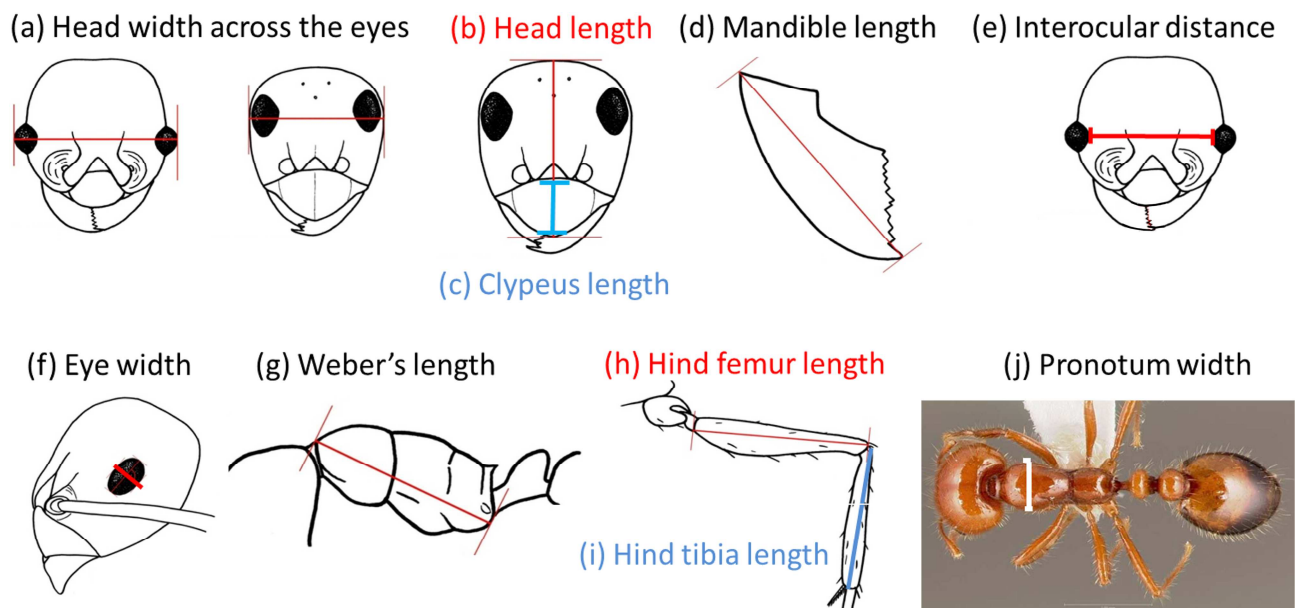


Digital supplementary material to

SCHOFIELD, S.F., BISHOP T.R. & PARR. C.L. 2016: Morphological characteristics of ant assemblages (Hymenoptera: Formicidae) differ among contrasting biomes. – Myrmecological News 23: 129-137.

