phrae|
 Macroglossum pyrrhosticta|JCM-TWN-0039|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel 0852|Philippines.Samar|
 Macroglossum pyrrhosticta|BC-Mel 0800|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel 0667|Japan.Yamanashi-ken|
 Macroglossum pyrrhosticta|BC-Mel 0669|Bhutan.Parol|
 Macroglossum pyrrhosticta|BC-Mel 0798|Nepal|
 Macroglossum pyrrhosticta|BC-Mel 0851|Philippines.Samar|
 Macroglossum pyrrhosticta|BC-Mel 0954|China.Yunnan|
 Macroglossum pyrrhosticta|BC-Mel 0956|China.Hunan|
 Macroglossum pyrrhosticta|DB-03-2017|United States.Hawaii|
 Macroglossum pyrrhosticta|BC-Mel1351|Thailand.Chiang Mai|
 Macroglossum pyrrhosticta|BC-Mel1319|Indonesia.Sumatra|
 Macroglossum variegatum|BC-Hax3606|Thailand.Phrae|
 Macroglossum variegatum|BC-Mel 0787|Nepal|
 Macroglossum variegatum|BC-Mel 0853|Indonesia.Sumatra|
 Macroglossum variegatum|BC-Mel 0786|Laos|
 Macroglossum variegatum|BC-Mel 0960|Malaysia|
 Macroglossum variegatum|BC-Hax3605|Thailand.Phrae|
 Macroglossum variegatumJH01|BC-Hax3634|Philippines|
 Macroglossum limata|BC-Mel 0644|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0645|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0647|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0802|Indonesia.Sulawesi Selatan|
 Macroglossum limata|BC-Mel 0646|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0801|Thailand.Puket|
 Macroglossum limata|BC-Mel 0803|Indonesia.Sumatra|
 Macroglossum limata|BC-Hax3607|Malaysia|
 Macroglossum troglodytus|ANIC Gen No. 003212|Australia.Queensland|
 Macroglossum insipida|BC-Mel 0675|Indonesia.Sulawesi Selatan|
 Macroglossum insipida|BC-Mel 0676|Indonesia.Sulawesi Selatan|
 Macroglossum insipida|BC-Hax3631|Indonesia|
 Macroglossum insipida|BC-Hax3632|Indonesia|
 Macroglossum insipida|BC-Mel 0887|Indonesia.Papua|
 Macroglossum insipida|BC-Mel 0884|Philippines.Leyte|
 Macroglossum insipida|BC-Hax3633|Philippines|
 Macroglossum insipida|BC-Mel 1068|India.Karnataka|
 Macroglossum vicinum piepersi|BC-Mel 0651|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0635|Indonesia.Sumatra West|
 Macroglossum pyrrhosticta|BC-Mel1321|Indonesia|
 Macroglossum insipida|BC-Mel 0637|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0638|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0779|Indonesia.Sumatra|
 Macroglossum vicinum piepersi|BC-Mel 0650|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0649|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0648|Indonesia.Sumatra West|
 Macroglossum neotroglodytus|BC-Hax5100|Laos.Khammouan|
 Macroglossum neotroglodytus|AYK-04-0381|India.Assam|
 Macroglossum insipida|BC-Mel 0643|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0641|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0640|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0639|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0636|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0642|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum vicinum piepersi|BC-Mel 0476|
 Macroglossum insipida papuana|89084|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|84093|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|USNM ENT 00676004|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|83080|Papua New Guinea.Madang|SPHI009
 Macroglossum alcedo|BC-LTM-121|Australia.Queensland|
 Macroglossum alcedo|BC-JT-23M|Australia.Queensland|
 Macroglossum pyrrhosticta|BC-Mel1325|Indonesia.Sumatra|
 Macroglossum vicinum piepersi|BC-Hax4009|Malaysia|
 Macroglossum|BC-Mel 0951|Malaysia.Sabah|
 Macroglossum pachycerus|BC-Mel 0477|Madagascar|
 Macroglossum pachycerus|BC-Basq0552|Madagascar|
 Macroglossum meeki|BC-Mel 0875|Indonesia.Papua|
 Macroglossum trochilus|BC-MNHJJP0127|Malawi|
 Macroglossum aesalon|BC-Basq0561|Madagascar|
 Macroglossum milvus|BC-EST0584|Reunion|
 Macroglossum milvus|BC-Hax3612|Reunion|
 Macroglossum milvus|BC-Hax3611|Reunion|
 Macroglossum melanoleuca|BC-Mel 0878|Indonesia|Holotype
 Macroglossum micacea|ANIC Gen No. 003203|Australia.Queensland|
 Macroglossum napolovi|BC-Mel 0864|Vietnam|Paratype
 Macroglossum napolovi|BC-Mel 0927|Vietnam|Holotype
 Macroglossum napolovi|BC-Mel 0928|Vietnam|Alotype
 Macroglossum kadneri|BC-Mel 0924|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum kadneri|BC-Mel 0921|Indonesia.Sulawesi|Holotype
 Macroglossum palawana|BC-Mel 0926|Philippines.Palawan|Alotype
 Macroglossum trigi|BC-Mel 0920|Indonesia.Sulawesi|Paratype
 Macroglossum kadneri|BC-Mel 0922|Indonesia.Sulawesi|Paratype
 Macroglossum kadneri|BC-Mel 0923|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum palawana|BC-Mel 0925|Philippines.Palawan|Holotype
 Macroglossum trigi|BC-Mel 0919|Indonesia.Sulawesi|Holotype
 Macroglossum|BC-Hax4907|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4929|Indonesia.Sulawesi|Life stage
 Macroglossum haxairei|BC-Hax4860|Indonesia.Sulawesi|Paratype
 Macroglossum haxairei|BC-Mel 0911|Indonesia.Sulawesi|Paratype
 Macroglossum eggeri|BC-Mel 0912|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum eggeri|BC-Mel 0910|Indonesia.Sulawesi|Holotype





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Specimen Identification Request

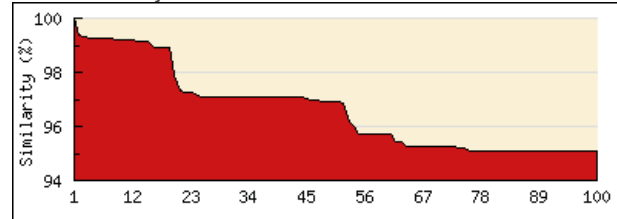
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophiladivergens</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.39
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.32
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.27
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum		99.24
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.24
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.24
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>UB01</i>	99.24
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.22
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.22
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.22
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.19
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.15
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.14
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	99.14
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>fringilla</i>	98.93
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	98.93
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>fringilla</i>	98.93
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>heliophila</i>	98.9
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>amoenum</i>	97.86

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Macroglossum troglodytus
(Butler, 1875)



BOLD TaxonID Tree

Project : SEARCH: Tax(Macroglossum)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 629
Species count : 90
Genus count : 1
Family count : 1
Unidentified : 96



10 %

Macroglossum micacea|ANIC Gen No. 003175|Australia.Queensland|
 Macroglossum haxairei|BC-Mel 0582|Indonesia.Sulawesi Selatan|
 Macroglossum haxairei|BC-Mel 0868|Indonesia.Sulawesi|
 Macroglossum passalus|BC-Mel 0475|Japan.Okinawa|
 Macroglossum belis|BC-Mel 0796|Thailand.Chiang Mai|
 Macroglossum aquila|BC-Mel 0672|Indonesia.Sulawesi|
 Macroglossum kitchingi|BC-Mel 0626|Indonesia.Sulawesi|
 Macroglossum mediiovitta|BC-Mel 0634|Indonesia.Sulawesi Selatan|
 Macroglossum mediiovitta|BC-Mel 0812|Indonesia.Sulawesi Selatan|
 Macroglossum neotroglodytus|BC-Mel 0880|Nepal|
 Macroglossum neotroglodytus|BC-Mel 0881|Philippines.Leyte|
 Macroglossum pyrrhosticta|BC-Mel 0668|Vietnam.Vinh Phuc|
 Macroglossum hirundo errans|ANIC Gen No. 003257|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003176|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003184|Australia.Queensland|
 Macroglossum prometheus|BC-Mel 0816|Indonesia.Jawa Barat|
 Macroglossum prometheus|BC-Mel 0818|Indonesia|
 Macroglossum albolineata|BC-Mel 0877|Indonesia.Papua|
 Macroglossum reithi|BC-Mel 0806|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum reithi|BC-Mel 0807|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0578|Indonesia.Sulawesi|
 Macroglossum|BC-Hax4919|Indonesia.Sulawesi|Life stage
 Macroglossum haxairei|BC-Mel 0913|Indonesia.Sulawesi|Alotype
 Macroglossum|BC-Hax4943|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4944|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4889|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4866|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0698|Indonesia.Sulawesi Selatan|
 Macroglossum|BC-Hax4898|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4899|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4897|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4888|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4864|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4900|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4922|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4941|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4895|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4867|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4859|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4901|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax3643|Indonesia.Sulawesi|
 Macroglossum|BC-Hax4933|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4878|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4879|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4910|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4896|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4880|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4908|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|USNM ENT 00676001|Papua New Guinea.Madang|SPHI008
 Macroglossum|BC-Hax4875|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax4861|Indonesia.Sulawesi|Life stage
 Macroglossum corythus pylene|BC-Mel 0842|Indonesia|
 Macroglossum corythus pylene|BC-Mel 0843|Indonesia|
 Macroglossum|BC-Hax4890|Philippines.Leyte|Life stage
 Macroglossum|BC-Hax4892|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4865|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0871|Indonesia.Sulawesi Selatan|
 Macroglossum|BC-Hax4903|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4925|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|USNM ENT 00676002|Papua New Guinea.Madang|SPHI008
 Macroglossum corythus|BC-Mel 0707|Indonesia.Papua|
 Macroglossum corythus|BC-Mel 0701|Indonesia.Sulawesi Selatan|
 Macroglossum|BC-Hax4936|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4886|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4881|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4871|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|USNM ENT 00676003|Papua New Guinea.Madang|SPHI008
 Macroglossum corythus|BC-Hax4928|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4877|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4873|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4927|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4932|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|USNM ENT 00676000|Papua New Guinea.Madang|SPHI008
 Macroglossum|BC-Hax4874|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4940|Indonesia.Sulawesi|Life stage
 Macroglossum pseudocorythus|BC-Mel 0914|Indonesia.Sulawesi|Holotype
 Macroglossum|BC-Hax4884|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4930|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4885|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4883|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax5105|Laos.Houaphan|
 Macroglossum corythus|BC-Hax3648|Malaysia|ssp. luteata?
 Macroglossum corythus|BC-Hax3649|Vietnam|ssp. luteata?
 Macroglossum corythus|BC-Hax3659|Malaysia|ssp. luteata?
 Macroglossum corythus|BC-Mel 0703|Malaysia|
 Macroglossum corythus|BC-Mel 0702|Malaysia|
 Macroglossum corythus|BC-Hax5099|Laos.Houaphan|
 Macroglossum corythus|BC-Hax4013|Philippines|
 Macroglossum corvthus|BC-Hax4862|Indonesia.Sulawesi|Life stage



Macroglossum corythus|BC-Hax4013|Philippines|
 Macroglossum corythus|BC-Hax4862|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax5098|Laos.Houaphan|
 Macroglossum corythus|BC-Hax5106|Laos.Houaphan|
 Macroglossum|BC-Hax4916|Vietnam|Life stage
 Macroglossum corythus|BC-Mel 0704|China.Guangxi|
 Macroglossum|BC-Hax4891|Philippines.Leyte|Life stage
 Macroglossum|BC-Hax4914|Vietnam|Life stage
 Macroglossum|BC-Hax4938|Vietnam|Life stage
 Macroglossum corythus|BC-Mel 0699|Indonesia|
 Macroglossum corythus|BC-Mel 0700|Indonesia|
 Macroglossum|BC-Hax4911|Indonesia.Sulawesi|Life stage
 Macroglossum corythus lusteata|BC-Mel 0838|Indonesia.Sumatra|
 Macroglossum corythus|AYK-04-0380|India.Assam|
 Macroglossum corythus|MF-05-0015|Palau|ssp. luteata?
 Macroglossum|BC-Hax4905|Indonesia.Sulawesi|Life stage
 Macroglossum corythus pylene|BC-Mel 0840|Indonesia|
 Macroglossum corythus|BC-Mel 0710|Indonesia.Sulawesi Selatan|
 Macroglossum|BC-Hax4918|Laos|Life stage
 Macroglossum|BC-Hax4945|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4882|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4909|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4902|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0708|Indonesia|
 Macroglossum corythus lusteata|BC-Mel 0839|Indonesia.Sulawesi Selatan|
 Macroglossum corythus|ANIC Gen No. 003216|Australia.Queensland|
 Macroglossum|BC-Hax4887|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4942|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0705|Indonesia|
 Macroglossum corythus|BC-Mel 0706|Indonesia|
 Macroglossum pseudocorythus|BC-Mel 0915|Indonesia.Sulawesi|Alotype
 Macroglossum|BC-Hax4924|Indonesia.Sulawesi|Life stage
 Macroglossum corythus lusteata|BC-Mel 0836|Philippines.Leyte|
 Macroglossum|BC-Hax4937|Vietnam|Life stage
 Macroglossum corythus|AYK-04-0242|China.Taiwan|
 Macroglossum corythus lusteata|BC-Mel 0837|China.Taiwan|
 Macroglossum corythus|JCM-TWN-0038|China.Taiwan|ssp. luteata?
 Macroglossum corythus lusteata|BC-Mel 0833|Thailand.Chiang Mai|
 Macroglossum corythus lusteata|BC-Mel 0834|Vietnam|
 Macroglossum corythus|BC-Mel 0709|China.Guangxi|
 Macroglossum|BC-Hax4917|Vietnam|Life stage
 Macroglossum|BC-Hax4894|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4934|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax3638|Solomon Islands|
 Macroglossum corythus|BC-Mel 0696|Solomon Islands|
 Macroglossum corythus fulvicautata|BC-Mel 0821|Solomon Islands|
 Macroglossum corythus|BC-Mel1213|Solomon Islands|
 Macroglossum corythus fuscituta|BC-Mel 0870|New Caledonia|
 Macroglossum corythus|BC-Mel1214|Solomon Islands|
 Macroglossum corythus|BC-Hax3639|Solomon Islands|
 Macroglossum corythus|BC-Hax3640|Solomon Islands|
 Macroglossum corythus|BC-Mel 0697|Solomon Islands|
 Macroglossum tenebrosa|ANIC Gen No. 003229|Australia.Queensland|
 Macroglossum tenebrosa|ANIC Gen No. 003330|Australia.Queensland|
 Macroglossum tenebrosa|BC-LTM-100|Australia.Queensland|
 Macroglossum tenebrosa|BC-LTM-101|Australia.Queensland|
 Macroglossum tenebrosa|JP-05-0749|Australia.Queensland|
 Macroglossum tenebrosa|BC-Mel 0874|Indonesia.Papua|
 Macroglossum tenebrosa|BC-Hax3653|Indonesia|
 Macroglossum tenebrosa|BC-Hax3654|Indonesia|
 Macroglossum tenebrosa|BC-Hax3652|Indonesia|
 Macroglossum|BC-Hax3646|Indonesia.Sulawesi|
 Macroglossum sulawesica|BC-Mel 0471|Indonesia.Sulawesi|
 Macroglossum perplexum|BC-Mel 0930|Indonesia.Sulawesi Selatan|Holotype
 Macroglossum hemichroma|BC-Mel 0586|Indonesia.Sulawesi Selatan|
 Macroglossum sulai|BC-Mel 0980|Indonesia.Sulawesi|Paratype
 Macroglossum|BC-Hax4872|Indonesia.Sulawesi|Life stage
 Macroglossum hemichroma|BC-Mel 0579|Indonesia.Sulawesi|
 Macroglossum sulai|BC-Mel 0845|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0577|Indonesia.Sulawesi|
 Macroglossum perplexum|BC-Mel 0931|Indonesia.Sulawesi|Paratype
 Macroglossum sulai|BC-Mel 0844|Indonesia.Sulawesi|
 Macroglossum sulai|BC-Mel 0932|Indonesia.Sulawesi|Holotype
 Macroglossum sulai|BC-Hax4939|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4870|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Mel 0580|Indonesia.Sulawesi|Macroglossum sulawesica
 Macroglossum pyrrhosticta|BC-Mel1198|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel1197|China.Taiwan|
 Macroglossum saga|BC-Mel 0693|China.Hubei|
 Macroglossum saga|BC-Mel 0694|China.Guangxi|
 Macroglossum saga|BC-Mel 1056|China.Guangxi|
 Macroglossum saga|BC-Mel 1057|China.Guangxi|
 Macroglossum saga|BC-Mel 0788|Thailand.Nan|
 Macroglossum saga|BC-Hax4010|Malaysia|
 Macroglossum saga|BC-Hax3651|Thailand.Chiang Mai|
 Macroglossum saga|BC-Mel 0695|China.Hunan|
 Macroglossum saga|BC-Mel 1055|China|
 Macroglossum saga|BC-Hax3650|Thailand.Chiang Mai|
 Macroglossum semifasciata|BC-Hax3655|Thailand.Phrae|
 Macroglossum semifasciata|BC-Mel1199|Indonesia|
 Macroglossum semifasciata|BC-Hax3656|Thailand.Phrae|
 Macroglossum semifasciata|BC-EST0596|Thailand.Trat|
 Macroglossum semifasciata|BC-Hax3657|Thailand.Phrae|



Macroglossum semifasciata|BC-EST0596|Thailand.Trat|
 Macroglossum semifasciata|BC-Hax3657|Thailand.Phrae|
 Macroglossum semifasciata|BC-Mel 0988|Malaysia|
 Macroglossum semifasciata|BC-Mel1211|Indonesia.Bali|
 Macroglossum semifasciata|BC-Mel1212|Indonesia.Bali|
 Macroglossum semifasciata|BC-Mel 0989|Indonesia.Sumatra West|
 Macroglossum semifasciata|BC-Mel 0986|Indonesia.Sulawesi|
 Macroglossum BC-Mel 0902|Indonesia.Sulawesi Selatan|Macroglossum pseudonigellum- Holotype
 Macroglossum semifasciata|BC-Hax4952|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Hax4949|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Hax4946|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4947|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4931|Indonesia.Sulawesi|Life stage
 Macroglossum semifasciata|BC-Mel 0985|Indonesia.Sulawesi|
 Macroglossum BC-Mel 0984|Indonesia.Sulawesi|Macroglossum pseudonigellum- Paratype
 Macroglossum nigellum|BC-Mel 0990|Indonesia.Sumatra West|
 Macroglossum nigellum speideli|BC-Mel 0861|Indonesia.Sulawesi Selatan|
 Macroglossum nigellum speideli|BC-Mel 0981|Indonesia.Sulawesi|Paratype
 Macroglossum nigellum speideli|BC-Mel 0901|Indonesia.Sulawesi|Holotype
 Macroglossum nigellum speideli|BC-Mel 0982|Indonesia.Sulawesi|Paratype
 Macroglossum nigellum|BC-Mel 0977|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0975|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0976|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Mel 0978|Indonesia.Sulawesi|
 Macroglossum nigellum speideli|BC-Mel 0900|Indonesia.Sulawesi|Alotype
 Macroglossum nigellum speideli|BC-Mel 0979|Indonesia.Sulawesi|
 Macroglossum nigellum|BC-Hax4024|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4025|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4026|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4027|Indonesia.Sulawesi Utara|
 Macroglossum nigellum|BC-Hax4948|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4950|Indonesia.Sulawesi|Life stage
 Macroglossum nigellum|BC-Hax4951|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4893|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Mel 0983|Indonesia.Sulawesi|Macroglossum pseudonigellum- Paratype
 Macroglossum BC-Hax4923|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Hax5104|Laos.Houaphan|
 Macroglossum BC-Hax4015|Philippines|
 Macroglossum corythus|BC-Hax5102|Laos.Houaphan|
 Macroglossum BC-Hax4912|Vietnam|Life stage
 Macroglossum BC-Hax3658|Indonesia.Sulawesi|
 Macroglossum corythus lusteata|BC-Mel 0835|Laos|
 Macroglossum corythus lusteata|BC-Mel 0832|Indonesia.Jawa Barat|
 Macroglossum corythus|BC-Hax4863|Indonesia.Sulawesi|Life stage
 Macroglossum corythus|BC-Mel 0581|Indonesia|
 Macroglossum BC-Hax4014|Philippines|
 Macroglossum BC-Hax4913|Vietnam|Life stage
 Macroglossum BC-Hax4915|Vietnam|Life stage
 Macroglossum sylvia|BC-Hax3641|Indonesia|
 Macroglossum pseudoluteata|BC-Mel 0906|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum pseudoluteata|BC-Mel 0905|Indonesia.Sulawesi|Holotype
 Macroglossum sylvia|BC-Hax3645|Indonesia|
 Macroglossum sylvia|BC-Hax3644|Indonesia|
 Macroglossum BC-Hax4869|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4921|Indonesia.Sulawesi|Life stage
 Macroglossum BC-Hax4935|Indonesia.Sulawesi|Life stage
 Macroglossum amoenum|BC-Mel 0938|Indonesia|
 Macroglossum heliophila divergens|BC-Mel 1069|India.Karnataka|
 Macroglossum heliophila|BC-Hax4008|Malaysia|
 Macroglossum fringilla|BC-Mel1357|Indonesia.Bali|
 Macroglossum fringilla|BC-Mel1358|Indonesia.Bali|
 Macroglossum heliophila|BC-Mel 0952|Vietnam|
 Macroglossum heliophila|BC-Mel 0473|Indonesia.Sumatra|
 Macroglossum heliophila|BC-Mel 0953|Indonesia|
 Macroglossum heliophila|BC-Hax4039|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0962|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Hax4038|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 1008|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0959|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0968|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0963|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0958|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0967|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0969|Indonesia.Sulawesi|
 Macroglossum BC-Hax4920|Indonesia.Sulawesi|Life stage
 Macroglossum melas pullius|US00455193|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00503995|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|84298|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00480608|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00459830|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|USNM ENT 00490591|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00455192|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00459522|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499573|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499555|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00506630|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00508535|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506420|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506560|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00505811|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00508338|Papua New Guinea.East Sepik|SPHI004



Macroglossum melas pullius|US00508338|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00506685|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|US00459495|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00506661|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|USNM ENT 00731795|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|US00499385|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|67753|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00494185|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00499193|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|86204|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|88905|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00503448|Papua New Guinea.East Sepik|SPHI004
 Macroglossum melas pullius|USNM ENT 00480610|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|US00480609|Papua New Guinea.Madang|SPHI004
 Macroglossum melas pullius|USNM ENT 00733433|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|USNM ENT 00733434|Papua New Guinea.Chimbu|MOTH181
 Macroglossum melas pullius|USNM ENT 00731791|Papua New Guinea.Chimbu|MOTH181
 Macroglossum arimasi|BC-Mel 0863|Philippines.Samar|
 Macroglossum arimasi|BC-Hax4052|Philippines|
 Macroglossum caldum philipinense|BC-Mel 0849|Indonesia.Sulawesi Selatan|
 Macroglossum melas pullius|US00499369|Papua New Guinea.Madang|SPHI004
 Macroglossum|USNM ENT 00733436|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731897|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731790|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731794|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00733435|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731792|Papua New Guinea.Chimbu|MOTH181
 Macroglossum|USNM ENT 00731793|Papua New Guinea.Chimbu|MOTH181
 Macroglossum clemensi|BC-Mel 0470|Indonesia.Sulawesi|
 Macroglossum clemensi|BC-Mel 0769|Indonesia.Sulawesi Selatan|Holotype
 Macroglossum hemichroma|BC-Mel 0855|Thailand.Chiang Mai|
 Macroglossum hemichroma|BC-Hax4029|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Mel 0571|Malaysia|
 Macroglossum hemichroma|BC-Mel 0575|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Mel 0576|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Mel 0574|Indonesia.Sulawesi|
 Macroglossum hemichroma|BC-Hax4031|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Hax4028|Indonesia.Sulawesi Utara|
 Macroglossum hemichroma|BC-Mel 0572|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0573|Indonesia.Sulawesi Selatan|
 Macroglossum hemichroma|BC-Mel 0854|Philippines.Bukidnon|
 Macroglossum hemichroma|BC-Hax4030|Indonesia.Sulawesi Utara|
 Macroglossum fritzei|BC-Hax4047|China|
 Macroglossum fritzei|BC-Hax4046|China|
 Macroglossum nycteris|BC-Hax3635|India|
 Macroglossum nycteris|BC-Hax3636|India|
 Macroglossum nycteris|ZA-0019|Pakistan|
 Macroglossum nycteris|BC-Hax3637|India|
 Macroglossum gyrans|BC-Hax3596|India|
 Macroglossum gyrans|BC-Hax3597|India|
 Macroglossum gyrans|BC-Hax3595|India|
 Macroglossum gyrans|BC-Mel1355|Maldives|
 Macroglossum gyrans|BC-Mel1353|Maldives|
 Macroglossum gyrans|BC-Mel 0764|India.Kerala|
 Macroglossum gyrans|BC-Mel 0763|Indonesia|
 Macroglossum gyrans|BC-Mel 0765|Thailand.Phrae|
 Macroglossum gyrans|BC-Mel 0766|Indonesia.Sulawesi Selatan|
 Macroglossum gyrans|BC-Hax4012|Laos|
 Macroglossum gyrans|BC-Hax3599|Thailand|
 Macroglossum kishidai|BC-Mel 0846|Indonesia.Sulawesi Selatan|
 Macroglossum kishidai|BC-Mel 0847|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum passalus|BC-Mel 0819|Laos|
 Macroglossum augarra|BC-Mel 0918|Indonesia.Papua|
 Macroglossum|BC-Mel1205|Laos|
 Macroglossum spilonotum|BC-Hax4006|Papua New Guinea|
 Macroglossum sitiene|BC-Hax3604|Thailand.Phrae|
 Macroglossum sitiene|BC-Hax3603|Myanmar|
 Macroglossum sitiene|BC-Mel1356|Maldives|
 Macroglossum sitiene|BC-Mel 0780|Laos|
 Macroglossum|BC-Mel1215|Indonesia|
 Macroglossum faro cottoni|BC-Hax4033|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4034|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4036|Indonesia.Sulawesi Utara|
 Macroglossum faro cottoni|BC-Hax4035|Indonesia.Sulawesi Utara|
 Macroglossum faro|BC-Mel 0916|Philippines.Leyte|Macroglossum leytensis- Holotype
 Macroglossum faro|BC-Mel 0917|Philippines.Leyte|Macroglossum leytensis- Alotype
 Macroglossum faro|BC-Mel1288|Indonesia|
 Macroglossum faro|BC-Mel 0937|Indonesia|
 Macroglossum faro|BC-Mel1287|Indonesia.Sumatra|
 Macroglossum faro|BC-Mel 0825|Laos|
 Macroglossum faro|BC-Hax4032|Laos|
 Macroglossum mitchellii imperator|BC-Hax3628|Vietnam|
 Macroglossum mitchellii imperator|AYK-04-0178|China.Taiwan|
 Macroglossum mitchellii imperator|BC-Hax3629|Malaysia|
 Macroglossum cadioui|BC-Mel 0773|Indonesia.Sulawesi|Paratype
 Macroglossum cadioui|BC-Hax4004|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Hax4001|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Hax4002|Indonesia.Sulawesi Utara|
 Macroglossum cadioui|BC-Mel 0772|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum cadioui|BC-Hax4003|Indonesia.Sulawesi Utara|
 Macroglossum multifascia|BC-Mel 0770|Philippines.Samar|