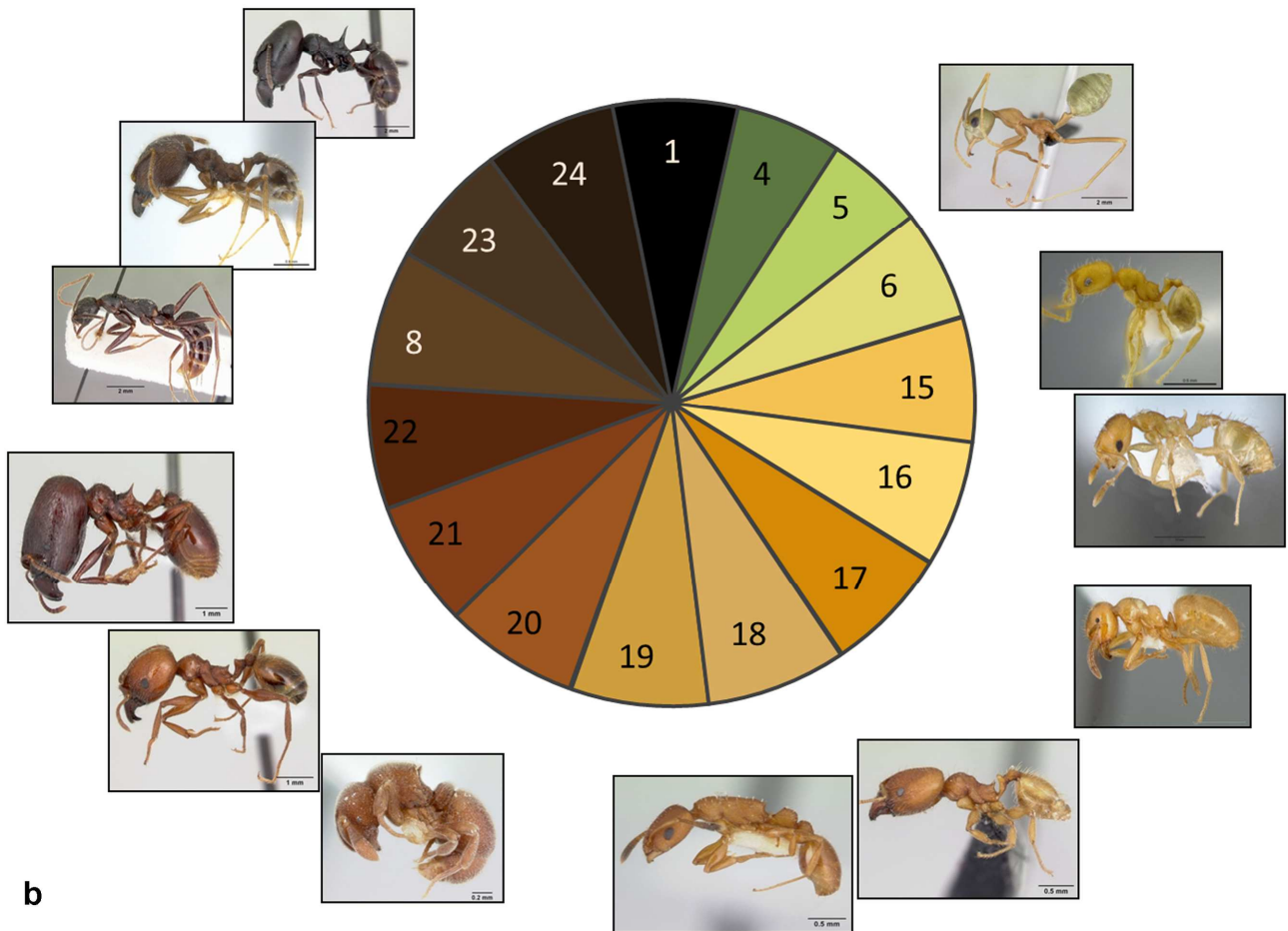
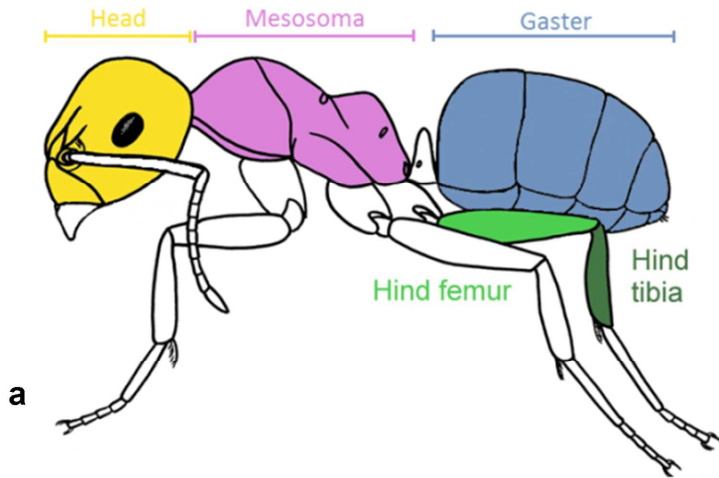
Appendix S1: Illustrations of trait measurements from the head (a - e), profile (f - i), and dorsal (j) images. Line drawings provided by Melanie Tista, photograph taken from Antweb.



Appendix S2: Numbers of species, specimens and image sources for each region.

Source	Iran		Costa Rica	
	Species	Specimens	Species	Specimens
antweb.org	20	70	96	271
antbase.net	3	3	0	0
antwiki.net	1	1	0	0
lucidcentral.org	1	1	0	0
academic.evergreen.edu	0	0	179	189
Total	25	75	275	460

Appendix S3: a) Whole ant illustration indicating head, mesosoma and gaster positions from which colour assessments are made using b). a) Also includes leg measurement clarification. Line drawings provided by Melanie Tista, photograph taken from AntWeb.



Appendix S4: Percentage completeness of inventories by subfamily for both biomes, showing an average of 64.47% completeness for Costa Rica and 100% for Iran.