Macroglossum multifascia|BC-Mel 0770|Philippines.Samar|
 Macroglossum multifascia|BC-Mel 0771|Indonesia.Sumatra|
 Macroglossum multifascia|BC-Hax4005|Malaysia|
 Macroglossum avicula|BC-Mel 0805|Indonesia.Jawa Barat|
 Macroglossum bombylans|AYK-04-0170|China.Taiwan|
 Macroglossum bombylans|AYK-04-0173|China.Taiwan|
 Macroglossum stellatarum|BC-EST0016|France.Midi-Pyrenees|
 Macroglossum stellatarum|IJK-02-5806|France.ex bred stock|
 Macroglossum stellatarum|BC ZSM Lep 21574|Germany.Bavaria|
 Macroglossum stellatarum|ZA-0020|Pakistan|
 Macroglossum stellatarum|BC-Hax3626|France|
 Macroglossum belis|BC-Hax5103|Laos.Houaphan|
 Macroglossum belis|BC-Hax3619|India|
 Macroglossum belis|BC-Hax5101|Laos.Houaphan|
 Macroglossum belis|ZA-0018|Pakistan|
 Macroglossum belis|AYK-04-0388|India.Andhra Pradesh|
 Macroglossum belis|BC-Mel 0692|India.Tamil Nadu|
 Macroglossum belis|BC-Hax4018|Thailand.Chiang Mai|
 Macroglossum belis|BC-Hax3620|Thailand.Phrae|
 Macroglossum belis|BC-Mel 0795|Thailand.Phrae|
 Macroglossum saga|BC-Mel1126|India.Karnataka|
 Macroglossum vacillans|ANIC Gen No. 003344|Australia.Queensland|
 Macroglossum vacillans|ANIC Gen No. 003345|Australia.Queensland|
 Macroglossum vacillans|BC-Mel 0664|Australia.Queensland|
 Macroglossum vacillans|BC-Mel 0662|Indonesia|
 Macroglossum vacillans|ANIC Gen No. 003238|Australia.Western Australia|
 Macroglossum vacillans|BC ZSM Lep 10457|Australia.Western Australia|
 Macroglossum vacillans|BC-Mel 0663|Indonesia|
 Macroglossum vacillans|BC ZSM Lep 10464|Australia.Northern Territory|
 Macroglossum vacillans|BC ZSM Lep 10470|Australia.Northern Territory|
 Macroglossum vacillans|BC-Mel 0661|Indonesia|
 Macroglossum vacillans|ANIC Gen No. 003177|Australia.Queensland|
 Macroglossum vacillans|BC-Hax3615|Australia.Queensland|
 Macroglossum vacillans|BC ZSM Lep 10570|Australia.Northern Territory|
 Macroglossum vacillans|BC ZSM Lep 02002|Australia.Queensland|
 Macroglossum vacillans|BC-Mel1192|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel1191|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel 0658|Indonesia.Sulawesi Selatan|
 Macroglossum vacillans|BC ZSM Lep 10533|Australia.Western Australia|
 Macroglossum vacillans|BC-Mel 0659|Indonesia|
 Macroglossum vacillans|BC ZSM Lep 13245|Australia.Northern Territory|
 Macroglossum vacillans|BC-Mel1193|Indonesia.Bali|
 Macroglossum vacillans|BC-Mel 0660|Indonesia|
 Macroglossum vacillans|BC-Hax3616|Australia.Queensland|
 Macroglossum aquila|BC-Mel 0671|Indonesia|
 Macroglossum aquila|BC-Mel 0856|Indonesia.Sulawesi Selatan|
 Macroglossum aquila|BC-Mel 0857|Indonesia.Sulawesi|
 Macroglossum nemesis|BC-Hax4904|Indonesia.Sulawesi Life stage|
 Macroglossum nemesis|BC-Mel 0683|Vietnam.Vinh Phuc|
 Macroglossum nemesis|BC-Mel 0776|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0684|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0685|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Mel 0777|Indonesia.Sulawesi Selatan|
 Macroglossum nemesis|BC-Hax4049|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Hax4040|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0966|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Hax4041|Indonesia.Sulawesi Utara|
 Macroglossum heliophila|BC-Mel 0630|Indonesia.Sumatra West|Macroglossum fringilla|
 Macroglossum heliophila|BC-Mel 0631|Indonesia.Sumatra West|Macroglossum fringilla|
 Macroglossum heliophila|BC-Mel 0632|Indonesia.Sumatra West|
 Macroglossum pyrhosticta|BC-Mel1324|Indonesia.Sumatra|
 Macroglossum lepidum|BC-Mel 0831|Philippines.Leyte|
 Macroglossum heliophila|BC-Mel 0964|Indonesia.Sulawesi|
 Macroglossum heliophila|BC-Mel 0965|Indonesia.Sulawesi|
 Macroglossum|BC-Hax4048|Indonesia.Sulawesi Utara|
 Macroglossum assimilis|BC-Mel 0775|Sri Lanka.Uva|
 Macroglossum assimilis|BC-Mel 1045|India.Karnataka|
 Macroglossum assimilis|BC-Mel1123|India.Karnataka|
 Macroglossum assimilis|AYK-04-0411|India|
 Macroglossum assimilis|BC-Mel 0774|Sri Lanka.Uva|
 Macroglossum assimilis|BC-Mel 1046|India.Karnataka|
 Macroglossum assimilis|MA05-09-02-81|India.Maharashtra|
 Macroglossum glaucoptera|BC-Mel 0790|Indonesia|
 Macroglossum loeffleri|BC-Mel 0907|Vietnam.Holotype|
 Macroglossum glaucoptera|BC-Mel 0670|Bhutan.Parol|
 Macroglossum glaucoptera|BC-Hax3609|Thailand.Phrae|
 Macroglossum glaucoptera|BC-Mel 0791|Indonesia.Sulawesi Selatan|
 Macroglossum loeffleri|BC-Mel 0908|Vietnam.Paratype|
 Macroglossum|BC-Mel 0903|Indonesia.Sulawesi|Macroglossum geofmartini- Holotype|
 Macroglossum prometheus|BC-Hax4019|Philippines|
 Macroglossum prometheus|BC-Mel 0691|Malaysia|
 Macroglossum prometheus lineata|ANIC Gen No. 003227|Australia.Queensland|
 Macroglossum prometheus lineata|USNM ENT 00676005|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676006|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676007|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|USNM ENT 00676008|Papua New Guinea.Madang|SPHI007|
 Macroglossum prometheus lineata|ANIC Gen No. 003226|Australia.Queensland|
 Macroglossum prometheus lineata|BC-LTM-103|Australia.Queensland|
 Macroglossum prometheus lineata|BC-LTM-102|Australia.Queensland|
 Macroglossum prometheus lineata|ANIC Gen No. 003228|Australia.Queensland|
 Macroglossum prometheus|BC-Hax4023|Indonesia.Sulawesi Utara|

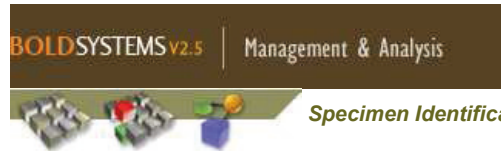


Macroglossum prometheus|BC-Hax4023|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Mel 1007|Indonesia|
 Macroglossum prometheus|BC-Hax3600|Indonesia|
 Macroglossum prometheus|BC-Mel 0688|Indonesia|
 Macroglossum prometheus|BC-Mel 0689|Indonesia|
 Macroglossum paukstadorum|BC-Mel 0826|Indonesia|Paratype
 Macroglossum paukstadorum|BC-Mel 0934|Indonesia|Holotype
 Macroglossum prometheus|BC-Mel 0690|Indonesia|
 Macroglossum prometheus|BC-Hax4021|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Hax4022|Indonesia.Sulawesi Utara|
 Macroglossum prometheus|BC-Mel 0687|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Hax3602|Indonesia|
 Macroglossum prometheus|BC-Mel 0686|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Mel 1004|Indonesia.Sulawesi|
 Macroglossum prometheus|BC-Hax3601|Indonesia|
 Macroglossum nubilum|BC-Hax4007|Papua New Guinea|
 Macroglossum nubilum|ANIC Gen No. 003222|Australia.Queensland|
 Macroglossum affictitia|BC-Hax3593|Thailand|
 Macroglossum affictitia|BC-Hax3594|Thailand.Phrae|
 Macroglossum affictitia|BC-Mel 0848|Thailand.Phrae|
 Macroglossum affictitia|BC-Hax4020|Thailand.Chiang Mai|
 Macroglossum reithi|BC-Hax4044|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4043|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4042|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Hax4037|Indonesia.Sulawesi Utara|
 Macroglossum reithi|BC-Mel 0973|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0970|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0972|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0971|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Mel 0974|Indonesia.Sulawesi|
 Macroglossum reithi|BC-Hax4045|Indonesia.Sulawesi Utara|
 Macroglossum schnitzleri|BC-Mel 0804|Indonesia|
 Macroglossum hirundo lifuensis|BC-Mel 0656|New Caledonia|
 Macroglossum hirundo lifuensis|BC-Mel 0657|New Caledonia|
 Macroglossum dohertyi doddi|BC-LTM-122|Australia.Queensland|
 Macroglossum dohertyi doddi|BC-LTM-123|Australia.Queensland|
 Macroglossum dohertyi|BC-Mel 0991|Indonesia.Papua|
 Macroglossum dohertyi|BC-Mel 0992|Indonesia.Papua|
 Macroglossum dohertyi|BC-Mel 0993|Indonesia|
 Macroglossum dohertyi|BC-Mel 0994|Indonesia|
 Macroglossum hirundo|MF-05-0018|Fiji|
 Macroglossum hirundo|BC-Mel 0935|Tonga|ssp vitiense
 Macroglossum moeckii|BC-Mel 0998|Indonesia.Papua|
 Macroglossum moeckii|BC-Mel 0999|Indonesia.Papua|
 Macroglossum hirundo errans|BC-Hax4011|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003185|Australia.Queensland|
 Macroglossum hirundo errans|ANIC Gen No. 003329|Australia.Queensland|
 Macroglossum hirundo errans|BC-Mel 0652|Australia.Queensland|Macroglossum fringilla
 Macroglossum hirundo lifuensis|MF-05-0011|Vanuatu|
 Macroglossum hirundo lifuensis|MF-05-0028|Vanuatu|
 Macroglossum rectans|ANIC Gen No. 003221|Australia.Queensland|
 Macroglossum hirundo|BC-Mel 0461|Australia|
 Macroglossum rectans|ANIC Gen No. 003187|Australia.Queensland|
 Macroglossum rectans|ANIC Gen No. 003189|Australia.Queensland|
 Macroglossum rectans|ANIC Gen No. 003190|Australia.Queensland|
 Macroglossum rectans|BC-Mel 0654|Indonesia|
 Macroglossum rectans|BC-Mel 0655|Indonesia|
 Macroglossum hirundo|BC-Hax4017|French Polynesia|rectans?
 Macroglossum rectans|BC-Mel 0653|Indonesia|
 Macroglossum rectans|BC-Mel 0814|Indonesia|
 Macroglossum stevensi|BC-Mel 0997|Indonesia.Papua|
 Macroglossum stevensi|BC-Mel 0995|Indonesia.Papua|
 Macroglossum stevensi|BC-Mel 0996|Indonesia.Papua|
 Macroglossum kitchingi|BC-Hax4053|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Hax4056|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Hax4054|Indonesia.Sulawesi Utara|
 Macroglossum kitchingi|BC-Mel 0629|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0628|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0808|Indonesia.Sulawesi Selatan|
 Macroglossum kitchingi|BC-Mel 0627|Indonesia.Sulawesi|
 Macroglossum kitchingi|BC-Hax4055|Indonesia.Sulawesi Utara|
 Macroglossum mediovitita|BC-Mel 0809|Indonesia.Jawa Barat|
 Macroglossum mediovitita|BC-Mel 0810|Philippines|
 Macroglossum mediovitita|BC-Hax4050|Indonesia.Sulawesi Utara|
 Macroglossum mediovitita|BC-Hax4051|Indonesia.Sulawesi Utara|
 Macroglossum neotroglodytus|BC-Mel 0472|China.Guangxi|
 Macroglossum neotroglodytus|BC-Mel 0883|Laos|
 Macroglossum neotroglodytus|BC-Hax5096|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax5097|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax5095|Laos.Louangphrabang|
 Macroglossum neotroglodytus|BC-Hax3610|Malaysia|
 Macroglossum pyrrhosticta|BC-Mel 0797|Laos|
 Macroglossum pyrrhosticta|BC-Mel1320|Indonesia|
 Macroglossum pyrrhosticta|BC-Mel1322|Indonesia|
 Macroglossum pyrrhosticta|BC-Mel1323|Indonesia.Bali|
 Macroglossum pyrrhosticta|BC-Mel1327|Indonesia.Bali|
 Macroglossum pyrrhosticta|BC-Mel1328|Indonesia.Bali|
 Macroglossum pyrrhosticta|IJK-04-0002|China|
 Macroglossum pyrrhosticta|BC-Mel 0955|China.Guangxi|
 Macroglossum pyrrhosticta|BC-Mel 0957|China.Guangxi|
 Macroglossum pyrrhosticta|BC-Mel 0799|Thailand.Phrae|
 Macroglossum pyrrhosticta|TCM-TM-0038|China.Taiwan|



Macroglossum pyrrhosticta|BC-Mel 0799|Thailand.Phrae|
 Macroglossum pyrrhosticta|JCM-TWN-0039|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel 0852|Philippines.Samar|
 Macroglossum pyrrhosticta|BC-Mel 0800|China.Taiwan|
 Macroglossum pyrrhosticta|BC-Mel 0667|Japan.Yamanashi-ken|
 Macroglossum pyrrhosticta|BC-Mel 0669|Bhutan.Parol|
 Macroglossum pyrrhosticta|BC-Mel 0798|Nepal|
 Macroglossum pyrrhosticta|BC-Mel 0851|Philippines.Samar|
 Macroglossum pyrrhosticta|BC-Mel 0954|China.Yunnan|
 Macroglossum pyrrhosticta|BC-Mel 0956|China.Hunan|
 Macroglossum pyrrhosticta|DB-03-2017|United States.Hawaii|
 Macroglossum pyrrhosticta|BC-Mel1351|Thailand.Chiang Mai|
 Macroglossum pyrrhosticta|BC-Mel1319|Indonesia.Sumatra|
 Macroglossum variegatum|BC-Hax3606|Thailand.Phrae|
 Macroglossum variegatum|BC-Mel 0787|Nepal|
 Macroglossum variegatum|BC-Mel 0853|Indonesia.Sumatra|
 Macroglossum variegatum|BC-Mel 0786|Laos|
 Macroglossum variegatum|BC-Mel 0960|Malaysia|
 Macroglossum variegatum|BC-Hax3605|Thailand.Phrae|
 Macroglossum variegatumJH01|BC-Hax3634|Philippines|
 Macroglossum limata|BC-Mel 0644|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0645|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0647|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0802|Indonesia.Sulawesi Selatan|
 Macroglossum limata|BC-Mel 0646|Indonesia.Sumatra West|
 Macroglossum limata|BC-Mel 0801|Thailand.Puket|
 Macroglossum limata|BC-Mel 0803|Indonesia.Sumatra|
 Macroglossum limata|BC-Hax3607|Malaysia|
 Macroglossum troglodytus|ANIC Gen No. 003212|Australia.Queensland|
 Macroglossum insipida|BC-Mel 0675|Indonesia.Sulawesi Selatan|
 Macroglossum insipida|BC-Mel 0676|Indonesia.Sulawesi Selatan|
 Macroglossum insipida|BC-Hax3631|Indonesia|
 Macroglossum insipida|BC-Hax3632|Indonesia|
 Macroglossum insipida|BC-Mel 0887|Indonesia.Papua|
 Macroglossum insipida|BC-Mel 0884|Philippines.Leyte|
 Macroglossum insipida|BC-Hax3633|Philippines|
 Macroglossum insipida|BC-Mel 1068|India.Karnataka|
 Macroglossum vicinum piepersi|BC-Mel 0651|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0635|Indonesia.Sumatra West|
 Macroglossum pyrrhosticta|BC-Mel1321|Indonesia|
 Macroglossum insipida|BC-Mel 0637|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0638|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0779|Indonesia.Sumatra|
 Macroglossum vicinum piepersi|BC-Mel 0650|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0649|Indonesia.Sumatra West|
 Macroglossum vicinum piepersi|BC-Mel 0648|Indonesia.Sumatra West|
 Macroglossum neotroglodytus|BC-Hax5100|Laos.Khammouan|
 Macroglossum neotroglodytus|AYK-04-0381|India.Assam|
 Macroglossum insipida|BC-Mel 0643|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0641|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0640|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0639|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum insipida|BC-Mel 0636|Indonesia.Sumatra West|
 Macroglossum insipida|BC-Mel 0642|Indonesia.Sumatra West|Macroglossum troglodytus
 Macroglossum vicinum piepersi|BC-Mel 0476|
 Macroglossum insipida papuana|89084|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|84093|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|USNM ENT 00676004|Papua New Guinea.Madang|SPHI009
 Macroglossum insipida papuana|83080|Papua New Guinea.Madang|SPHI009
 Macroglossum alcedo|BC-LTM-121|Australia.Queensland|
 Macroglossum alcedo|BC-JT-23M|Australia.Queensland|
 Macroglossum pyrrhosticta|BC-Mel1325|Indonesia.Sumatra|
 Macroglossum vicinum piepersi|BC-Hax4009|Malaysia|
 Macroglossum|BC-Mel 0951|Malaysia.Sabah|
 Macroglossum pachycerus|BC-Mel 0477|Madagascar|
 Macroglossum pachycerus|BC-Basq0552|Madagascar|
 Macroglossum meeki|BC-Mel 0875|Indonesia.Papua|
 Macroglossum trochilus|BC-MNHJJP0127|Malawi|
 Macroglossum aesalon|BC-Basq0561|Madagascar|
 Macroglossum milvus|BC-EST0584|Reunion|
 Macroglossum milvus|BC-Hax3612|Reunion|
 Macroglossum milvus|BC-Hax3611|Reunion|
 Macroglossum melanoleuca|BC-Mel 0878|Indonesia|Holotype
 Macroglossum micacea|ANIC Gen No. 003203|Australia.Queensland|
 Macroglossum napolovi|BC-Mel 0864|Vietnam|Paratype
 Macroglossum napolovi|BC-Mel 0927|Vietnam|Holotype
 Macroglossum napolovi|BC-Mel 0928|Vietnam|Alotype
 Macroglossum kadneri|BC-Mel 0924|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum kadneri|BC-Mel 0921|Indonesia.Sulawesi|Holotype
 Macroglossum palawana|BC-Mel 0926|Philippines.Palawan|Alotype
 Macroglossum trigi|BC-Mel 0920|Indonesia.Sulawesi|Paratype
 Macroglossum kadneri|BC-Mel 0922|Indonesia.Sulawesi|Paratype
 Macroglossum kadneri|BC-Mel 0923|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum palawana|BC-Mel 0925|Philippines.Palawan|Holotype
 Macroglossum trigi|BC-Mel 0919|Indonesia.Sulawesi|Holotype
 Macroglossum|BC-Hax4907|Indonesia.Sulawesi|Life stage
 Macroglossum|BC-Hax4929|Indonesia.Sulawesi|Life stage
 Macroglossum haxairei|BC-Hax4860|Indonesia.Sulawesi|Paratype
 Macroglossum haxairei|BC-Mel 0911|Indonesia.Sulawesi|Paratype
 Macroglossum eggeri|BC-Mel 0912|Indonesia.Sulawesi Selatan|Paratype
 Macroglossum eggeri|BC-Mel 0910|Indonesia.Sulawesi|Holotype





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Specimen Identification Request

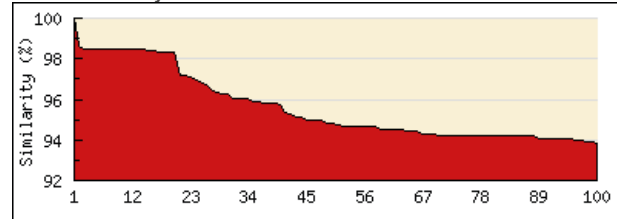
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>insipida</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vicinumpiepersi</i>	98.62
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vicinumpiepersi</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vicinumpiepersi</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vicinumpiepersi</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>insipida</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>insipida</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>insipida</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>insipida</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vicinumpiepersi</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>neotroglodytus</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>neotroglodytus</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>neotroglodytus</i>	98.47
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>insipida</i>	98.43
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>vicinumpiepersi</i>	98.42
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>pyrrhosticta</i>	98.32
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>insipida</i>	98.32
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>insipida</i>	98.32
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>insipida</i>	98.32

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Phone: (+420) 775 349 546



Marumba dyras
(Walker, 1856)

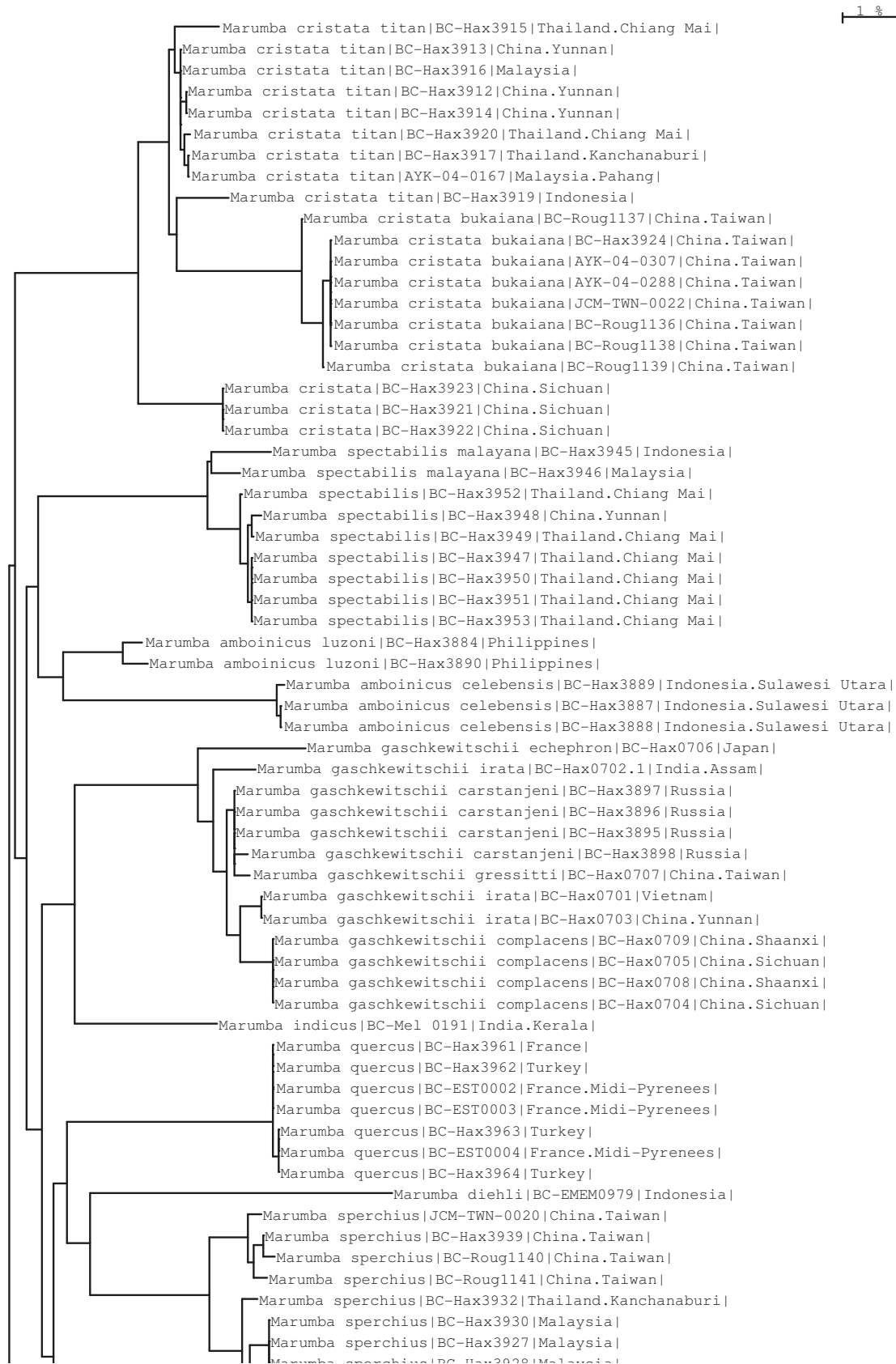


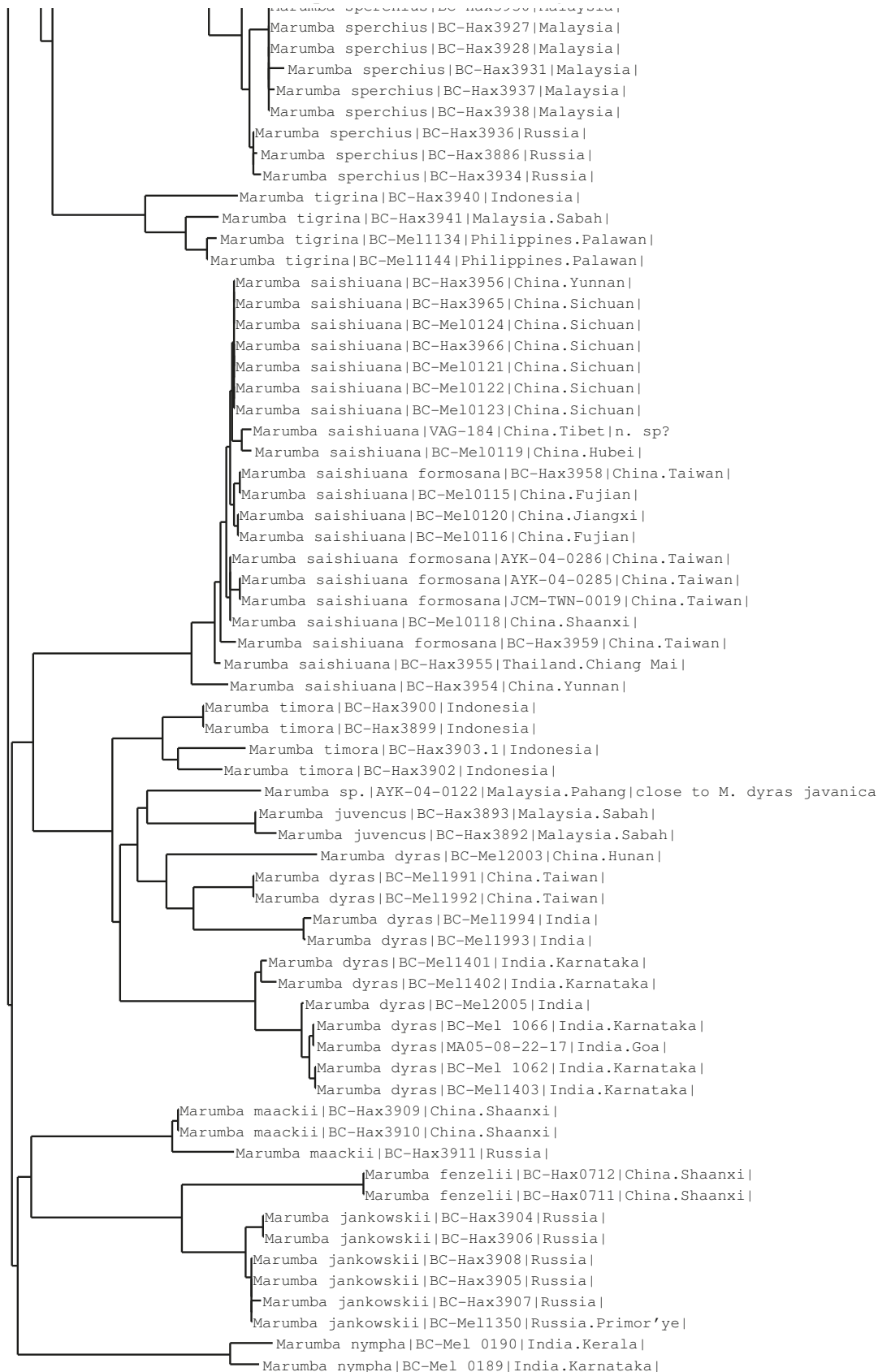
BOLD TaxonID Tree

Project : SEARCH: Tax(Marumba)
Date : 25-April-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 126
Species count : 27
Genus count : 1
Family count : 1
Unidentified : 0









Specimen Identification Request

Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :

Similarity scores of the top 100 matches

TOP 20 Matches :

Display option:

default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	99.08
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	98.93
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	98.93
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	98.78
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	98.78
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>timora</i>	96.14
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>timora</i>	96.02
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>timora</i>	95.87
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>timora</i>	95.87
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	95.72
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>timora</i>	95.72
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	95.72
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	95.41
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	95.41
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>timora</i>	95.31
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyras</i>	95.11
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>dyrasjavanica</i>	95.11
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>sp.</i>	95.1





Marumba nympa
(Rothschild & Jordan, 1903)

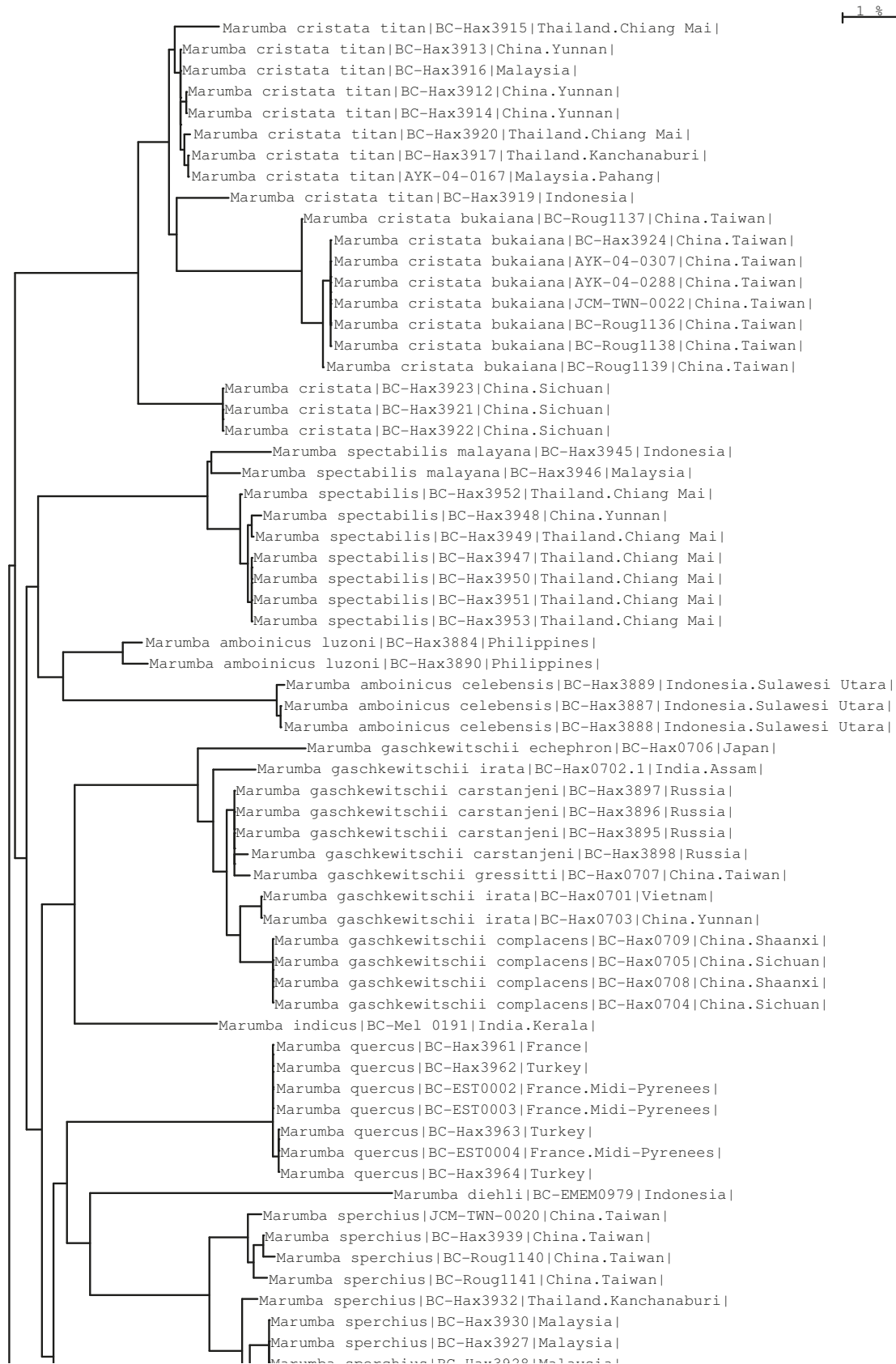


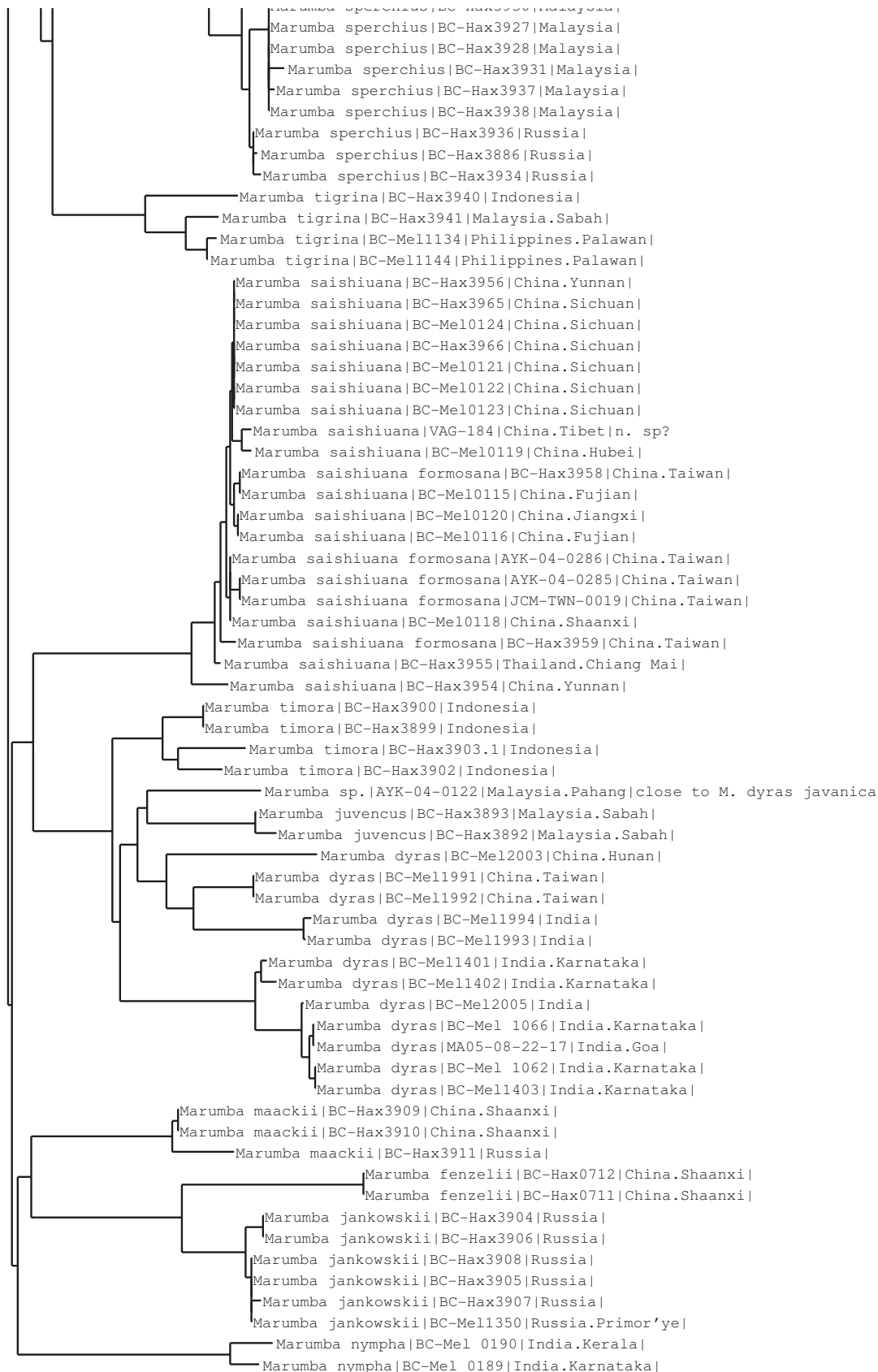
BOLD TaxonID Tree

Project : SEARCH: Tax(Marumba)
Date : 25-April-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 126
Species count : 27
Genus count : 1
Family count : 1
Unidentified : 0









Specimen Identification Request

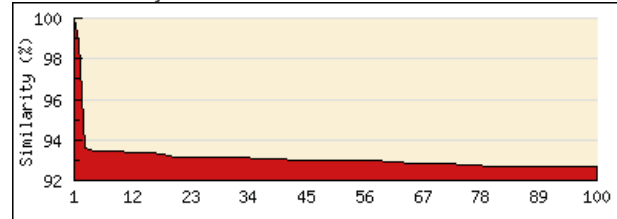
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>nympha</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>nympha</i>	98.88
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>cristatititan</i>	93.58
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>maackii</i>	93.55
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>cristatititan</i>	93.43
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>cristatititan</i>	93.43
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>amboinicus</i>	93.43
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>amboinicus</i>	93.43
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>amboinicus</i>	93.43
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>indicus</i>	93.43
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>amboinicusluzoni</i>	93.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>cristatititan</i>	93.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>timora</i>	93.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>cristatititan</i>	93.39
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>cristatititan</i>	93.36
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>cristatititan</i>	93.36
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>sperchius</i>	93.27
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>cristatititan</i>	93.27
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>cristatititan</i>	93.19
Arthropoda	Insecta	Lepidoptera	Sphingidae	Marumba	<i>amboinicusluzoni</i>	93.14

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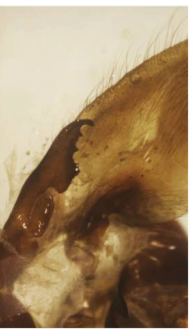
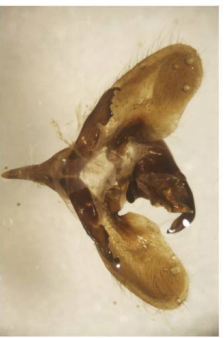


Meganoton nyctiphanes
(Walker, 1856)

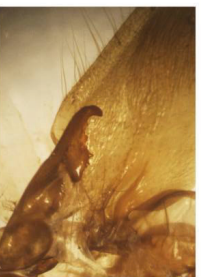


Study of genital

Laos



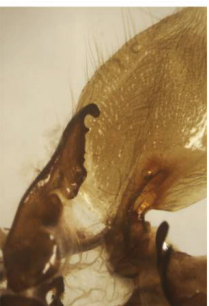
Malaysia



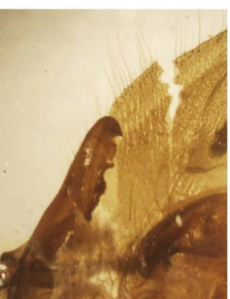
Thailand



India



India



India



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WWW: www.sphingidae-museum.com

E-mail: info@sphingidae-museum.com

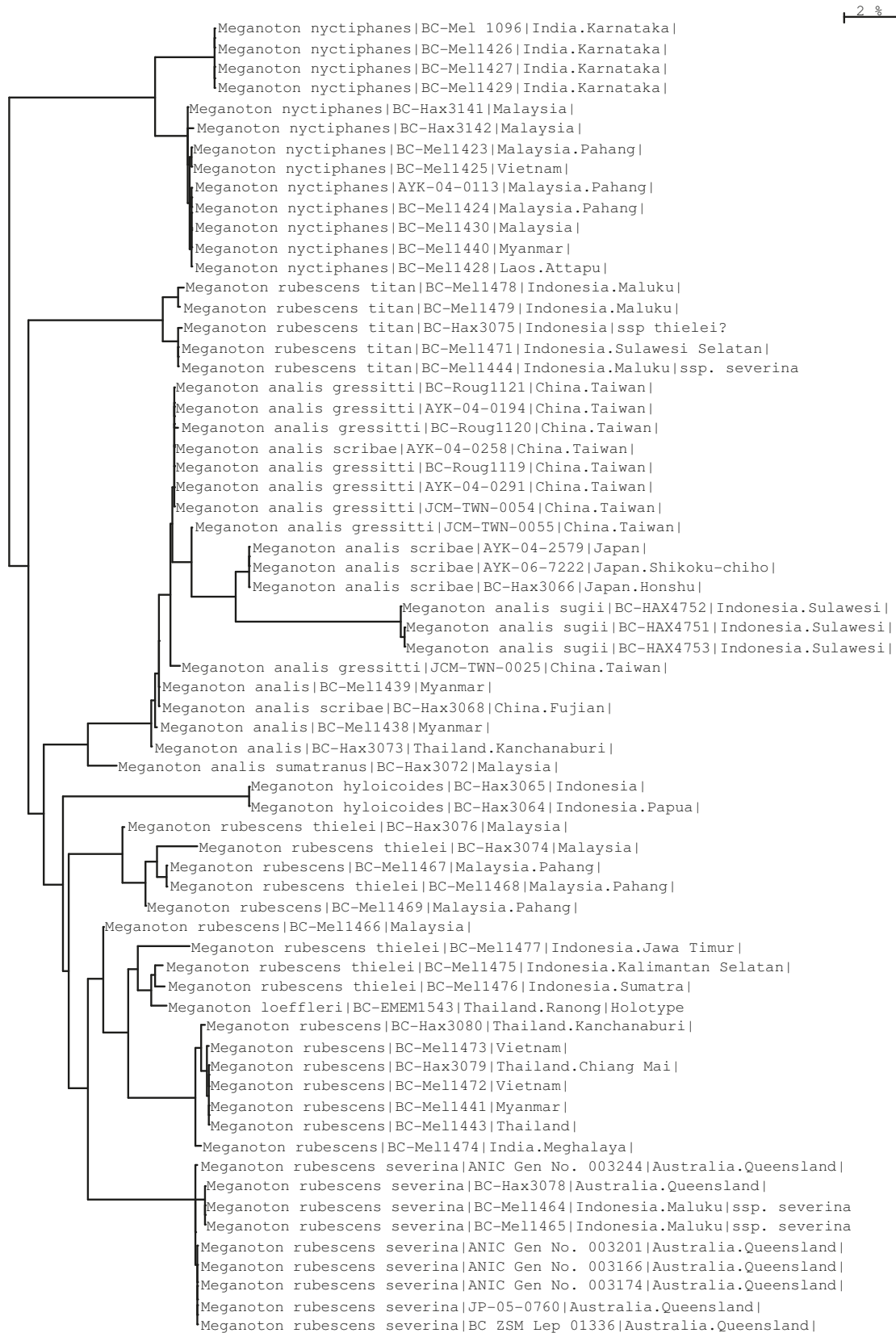
Phone: (+420) 775 349 546

BOLD TaxonID Tree

Project : SEARCH: Tax(Meganoton)
Date : 25-April-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 66
Species count : 12
Genus count : 1
Family count : 1
Unidentified : 0







Specimen Identification Request

Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :

Similarity scores of the top 100 matches

TOP 20 Matches :

Display option:

default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Meganoton	<i>nyctiphanes</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Meganoton	<i>nyctiphanes</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Meganoton	<i>nyctiphanes</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Meganoton	<i>nyctiphanes</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Meganoton	<i>nyctiphanes</i>	98.17
Arthropoda	Insecta	Lepidoptera	Sphingidae	Meganoton	<i>nyctiphanes</i>	98.17
Arthropoda	Insecta	Lepidoptera	Sphingidae	Meganoton	<i>nyctiphanes</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Meganoton	<i>nyctiphanes</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Meganoton	<i>nyctiphanes</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Meganoton	<i>nyctiphanes</i>	98.01
Arthropoda	Insecta	Lepidoptera	Sphingidae	Macroglossum	<i>nubilum</i>	92
Arthropoda	Insecta	Lepidoptera	Sphingidae	Sphinx	<i>drupiferarum</i>	91.51
Arthropoda	Insecta	Lepidoptera	Sphingidae	Sphinx	<i>drupiferarum</i>	91.44
Arthropoda	Insecta	Lepidoptera	Sphingidae	Sphinx	<i>drupiferarum</i>	91.44
Arthropoda	Insecta	Lepidoptera	Sphingidae	Sphinx	<i>drupiferarum</i>	91.44
Arthropoda	Insecta	Lepidoptera	Sphingidae	Sphinx	<i>drupiferarum</i>	91.44
Arthropoda	Insecta	Lepidoptera	Sphingidae	Sphinx	<i>drupiferarum</i>	91.44
Arthropoda	Insecta	Lepidoptera	Sphingidae	Sphinx	<i>drupiferarum</i>	91.44
Arthropoda	Insecta	Lepidoptera	Notodontidae	Datana	<i>drexelii</i>	91.42





Nephela hespera
(Fabricius, 1775)

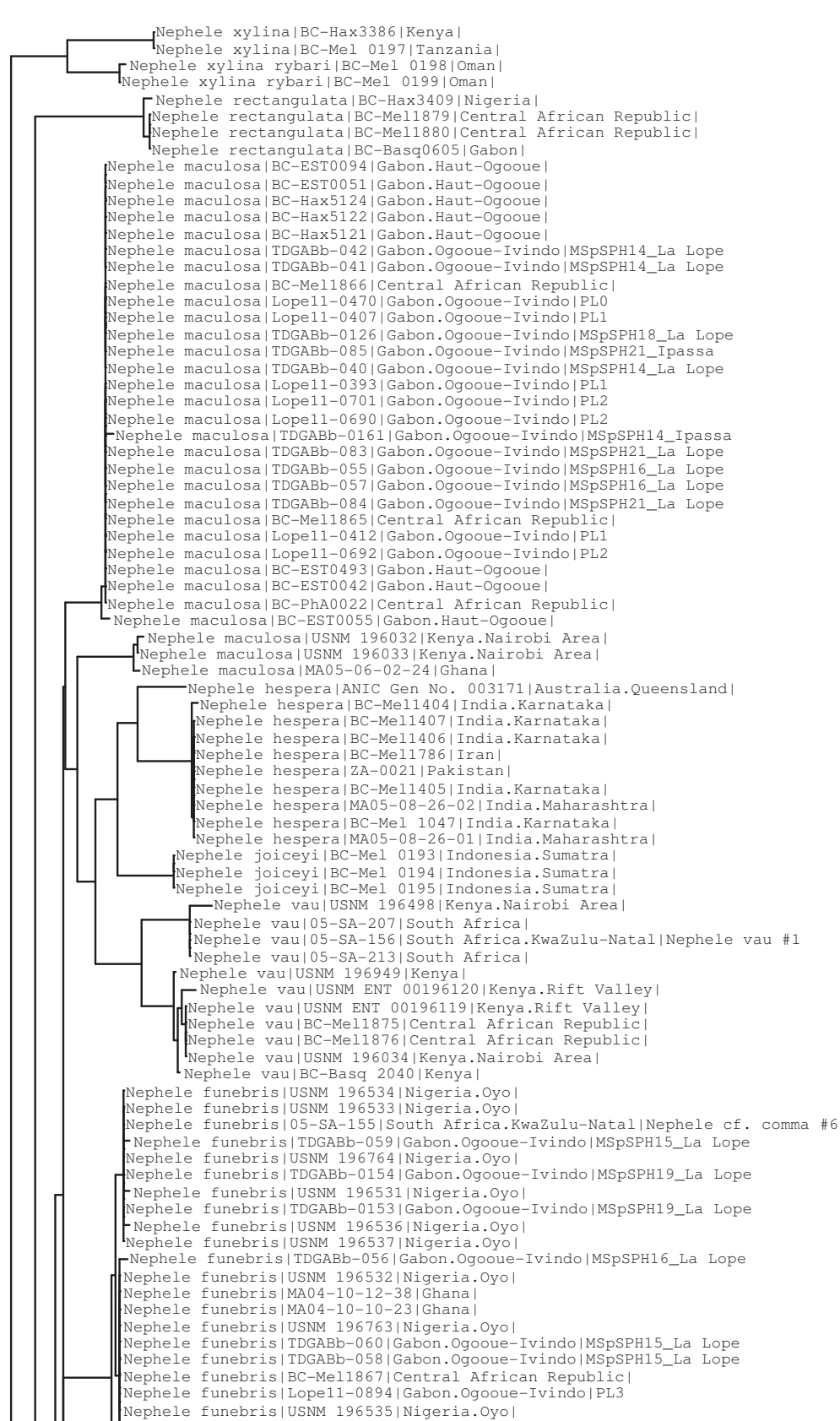


BOLD TaxonID Tree

Project : SEARCH: Tax(Nephele)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

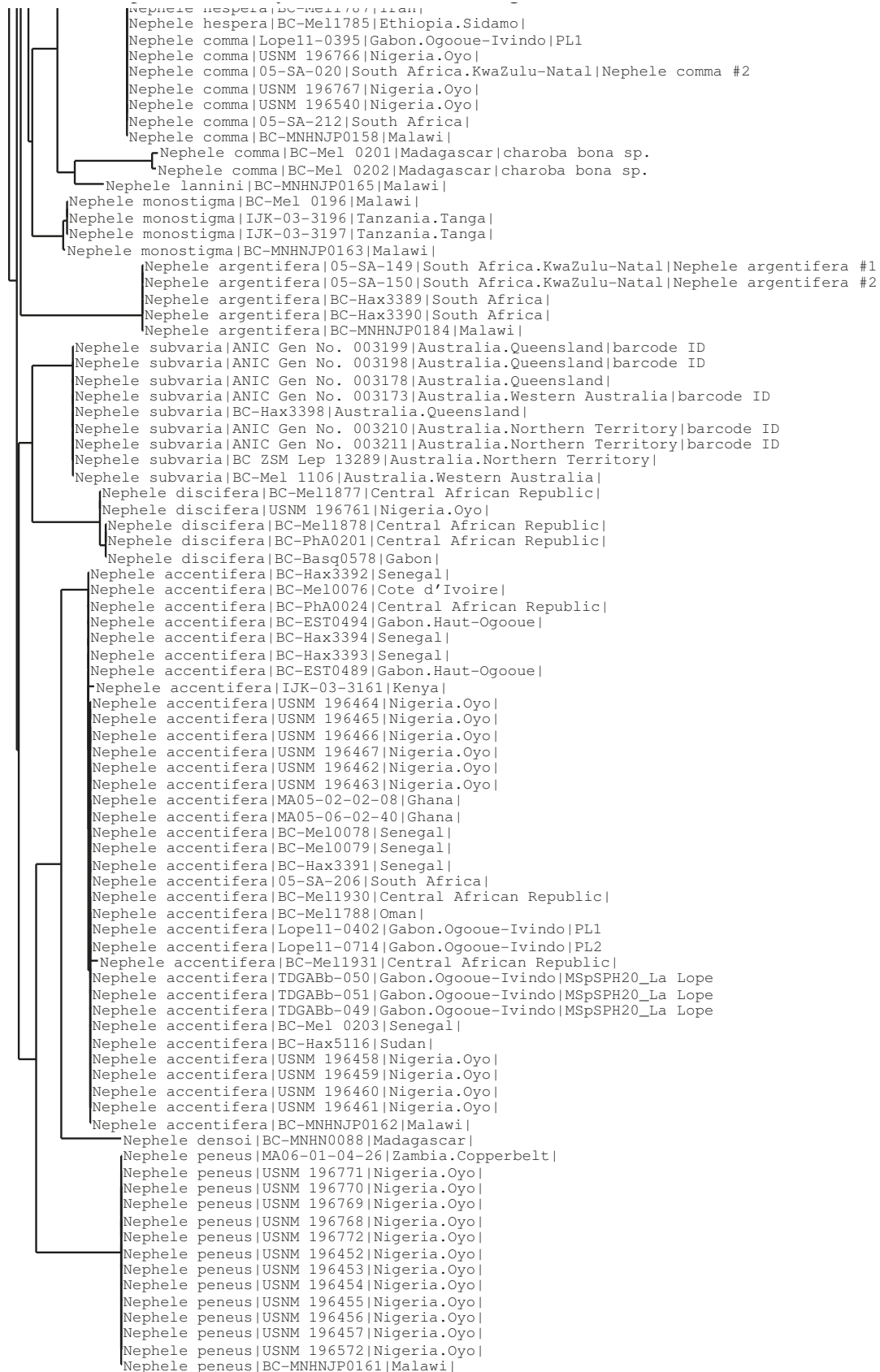
Sequence Count : 249
Species count : 24
Genus count : 1
Family count : 1
Unidentified : 0





Nephele funebris|Lopell-0894|Gabon.Ogooue-Ivindo|PL3
 Nephele funebris|USNM 196535|Nigeria.Oyo|
 Nephele funebris|USNM 196538|Nigeria.Oyo|
 Nephele funebris|BC-EST0060|Gabon.Haut-Ogooue|
 Nephele funebris|BC-Hax3407|Tanzania|
 Nephele funebris|BC-Hax3406|Tanzania|
 Nephele funebris|BC-Mell1868|Central African Republic|
 Nephele funebris|USNM 196035|Kenya.Nairobi Area|
 Nephele funebris|BC-MNHNJP0160|Malawi|
 Nephele aequivalens|BC-EST0077|Gabon.Haut-Ogooue|
 Nephele aequivalens|Lopell-0422|Gabon.Ogooue-Ivindo|PL1
 Nephele aequivalens|USNM 196470|Nigeria.Oyo|
 Nephele aequivalens|MA04-10-09-60|Ghana|
 Nephele aequivalens|BC-Mell1882|Central African Republic|
 Nephele aequivalens|BC-Mell1881|Central African Republic|
 Nephele aequivalens|Lopell-0403|Gabon.Ogooue-Ivindo|PL1
 Nephele aequivalens|TDGABb-0174|Gabon.Ogooue-Ivindo|MSpSPH38_La Lope
 Nephele aequivalens|TDGABb-022|Gabon.Ogooue-Ivindo|MSpSPH38_La Lope
 Nephele aequivalens|TDGABb-023|Gabon.Ogooue-Ivindo|MSpSPH38_La Lope
 Nephele aequivalens|TDGABb-024|Gabon.Ogooue-Ivindo|MSpSPH38_Ipassa
 Nephele aequivalens|BC-PhA0026|Central African Republic|
 Nephele aequivalens|USNM 196468|Nigeria.Oyo|
 Nephele aequivalens|USNM 196469|Nigeria.Oyo|
 Nephele aequivalens|USNM 196471|Nigeria.Oyo|
 Nephele aequivalens|USNM 196472|Nigeria.Oyo|
 Nephele aequivalens|USNM 196473|Nigeria.Oyo|
 Nephele aequivalens|USNM 196474|Nigeria.Oyo|
 Nephele aequivalens|USNM 196475|Nigeria.Oyo|
 Nephele aequivalens|USNM 196491|Nigeria.Oyo|
 Nephele aequivalens|USNM 196492|Nigeria.Oyo|
 Nephele aequivalens|BC-Hax3412|Sierra Leone|
 Nephele aequivalens|BC-EST0033|Gabon.Haut-Ogooue|
 Nephele aequivalens|BC-MNHNJP0211|Sao Tome and Principe|
 Nephele bipartita|Lopell-0399|Gabon.Ogooue-Ivindo|PL1
 Nephele bipartita|BC-Hax5123|Gabon.Haut-Ogooue|
 Nephele bipartita|Lopell-0406|Gabon.Ogooue-Ivindo|PL1
 Nephele bipartita|TDGABb-0127|Gabon.Ogooue-Ivindo|MSpSPH18_La Lope
 Nephele bipartita|BC-EST0481|Gabon.Haut-Ogooue|
 Nephele bipartita|BC-Mell1869|Central African Republic|
 Nephele bipartita|TDGABb-0128|Gabon.Ogooue-Ivindo|MSpSPH18_La Lope
 Nephele bipartita|BC-EST0054|Gabon.Haut-Ogooue|
 Nephele bipartita|BC-Basq0582|Gabon|
 Nephele oenopion stictica|BC-Hax3396|Reunion|
 Nephele oenopion|BC-Hax3411|Mayotte|
 Nephele oenopion continentis|BC-Mell1873|Central African Republic|
 Nephele oenopion continentis|BC-Hax3395|Tanzania|
 Nephele oenopion continentis|BC-Mell1874|Central African Republic|
 Nephele oenopion continentis|BC-MNHNJP0169|Malawi|
 Nephele rosae|Lopell-0856|Gabon.Ogooue-Ivindo|PL3
 Nephele rosae|USNM 196799|Nigeria.Oyo|
 Nephele rosae|BC-EST0056|Gabon.Haut-Ogooue|
 Nephele rosae|BC-EST0046|Gabon.Haut-Ogooue|
 Nephele rosae|MA04-10-09-56|Ghana|
 Nephele rosae|USNM 196796|Nigeria.Oyo|
 Nephele rosae|TDGABb-045|Gabon.Ogooue-Ivindo|MSpSPH17_La Lope
 Nephele rosae|TDGABb-044|Gabon.Ogooue-Ivindo|MSpSPH17_La Lope
 Nephele rosae|TDGABb-043|Gabon.Ogooue-Ivindo|MSpSPH17_La Lope
 Nephele rosae|TDGABb-0160|Gabon.Ogooue-Ivindo|MSpSPH17_Ipassa
 Nephele rosae|TDGABb-0159|Gabon.Ogooue-Ivindo|MSpSPH17_Ipassa
 Nephele rosae|BC-Mell1872|Central African Republic|
 Nephele rosae|BC-Mell1871|Central African Republic|
 Nephele rosae|USNM 196798|Nigeria.Oyo|
 Nephele rosae|USNM 196797|Nigeria.Oyo|
 Nephele rosae|USNM 196800|Nigeria.Oyo|
 Nephele rosae|Lopell-0405|Gabon.Ogooue-Ivindo|PL1
 Nephele rosae|BC-Hax3415|Sierra Leone|
 Nephele rosae|BC-Hax3416|Sierra Leone|
 Nephele rosae|BC-PhA0203|Central African Republic|
 Nephele rosae|Lopell-0414|Gabon.Ogooue-Ivindo|PL1
 Nephele rosae|USNM 196795|Nigeria.Oyo|
 Nephele rosae|BC-EST0093|Gabon.Haut-Ogooue|
 Nephele rosae illustris|BC-Hax3413|Tanzania|
 Nephele rosae illustris|BC-MNHNJP0167|Malawi|
 Nephele comma|BC-EST0487|Gabon.Haut-Ogooue|
 Nephele comma|05-SA-210|South Africa|
 Nephele comma|USNM 196541|Nigeria.Oyo|
 Nephele comma|USNM 196539|Nigeria.Oyo|
 Nephele comma|BC-Hax5120|Gabon.Haut-Ogooue|
 Nephele comma|BC-Hax5119|Gabon.Haut-Ogooue|
 Nephele comma|BC-Hax5110|Namibia|
 Nephele comma|USNM 196765|Nigeria.Oyo|
 Nephele comma|BC-PhA0184|Central African Republic|
 Nephele comma|BC-Mel 0200|Zambia|
 Nephele hespera|BC-Mell1787|Iran|
 Nephele hespera|BC-Mell1785|Ethiopia.Sidamo|
 Nephele comma|Lopell-0395|Gabon.Ogooue-Ivindo|PL1







Specimen Identification Request

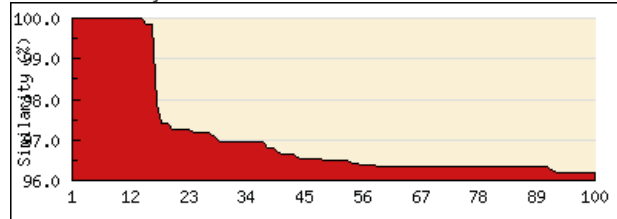
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>hespera</i>	97.9
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>joiceyi</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>joiceyi</i>	97.4
Arthropoda	Insecta	Lepidoptera	Sphingidae	Nephele	<i>joiceyi</i>	97.25

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Polyptychus dentatus
(Cramer, 1777)