Region	Subfamily	Number of species listed	Species available to measure	Percentage
Costa Rica	Agroecomyrmecinae	1	1	100.00
	Amblyoponinae	5	2	40.00
	Dolichoderinae	48	26	53.06
	Dorylinae	45	18	40.00
	Ectatomminae	9	6	66.67
	Formicinae	79	57	72.15
	Heteroponerinae	3	0	0.00
	Myrmicinae	189	135	71.43
	Paraponerinae	1	1	100.00
	Ponerinae	36	23	63.89
	Proceratiinae	8	5	62.50
	Pseudomyrmecinae	1	0	0.00
	Total	426	274	64.47
Iran	Formicinae	13	13	100.00
	Myrmicinae	10	10	100.00
	Ponerinae	2	2	100.00
	Total	25	25	100.00

Appendix S5: Percentage completeness of inventories by genus for both regions, showing an average of 63% completeness for Costa Rica and 100% for Iran. Total column indicates number of species searched for. Measured column indicates number of species that we successfully found and measured.

Region	Subfamily	Genus	Total	Measured	Percentage	
Costa Rica	Agroecomyrmecinae	<i>Tatuidris</i>	1	1	100	
	Amblyoponinae	<i>Prionopelta</i>	2	1	50	
		<i>Stigmatomma</i>	3	1	33.33	
	Dolichoderinae	<i>Azteca</i>	24	14	58.33	
		<i>Bothriomyrmex</i>	1	1	100	
		<i>Dolichoderus</i>	11	10	90.91	
		<i>Forelius</i>	2	1	50	
		<i>Linepithema</i>	5	0	0	
		<i>Tapinoma</i>	4	0	0	
		<i>Technomyrmex</i>	1	0	0	
		Dorylinae	<i>Cerapachys</i>	2	0	0
			<i>Cylindromyrmex</i>	5	0	0
	<i>Eciton</i>		8	6	75	
	<i>Labidus</i>		3	0	0	
	<i>Leptanilloides</i>		1	0	0	
	<i>Neivamyrmex</i>		23	12	52.17	
	<i>Nomamyrmex</i>		3	1	33.33	
	Ectatomminae	<i>Ectatomma</i>	3	3	100	
		<i>Gnamptogenys</i>	3	3	100	
<i>Typhlomyrmex</i>		3	0	0		

Costa Rica (cont.)	Formicinae	<i>Acropyga</i>	6	6	100
		<i>Brachymyrmex</i>	8	8	100
		<i>Camponotus</i>	35	23	65.71
		<i>Myrmelachista</i>	24	15	62.50
		<i>Nylanderia</i>	4	4	100
		<i>Paratrechina</i>	1	1	100
	Heteroponerinae	<i>Acanthoponera</i>	1	0	0
		<i>Heteroponera</i>	2	0	0
	Myrmicinae	<i>Acanthognathus</i>	2	2	100
		<i>Acromyrmex</i>	1	0	0
		<i>Adelomyrmex</i>	2	2	100
		<i>Aphaenogaster</i>	1	1	100
		<i>Apterostigma</i>	5	5	100
		<i>Atta</i>	1	1	100
		<i>Bariamyrra</i>	1	0	0
		<i>Basiceros</i>	1	1	100
		<i>Cardiocondyla</i>	3	0	0
		<i>Carebara</i>	6	2	33.33
		<i>Cephalotes</i>	15	13	86.67
		<i>Crematogaster</i>	3	3	100
		<i>Cryptocerus</i>	1	0	0
		<i>Cyphomyrmex</i>	3	2	66.67
		<i>Eurhopalothrix</i>	1	1	100
		<i>Hylomyrra</i>	1	1	100
		<i>Lachnomyrmex</i>	3	1	33.33
		<i>Lenomyrmex</i>	1	1	100
		<i>Megalomyrmex</i>	3	3	100
		<i>Monomorium</i>	3	3	100
		<i>Mycetosoritis</i>	1	1	100
		<i>Myocepurus</i>	3	3	100
		<i>Myrmicocrypta</i>	1	0	0
		<i>Nesomyrmex</i>	8	8	100
		<i>Octostruma</i>	1	1	100
		<i>Pheidole</i>	33	23	69.70
		<i>Procryptocerus</i>	23	0	0
		<i>Rhopalothrix</i>	1	1	100
		<i>Rogeria</i>	5	5	100
		<i>Sericomyrmex</i>	1	1	100
		<i>Solenopsis</i>	3	3	100
		<i>Stegomyrmex</i>	1	1	100
		<i>Stenamma</i>	1	1	100
		<i>Strumigenys</i>	41	37	90.24
		<i>Temnothorax</i>	2	2	100
		<i>Tetramorium</i>	2	0	0
		<i>Trachymyrmex</i>	2	2	100
	<i>Tranopelta</i>	1	1	100	
	<i>Wasmannia</i>	2	1	50	
<i>Xenomyrmex</i>	1	1	100		
Paraponerinae	<i>Paraponera</i>	1	1	100	
Ponerinae	<i>Anochetus</i>	6	3	50	
	<i>Belonopelta</i>	1	0	0	
	<i>Centromyrmex</i>	1	0	0	
	<i>Cryptopone</i>	1	0	0	