SPHINGIDAE MUSEUM
CZECH REPUBLIC

Address: Orlov 79, Příbram 261 02, Czech republic

WWW: www.sphingidae-museum.com

E-mail: info@sphingidae-museum.com

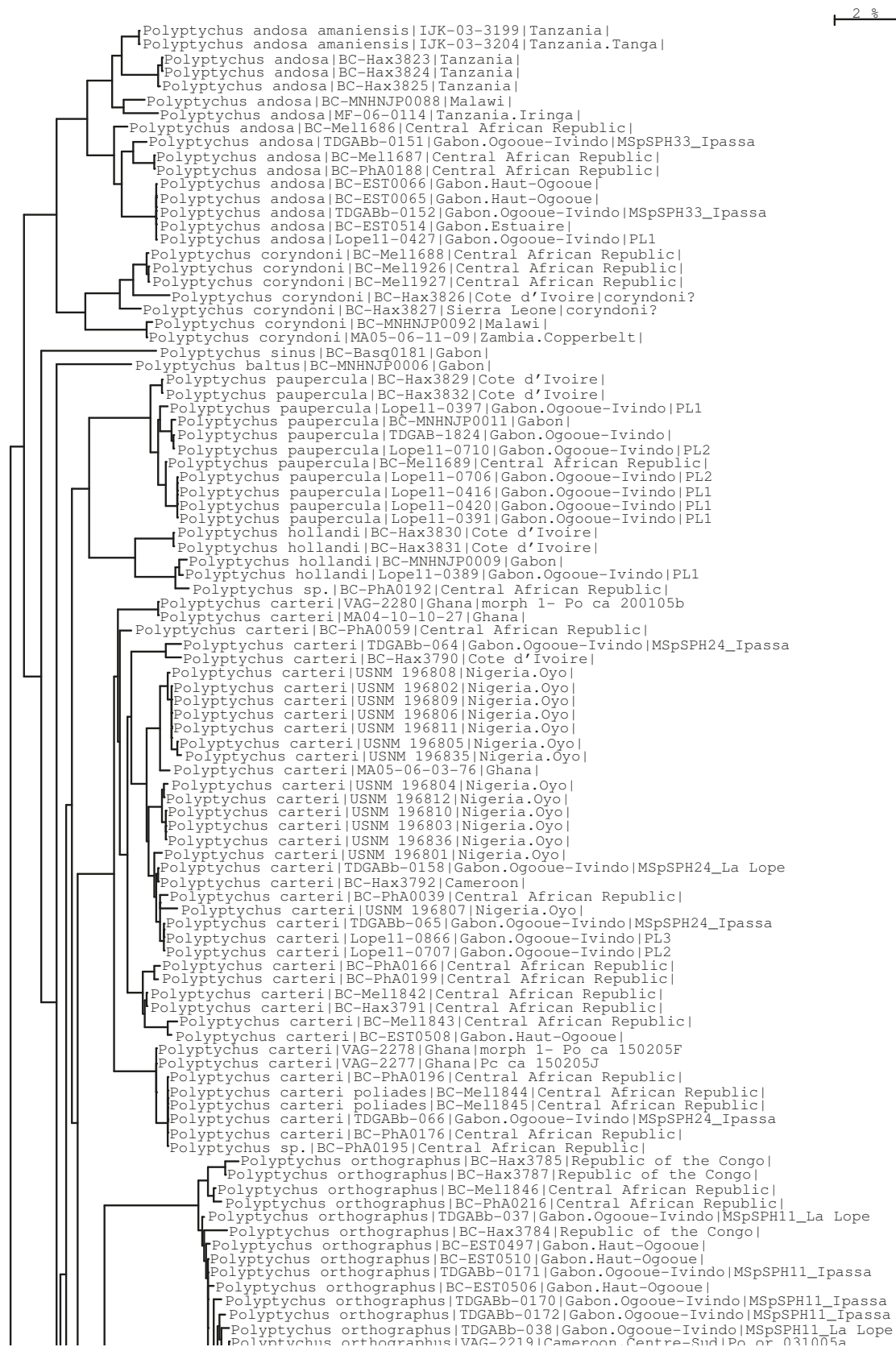
Phone: (+420) 775 349 546

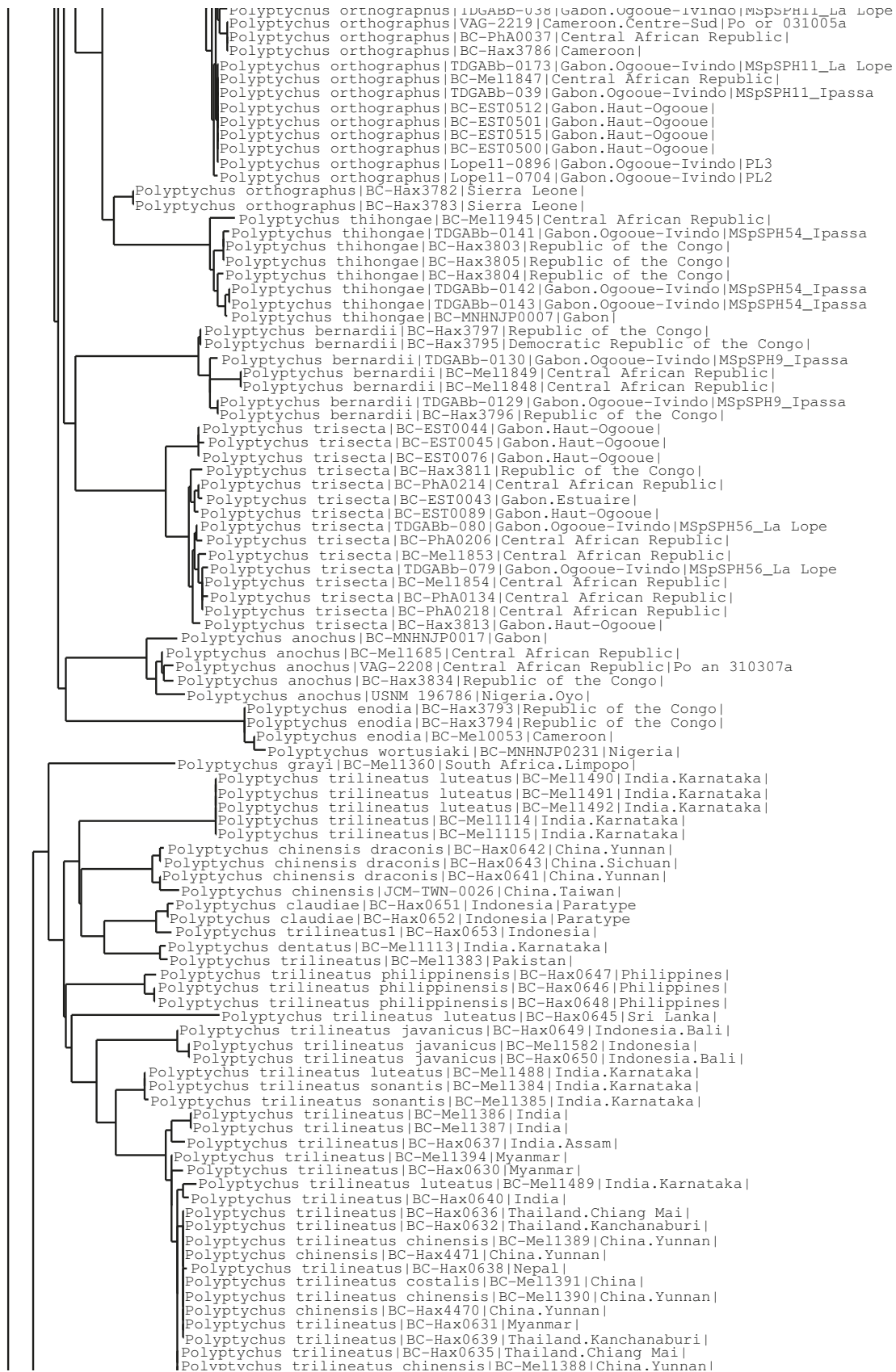
BOLD TaxonID Tree

Project : SEARCH: Tax(Polyptychus)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 286
Species count : 45
Genus count : 1
Family count : 1
Unidentified : 0











Specimen Identification Request

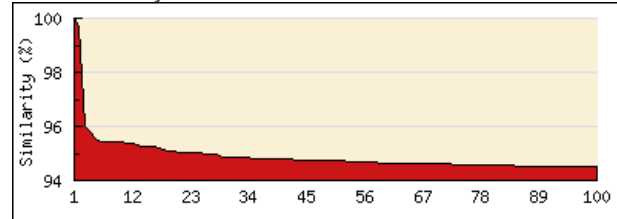
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>dentatus</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatus</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>claudiae</i>	96.02
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>claudiae</i>	95.83
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconis</i>	95.57
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconis</i>	95.41
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychoides	<i>sp.</i>	95.41
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconoides</i>	95.41
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconoides</i>	95.41
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconis</i>	95.41
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatus</i>	95.39
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconis</i>	95.38
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconoides</i>	95.31
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatussonantis</i>	95.26
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychoides	<i>sp.</i>	95.26
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisshaanxiensis</i>	95.26
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychoides	<i>digitatus</i>	95.21
Arthropoda	Insecta	Lepidoptera	Sphingidae	Microclanis	<i>erlangeri</i>	95.14
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatusluteatus</i>	95.11
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatussonantis</i>	95.11

Display option: default

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Phone: (+420) 775 349 546



Polyptychus trilineatus
(Moore, 1888)

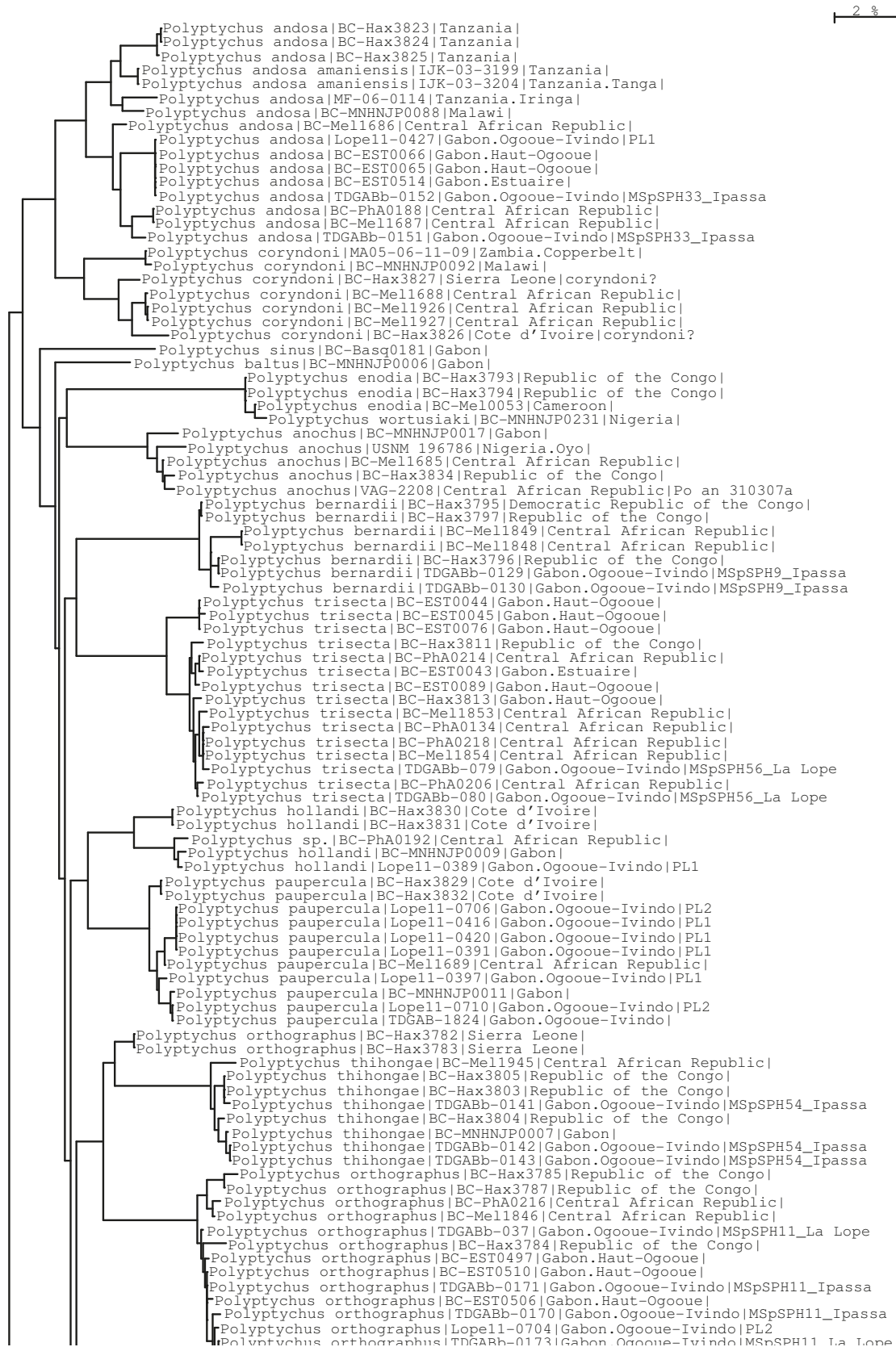


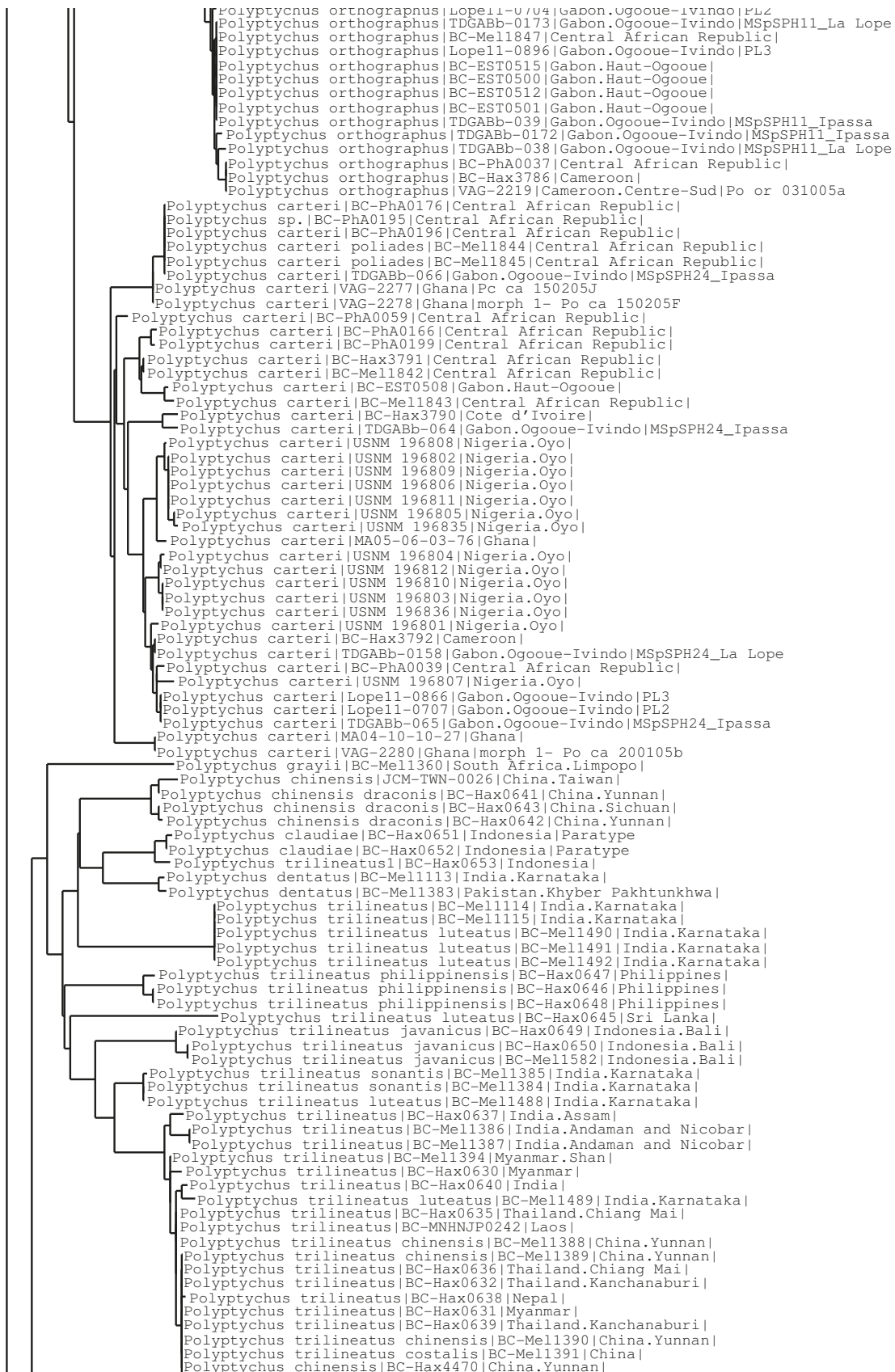
BOLD TaxonID Tree

Project : SEARCH: Tax(Polyptychus)
Date : 25-April-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 286
Species count : 44
Genus count : 1
Family count : 1
Unidentified : 0











Specimen Identification Request

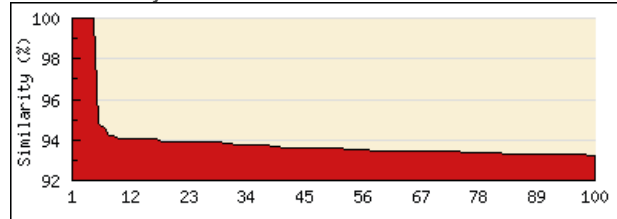
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatusluteatus</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatus</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatus</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatusluteatus</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatusluteatus</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>claudiae</i>	94.8
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>claudiae</i>	94.6
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconis</i>	94.22
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconis</i>	94.19
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconoides</i>	94.05
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatusluteatus</i>	94.04
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatussonantis</i>	94.04
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconis</i>	94.04
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconoides</i>	94.04
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconoides</i>	94.04
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>chinensisdraconis</i>	94.04
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatus</i>	94.03
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychoides	<i>septentrionalis</i>	93.94
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatuschinensis</i>	93.89
Arthropoda	Insecta	Lepidoptera	Sphingidae	Polyptychus	<i>trilineatusjavanicus</i>	93.89

Display option: default





Psilogramma manjunataha
(Eitschberger & Melichar, 2011)

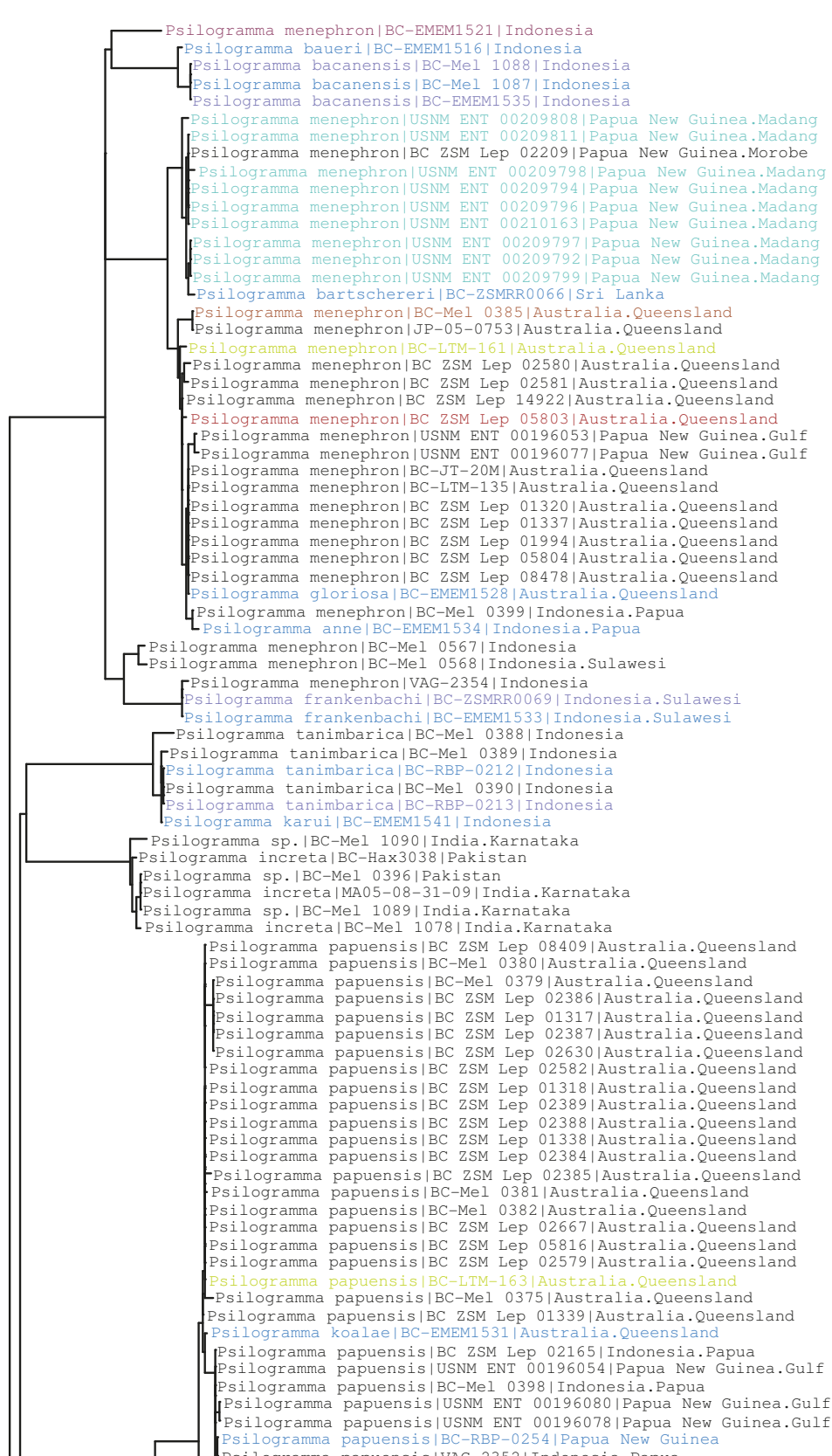


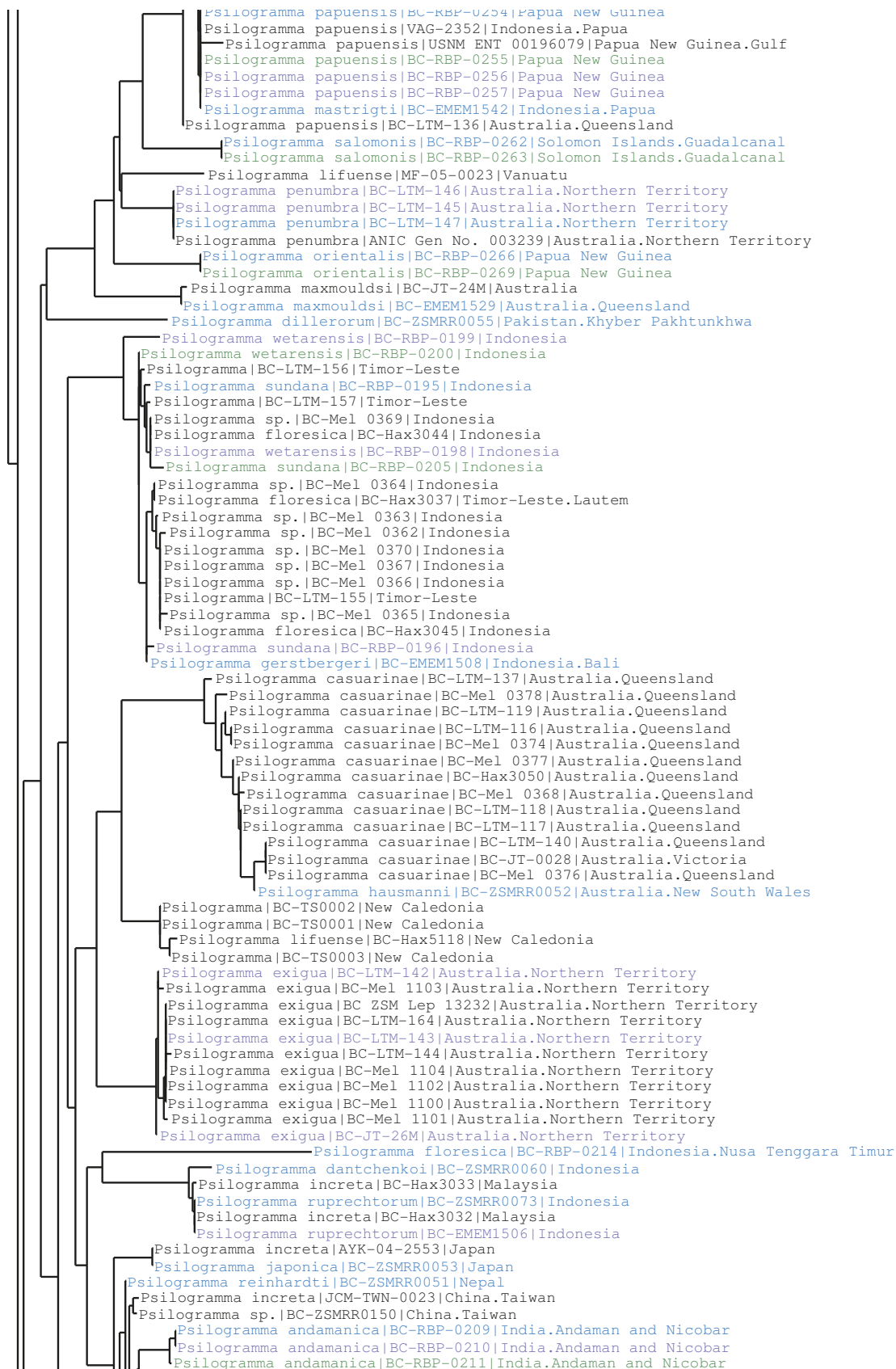
BOLD TaxonID Tree

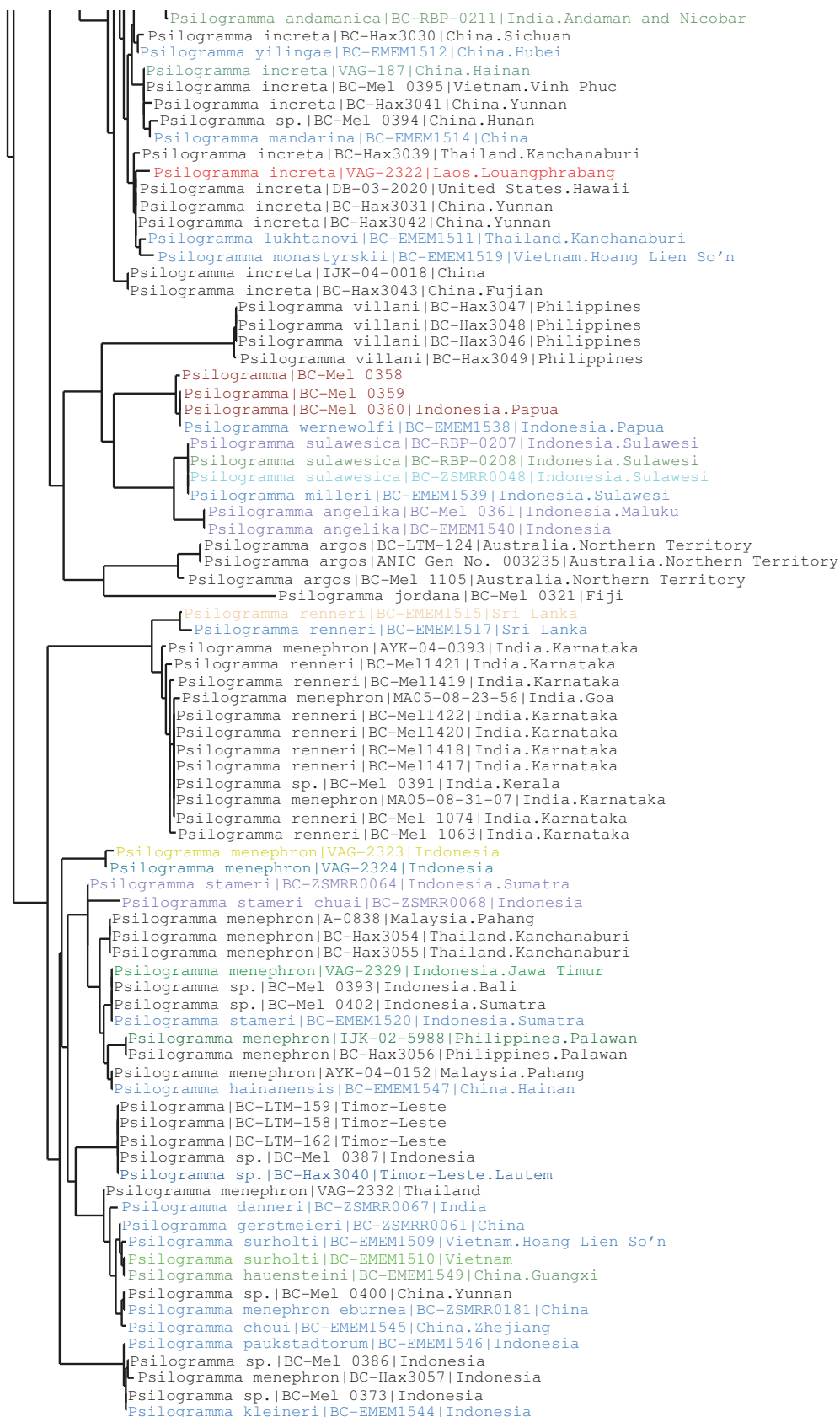
Project : SEARCH: Tax(Psilogramma)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Country & Province, SampleID,
Filters : Length > 200
Colorization : extrainf