Costa Rica (cont.)	Ponerinae (cont.)	<i>Hypoponera</i>	4	4	100
		<i>Leptogenys</i>	2	1	50
		<i>Mayaponera</i>	1	0	0
		<i>Neoponera</i>	1	0	0
		<i>Odontomachus</i>	5	5	100
		<i>Pachycondyla</i>	1	1	100
		<i>Platythyrea</i>	4	3	75
		<i>Pseudoponera</i>	2	0	0
		<i>Rasopone</i>	1	0	0
		<i>Simopelta</i>	5	5	100
		<i>Thaumatomyrmex</i>	1	1	100
	Proceratiinae	<i>Discothyrea</i>	2	1	50
		<i>Probolomyrmex</i>	2	0	0
		<i>Proceratium</i>	4	4	100
Pseudomyrmecinae	<i>Pseudomyrmex</i>	1	0	0	
Total		425	274	64.47	
Iran	Formicinae	<i>Camponotus</i>	2	2	100
		<i>Cataglyphis</i>	8	8	100
		<i>Lepisiota</i>	2	2	100
		<i>Paratrechina</i>	1	1	100
	Myrmicinae	<i>Messor</i>	5	5	100
		<i>Monomorium</i>	3	3	100
		<i>Tetramorium</i>	2	2	100
	Ponerinae	<i>Brachyponera</i>	1	1	100
		<i>Pachycondyla</i>	1	1	100
	Total		25	25	100

Appendix S6: Entire species list for Costa Rica including both non-available and available species, and source. Crosses indicate if images for species were available and from which source.

Subfamily	Species	AntWeb	Longino
Agroecomyrmecinae	<i>Tatuidris tatusia</i>	×	
Amblyoponinae	<i>Prionopelta amabilis</i>	×	
Amblyoponinae	<i>Prionopelta modesta</i>		
Amblyoponinae	<i>Stigmatomma orizobana</i>		
Amblyoponinae	<i>Stigmatomma degenerata</i>		
Amblyoponinae	<i>Stigmatomma mystriops</i>		×
Dolichoderinae	<i>Azteca alfari</i>		×
Dolichoderinae	<i>Azteca beltii</i>		
Dolichoderinae	<i>Azteca brevis</i>		
Dolichoderinae	<i>Azteca chartifex</i>		×
Dolichoderinae	<i>Azteca coeruleipennis</i>		×
Dolichoderinae	<i>Azteca constructor</i>		×
Dolichoderinae	<i>Azteca flavigaster</i>		×
Dolichoderinae	<i>Azteca forelii</i>		×
Dolichoderinae	<i>Azteca gnava</i>		×
Dolichoderinae	<i>Azteca instabilis</i>		×
Dolichoderinae	<i>Azteca longiceps</i>		
Dolichoderinae	<i>Azteca nanogyna</i>		
Dolichoderinae	<i>Azteca nigra</i>		×
Dolichoderinae	<i>Azteca nigracans</i>		
Dolichoderinae	<i>Azteca ovaticeps</i>		×

Dolichoderinae	<i>Azteca pilosula</i>		
Dolichoderinae	<i>Azteca pittiera</i>		
Dolichoderinae	<i>Azteca quadriceps</i>		
Dolichoderinae	<i>Azteca schimperi</i>		×
Dolichoderinae	<i>Azteca sericeasur</i>		×
Dolichoderinae	<i>Azteca tonduzi</i>		×
Dolichoderinae	<i>Azteca trigona</i>		
Dolichoderinae	<i>Azteca velox</i>		×
Dolichoderinae	<i>Azteca xanthochroa</i>		
Dolichoderinae	<i>Bothriomyrmex paradoxus</i>		×
Dolichoderinae	<i>Dolichoderus bispinosus</i>		×
Dolichoderinae	<i>Dolichoderus curvilobus</i>		×
Dolichoderinae	<i>Dolichoderus debilis</i>		×
Dolichoderinae	<i>Dolichoderus diversus</i>		×
Dolichoderinae	<i>Dolichoderus inermis</i>		×
Dolichoderinae	<i>Dolichoderus lamellosus</i>		
Dolichoderinae	<i>Dolichoderus laminatus</i>		×
Dolichoderinae	<i>Dolichoderus lutosus</i>		×
Dolichoderinae	<i>Dolichoderus schulzi</i>		×
Dolichoderinae	<i>Dolichoderus setosus</i>		×
Dolichoderinae	<i>Dolichoderus validus</i>		×
Dolichoderinae	<i>Forelius damiani</i>		×
Dolichoderinae	<i>Forelius pruinosus</i>		
Dolichoderinae	<i>Linepithema angulatum</i>		
Dolichoderinae	<i>Linepithema dispertitum</i>		
Dolichoderinae	<i>Linepithema inquam</i>		
Dolichoderinae	<i>Linepithema neotropicum</i>		
Dolichoderinae	<i>Linepithema piliferum</i>		
Dolichoderinae	<i>Tapinoma litorale</i>		
Dolichoderinae	<i>Tapinoma melanocephalum</i>		
Dolichoderinae	<i>Tapinoma ramulorum</i>		
Dolichoderinae	<i>Tapinoma ramulorum inrectum</i>		
Dolichoderinae	<i>Technomyrmex fulvus</i>		
Dorylinae	<i>Cerapachys augustae</i>		
Dorylinae	<i>Cerapachys neotropicus</i>		
Dorylinae	<i>Cylindromyrmex brevitarsus</i>		
Dorylinae	<i>Cylindromyrmex escobari</i>		
Dorylinae	<i>Cylindromyrmex godmani</i>		
Dorylinae	<i>Cylindromyrmex meinarti</i>		
Dorylinae	<i>Cylindromyrmex whymperi</i>		
Dorylinae	<i>Eciton burchelli foreli</i>		
Dorylinae	<i>Eciton burchelli parvispinum</i>		×
Dorylinae	<i>Eciton dulcium crassinode</i>		×
Dorylinae	<i>Eciton hamatum</i>		×
Dorylinae	<i>Eciton lucanoides</i>		×
Dorylinae	<i>Eciton lucanoides conquistador</i>		
Dorylinae	<i>Eciton mexicanum</i>		×
Dorylinae	<i>Eciton vagans angustatum</i>		×
Dorylinae	<i>Labidus coecus</i>		
Dorylinae	<i>Labidus praedator</i>		
Dorylinae	<i>Labidus spininodis</i>		

Dorylinae	<i>Leptanilloides mckennae</i>		
Dorylinae	<i>Neivamyrmex adnepos</i>		×
Dorylinae	<i>Neivamyrmex alfaroi</i>		×
Dorylinae	<i>Neivamyrmex asper</i>		×
Dorylinae	<i>Neivamyrmex compressinodis</i>		×
Dorylinae	<i>Neivamyrmex digitistipus</i>		
Dorylinae	<i>Neivamyrmex fumosus</i>		
Dorylinae	<i>Neivamyrmex gibbatus</i>		×
Dorylinae	<i>Neivamyrmex halidaii</i>		
Dorylinae	<i>Neivamyrmex humilis</i>		×
Dorylinae	<i>Neivamyrmex impudens</i>		×
Dorylinae	<i>Neivamyrmex iridescens</i>		
Dorylinae	<i>Neivamyrmex klugii distans</i>		
Dorylinae	<i>Neivamyrmex longiscapus</i>		
Dorylinae	<i>Neivamyrmex macrodentatus</i>		
Dorylinae	<i>Neivamyrmex melshaemeri</i>		
Dorylinae	<i>Neivamyrmex opacithorax</i>		
Dorylinae	<i>Neivamyrmex pilosus mexicanus</i>		×
Dorylinae	<i>Neivamyrmex postcarinatus</i>		×
Dorylinae	<i>Neivamyrmex punctaticeps</i>		×
Dorylinae	<i>Neivamyrmex radoszkowskii</i>		
Dorylinae	<i>Neivamyrmex rosenbergi</i>		
Dorylinae	<i>Neivamyrmex sumichrasti</i>		×
Dorylinae	<i>Neivamyrmex swainsonii</i>		×
Dorylinae	<i>Nomamyrmex esenbeckii crassicornis</i>		
Dorylinae	<i>Nomamyrmex esenbeckii wilsoni</i>		
Dorylinae	<i>Nomamyrmex hartigii</i>		
Ectatomminae	<i>Ectatomma gibbum</i>	×	
Ectatomminae	<i>Ectatomma ruidum</i>	×	
Ectatomminae	<i>Ectatomma tuberculatum</i>	×	
Ectatomminae	<i>Gnamptogenys hartmani</i>	×	
Ectatomminae	<i>Gnamptogenys mecotyle</i>	×	
Ectatomminae	<i>Gnamptogenys minuta</i>	×	
Ectatomminae	<i>Typhlomyrmex prolatus</i>		
Ectatomminae	<i>Typhlomyrmex pusillus</i>		
Ectatomminae	<i>Typhlomyrmex rogenhoferi</i>		
Formicinae	<i>Acropyga exsanguis</i>		×
Formicinae	<i>Acropyga fuhrmanni</i>		×
Formicinae	<i>Acropyga goeldii</i>		×
Formicinae	<i>Acropyga keira</i>		×
Formicinae	<i>Acropyga palaga</i>		×
Formicinae	<i>Acropyga panamensis</i>		×
Formicinae	<i>Brachymyrmex cavernicola</i>		×
Formicinae	<i>Brachymyrmex coactus</i>		×
Formicinae	<i>Brachymyrmex heeri</i>		×
Formicinae	<i>Brachymyrmex longicornis</i>		×
Formicinae	<i>Brachymyrmex nebulosus</i>		×
Formicinae	<i>Brachymyrmex obscurior</i>		×
Formicinae	<i>Brachymyrmex pictus balboae</i>		×
Formicinae	<i>Brachymyrmex santschii</i>		×
Formicinae	<i>Camponotus abscisus</i>		