Sequence Count : 246
Species count : 55
Genus count : 1
Family count : 1
Unidentified : 12











Specimen Identification Request

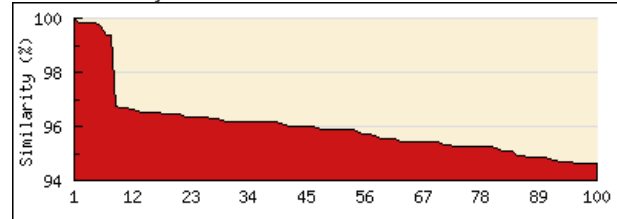
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>sp.</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>sp.</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>sp.</i>	99.39
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>vates</i>	99.39
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	96.74
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	96.68
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	96.67
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	96.62
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	96.57
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	96.53
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	96.53
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>sp.</i>	96.52
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	96.51
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	96.48
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	96.48
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increta</i>	96.48

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Psilogramma renerii
(Eitschberger, 2001)

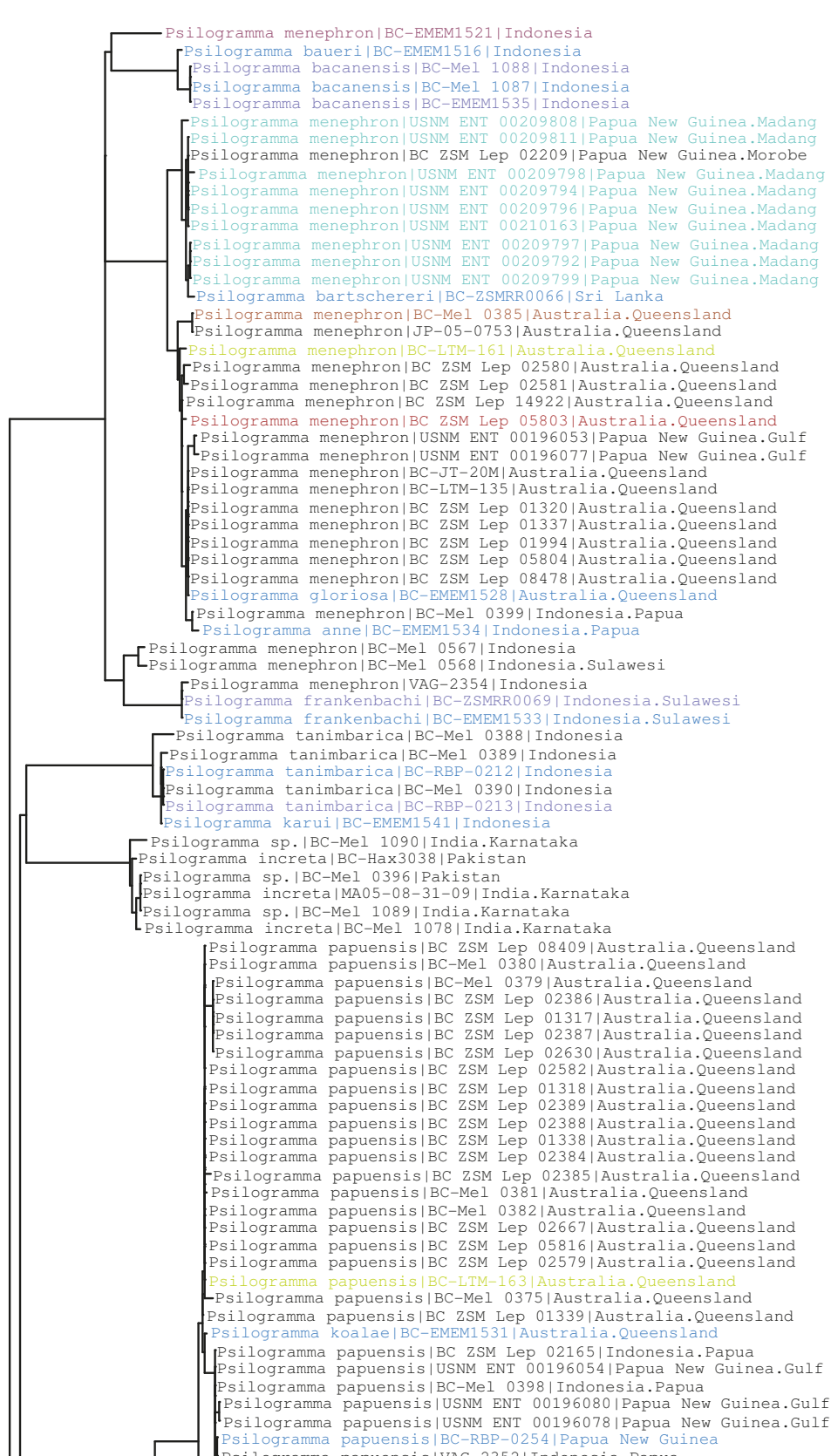


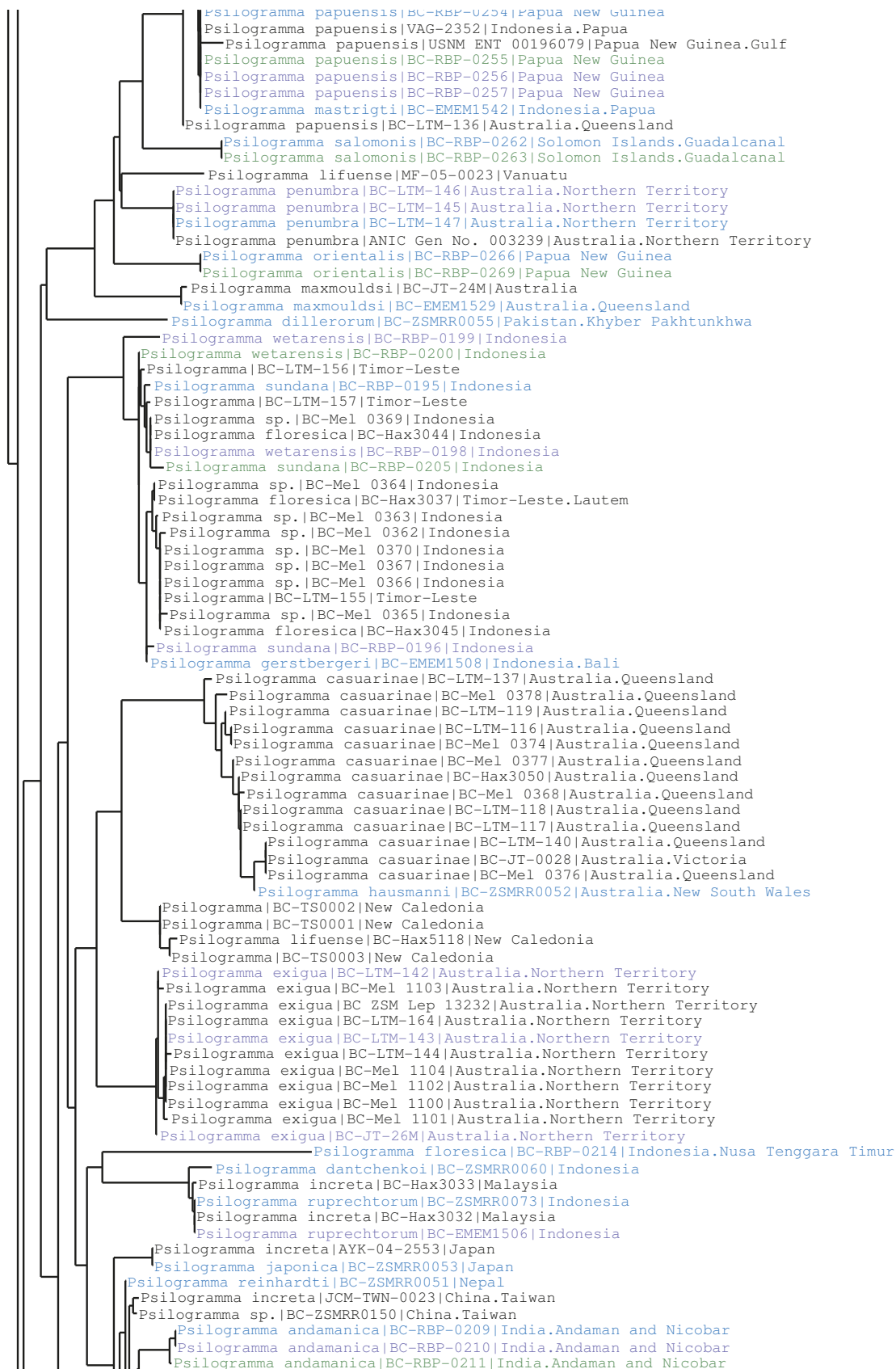
BOLD TaxonID Tree

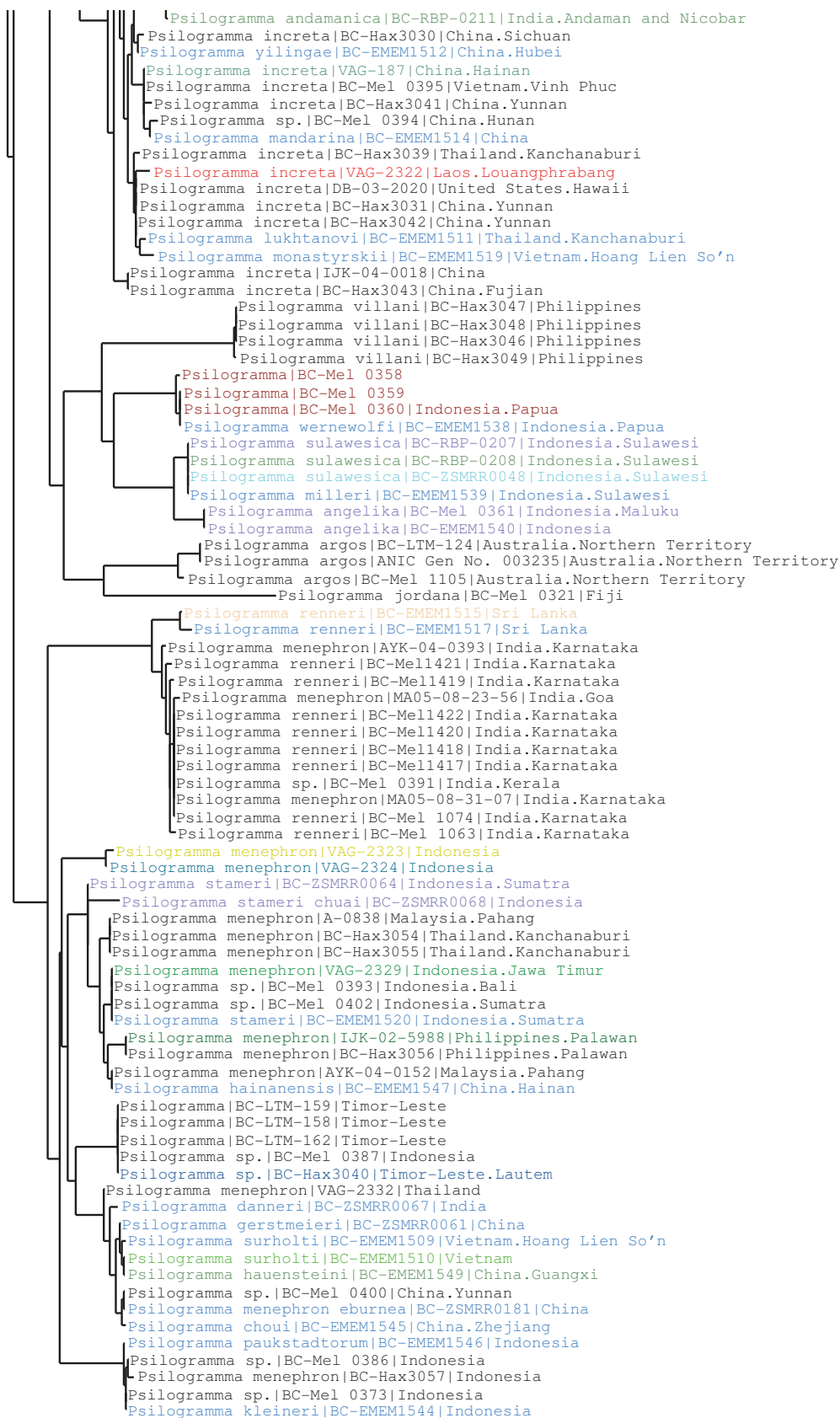
Project : SEARCH: Tax(Psilogramma)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Country & Province, SampleID,
Filters : Length > 200
Colorization : extrainf

Sequence Count : 246
Species count : 55
Genus count : 1
Family count : 1
Unidentified : 12











Specimen Identification Request

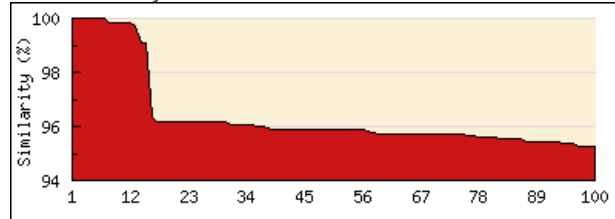
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>renneri</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>renneri</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>renneri</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>renneri</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>renneri</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>menephron</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>sp.</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>renneri</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>renneri</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>menephron</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>menephron</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>renneri</i>	99.85
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>renneri</i>	99.69
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>renneri</i>	99.08
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>renneri</i>	99.08
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>menephron</i>	96.33
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>increti</i>	96.19
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>medicieloi</i>	96.18
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>menephron</i>	96.18
Arthropoda	Insecta	Lepidoptera	Sphingidae	Psilogramma	<i>menephron</i>	96.18

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Theretra clotho
(Drury, 1773)

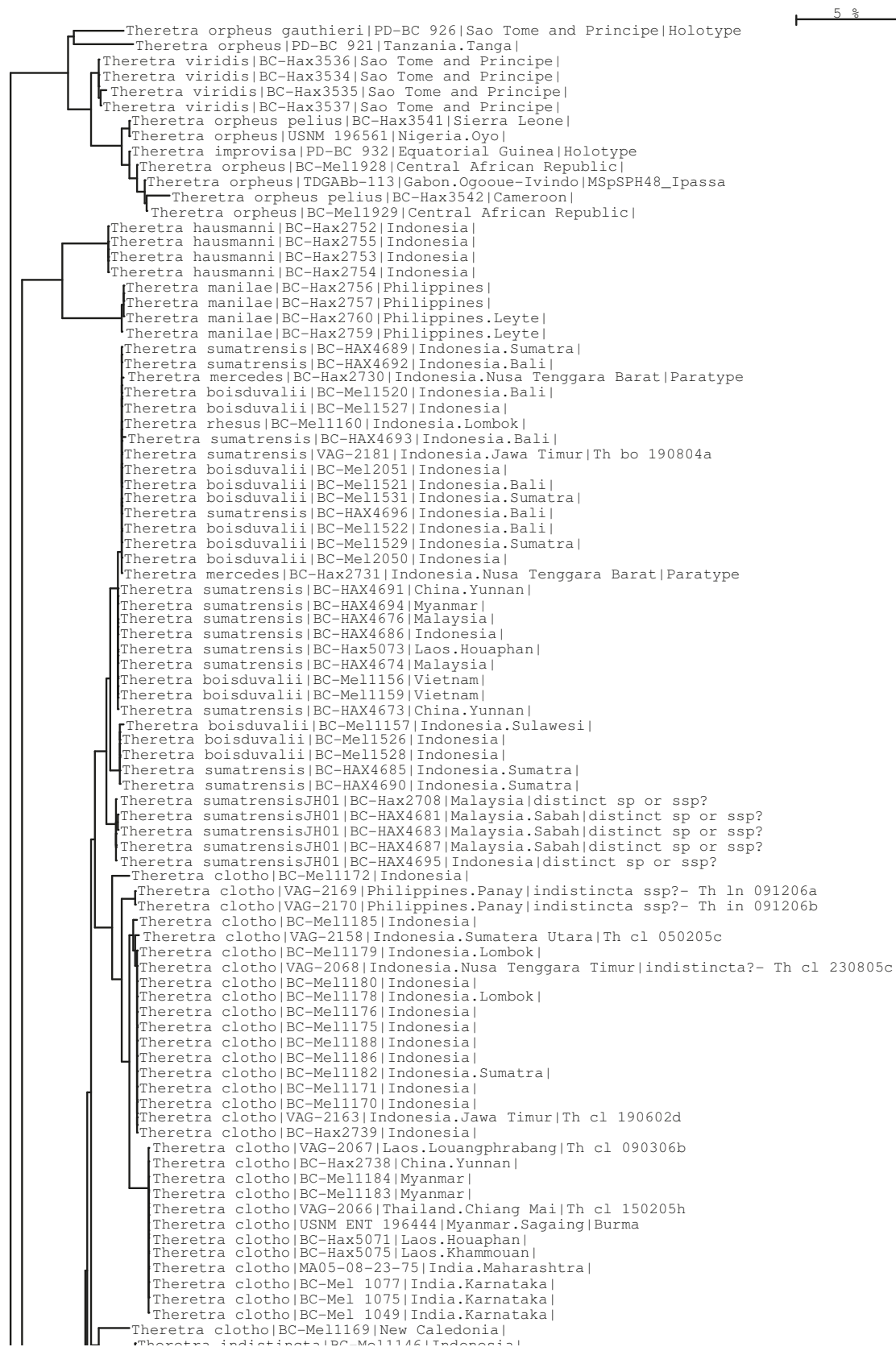


BOLD TaxonID Tree

Project : SEARCH: Tax(Theretra)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 531
Species count : 64
Genus count : 1
Family count : 1
Unidentified : 2





Theretra ciotno|BC-Mell1169|New Caledonia|
 Theretra indistincta|BC-Mell1146|Indonesia|
 Theretra indistincta|BC-Mell1145|Indonesia|
 Theretra sp.|VAG-2069|Indonesia.Maluku|n. sp?- Th cl? 220905J
 Theretra natashae|BC-Hax2724|Indonesia.Nusa Tenggara Barat|
 Theretra natashae paukstadtorum|BC-Hax2721|Indonesia|Paratype
 Theretra natashae|BC-Hax2723|Indonesia|
 Theretra natashae|BC-Hax2720|Indonesia|
 Theretra natashae paukstadtorum|BC-Hax2722|Indonesia|Paratype
 Theretra natashae|BC-Hax2719|Indonesia|
 Theretra natashae|BC-Hax2725|Indonesia.Nusa Tenggara Barat|
 Theretra natashae|BC-Hax2718|Indonesia|
 Theretra gala|BC-Mell1219|Indonesia|
 Theretra gala|BC-Mell1218|Indonesia|
 Theretra gala|BC-Mell1220|Indonesia|
 Theretra gala|BC-Mell2048|Indonesia.Sumatra|
 Theretra gala|BC-Mell1216|Indonesia|
 Theretra gala|BC-Mell1217|Indonesia|
 Theretra gala|BC-Mell1221|Indonesia|
 Theretra celata babarensis|BC-Hax2727|Indonesia|Paratype
 Theretra celata babarensis|BC-Hax2728|Indonesia|Paratype
 Theretra celata babarensis|BC-Hax2729|Indonesia.Maluku|Paratype
 Theretra celata babarensis|BC-Mel 0569|Indonesia|tanimbar?
 Theretra celata|BC-Hax2743|Australia.Queensland|
 Theretra celata|ANIC Gen No. 003169|Australia.Queensland|
 Theretra clotho|BC-Mell1164|Indonesia|
 Theretra clotho|BC-Mell1162|Indonesia|
 Theretra celata|BC-Hax2744|Papua New Guinea|
 Theretra celata|ANIC Gen No. 003168|Australia.Queensland|
 Theretra clotho|BC-Mell1163|Indonesia|
 Theretra celata|ANIC Gen No. 003167|Australia.Queensland|
 Theretra celata|BC ZSM Lep 02678|Australia.Queensland|
 Theretra celata|BC ZSM Lep 02671|Australia.Queensland|
 Theretra clotho|BC-Mell1168|Indonesia|
 Theretra celata|ANIC Gen No. 003170|Australia.Queensland|
 Theretra celata|BC ZSM Lep 05809|Australia.Queensland|
 Theretra celata|BC ZSM Lep 01325|Australia.Queensland|
 Theretra clotho|BC-Mell1187|Indonesia|
 Theretra clotho|BC-Mell1166|Indonesia|
 Theretra clotho|BC-Mell1167|Indonesia|
 Theretra celata|BC ZSM Lep 01991|Australia.Queensland|
 Theretra celata|BC ZSM Lep 05768|Australia.Queensland|
 Theretra celata|BC ZSM Lep 05810|Australia.Queensland|
 Theretra radiosa|BC-Mell1514|Indonesia|
 Theretra radiosa|BC-Mell1515|Indonesia|
 Theretra acuta|VAG-122|Philippines|sp7
 Theretra acuta|VAG-110|Indonesia.Sumatra|sp1
 Theretra acuta|VAG-108|Philippines.Leyte|HOLOTYPE
 Theretra acuta|VAG-109|Philippines|sp1
 Theretra acuta|BC-Mell1562|Philippines|
 Theretra acuta|BC-Mell1563|Philippines|
 Theretra rhesus|VAG-111|Philippines.Palawan|sp2
 Theretra insularis|BC-Hax2704|Philippines.Mountain|
 Theretra insularis|BC-Hax2703|Philippines|
 Theretra rhesus|VAG-123|Indonesia|sp7
 Theretra rhesus|VAG-121|Philippines|sp7
 Theretra insularis|BC-Hax2702|Philippines.Leyte|
 Theretra rhesus|BC-Hax2700|Malaysia|
 Theretra rhesus|BC-Hax2697|Malaysia|
 Theretra rhesus|VAG-128|Indonesia|sp8
 Theretra rhesus|BC-Mel 0570|Indonesia|
 Theretra rhesus|VAG-126|Indonesia|sp6a
 Theretra rhesus|BC-Mell1161|Indonesia.Lombok|
 Theretra rhesus|VAG-118|Indonesia|sp3b
 Theretra rhesus|VAG-127.1|Indonesia|sp8
 Theretra insularis|BC-Mell1517|Indonesia|
 Theretra insularis|BC-Mell1153|Indonesia|
 Theretra insularis|BC-Mell1154|Indonesia|
 Theretra rhesus|VAG-119.1|Indonesia.Sulawesi|sp5
 Theretra rhesus|BC-Hax2701|Papua New Guinea|
 Theretra insularis|USNM ENT 00196059|Papua New Guinea.Morobe|
 Theretra insularis|USNM ENT 196041|Papua New Guinea.Morobe|
 Theretra insularis|USNM ENT 00196040|Papua New Guinea.Gulf|
 Theretra insularis|BC ZSM Lep 02167|Indonesia.Papua|
 Theretra|BC-Mell1516|Indonesia|
 Theretra radiosa|BC-Mell1243|Indonesia|
 Theretra rhesus|VAG-116.1|Indonesia.Sulawesi|sp3a
 Theretra rhesus|VAG-115|Philippines|sp3
 Theretra rhesus|VAG-114|Philippines|sp3
 Theretra rhesus|VAG-112|Philippines|sp2
 Theretra insularis|BC-Mell1152|Indonesia|
 Theretra insularis|BC-Mell1151|Indonesia|
 Theretra insularis|BC-Mell1150|Indonesia|
 Theretra insularis|BC-Mell1155|Indonesia.Sulawesi|
 Theretra rhesus|VAG-117|Indonesia.Sulawesi|sp3a?
 Theretra rhesus|BC-Hax2699|Malaysia|
 Theretra rhesus|VAG-113|Philippines|sp2?
 Theretra radiosa|BC-Mell1242|Indonesia|
 Theretra insularis|BC-Mell1148|Indonesia|
 Theretra insularis|BC-Mel 1058|Indonesia|
 Theretra insularis|BC-Mel 1058|Indonesia|



Theretra insularis BC-Mel 1058 Indonesia
Theretra insularis BC-Mel1244 Indonesia
Theretra insularis BC-Mel1245 Indonesia
Theretra insularis BC-Mel1246 Indonesia
Theretra insularis BC-Mel1247 Indonesia
Theretra latreillii BC-Mel1227 Indonesia
Theretra tryoni BC ZSM Lep 01987 Australia.Queensland
Theretra tryoni BC ZSM Lep 01985 Australia.Queensland
Theretra latreillii BC-Mel1226 Indonesia
Theretra tryoni BC ZSM Lep 14923 Australia.Queensland
Theretra tryoni BC ZSM Lep 01989 Australia.Queensland
Theretra tryoni BC-Hax2768 Indonesia.Maluku
Theretra tryoni BC ZSM Lep 02166 Indonesia.Papua
Theretra latreillii BC-Mel1228 Indonesia
Theretra muricolor BC-Mel 0318 Papua New Guinea
Theretra queenslandi VAG-2185 Australia.New South Wales
Theretra radiosa BC-Hax2706 Papua New Guinea
Theretra radiosa USNM ENT 00196060 Papua New Guinea.Gulf
Theretra queenslandi ANIC Gen No. 003205 Australia.Queensland Theretra queenslandi ?
Theretra queenslandi ANIC Gen No. 003254 Australia.New South Wales
Theretra queenslandi BC-Mel1241 Australia.Queensland
Theretra indistincta BC-Hax2745 Indonesia indistincta manuselensis
Theretra indistincta BC-Mel1222 Indonesia
Theretra indistincta BC-Mel1223 Indonesia
Theretra indistincta USNM ENT 00196056 Papua New Guinea.Gulf
Theretra indistincta BC-Hax2749 Australia.Queensland
Theretra indistincta papuensis VAG-2164 Papua New Guinea.Morobe Th in 250305a
Theretra indistincta manuselensis BC-Hax2746 Indonesia
Theretra indistincta BC-Hax2750 Papua New Guinea
Theretra indistincta BC-Hax2751 Papua New Guinea
Theretra indistincta USNM ENT 00196057 Papua New Guinea.Gulf
Theretra indistincta BC ZSM Lep 01357 Australia.Queensland
Theretra celata BC-Mel1251 Indonesia
Theretra indistincta manuselensis BC-Hax2747 Indonesia
Theretra indistincta manuselensis BC-Hax2748 Indonesia
Theretra indistincta BC ZSM Lep 02675 Australia.Queensland
Theretra indistincta BC ZSM Lep 10635 Australia.Northern Territory
Theretra indistincta BC-Mel1248 Australia
Theretra indistincta BC-Mel1249 Australia.Northern Territory
Theretra indistincta BC-Mel1250 Australia.Northern Territory
Theretra indistincta BC-Mel1252 Indonesia
Theretra indistincta BC-Mel1253 Indonesia
Theretra indistincta BC-Mel1254 Indonesia
Theretra indistincta BC-Mel1255 Indonesia
Theretra indistincta BC ZSM Lep 02401 Australia.Queensland
Theretra indistincta USNM ENT 00196058 Papua New Guinea.Gulf
Theretra indistincta BC-Mel1256 Indonesia
Theretra clotho BC-Mel1174 Indonesia
Theretra clotho BC-Mel1173 Indonesia
Theretra clotho BC-Hax2742 Timor-Leste.Lautem
Theretra inornata BC ZSM Lep 13221 Australia.Northern Territory
Theretra inornata BC ZSM Lep 13224 Australia.Northern Territory
Theretra inornata BC ZSM Lep 13226 Australia.Northern Territory
Theretra inornata BC ZSM Lep 13225 Australia.Northern Territory
Theretra inornata BC ZSM Lep 13223 Australia.Northern Territory
Theretra inornata BC ZSM Lep 13227 Australia.Northern Territory
Theretra inornata BC ZSM Lep 13228 Australia.Northern Territory
Theretra inornata BC ZSM Lep 13229 Australia.Northern Territory
Theretra inornata BC ZSM Lep 13230 Australia.Northern Territory
Theretra inornata BC-Hax2732 Australia.Queensland
Theretra inornata BC ZSM Lep 13222 Australia.Northern Territory
Theretra inornata BC ZSM Lep 02000 Australia.Queensland
Theretra inornata BC ZSM Lep 02001 Australia.Queensland
Theretra gnoma BC-Mel1124 India.Karnataka
Theretra gnoma BC-Mel 1052 India.Karnataka
Theretra gnoma BC-Mel 1053 India.Karnataka
Theretra gnoma BC-Mel 1051 India.Karnataka
Theretra gnoma BC-Mel 0319 India.Karnataka
Theretra tibetiana VAG-2073 China.Shanxi Th cl cl 270404a
Theretra tibetiana VAG-2057 China.Tibet Th cl 280107b
Theretra tibetiana VAG-2058 China.Tibet Th cl 280107c
Theretra tibetiana VAG-2060 China.Tibet Th cl 280107a
Theretra tibetiana VAG-2061 China.Tibet Th cl 090306c
Theretra tibetiana VAG-2063 China.Tibet Th gn 280107b
Theretra tibetiana VAG-2064 China.Tibet Th gn 280107e
Theretra tibetiana VAG-2074 China.Hainan Th cl 250207a
Theretra tibetiana VAG-2059 China.Tibet Th cl 270207b
Theretra tibetiana BC-Mel11564 China.Hunan
Theretra clotho AYK-04-0102 Malaysia.Pahang
Theretra clotho BC-Mel1177 Indonesia
Theretra clotho BC-Mel1181 Indonesia
Theretra clotho BC-Hax2737 China.Yunnan
Theretra incarnata BC-Hax2769 Indonesia
Theretra incarnata BC-Hax2775 Indonesia
Theretra incarnata BC-Hax2770 Indonesia
Theretra incarnata BC-Hax2774 Timor-Leste.Lautem
Theretra incarnata BC-Hax2776 Indonesia
Theretra boisduvalii BC-Mel1158 Indonesia
Theretra boisduvalii BC-HAX4675 Indonesia
Theretra boisduvalii BC-HAX4679 Myanmar



Theretra boisduvalii|BC-HAX4679|Myanmar|
 Theretra boisduvalii|BC-HAX4680|Malaysia|
 Theretra boisduvalii|VAG-2079|China.Hainan|sp?- Th gn 250207a
 Theretra boisduvalii|BC-Hax5074|Laos.Houaphan|
 Theretra boisduvalii|BC-Hax5108|Laos.Houaphan|
 Theretra boisduvalii|BC-Mell1519|Myanmar|
 Theretra boisduvalii|BC-Mell1523|Laos|
 Theretra boisduvalii|BC-Mell1525|Thailand|
 Theretra boisduvalii|BC-HAX4677|Myanmar|
 Theretra boisduvalii|BC-HAX4678|Malaysia|
 Theretra boisduvalii|BC-HAX4688|Indonesia|
 Theretra boisduvalii|BC-HAX4684|Malaysia|
 Theretra insularis|BC-Mell147|China.Hunan|
 Theretra sugii|BC-Hax2726|Philippines|
 Theretra catherinae|VAG-125|Indonesia.Sulawesi|sp6
 Theretra catherinae|VAG-124|Indonesia.Sulawesi|sp6
 Theretra catherinae|BC-Mell1565|Indonesia.Sulawesi|
 Theretra catherinae|BC-Mell1569|Indonesia.Sulawesi|
 Theretra latreillii|AYK-04-0377|Papua New Guinea.Chimbu|
 Theretra latreillii|AYK-04-0378-1|Papua New Guinea.Chimbu|
 Theretra latreillii|BC-Hax2767|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 10508|Australia.Western Australia|
 Theretra latreillii|BC ZSM Lep 13255|Australia.Northern Territory|
 Theretra latreillii|BC ZSM Lep 02672|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01993|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01990|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01988|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01984|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01983|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01981|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01326|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01330|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01361|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01360|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01358|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01346|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01327|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01368|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01345|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 02258|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 01331|Australia.Queensland|
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 Theretra latreillii|BC ZSM Lep 01328|Australia.Queensland|
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 Theretra latreillii|BC ZSM Lep 01344|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 02583|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 02584|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 05805|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 05807|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 05808|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 08419|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 08476|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 14924|Australia.Queensland|
 Theretra latreillii|BC ZSM Lep 02259|Australia.Queensland|
 Theretra latreillii prattorum|BC-Hax2761|Indonesia|
 Theretra latreillii prattorum|BC-Hax2762|Indonesia|
 Theretra latreillii prattorum|BC-Hax2763|Indonesia|
 Theretra latreillii lucasii|AYK-04-0111|Malaysia.Pahang|
 Theretra latreillii lucasii|BC-Hax2765|Malaysia|
 Theretra latreillii lucasii|BC-Hax2766|Philippines.Mountain|
 Theretra latreillii|BC-Mell1229|Indonesia|
 Theretra latreillii|BC-Mell1230|Indonesia|
 Theretra alecto|BC-Hax2786|India.Sikkim|
 Theretra alecto|BC-Hax2787|India|
 Theretra alecto|BC-Hax2782|Malaysia|
 Theretra alecto|BC-Hax2783|Philippines.Mountain|
 Theretra alecto|IJK-02-5880|Cyprus|ex bred stock
 Theretra alecto|BC-Hax2784|Turkey|
 Theretra alecto|ZA-0024|Pakistan|
 Theretra capensis|IJK-03-3184|Tanzania|
 Theretra capensis|05-SA-193|South Africa.KwaZulu-Natal|Theretra capensis #5
 Theretra capensis|BC-Hax2713|South Africa|
 Theretra capensis|BC-Hax2711|South Africa.Eastern Cape|
 Theretra suffusa|BC-Hax2781|Malaysia|
 Theretra suffusa|BC-Hax2780|Vietnam|
 Theretra suffusa|BC-Hax2779|India.Assam|
 Theretra suffusa|BC-Hax2777|India|
 Theretra suffusa|BC-Hax2778|China.Yunnan|
 Theretra polistratus|USNM ENT 196070|Papua New Guinea.Gulf|
 Theretra polistratus|USNM ENT 00196064|Papua New Guinea.Gulf|
 Theretra polistratus|USNM ENT 00196039|Papua New Guinea.Gulf|
 Theretra polistratus|USNM ENT 196069|Papua New Guinea.Gulf|
 Theretra polistratus|BC-Hax2707|Papua New Guinea|
 Theretra jugurtha|BC-Mel 0726|Tanzania|
 Theretra jugurtha|TDGABb-074|Gabon.Ogooue-Ivindo|MSpSPH39_La Lope
 Theretra jugurtha|TDGABb-054|Gabon.Ogooue-Ivindo|MSpSPH30_Ipassa
 Theretra jugurtha|TDGABb-073|Gabon.Ogooue-Ivindo|MSpSPH39_Ipassa
 Theretra jugurtha|TDGABb-053|Gabon.Ogooue-Ivindo|MSpSPH30_Ipassa
 Theretra jugurtha|BC-Basq 2541|Gabon|
 Theretra jugurtha|Lopell-0413|Gabon.Ogooue-Ivindo|PL1



Theretra jugurtha Lopell-0413 Gabon.Ogooue-Ivindo PL1
Theretra jugurtha Lopell-0394 Gabon.Ogooue-Ivindo PL1
Theretra jugurtha Lopell-0396 Gabon.Ogooue-Ivindo PL1
Theretra jugurtha peracuta PD-BC 916 Equatorial Guinea Holotype
Theretra jugurtha MA05-06-03-75 Ghana
Theretra jugurtha USNM 196544 Nigeria.Oyo
Theretra jugurtha USNM 196542 Nigeria.Oyo
Theretra tessmanni BC-Mel 0727 Senegal
Theretra tessmanni BC-Mel 0728 Senegal Theretra chelen
Theretra jugurtha BC-Mel 0722 Cameroon.Centre-Sud
Theretra jugurtha BC-Mel 0723 Cote d'Ivoire
Theretra jugurtha USNM 196543 Nigeria.Oyo
Theretra jugurtha BC-Mel 0724 Cameroon.Centre-Sud
Theretra jugurtha BC-Mel 0725 Cote d'Ivoire
Theretra tessmanni BC-Basq 2544 Nigeria
Theretra jugurtha TDGABb-052 Gabon.Ogooue-Ivindo MSPSPH30_Ipassa
Theretra jugurtha BC-Mel1916 Central African Republic
Theretra jugurtha BC-Mel1917 Central African Republic
Theretra tessmanni BC-Mel1231 Central African Republic
Theretra tessmanni BC-Mel1232 Central African Republic
Theretra tessmanni BC-Mel1233 Central African Republic
Theretra japonica BC-Hax3515 China.Sichuan
Theretra japonica BC-Hax3517 Japan
Theretra japonica BC-Hax3516 China.Sichuan
Theretra castanea MA05-08-27-32 India.Maharashtra
Theretra griseomarginata BC-Basq0769 India
Theretra nessus BC-Hax4445 Vanuatu
Theretra nessus USNM ENT 00196072 Papua New Guinea.Gulf
Theretra nessus BC ZSM Lep 02169 Indonesia.Papua
Theretra nessus USNM ENT 00196038 Papua New Guinea.Gulf
Theretra nessus USNM ENT 00196073 Papua New Guinea.Gulf
Theretra nessus BC ZSM Lep 01354 Australia.Queensland
Theretra nessus BC ZSM Lep 01352 Australia.Queensland
Theretra nessus BC ZSM Lep 01342 Australia.Queensland
Theretra nessus BC ZSM Lep 02591 Australia.Queensland
Theretra nessus BC ZSM Lep 08475 Australia.Queensland
Theretra nessus AYK-04-0163 Malaysia.Pahang
Theretra nessus BC-Hax2734 China.Yunnan
Theretra nessus BC-Hax2735 China.Yunnan
Theretra nessus BC-Hax2736 Timor-Leste.Lautem
Theretra nessus BC-Hax4478 China.Yunnan
Theretra nessus USNM ENT 00196071 Papua New Guinea.Gulf
Theretra nessus BC-Roug1155 Vietnam
Theretra nessus BC-Mel 1050 India.Karnataka
Theretra nessus MA05-08-31-03 India.Karnataka
Theretra nessus BC-Hax4477 China.Yunnan
Theretra lycetus USNM ENT 196443 Myanmar.Sagaing Burma
Theretra lycetus BC-Hax3511 Thailand.Chiang Mai
Theretra lycetus BC-Hax3512 Thailand.Chiang Mai
Theretra lycetus BC-Hax3513 Laos.Saravan
Theretra lycetus BC-Hax3514 Thailand.Kanchanaburi
Theretra pallicosta BC-Mel1122 India.Karnataka
Theretra pallicosta BC-Mel 1093 India.Karnataka
Theretra pallicosta BC-Hax4482 China.Yunnan
Theretra pallicosta BC-Hax4479 China.Yunnan
Theretra boisdualii BC-HAX4682 Malaysia.Sabah
Theretra sp. BC-Mel 0267 Malawi
Theretra monteironis BC-Mel 0270 Mozambique
Theretra monteironis BC-Mel 0269 Tanzania.Iringa
Theretra monteironis 05-SA-194 South Africa.KwaZulu-Natal Theretra monteironis #1
Theretra monteironis BC-Mel1362 South Africa.KwaZulu-Natal
Theretra monteironis BC-Mel1368 South Africa.Limpopo
Theretra monteironis BC-Mel1369 South Africa.Limpopo
Theretra sp. BC-Mel 0268 Mozambique
Theretra monteironis 05-SA-195 South Africa.KwaZulu-Natal Theretra monteironis #2
Theretra monteironis VAG-2253 Tanzania Hi ba 090306a
Theretra silhetensis BC-Hax3523 Malaysia
Theretra silhetensis BC-Hax3524 Malaysia
Theretra silhetensis MA05-08-31-12 India.Karnataka
Theretra silhetensis intersecta BC-Hax4443 Vanuatu
Theretra silhetensis intersecta BC-Hax3530 Indonesia.Sulawesi
Theretra silhetensis intersecta ANIC Gen No. 003165 Australia.Northern Territory
Theretra silhetensis intersecta ANIC Gen No. 003202 Australia.Northern Territory
Theretra silhetensis intersecta BC ZSM Lep 13250 Australia.Northern Territory
Theretra silhetensis intersecta BC-Hax4442 Vanuatu
Theretra silhetensis intersecta BC ZSM Lep 13290 Australia.Northern Territory
Theretra silhetensis intersecta ANIC Gen No. 003164 Australia.Northern Territory
Theretra silhetensis intersecta IJK-02-5987 Philippines.Palawan
Theretra silhetensis intersecta BC-Hax3528 Australia.Queensland
Theretra silhetensis intersecta ANIC Gen No. 003172 Australia.Western Australia
Theretra silhetensis intersecta BC ZSM Lep 13299 Australia.Northern Territory
Theretra tomasi BC-Mel 0264 Guinea
Theretra tomasi BC-Mel 0263 Senegal Holotype
Theretra tomasi BC-Mel 0262 Senegal Paratype
Theretra tomasi BC-Mel 0261 Senegal Paratype
Theretra tomasi BC-ZSMRR0147 Gambia
Theretra cajus BC-Mel1359 South Africa.Mpumalanga
Theretra cajus PD-BC 919 South Africa
Theretra monteironis BC-Mel 0257 Tanzania.Morogoro ugandae?
Theretra monteironis BC-Mel 0258 Mozambique ugandae?



Theretra monteironis BC-Mel 0258 Mozambique ugandae?
Theretra monteironis BC-Mel 0259 Tanzania.Pwani ugandae?
Theretra monteironis BC-Mel 0260 Tanzania.Dodoma ugandae?
Theretra monteironis BC-Mel 0256 Kenya ugandae?
Theretra ugandae BC-Mel1990 Kenya
Theretra perkeo BC-Hax3533 Senegal
Theretra perkeo BC-Mel 0266 Senegal
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Theretra gnoma
(Fabricius, 1775)

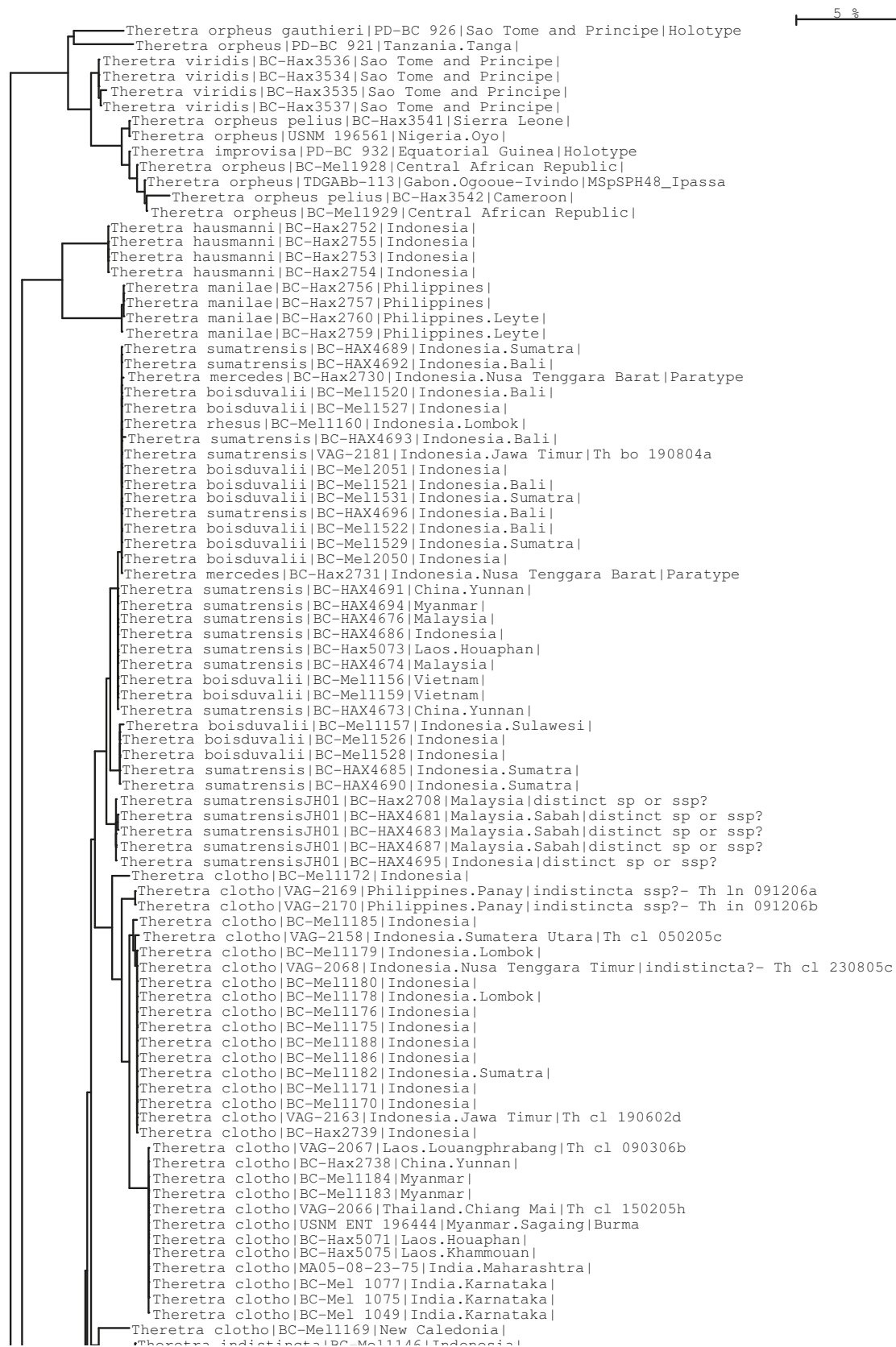


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Sequence Count : 531
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Genus count : 1
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 Theretra gala|BC-Mell2048|Indonesia.Sumatra|
 Theretra gala|BC-Mell1216|Indonesia|
 Theretra gala|BC-Mell1217|Indonesia|
 Theretra gala|BC-Mell1221|Indonesia|
 Theretra celata babarensis|BC-Hax2727|Indonesia|Paratype
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 Theretra acuta|VAG-110|Indonesia.Sumatra|sp1
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 Theretra acuta|BC-Mell1563|Philippines|
 Theretra rhesus|VAG-111|Philippines.Palawan|sp2
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 Theretra insularis|BC-Hax2703|Philippines|
 Theretra rhesus|VAG-123|Indonesia|sp7
 Theretra rhesus|VAG-121|Philippines|sp7
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 Theretra rhesus|BC-Hax2697|Malaysia|
 Theretra rhesus|VAG-128|Indonesia|sp8
 Theretra rhesus|BC-Mel 0570|Indonesia|
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 Theretra rhesus|BC-Mell1161|Indonesia.Lombok|
 Theretra rhesus|VAG-118|Indonesia|sp3b
 Theretra rhesus|VAG-127.1|Indonesia|sp8
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 Theretra insularis|BC-Mell1153|Indonesia|
 Theretra insularis|BC-Mell1154|Indonesia|
 Theretra rhesus|VAG-119.1|Indonesia.Sulawesi|sp5
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 Theretra insularis|USNM ENT 196041|Papua New Guinea.Morobe|
 Theretra insularis|USNM ENT 00196040|Papua New Guinea.Gulf|
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 Theretra rhesus|VAG-114|Philippines|sp3
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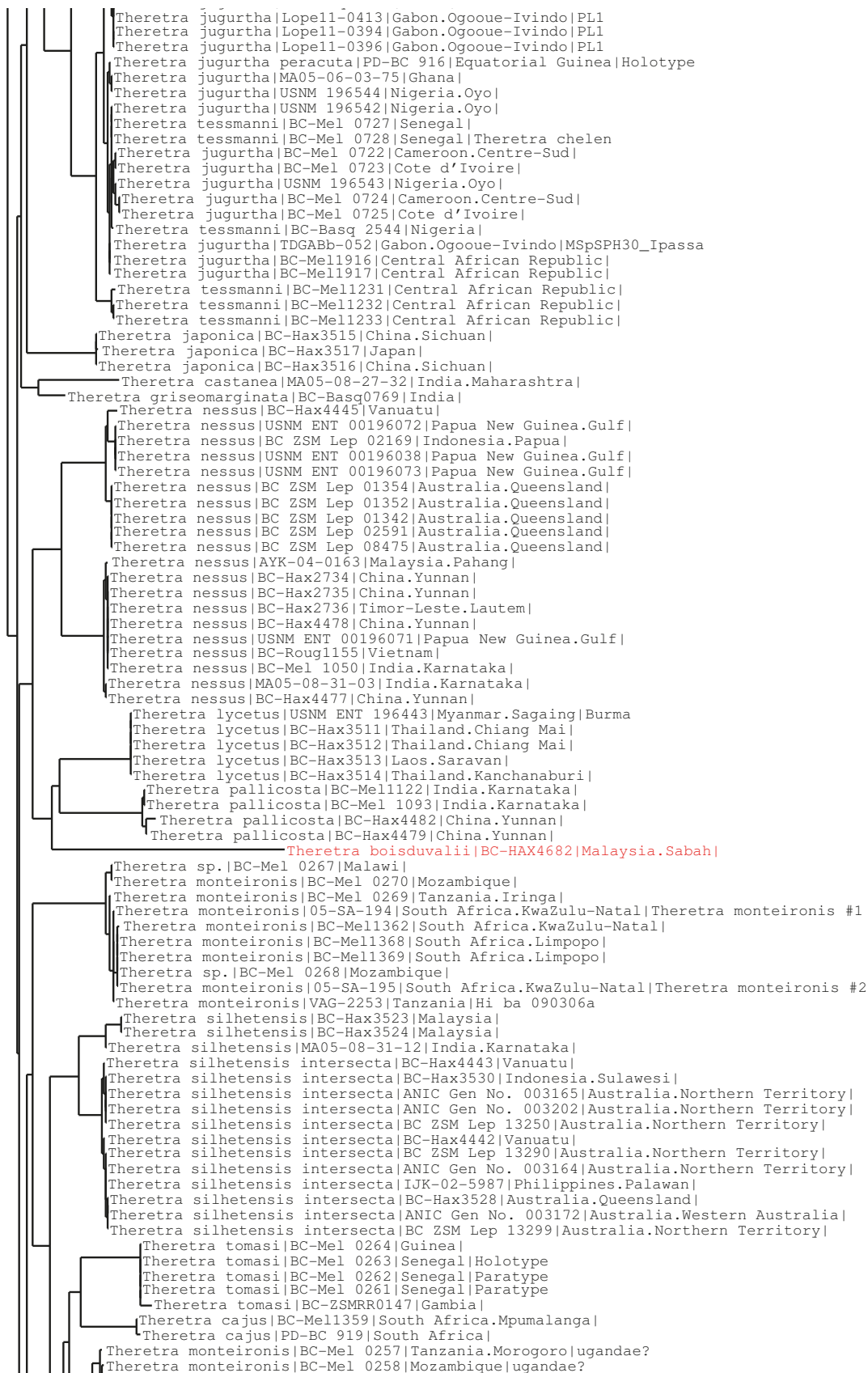


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Theretra jugurtha	Lopell-0413 Gabon.Ogooue-Ivindo PL1





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Theretra insignis kuehni BC-Hax3550 Indonesia
Theretra oldenlandiae fuscata BC-Hax3521 Philippines.Mountain
Theretra oldenlandiae fuscata BC-Hax3522 Philippines.Mountain
Theretra turneri BC-Hax3543 Australia
Theretra turneri BC-Hax3544 Australia.Queensland
Theretra turneri BC ZSM Lep 02677 Australia.Queensland
Theretra turneri ANIC Gen No. 003196 Australia.Queensland
Theretra turneri BC ZSM Lep 02492 Australia.Queensland
Theretra turneri BC ZSM Lep 02676 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02685 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 10997 Australia.Northern Territory
Theretra insignis BC-Mel1235 Indonesia
Theretra oldenlandiae BC-Hax3519 China.Sichuan
Theretra oldenlandiae BC-Hax3518 China.Sichuan
Theretra oldenlandiae MA06-01-05-36 India.Maharashtra
Theretra oldenlandiae AYK-04-0112 Malaysia.Pahang
Theretra oldenlandiae BC-Hax3520 China.Sichuan
Theretra oldenlandiae ZA-0025 Pakistan
Theretra oldenlandiae lewini BC ZSM Lep 02684 Australia.Queensland
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Theretra oldenlandiae lewini BC ZSM Lep 02697 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02696 Australia.Queensland
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Theretra oldenlandiae lewini BC ZSM Lep 10511 Australia.Western Australia
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Theretra oldenlandiae lewini BC ZSM Lep 05806 Australia.Queensland
Theretra BC-Mel1538 Indonesia
Theretra insignis BC-Mel1239 Indonesia
Theretra insignis BC-Mel1238 Indonesia
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Specimen Identification Request

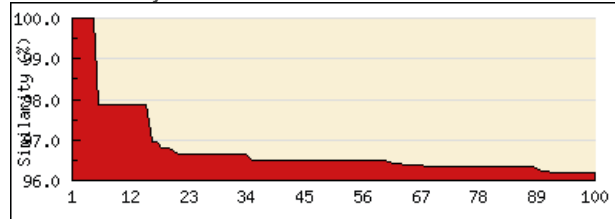
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>gnoma</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>gnoma</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>gnoma</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>gnoma</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>gnoma</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>tibetiana</i>	97.86
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>tibetiana</i>	97.86
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>tibetiana</i>	97.86
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>tibetiana</i>	97.86
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>tibetiana</i>	97.86
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Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>boisduvalii</i>	96.94
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>boisduvalii</i>	96.94
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>clotho</i>	96.79
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>boisduvalii</i>	96.79
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>boisduvalii</i>	96.75

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Thretra nesus
(Drury, 1773)

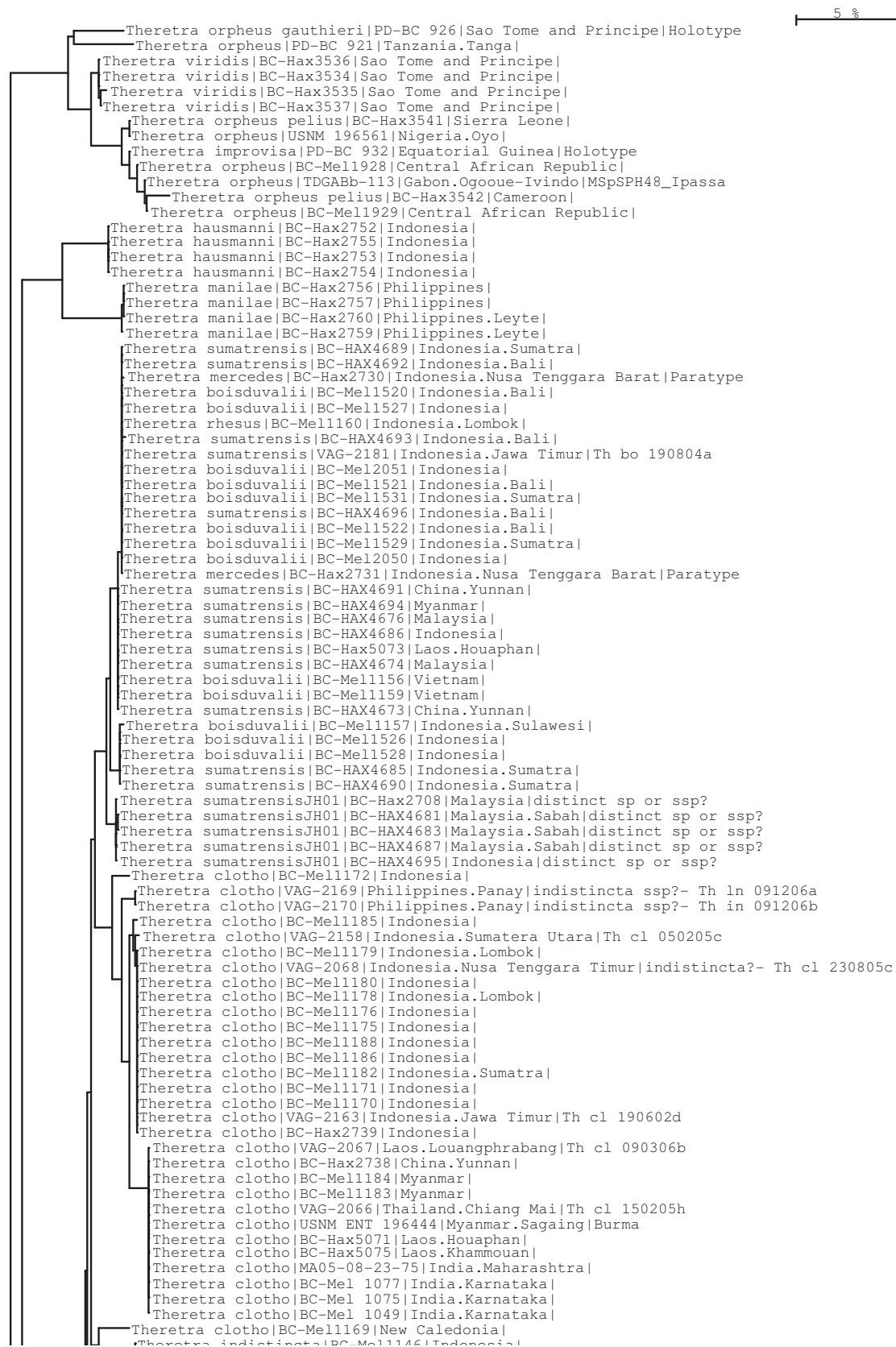


BOLD TaxonID Tree

Project : SEARCH: Tax(Theretra)
Date : 11-May-2012
Data Type : Nucleotide
Distance Model : Kimura 2 Parameter
Marker : COI-5P
Codon Positions : 1st, 2nd, 3rd
Labels : Extra Info, Country & Province, SampleID,
Filters : Length > 200
Colorization : [blue]=Stop Codons [red]=Contamination or misidentification

Sequence Count : 531
Species count : 64
Genus count : 1
Family count : 1
Unidentified : 2