Formicinae	<i>Camponotus ager</i>		×
Formicinae	<i>Camponotus albicoxis</i>		×
Formicinae	<i>Camponotus atriceps</i>		×
Formicinae	<i>Camponotus bidens</i>		
Formicinae	<i>Camponotus blandus</i>		×
Formicinae	<i>Camponotus brettesi</i>		×
Formicinae	<i>Camponotus brevis</i>		
Formicinae	<i>Camponotus championi</i>		×
Formicinae	<i>Camponotus chartifex</i>		×
Formicinae	<i>Camponotus claviscapus</i>		×
Formicinae	<i>Camponotus conspicuus zonatus</i>		×
Formicinae	<i>Camponotus constructor</i>		×
Formicinae	<i>Camponotus coruscus</i>		
Formicinae	<i>Camponotus cuneidorsus</i>		×
Formicinae	<i>Camponotus curviscapus</i>		×
Formicinae	<i>Camponotus elevatus</i>		
Formicinae	<i>Camponotus excisus</i>		
Formicinae	<i>Camponotus fastigatus</i>		×
Formicinae	<i>Camponotus linnaei</i>		×
Formicinae	<i>Camponotus mucronatus</i>		×
Formicinae	<i>Camponotus nitidior</i>		×
Formicinae	<i>Camponotus novogranadensis</i>		×
Formicinae	<i>Camponotus pittieri</i>		
Formicinae	<i>Camponotus planatus</i>		
Formicinae	<i>Camponotus raphaelis</i>		
Formicinae	<i>Camponotus rectangularis</i>		×
Formicinae	<i>Camponotus salvini</i>		×
Formicinae	<i>Camponotus sanctaefidei</i>		×
Formicinae	<i>Camponotus senex</i>		×
Formicinae	<i>Camponotus sericeiventris</i>		
Formicinae	<i>Camponotus sexguttatus</i>		
Formicinae	<i>Camponotus striatus</i>		
Formicinae	<i>Camponotus substitutus coloratus</i>		×
Formicinae	<i>Camponotus textor</i>		×
Formicinae	<i>Myrmelachista ambigua</i>		×
Formicinae	<i>Myrmelachista amicta</i>		
Formicinae	<i>Myrmelachista cooperi</i>		×
Formicinae	<i>Myrmelachista flavocotea</i>		×
Formicinae	<i>Myrmelachista flavoguarea</i>		×
Formicinae	<i>Myrmelachista guyanensis</i>		
Formicinae	<i>Myrmelachista haberi</i>		×
Formicinae	<i>Myrmelachista joycei</i>		×
Formicinae	<i>Myrmelachista lauroatlantica</i>		×
Formicinae	<i>Myrmelachista lauropacifica</i>		×
Formicinae	<i>Myrmelachista longiceps</i>		×
Formicinae	<i>Myrmelachista longinoda</i>		
Formicinae	<i>Myrmelachista megaranarja</i>		×
Formicinae	<i>Myrmelachista mexicana</i>		×
Formicinae	<i>Myrmelachista nigrocotea</i>		×
Formicinae	<i>Myrmelachista osa</i>		×
Formicinae	<i>Myrmelachista plebecula</i>		×