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 Theretra indistincta|BC-Mell1146|Indonesia|
 Theretra indistincta|BC-Mell1145|Indonesia|
 Theretra sp.|VAG-2069|Indonesia.Maluku|n. sp?- Th cl? 220905J
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 Theretra natashae paukstadtorum|BC-Hax2721|Indonesia|Paratype
 Theretra natashae|BC-Hax2723|Indonesia|
 Theretra natashae|BC-Hax2720|Indonesia|
 Theretra natashae paukstadtorum|BC-Hax2722|Indonesia|Paratype
 Theretra natashae|BC-Hax2719|Indonesia|
 Theretra natashae|BC-Hax2725|Indonesia.Nusa Tenggara Barat|
 Theretra natashae|BC-Hax2718|Indonesia|
 Theretra gala|BC-Mell1219|Indonesia|
 Theretra gala|BC-Mell1218|Indonesia|
 Theretra gala|BC-Mell1220|Indonesia|
 Theretra gala|BC-Mell2048|Indonesia.Sumatra|
 Theretra gala|BC-Mell1216|Indonesia|
 Theretra gala|BC-Mell1217|Indonesia|
 Theretra gala|BC-Mell1221|Indonesia|
 Theretra celata babarensis|BC-Hax2727|Indonesia|Paratype
 Theretra celata babarensis|BC-Hax2728|Indonesia|Paratype
 Theretra celata babarensis|BC-Hax2729|Indonesia.Maluku|Paratype
 Theretra celata babarensis|BC-Mel 0569|Indonesia|tanimbar?
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 Theretra celata|ANIC Gen No. 003169|Australia.Queensland|
 Theretra clotho|BC-Mell1164|Indonesia|
 Theretra clotho|BC-Mell1162|Indonesia|
 Theretra celata|BC-Hax2744|Papua New Guinea|
 Theretra celata|ANIC Gen No. 003168|Australia.Queensland|
 Theretra clotho|BC-Mell1163|Indonesia|
 Theretra celata|ANIC Gen No. 003167|Australia.Queensland|
 Theretra celata|BC ZSM Lep 02678|Australia.Queensland|
 Theretra celata|BC ZSM Lep 02671|Australia.Queensland|
 Theretra clotho|BC-Mell1168|Indonesia|
 Theretra celata|ANIC Gen No. 003170|Australia.Queensland|
 Theretra celata|BC ZSM Lep 05809|Australia.Queensland|
 Theretra celata|BC ZSM Lep 01325|Australia.Queensland|
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 Theretra clotho|BC-Mell1166|Indonesia|
 Theretra clotho|BC-Mell1167|Indonesia|
 Theretra celata|BC ZSM Lep 01991|Australia.Queensland|
 Theretra celata|BC ZSM Lep 05768|Australia.Queensland|
 Theretra celata|BC ZSM Lep 05810|Australia.Queensland|
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 Theretra radiosa|BC-Mell1515|Indonesia|
 Theretra acuta|VAG-122|Philippines|sp7
 Theretra acuta|VAG-110|Indonesia.Sumatra|sp1
 Theretra acuta|VAG-108|Philippines.Leyte|HOLOTYPE
 Theretra acuta|VAG-109|Philippines|sp1
 Theretra acuta|BC-Mell1562|Philippines|
 Theretra acuta|BC-Mell1563|Philippines|
 Theretra rhesus|VAG-111|Philippines.Palawan|sp2
 Theretra insularis|BC-Hax2704|Philippines.Mountain|
 Theretra insularis|BC-Hax2703|Philippines|
 Theretra rhesus|VAG-123|Indonesia|sp7
 Theretra rhesus|VAG-121|Philippines|sp7
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 Theretra rhesus|BC-Hax2700|Malaysia|
 Theretra rhesus|BC-Hax2697|Malaysia|
 Theretra rhesus|VAG-128|Indonesia|sp8
 Theretra rhesus|BC-Mel 0570|Indonesia|
 Theretra rhesus|VAG-126|Indonesia|sp6a
 Theretra rhesus|BC-Mell1161|Indonesia.Lombok|
 Theretra rhesus|VAG-118|Indonesia|sp3b
 Theretra rhesus|VAG-127.1|Indonesia|sp8
 Theretra insularis|BC-Mell1517|Indonesia|
 Theretra insularis|BC-Mell1153|Indonesia|
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 Theretra rhesus|VAG-119.1|Indonesia.Sulawesi|sp5
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 Theretra insularis|USNM ENT 00196059|Papua New Guinea.Morobe|
 Theretra insularis|USNM ENT 196041|Papua New Guinea.Morobe|
 Theretra insularis|USNM ENT 00196040|Papua New Guinea.Gulf|
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 Theretra rhesus|VAG-116.1|Indonesia.Sulawesi|sp3a
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 Theretra rhesus|VAG-114|Philippines|sp3
 Theretra rhesus|VAG-112|Philippines|sp2
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 Theretra insularis|BC-Mell1150|Indonesia|
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Theretra insularis BC-Mel1247 Indonesia
Theretra latreillii BC-Mel1227 Indonesia
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Theretra tryoni BC ZSM Lep 01985 Australia.Queensland
Theretra latreillii BC-Mel1226 Indonesia
Theretra tryoni BC ZSM Lep 14923 Australia.Queensland
Theretra tryoni BC ZSM Lep 01989 Australia.Queensland
Theretra tryoni BC-Hax2768 Indonesia.Maluku
Theretra tryoni BC ZSM Lep 02166 Indonesia.Papua
Theretra latreillii BC-Mel1228 Indonesia
Theretra muricolor BC-Mel 0318 Papua New Guinea
Theretra queenslandi VAG-2185 Australia.New South Wales
Theretra radiosa BC-Hax2706 Papua New Guinea
Theretra radiosa USNM ENT 00196060 Papua New Guinea.Gulf
Theretra queenslandi ANIC Gen No. 003205 Australia.Queensland Theretra queenslandi ?
Theretra queenslandi ANIC Gen No. 003254 Australia.New South Wales
Theretra queenslandi BC-Mel1241 Australia.Queensland
Theretra indistincta BC-Hax2745 Indonesia indistincta manuselensis
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Theretra indistincta BC-Hax2750 Papua New Guinea
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Theretra clotho BC-Mel1174 Indonesia
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Theretra clotho BC-Hax2742 Timor-Leste.Lautem
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Theretra gnoma BC-Mel 1051 India.Karnataka
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Theretra tibetiana VAG-2073 China.Shanxi Th cl cl 270404a
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Theretra clotho BC-Mel1181 Indonesia
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Theretra incarnata BC-Hax2775 Indonesia
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Theretra incarnata BC-Hax2774 Timor-Leste.Lautem
Theretra incarnata BC-Hax2776 Indonesia
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Theretra boisduvalii BC-HAX4675 Indonesia
Theretra boisduvalii BC-HAX4679 Myanmar



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Theretra boisduvalii	VAG-2079 China.Hainan sp?- Th gn 250207a
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Theretra boisduvalii	BC-Hax5108 Laos.Houaphan
Theretra boisduvalii	BC-Mell1519 Myanmar
Theretra boisduvalii	BC-Mell1523 Laos
Theretra boisduvalii	BC-Mell1525 Thailand
Theretra boisduvalii	BC-HAX4677 Myanmar
Theretra boisduvalii	BC-HAX4678 Malaysia
Theretra boisduvalii	BC-HAX4688 Indonesia
Theretra boisduvalii	BC-HAX4684 Malaysia
Theretra insularis	BC-Mell147 China.Hunan
Theretra sugii	BC-Hax2726 Philippines
Theretra catherinae	VAG-125 Indonesia.Sulawesi sp6
Theretra catherinae	VAG-124 Indonesia.Sulawesi sp6
Theretra catherinae	BC-Mell1565 Indonesia.Sulawesi
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Theretra latreillii	BC-Hax2767 Australia.Queensland
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Theretra latreillii	prattorum BC-Hax2763 Indonesia
Theretra latreillii	lucasii AYK-04-0111 Malaysia.Pahang
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Theretra latreillii	lucasii BC-Hax2766 Philippines.Mountain
Theretra latreillii	BC-Mell1229 Indonesia
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Theretra alecto	BC-Hax2786 India.Sikkim
Theretra alecto	BC-Hax2787 India
Theretra alecto	BC-Hax2782 Malaysia
Theretra alecto	BC-Hax2783 Philippines.Mountain
Theretra alecto	IJK-02-5880 Cyprus ex bred stock
Theretra alecto	BC-Hax2784 Turkey
Theretra alecto	ZA-0024 Pakistan
Theretra capensis	IJK-03-3184 Tanzania
Theretra capensis	05-SA-193 South Africa.KwaZulu-Natal Theretra capensis #5
Theretra capensis	BC-Hax2713 South Africa
Theretra capensis	BC-Hax2711 South Africa.Eastern Cape
Theretra suffusa	BC-Hax2781 Malaysia
Theretra suffusa	BC-Hax2780 Vietnam
Theretra suffusa	BC-Hax2779 India.Assam
Theretra suffusa	BC-Hax2777 India
Theretra suffusa	BC-Hax2778 China.Yunnan
Theretra polistratus	USNM ENT 196070 Papua New Guinea.Gulf
Theretra polistratus	USNM ENT 00196064 Papua New Guinea.Gulf
Theretra polistratus	USNM ENT 00196039 Papua New Guinea.Gulf
Theretra polistratus	USNM ENT 196069 Papua New Guinea.Gulf
Theretra polistratus	BC-Hax2707 Papua New Guinea
Theretra jugurtha	BC-Mel 0726 Tanzania
Theretra jugurtha	TDGABb-074 Gabon.Ogooue-Ivindo MSpSPH39_La Lope
Theretra jugurtha	TDGABb-054 Gabon.Ogooue-Ivindo MSpSPH30_Ipassa
Theretra jugurtha	TDGABb-073 Gabon.Ogooue-Ivindo MSpSPH39_Ipassa
Theretra jugurtha	TDGABb-053 Gabon.Ogooue-Ivindo MSpSPH30_Ipassa
Theretra jugurtha	BC-Basq 2541 Gabon
Theretra jugurtha	Lopell-0413 Gabon.Ogooue-Ivindo PL1



Theretra jugurtha Lopell-0413 Gabon.Ogooue-Ivindo PL1
Theretra jugurtha Lopell-0394 Gabon.Ogooue-Ivindo PL1
Theretra jugurtha Lopell-0396 Gabon.Ogooue-Ivindo PL1
Theretra jugurtha peracuta PD-BC 916 Equatorial Guinea Holotype
Theretra jugurtha MA05-06-03-75 Ghana
Theretra jugurtha USNM 196544 Nigeria.Oyo
Theretra jugurtha USNM 196542 Nigeria.Oyo
Theretra tessmanni BC-Mel 0727 Senegal
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Theretra jugurtha BC-Mel 0722 Cameroon.Centre-Sud
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Theretra jugurtha BC-Mel 0725 Cote d'Ivoire
Theretra tessmanni BC-Basq 2544 Nigeria
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Theretra lycetus USNM ENT 196443 Myanmar.Sagaing Burma
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Theretra lycetus BC-Hax3513 Laos.Saravan
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Theretra sp. BC-Mel 0267 Malawi
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Theretra monteironis BC-Mel 0258 Mozambique ugandae?



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Theretra oldenlandiae fuscata BC-Hax3522 Philippines.Mountain
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Theretra palicosta
(Walker, 1856)

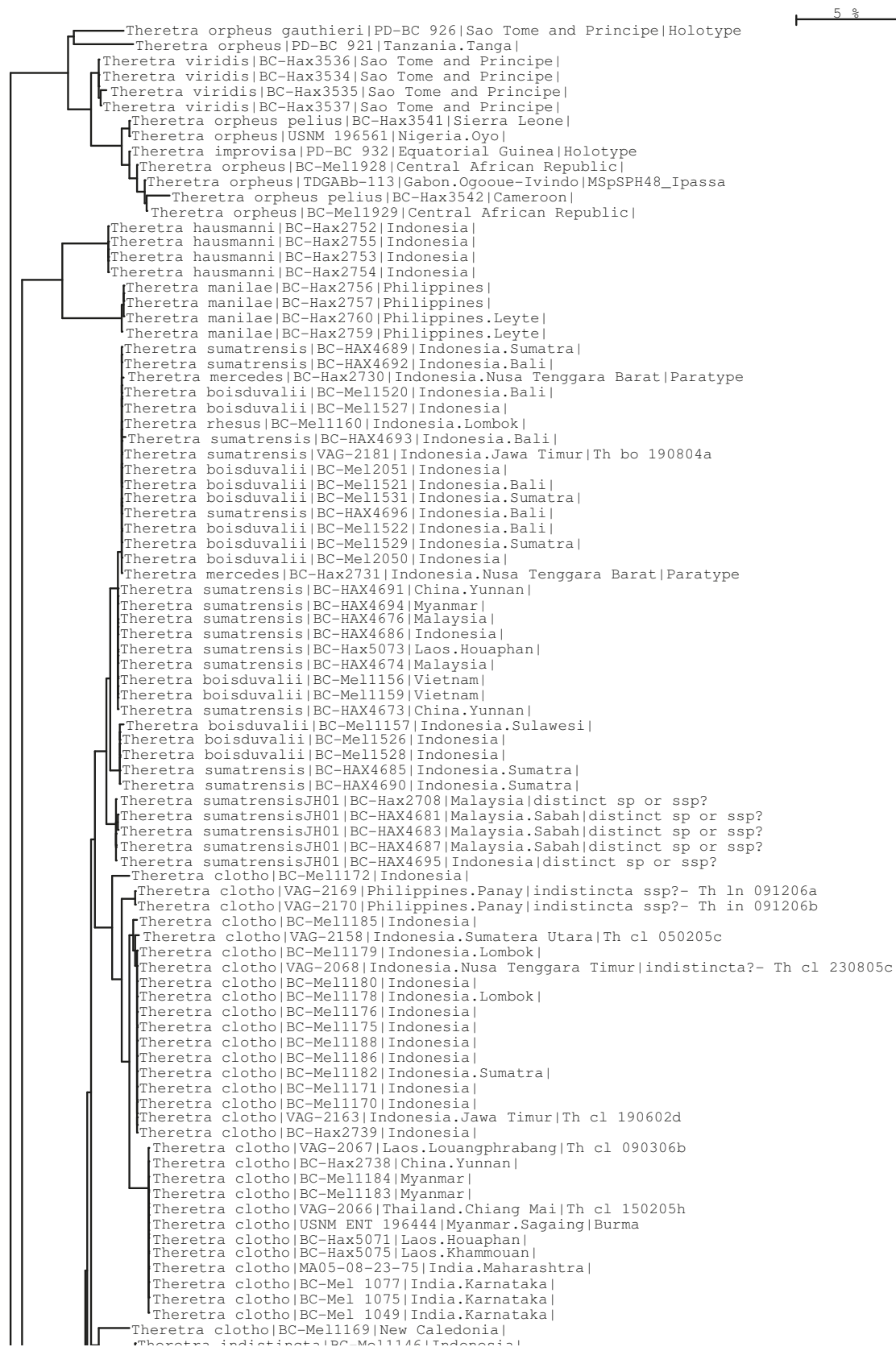


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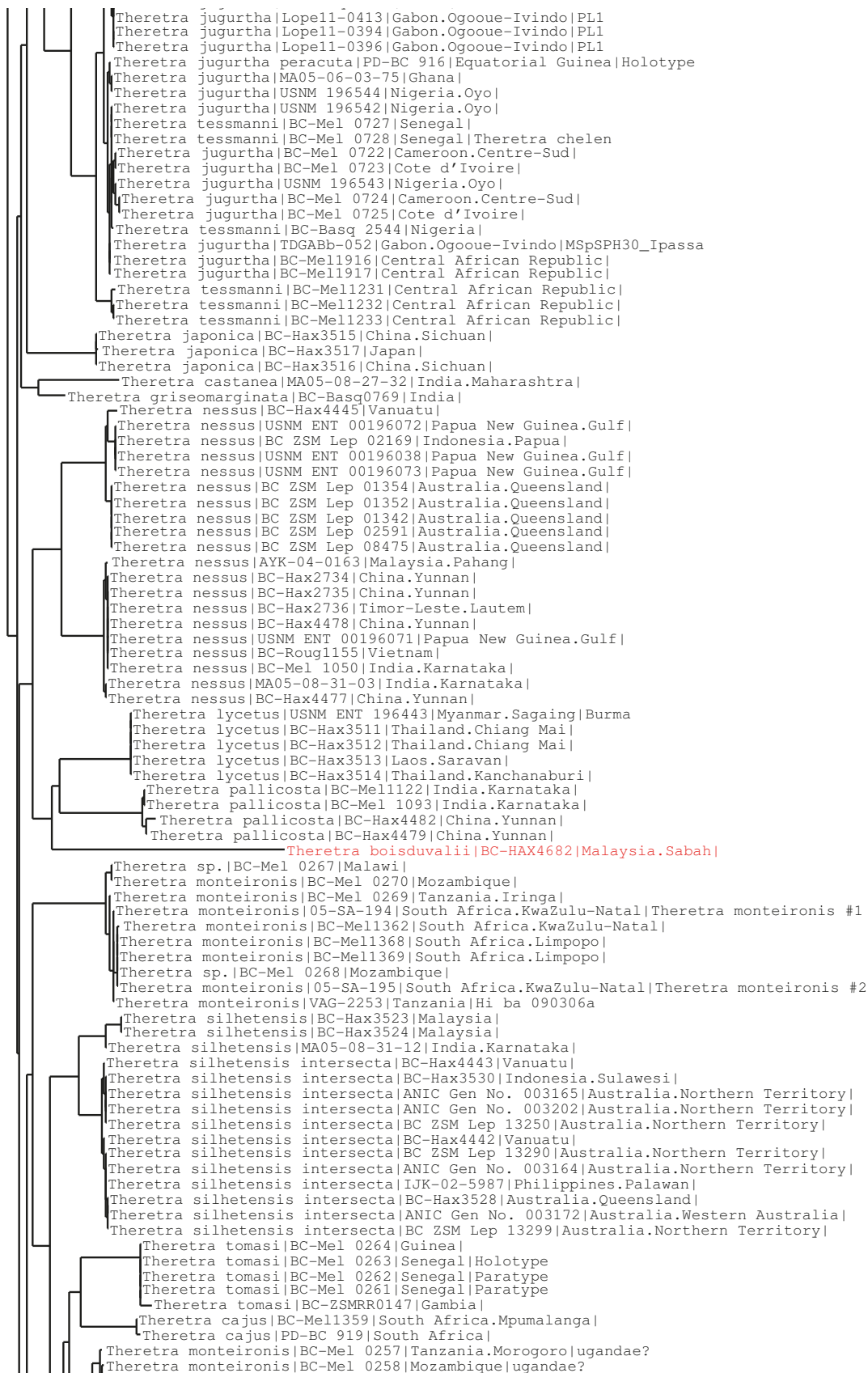


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Theretra queenslandi VAG-2185 Australia.New South Wales
Theretra radiosa BC-Hax2706 Papua New Guinea
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Theretra queenslandi ANIC Gen No. 003205 Australia.Queensland Theretra queenslandi ?
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Theretra gnoma BC-Mel 0319 India.Karnataka
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Theretra clotho BC-Mel1177 Indonesia
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Theretra incarnata BC-Hax2776 Indonesia
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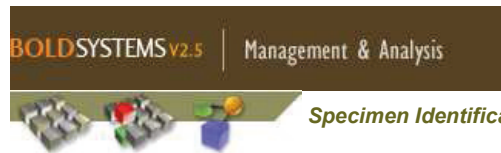
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Theretra insularis	BC-Mell147 China.Hunan
Theretra sugii	BC-Hax2726 Philippines
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Theretra jugurtha	TDGABb-073 Gabon.Ogooue-Ivindo MSpSPH39_Ipassa
Theretra jugurtha	TDGABb-053 Gabon.Ogooue-Ivindo MSpSPH30_Ipassa
Theretra jugurtha	BC-Basq 2541 Gabon
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Theretra oldenlandiae fuscata BC-Hax3522 Philippines.Mountain
Theretra turneri BC-Hax3543 Australia
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Theretra turneri ANIC Gen No. 003196 Australia.Queensland
Theretra turneri BC ZSM Lep 02492 Australia.Queensland
Theretra turneri BC ZSM Lep 02676 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02685 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 10997 Australia.Northern Territory
Theretra insignis BC-Mel1235 Indonesia
Theretra oldenlandiae BC-Hax3519 China.Sichuan
Theretra oldenlandiae BC-Hax3518 China.Sichuan
Theretra oldenlandiae MA06-01-05-36 India.Maharashtra
Theretra oldenlandiae AYK-04-0112 Malaysia.Pahang
Theretra oldenlandiae BC-Hax3520 China.Sichuan
Theretra oldenlandiae ZA-0025 Pakistan
Theretra oldenlandiae lewini BC ZSM Lep 02684 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 10990 Australia.Northern Territory
Theretra oldenlandiae lewini BC ZSM Lep 15003 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 13244 Australia.Northern Territory
Theretra oldenlandiae lewini BC ZSM Lep 13254 Australia.Northern Territory
Theretra oldenlandiae lewini BC ZSM Lep 02687 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02690 Australia.Queensland
Theretra oldenlandiae lewini BC-Hax4141 Australia
Theretra oldenlandiae lewini BC ZSM Lep 02688 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02697 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02696 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02695 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 10254 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 13243 Australia.Northern Territory
Theretra oldenlandiae lewini BC ZSM Lep 13292 Australia.Northern Territory
Theretra oldenlandiae lewini BC ZSM Lep 02699 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02698 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02694 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02689 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02686 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 10511 Australia.Western Australia
Theretra oldenlandiae lewini BC ZSM Lep 02700 Australia.Queensland
Theretra oldenlandiae lewini BC-Hax4142 Australia
Theretra oldenlandiae lewini BC ZSM Lep 02493 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 02691 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 11015 Australia.Northern Territory
Theretra oldenlandiae lewini BC ZSM Lep 15002 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 13247 Australia.Northern Territory
Theretra oldenlandiae lewini BC ZSM Lep 13291 Australia.Northern Territory
Theretra oldenlandiae lewini BC ZSM Lep 13296 Australia.Northern Territory
Theretra oldenlandiae lewini BC ZSM Lep 01335 Australia.Queensland
Theretra oldenlandiae lewini BC ZSM Lep 05806 Australia.Queensland
Theretra BC-Mel1538 Indonesia
Theretra insignis BC-Mel1239 Indonesia
Theretra insignis BC-Mel1238 Indonesia
Theretra insignis BC-Mel1234 Indonesia
Theretra insignis BC-Mel1236 Indonesia
Theretra insignis BC-Mel1237 Indonesia
Theretra insignis BC-Mel1240 Indonesia





PRINT | HELP

Specimen Identification Request

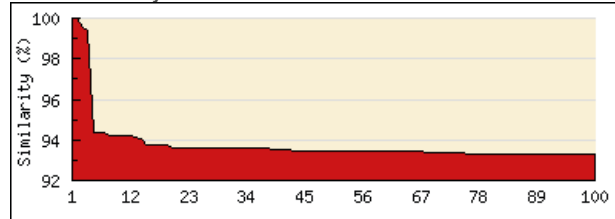
Search Request:

Type : COI FULL DATABASE

Search Result:

Tree Based Identification

Distance Summary :



Similarity scores of the top 100 matches

TOP 20 Matches :

Display option: default

Phylum	Class	Order	Family	Genus	Species	Specimen Similarity (%)
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>pallicosta</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>pallicosta</i>	100
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>pallicosta</i>	99.54
Arthropoda	Insecta	Lepidoptera	Sphingidae	Theretra	<i>pallicosta</i>	99.37
Arthropoda	Insecta	Lepidoptera	Sphingidae	Xylophanes	<i>jocasta</i>	94.34
Arthropoda	Insecta	Lepidoptera	Sphingidae	Xylophanes	<i>jocasta</i>	94.34
Arthropoda	Insecta	Lepidoptera	Sphingidae	Xylophanes	<i>jocasta</i>	94.34
Arthropoda	Insecta	Lepidoptera	Sphingidae	Xylophanes	<i>tyndarus</i>	94.19
Arthropoda	Insecta	Lepidoptera	Sphingidae	Xylophanes	<i>tyndarus</i>	94.19
Arthropoda	Insecta	Lepidoptera	Sphingidae	Xylophanes	<i>tyndarus</i>	94.19
Arthropoda	Insecta	Lepidoptera	Sphingidae	Xylophanes	<i>tyndarus</i>	94.19
Arthropoda	Insecta	Lepidoptera	Sphingidae	Xylophanes	<i>tyndarus</i>	94.16
Arthropoda	Insecta	Lepidoptera	Sphingidae	Xylophanes	<i>tyndarus</i>	94.03
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hyles	<i>lineata</i>	93.73
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hyles	<i>zygophylli</i>	93.73
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hyles	<i>zygophylli</i>	93.73
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hyles	<i>zygophylli</i>	93.73
Arthropoda	Insecta	Lepidoptera	Sphingidae	Hyles	<i>zygophylli</i>	93.73
Arthropoda	Insecta	Lepidoptera	Sphingidae	Xylophanes	<i>tyndarus</i>	93.58

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The Barcode of Life Data System



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BARCODING

**BOLD: The Barcode of Life Data System
(www.barcodinglife.org)**

SUJEEVAN RATNASINGHAM and PAUL D. N. HEBERT

*Canadian Centre for DNA Barcoding, Biodiversity Institute of Ontario, University of Guelph, Guelph, ON, Canada N1G 2W1***Abstract**

The Barcode of Life Data System (BOLD) is an informatics workbench aiding the acquisition, storage, analysis and publication of DNA barcode records. By assembling molecular, morphological and distributional data, it bridges a traditional bioinformatics chasm. BOLD is freely available to any researcher with interests in DNA barcoding. By providing specialized services, it aids the assembly of records that meet the standards needed to gain BARCODE designation in the global sequence databases. Because of its web-based delivery and flexible data security model, it is also well positioned to support projects that involve broad research alliances. This paper provides a brief introduction to the key elements of BOLD, discusses their functional capabilities, and concludes by examining computational resources and future prospects.

Keywords: COI, DNA barcoding, gene sequence, informatics, species identification, taxonomy

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Introduction

DNA barcoding employs sequence diversity in short, standardized gene regions to aid species identification and discovery in large assemblages of life. A 648-bp region of the cytochrome *c* oxidase I (COI) gene forms the primary barcode sequence for members of the animal kingdom (Hebert *et al.* 2003a; Savolainen *et al.* 2005). The early goals of DNA barcoding focus on the assembly of reference libraries of barcode sequences for known species. Current results show that these libraries will be very effective in generating identifications; more than 95% of species in test assemblages of varied animal groups have been shown to possess distinctive COI sequences (Hebert *et al.* 2003b, 2004; Ward *et al.* 2005; Hajibabaei *et al.* 2006). Moreover, cases of incomplete resolution involve species that are closely allied. Work on groups with well-studied taxonomy also promises to reveal the levels and the nature of barcode divergences that typically separate species, aiding development of algorithms and the underlying rule sets needed for DNA barcoding to advance species discovery in taxonomically understudied groups (Hebert *et al.* 2004; Smith *et al.* 2005, 2006; Barber & Boyce 2006).

The Consortium for the Barcode of Life (CBOL) was launched in May 2004 and now includes more than 120 organizations from 45 nations. CBOL is fostering development of the international research alliances needed to build, over the next 20 years, a barcode library for all eukaryotic life. It has already initiated the first campaigns with a global sweep; they seek to deliver barcode coverage for all species of birds and fishes by 2012 (Marshall 2005). Although these two projects will generate some 0.5 million records, a comprehensive barcode library for the animal kingdom will be much larger, *c.* 100 million records — almost twice the current size of GenBank (52 million sequence records as of 7 March 2006). This potential volume of data makes clear the need for enterprise-scale software to support novel aspects of DNA barcoding, a realization that motivated development of the Barcode of Life Data System. Key features include the requirement for a persistent linkage between a barcode sequence and its source specimen and a secure environment that stores, organizes and queries these records, accessible to the entire biodiversity community. There is also a need to establish and enforce data standards. To meet these challenges, CBOL initiated dialogue with the major genomics repositories [e.g. National Center for Biotechnology Information (NCBI)], biodiversity organizations [e.g. Global Biodiversity Information Facility (GBIF)], major barcoding centres and

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the multiple taxonomic communities. These joint consultations have now led to the establishment of formal guidelines that must be met for records to gain barcode designation. Gene sequences must derive from a designated gene region, they must meet quality standards and they must derive from a specimen whose taxonomic assignment can be reviewed, ordinarily through linkage to a specimen that is held in a major collection (Hanner *et al.* 2007).

The Barcode of Life Data System (BOLD) – www.barcodinglife.org – provides an integrated bioinformatics platform that supports all phases of the analytical pathway from specimen collection to tightly validated barcode library. First, it is a repository for the specimen and sequence records that form the basic data unit of all barcode studies. Second, it is a workbench that aids the management, quality assurance and analysis of barcode data. Third, it provides a vehicle for collaboration across geographically dispersed research communities by coupling flexible security and data entry features with web-based delivery. In the remainder of this article, we examine the key elements of BOLD and detail the computational resources available to support it, before concluding with a brief consideration of system expansibility.

Overview

BOLD was initially developed as an informatics workbench for a single, high-volume DNA barcode facility (Hajibabaei *et al.* 2005). It has evolved into a resource for the DNA barcoding community, as evidenced by its adoption for the first major barcode campaigns (birds, fishes, Lepidoptera). It has, as well, been selected by the Canadian Barcode of Life Network (www.bolnet.ca) for its campaign to barcode all eukaryotic life in that nation. Although BOLD aids the assembly of barcode data and maintains these records, a copy of all sequence and key specimen data also migrate to NCBI or its sister genomic repositories [DNA Data Bank of Japan (DDBJ), European Molecular Biology Laboratory (EMBL)] as soon as results are ready for public release. As such, BOLD is one of a spectrum of ancillary sites that provide the biological science community with specialized services that cannot be delivered by the global sequence databases, which were designed for a different mission – the assembly and organization of all sequence records. Access to BOLD is open to any researcher with interests in DNA barcoding; computational resources and personnel are available to sustain its primary site until 2011. The prospects for extended support, as well as funding to establish regional data nodes and mirror sites, will strengthen as usage grows.