Formicinae	<i>Myrmelachista ramulorum</i>		
Formicinae	<i>Myrmelachista rogeri</i>		
Formicinae	<i>Myrmelachista rogeri manni</i>		
Formicinae	<i>Myrmelachista rogeri rubriceps</i>		
Formicinae	<i>Myrmelachista schumanni</i>		
Formicinae	<i>Myrmelachista schumanni cordincola</i>		
Formicinae	<i>Myrmelachista zeledoni</i>		×
Formicinae	<i>Myrmicocrypta ednaella</i>		
Formicinae	<i>Nylanderia austroccidua</i>		×
Formicinae	<i>Nylanderia caeciliae</i>		×
Formicinae	<i>Nylanderia guatemalensis</i>		×
Formicinae	<i>Nylanderia steinheili</i>		×
Formicinae	<i>Paratrechina longicornis</i>		×
Heteroponerinae	<i>Acanthoponera minor</i>		
Heteroponerinae	<i>Heteroponera microps</i>		
Heteroponerinae	<i>Heteroponera panamensis</i>		
Myrmicinae	<i>Acanthognathus ocellatus</i>	×	
Myrmicinae	<i>Acanthognathus teledectus</i>	×	
Myrmicinae	<i>Acromyrmex octospinosus</i>	×	
Myrmicinae	<i>Adelomyrmex myops</i>	×	
Myrmicinae	<i>Adelomyrmex silvestrii</i>	×	
Myrmicinae	<i>Aphaenogaster araneoides</i>	×	
Myrmicinae	<i>Apterostigma chocoense</i>	×	
Myrmicinae	<i>Apterostigma collare</i>	×	
Myrmicinae	<i>Apterostigma dentigerum</i>	×	
Myrmicinae	<i>Apterostigma goniodes</i>	×	
Myrmicinae	<i>Apterostigma robustum</i>	×	
Myrmicinae	<i>Atta cephalotes</i>	×	
Myrmicinae	<i>Bariamyrra hispidula</i>		
Myrmicinae	<i>Basiceros manni</i>	×	
Myrmicinae	<i>Cardiocondyla emeryi</i>		
Myrmicinae	<i>Cardiocondyla minutior</i>		
Myrmicinae	<i>Cardiocondyla obscurior</i>		
Myrmicinae	<i>Carebara brevipilosa</i>		×
Myrmicinae	<i>Carebara inca</i>		
Myrmicinae	<i>Carebara reina</i>		
Myrmicinae	<i>Carebara urichi</i>		×
Myrmicinae	<i>Cephalotes alfaroi</i>		×
Myrmicinae	<i>Cephalotes basalis</i>		
Myrmicinae	<i>Cephalotes cordiventris</i>		×
Myrmicinae	<i>Cephalotes cristatus</i>		×
Myrmicinae	<i>Cephalotes curvistriatus</i>		×
Myrmicinae	<i>Cephalotes grandinosus</i>		×
Myrmicinae	<i>Cephalotes maculatus</i>		×
Myrmicinae	<i>Cephalotes minutus</i>		×
Myrmicinae	<i>Cephalotes multispinosus</i>		
Myrmicinae	<i>Cephalotes pallens</i>		×
Myrmicinae	<i>Cephalotes peruviansis</i>		×
Myrmicinae	<i>Cephalotes porrasi</i>		×
Myrmicinae	<i>Cephalotes scutulatus</i>		×
Myrmicinae	<i>Cephalotes setulifer</i>		×

Myrmicinae	<i>Cephalotes umbraculatus</i>		×
Myrmicinae	<i>Crematogaster carinata</i>	×	
Myrmicinae	<i>Crematogaster limata</i>	×	
Myrmicinae	<i>Crematogaster nigropilosa</i>	×	
Myrmicinae	<i>Cryptocerus curvispinosa</i>		
Myrmicinae	<i>Cyphomyrmex cornutus</i>	×	
Myrmicinae	<i>Cyphomyrmex costatus</i>	×	
Myrmicinae	<i>Cyphomyrmex rimosus</i>		
Myrmicinae	<i>Eurhopalothrix gravis</i>	×	
Myrmicinae	<i>Hylomyrma dentiloba</i>	×	
Myrmicinae	<i>Lachnomyrmex haskinsi</i>		
Myrmicinae	<i>Lachnomyrmex plaumanni</i>		
Myrmicinae	<i>Lachnomyrmex scrobiculatus</i>	×	
Myrmicinae	<i>Lenomyrmex colwelli</i>		×
Myrmicinae	<i>Megalomyrmex drifti</i>	×	
Myrmicinae	<i>Megalomyrmex modestus</i>	×	
Myrmicinae	<i>Megalomyrmex silvestrii</i>	×	
Myrmicinae	<i>Monomorium ebeninum</i>		×
Myrmicinae	<i>Monomorium floricola</i>		×
Myrmicinae	<i>Monomorium pharaonis</i>		×
Myrmicinae	<i>Mycetosoritis vinsoni</i>		×
Myrmicinae	<i>Mycocepurus curvispinosus</i>		×
Myrmicinae	<i>Mycocepurus smithii</i>		×
Myrmicinae	<i>Mycocepurus tardus</i>		×
Myrmicinae	<i>Nesomyrmex anduzei</i>		×
Myrmicinae	<i>Nesomyrmex asper</i>		×
Myrmicinae	<i>Nesomyrmex echinatinodis</i>		×
Myrmicinae	<i>Nesomyrmex echinatinodis dalmasi</i>		×
Myrmicinae	<i>Nesomyrmex pittieri</i>		×
Myrmicinae	<i>Nesomyrmex pleuriticus</i>		×
Myrmicinae	<i>Nesomyrmex tonsuratus</i>		×
Myrmicinae	<i>Nesomyrmex vargasi</i>		×
Myrmicinae	<i>Octostruma iheringi</i>	×	
Myrmicinae	<i>Pheidole anastasioi</i>	×	
Myrmicinae	<i>Pheidole arachnion</i>		
Myrmicinae	<i>Pheidole boruca</i>	×	
Myrmicinae	<i>Pheidole browni</i>	×	
Myrmicinae	<i>Pheidole celaena</i>	×	
Myrmicinae	<i>Pheidole citrina</i>	×	
Myrmicinae	<i>Pheidole fimbriata</i>	×	
Myrmicinae	<i>Pheidole fiorii</i>	×	
Myrmicinae	<i>Pheidole flavens</i>	×	
Myrmicinae	<i>Pheidole harrisonfordi</i>		
Myrmicinae	<i>Pheidole hirsuta</i>	×	
Myrmicinae	<i>Pheidole indagatrix</i>	×	
Myrmicinae	<i>Pheidole laselva</i>		
Myrmicinae	<i>Pheidole nebulosa</i>	×	
Myrmicinae	<i>Pheidole nigricula</i>	×	
Myrmicinae	<i>Pheidole nitella</i>	×	
Myrmicinae	<i>Pheidole otisi</i>	×	
Myrmicinae	<i>Pheidole perpusilla</i>		