BOLD now involves more than 65 000 lines of combined code written in Java (for business logic and light analytics), C++ (for heavy analytics), and PHP (for front end). It runs in a Linux environment with all data residing in a PostgreSQL

relational database (www.postgresql.org). Further details on application design and database structure are provided elsewhere (Ratnasingham and Hebert, in preparation), while an interactive introduction to BOLD is available at www.barcodinglife.org/docs/boldtutorial.html.

Some features on BOLD, such as access to data in public projects and use of the Identification System, are available to any visitor. However, system registration (which only involves the provision of contact details) grants additional privileges, such as the ability to create private projects and to share access to password-protected data. In the following sections, we briefly review the three functional units now available on BOLD – the Management and Analysis System, the Identification System and the External Connectivity System. While these three modules support key activities, programming efforts by members of the barcode community will soon add new capabilities in data analysis and visualization.

Management and analysis system (MAS)

Project establishment and data standards. Any interested researcher can gain the capacity to create projects by registering as a BOLD user through the completion of a short online form (www.barcodinglife.org/views/newuserapp.php). Once a project is established, only two data elements are required to inject each specimen record – a sample ID number and a taxonomic assignment (although the latter can simply be to a phylum-level). However, the specimen record will not gain formal barcode status until seven data elements are in place:

- 1 Species name (although this can be interim).
- 2 Voucher data (catalogue number and institution storing).
- 3 Collection record (collector, collection date and location with GPS coordinates).
- 4 Identifier of the specimen.
- 5 COI sequence of at least 500 bp.
- 6 Polymerase chain reaction (PCR) primers used to generate the amplicon.
- 7 Trace files.

Although these criteria must be satisfied to gain formal barcode status, data that lack one or more of these fields can reside within BOLD. For example, although the barcode standard demands a 500-bp read with less than 1% Ns, BOLD allows the injection of shorter sequences with no upper limit on Ns.

Although ultimate responsibility for data quality lies with the project participants, BOLD employs several tools to identify data anomalies or low quality records. All submitted sequences are first translated into amino acids and are compared against a Hidden Markov Model of the COI protein to verify that they actually derive from COI. Sequences

that pass this check are then examined for stop codons (to detect possible pseudogenes) and are also compared against a small suite of possible contaminants (e.g. human). If any potential errors are detected, the submitter is informed and the sequence is flagged. When trace files are supplied, BOLD further determines a PHRED score (Ewing & Green 1998) for each nucleotide position and a mean value for the full sequence. Using these results, it places each sequence record into one of four categories — failed (no sequence), low quality (mean PHRED < 30), medium quality (mean PHRED = 30–40) and high quality (mean PHRED > 40).

Projects are not subjected to any centralized review; data quality is ultimately reliant upon the project team and upon the peer-review process that occurs as data are incorporated into scientific publications. Similarly, barcode records are not filtered as they enter BOLD, even if they show deep sequence divergence (> 2%) from existing records for a particular species. However, BOLD has the capacity to search out and highlight such cases so they can be investigated. Detailed taxonomic study of such cases of deep barcode divergence has already led to the description of new species (e.g. Handfield & Handfield 2006).

Data repository. The core data element in BOLD is a biphasic record consisting of a specimen page and a sequence page. The specimen page assembles varied collateral data, including the date and location of capture, as well as from one to several image(s) of each specimen (Fig. 1). When spatial coordinates are available, they are plotted on a geographic information system with flexible scaling. This page also records both the taxonomist responsible for a specimen's identification and the holding institution. The fields currently incorporated into the specimen page meet the Darwin Core 1 standard established by GBIF and other biodiversity alliances; future field enhancements will be made as community standards evolve. Each specimen page is coupled to a companion page that records the barcode sequence and the PCR primers used to generate the amplicons that were sequenced (Fig. 2). The primer registry allows the deposition of information on both standard PCR primer sets and more complicated cocktails, but it does not record amplification conditions. Although the latter information will usually be available in the publication resulting from the records, BOLD has the capacity to attach documents (PDF, Word, Excel, etc.) to any project so that detailed PCR protocols can also be provided in this fashion. Currently, BOLD is exclusively populated with COI data, but it can support other single-gene or multigenic barcodes. As a result, it is positioned to deal with the additional data storage requirements created when supplemental barcode regions gain registration for the animal kingdom or as alternate barcode regions are designated for the other kingdoms of life.

Regardless of the genic target(s), each barcode record is placed into a project that can accommodate data for up to 999 specimens. This size constraint was imposed as an aid to quality control; single massive projects compromise both internal and peer review of results. However, there is no barrier to investigations that require the submission of very large volumes of data; some current studies include more than 10 000 specimen records. In such cases, specimen records are placed in a series of projects that sit within a single 'container' whose structure mirrors that of a standard Windows/Mac folder. Because there is no limit on the number of projects within a container, BOLD can accommodate studies that survey many specimens. For example, an ongoing campaign to assemble barcode records for all North American species of Lepidoptera aims for 10× coverage of the 13 000 species so the final number of records will be more than 100 000.

BOLD provides users with several pathways for the direct submission of their data, which can include specimen collaterals, sequences, trace files and images. Because it can accept data from sites compliant with the Distributed Generic Information Retrieval (DiGIR) protocol (digir.sourceforge.net), some users will avoid the need to reformat their records. Once data have been injected, there are several tools to aid their review, including a search engine that enables the retrieval of records based on multiple criteria. Specimen records in each project can also be sorted by a variety of factors including taxonomy, sequence length and specimen record number. Finally, because specimen information may need updating, an edit function is accessible from this page. BOLD also supports full journaling of sequence and specimen records, maintaining, in essence, an audit trail for every data field that is directly available from the sequence and specimen pages.

As noted above, new projects can be created by any registered user; this individual gains 'Project Manager' status through the act of project establishment. Projects are password protected; all data records remain private to a single researcher or to a group of collaborators until their public release. Because the security model is granular, the Project Manager can provide other individuals with either 'edit' or 'view only' access to each of the varied data elements in a project.

Data management. Because DNA barcoding projects often involve the analysis of large numbers of specimens, an interface is needed to both monitor analytical progress and compliance with data standards. The project management console in the MAS serves this function (Fig. 3). It reports progress in the submission of those data fields (trace files, images, GPS coordinates) that are needed for a record to gain barcode status. It also registers the number of specimens lacking sequences within a project and it monitors the sequence lengths themselves. Finally, as a quality

BOLDSYSTEMS Management & Analysis

Bats of Southeast Asia [BIM]

Specimen Identifiers Edit Specimen

Sample ID:	ROM 101996	Museum ID:	101996
Isolate / Field Num:	F35806	Collection Code:	MAMM
Donated By:	Judith L. Eger	Deposited In:	Royal Ontario Museum

Taxonomy

Identifier:	Mark D. Engstrom
phylum:	Chordata
class:	Mammalia
order:	Chiroptera
family:	Pteropodidae
genus:	Macroglossus
species:	Macroglossus minimus

Specimen Details

Voucher Type:	Skin, Skull, Skeleton
Tissue Type:	Frozen Liver
Extra Info:	F35806 - E Kalimantan
Sex:	Male
Reproduction:	Sexual
Life Stage:	Adult

Collection Data

Collectors:	Mark D. Engstrom
Date Collected:	22-May-1993
Country:	Indonesia
State/Province:	Kalimantan Timur
Region/Country:	East Kalimantan
Sector:	60
Exact Site:	
Latitude:	-0.8
Longitude:	112.2
Coord. Source:	
Elevation/Depth:	60

Photographs

Skull lateral (c)2005 Royal Ontario Museum

Skull ventral (c)2005 Royal Ontario Museum

Lower jaw (c)2005 Royal Ontario Museum

Skin ventral (c)2005 Royal Ontario Museum

Fig. 1 Specimen page for an individual of *Macroglossus minimus* (Chiroptera). 1, voucher information; 2, full taxonomy; 3, collection location; 4, collection site maps; 5, specimen images.

assurance check, it reports sequence anomalies, such as stop codons (that might signal the presence of a pseudogene), human sequences (that might indicate contamination) or kingdom-level mismatches (as would arise if, for example, a fungal sequence was recovered in a project focused on animals).

Data uploads, downloads and searches. Specimen data can be uploaded to BOLD using either online forms (for small numbers of specimen records) or through standardized spreadsheets. Trace files, specimen images and sequence records are also uploaded directly, allowing users to have immediate access to their submitted data.

Although BOLD currently only supports trace files from ABI sequencers, other trace formats will be added as the need arises.

Data that reside in BOLD can be readily exported for use in other analytical packages. The simplest forms of data export, downloads from single projects, are available directly from the project management console. The sequence-export function generates a FASTA file for all sequence records in a project, each labelled with a species name and specimen identifiers (i.e. voucher, sequence ID). Another function, the data workbook, generates an Excel spreadsheet that includes all collateral details (taxonomy, collection dates, etc.) for each specimen in a project, while

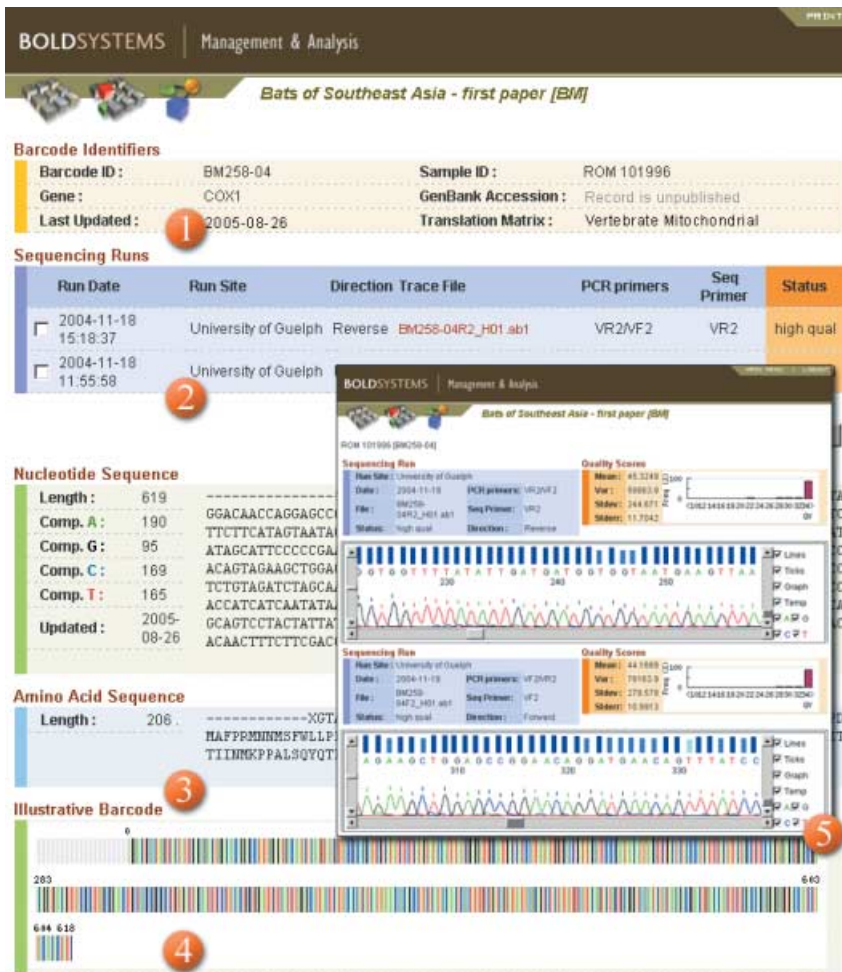


Fig. 2 Sequence page for the same individual of *Macroglossus minimus* (Chiroptera). 1, specimen details; 2, sequencing details including links to trace files; 3, amino acid translation of sequence; 4, colorized barcode representation; 5, trace viewer and detailed stats on trace quality.

the label-maker function generates labels in varied formats (pinned insects to vertebrate skins) to identify specimens which have been barcoded. Finally, the trace-file function provides access to the raw sequence traces that underpin the sequence records.

BOLD includes search functionality that allows users to ascertain sequence coverage for a particular taxonomic group and/or geographic region. The taxonomy browser permits the user to gain access to a list of all species in a particular taxonomic category (genus to phylum). This search is comprehensive; it includes both published and unpublished records, but it only provides access to published sequences.

Integrated analytics. The MAS includes several tools for routine data analysis. Among these, the taxon ID tree, which employs varied distance metrics to generate a neighbour-joining (NJ) tree based on nucleotide or amino acid sequences (Saitou & Nei 1987; Howe *et al.* 2002), is particularly valuable. This module supports the labelling

of terminal branches with taxonomic information, locality data and/or sequence lengths (Fig. 4) and provides results in a PDF format to aid transmission to collaborators. The ID tree can also be colorized in various ways to highlight, for example, recently collected data or members of a specific taxonomic category (e.g. genus or family). In addition, when specimen photographs are available within a project, an image library can be generated which matches the ordering of specimens in the ID tree. Other analytical tools within the MAS deliver synoptic views that aid detection of data anomalies that can then be probed in detail. For example, the nearest-neighbour analysis highlights both cases where individuals assigned to different species show barcode congruence and those where deep divergences occur among conspecifics. Other analytical modules summarize information on nucleotide composition, assemble image libraries, or display aggregate information, such as the collection points for specimens in a project. Because high-quality, properly validated sequence records are critical, the DNA barcode standard demands both bidirectional



Fig. 3 Management Console for a project assembling barcode records for the Fishes of Pacific Canada. 1, pie diagrams showing progress in analysing specimens and species; 2, status report on key specimen collaterals; 3, distribution of sequence lengths; 4, various analytical tools and access to specimen records.

sequence reads and the injection of trace files. BOLD has the capacity to assemble a sequence from the trace files for a specimen and to assign a quality score to the resultant record when bi-directional reads are available (PHRED – Ewing & Green 1998).

Although results are ordinarily first analysed on a project-by-project basis, BOLD has the capacity to combine records from multiple projects. These ‘merged’ projects are ephemeral, but all of the standard analytical modules are available for their examination. Because computational burdens grow nonlinearly, merged projects ordinarily have a size limit of 5000 specimens. Larger projects require additional computational support and are currently dealt with on a case-by-case basis. However, there are several longer-term solutions for the analysis of the very large data sets that will emerge from major barcode campaigns. More efficient analytical protocols can be employed (Mailund *et al.* 2006) or data can be partitioned before analysis. Moreover, these size limits only apply to certain analytical elements (e.g. NJ tree). Other analyses, such as the ID engine (see below), scale in a linear fashion and are able to incorporate all data records.

Identification system (IDS)

Unknown specimens are identified by pasting their sequence record into the window on the ID page. The query sequence needs to satisfy just one criterion – it must include at least 300 bp from the barcode region of COI. BOLD also has two identification functions that operate within single projects. One tests the validity of existing identifications, recording both cases of confirmation and conflict with those generated by the ID System. The other function assigns identifications to specimens lacking prior taxonomic placements, essentially carrying out a project-wide implementation of the ID function.

In all three cases, the ID System employs a linear search to collect nearest neighbours from a global alignment of all reference sequences (65 000 validated, 165 000 total, 15 October 2006). A query-optimized search library is maintained outside the main database with new records added weekly. This rapid access ensures that all data are available to guide identifications (although the sequence records themselves remain private until moved into the public realm), but this comes at a cost. Some barcode records that

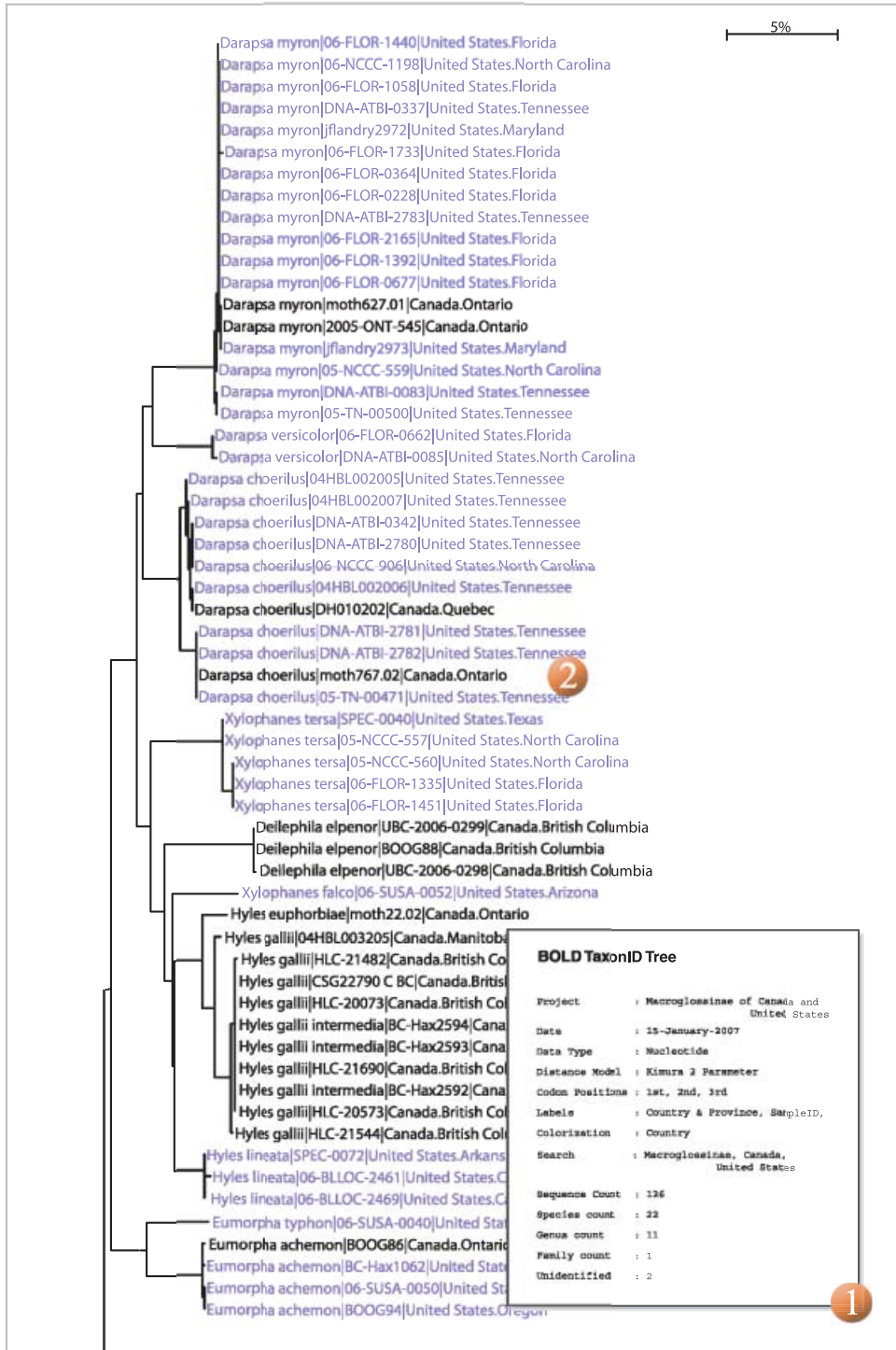


Fig. 4 Taxon ID tree of barcode records for North American members of the subfamily Macroglossinae (Sphingidae), showing colouration by country. 1, cover page; 2, ID tree.

have not been through full validation will derive from misidentified specimens or will reflect analytical errors. Because of this fact, barcode records in the search library are placed into two categories. Species with a minimum of

three representatives and a maximum conspecific divergence of two percent are classified as verified barcodes and these records are used as the default search library. All other records are stored in another data partition where

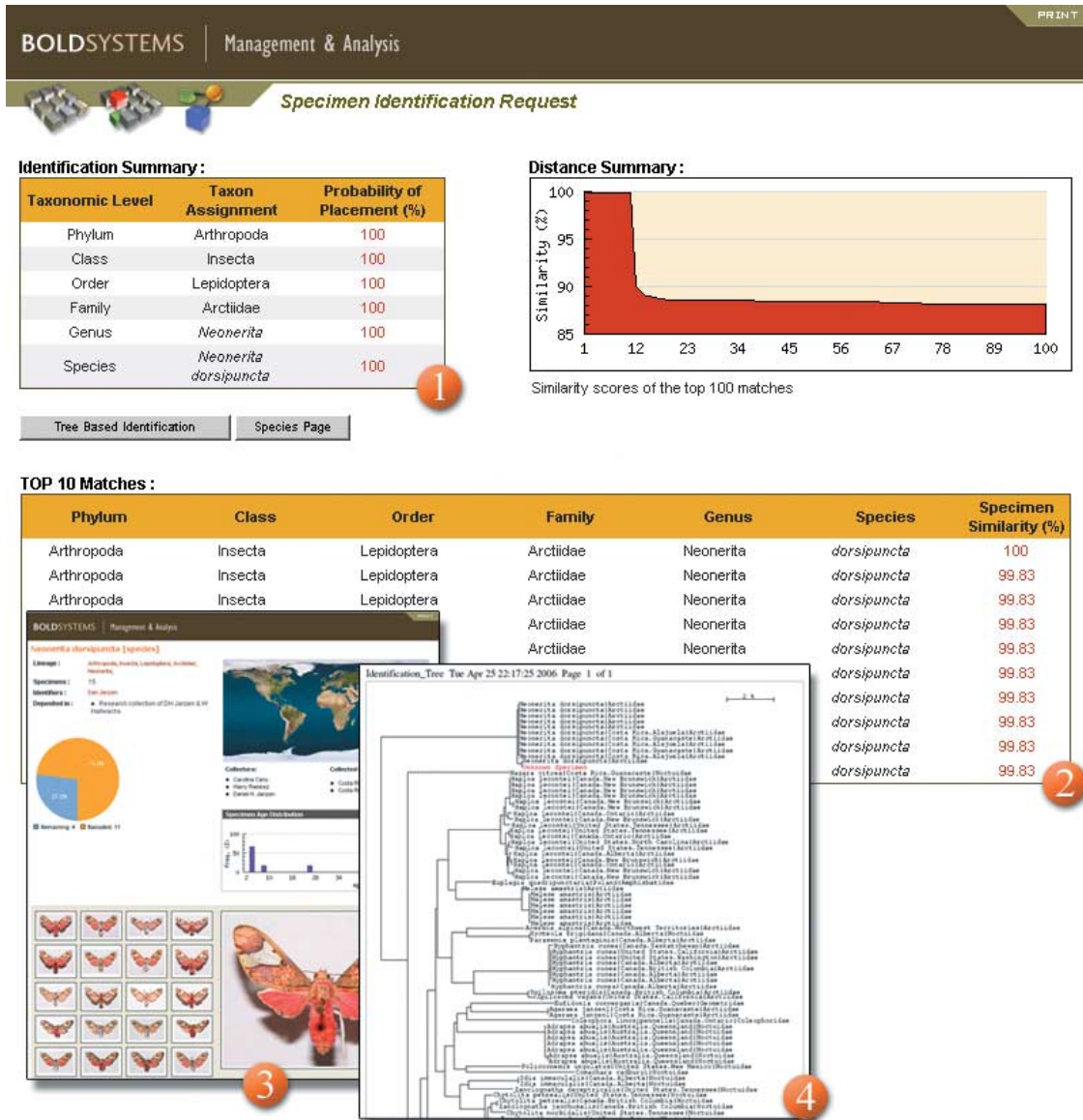


Fig. 5 ID page generated following submission of a COI sequence from an unidentified caterpillar. 1, taxonomic assignment; 2, sequence similarity between unknown and reference sequences; 3, link to species page; 4, ID Tree showing 100 nearest taxa.

they can be used for a full screen of the data, but this analysis is risky because the records are unvalidated.

Any query sequence is aligned very quickly to the global alignment through a Hidden Markov Model (HMM) profile of the COI protein (Eddy 1998), followed by a linear search of the reference library. BLAST methods were tested, but users had difficulty interpreting results because scores are influenced by sequence length as well as by sequence similarity. Moreover, the best BLAST hit is of little value when no closely related taxa are in the reference database (Pertsemlidis & Fondon 2001). Finally, benchmark studies (data not shown) demonstrated that linear searches supported by HMM alignments are faster than BLAST

(which was primarily designed for local similarity searches – Altschul *et al.* 1990).

The use of sequence thresholds to generate identifications has gained broad application in studies of microbial life (Venter *et al.* 2004; Tringe & Rubin 2005). The same approach is also highly effective for animals because levels of barcode variation within species are tightly constrained while most closely allied species show deep sequence divergence (Hebert *et al.* 2003b). Based on these general patterns of sequence variation, the identification system on BOLD (Fig. 5) delivers a species identification if the query sequence shows a tight match, less than 1% divergence, to a reference sequence. In those few instances where two

or more taxa share sequences with less than 1% divergence, all possible species assignments are shown. This approach defends against 'overdiagnosis' in such cases. When a species level match is found, the user is provided with access to a species page that aggregates all the available information about the species in BOLD. When available, there are also links to external species pages (e.g. FishBase: www.fishbase.org). Due to the limited number of species in the present reference library, the ID engine is often unable to deliver a species-level identification. However, its effectiveness is rising rapidly for groups that are gaining serious barcode attention and these involve some of the most important targets for biological research.

When a species-level match is not obtained, the query sequence is assigned to a genus in those cases where it shows <3% sequence divergence from a reference sequence. In all other cases, the ID algorithm is aborted and the system gathers taxonomic assignments for the 100 nearest-neighbouring taxa and summarizes their distribution across the taxonomic hierarchy (phylum, class, order, family, genus). For example, if all 100 nearest neighbours are members of the Chordata, the queried specimen is shown to have 100% of its nearest neighbours in this phylum, suggesting that it is also a chordate. This approach means that the probability of gaining 100% congruence scores typically declines at lower levels in the hierarchy simply because of current limitations in size of the reference database. Because of this fact, it is usually important to gain a more direct sense of the taxonomic relationships of the queried specimen to its 100 nearest neighbours by inspecting the NJ tree accessible from the ID page.

External connectivity system (ECS)

The ECS exposes system functionality and data to other developers in the form of web-services using standard protocols [simple object access protocol (SOAP), representational state transfer (REST)]. Moreover, external services can be registered and integrated into the BOLD interface, providing users with access to remote data and analytics.

One broadly useful data export capability of the ECS involves its ability to provide daily updates to external websites that are monitoring progress in the assembly of barcode records for particular taxonomic groups or geographic regions. For example, the campaign sites for birds (www.barcodingbirds.org), fishes (www.fishbol.org) and Lepidoptera (www.lepbarcoding.org) receive XML feeds that enable researchers involved in these campaigns to monitor progress. Data can also be extracted for particular geographic regions, such as the Canada campaign that is monitoring the accumulation of barcode coverage for species in that nation (www.bolnet.ca).

A second function of the ECS is of significance to all users — its ability to carry out bulk uploads of both barcode sequences and their associated specimen collaterals to GenBank. This capacity not only provides a highly efficient means of injecting sequences; it also ensures that data submissions encounter few difficulties. Taxonomic queries are minimized because checklists on BOLD, at least for major projects, will be harmonized with those at NCBI. Furthermore, its use as a submission tool ensures that records are pre-screened for compliance with the standards that must be satisfied to gain formal 'barcode' designation (Hanner *et al.* 2007).

Computational resources

BOLD is currently supported by 60 processor cores producing 152 gigahertz of total processing power. Six terabytes of storage, consisting of fibre channel, small computer system interface (SCSI) and serial advanced technology attachment (SATA) drives in a SAN environment, are available to allow growth of the database to approximately 1 million records based on current record sizes and usage patterns. Data are backed-up nightly on a 16-terabyte tape pool with copies stored offsite. Funding is in place for a substantial increase in computational support (300 processor cores, 68 terabytes fibre channel and SATA storage drives in a SAN environment, 264 terabytes tape backup). These resources, which will be added as justified by growth in BOLD, can support a 20-fold increase in the user community and a 100-fold growth from the current number of records (to 10 million). The core programming node for BOLD has funding for three programmers and four database technicians in addition to funding for hardware. It is important to note that much of the responsibility for injection and validation of primary data will reside with users, aiding the growth of records in BOLD without requiring a large central staff.

Prospects

Many of the barriers to the development of a comprehensive barcode library for eukaryotic life have been broken. Industrial-scale collection programs have the capacity to deliver large numbers of specimens for analysis (Fisher 1999; Janzen 2004) and current protocols permit single sequencing facilities to readily gather 100 000 barcode records per year (Hajibabaei *et al.* 2005). Once the global biodiversity infrastructure includes just 100 such facilities, the task of assembling comprehensive barcode libraries for large groups of life will be well within reach. For example, the 100 million barcode records needed to provide 10× coverage for the estimated 10 million animal species could be gathered in a decade. The Barcode of Life Data System is ready to absorb these records and to support their use as

a basis for automated identifications. In short, current analytical and databasing platforms have the scaling capacity needed to create a global bio-identification system. Future advances in DNA sequencing (Blazej *et al.* 2006) and computational technologies further promise the development of portable devices that will both gather barcode sequences in minutes and use an on-board barcode reference library to generate identifications. Such expedited access to biological identifications promises important benefits to both science and society.

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