Myrmicinae	<i>Pheidole pratorum</i>		
Myrmicinae	<i>Pheidole prostrata</i>	×	
Myrmicinae	<i>Pheidole psilogaster</i>	×	
Myrmicinae	<i>Pheidole pubiventris</i>		
Myrmicinae	<i>Pheidole rectispina</i>	×	
Myrmicinae	<i>Pheidole rogeri</i>	×	
Myrmicinae	<i>Pheidole rugiceps</i>		
Myrmicinae	<i>Pheidole scalaris</i>	×	
Myrmicinae	<i>Pheidole sensitiva</i>	×	
Myrmicinae	<i>Pheidole simonsi</i>	×	
Myrmicinae	<i>Pheidole specularis</i>	×	
Myrmicinae	<i>Pheidole tanyscapa</i>		
Myrmicinae	<i>Pheidole tennantae</i>		
Myrmicinae	<i>Pheidole vestita</i>	×	
Myrmicinae	<i>Pheidole walkeri</i>		
Myrmicinae	<i>Procryptocerus attenuatus</i>		
Myrmicinae	<i>Procryptocerus batesi</i>		
Myrmicinae	<i>Procryptocerus belti</i>		
Myrmicinae	<i>Procryptocerus carbomarius</i>		
Myrmicinae	<i>Procryptocerus coriarius</i>		
Myrmicinae	<i>Procryptocerus eladio</i>		
Myrmicinae	<i>Procryptocerus goeldii</i>		
Myrmicinae	<i>Procryptocerus hirsutus</i>		
Myrmicinae	<i>Procryptocerus hylaeus</i>		
Myrmicinae	<i>Procryptocerus impressus</i>		
Myrmicinae	<i>Procryptocerus kempfi</i>		
Myrmicinae	<i>Procryptocerus mayri</i>		
Myrmicinae	<i>Procryptocerus nalini</i>		
Myrmicinae	<i>Procryptocerus paleatus</i>		
Myrmicinae	<i>Procryptocerus pictipes</i>		
Myrmicinae	<i>Procryptocerus rudis</i>		
Myrmicinae	<i>Procryptocerus scabriusculus</i>		
Myrmicinae	<i>Procryptocerus schmitti</i>		
Myrmicinae	<i>Procryptocerus seabrai</i>		
Myrmicinae	<i>Procryptocerus subpilosus</i>		
Myrmicinae	<i>Procryptocerus tortuguero</i>		
Myrmicinae	<i>Procryptocerus victoris</i>		
Myrmicinae	<i>Procryptocerus virgatus</i>		
Myrmicinae	<i>Rhopalothrix weberi</i>	×	
Myrmicinae	<i>Rogeria blanda</i>	×	
Myrmicinae	<i>Rogeria creightoni</i>	×	
Myrmicinae	<i>Rogeria cuneola</i>	×	
Myrmicinae	<i>Rogeria inermis</i>	×	
Myrmicinae	<i>Rogeria tonduzi</i>	×	
Myrmicinae	<i>Sericomyrmex amabilis</i>	×	
Myrmicinae	<i>Solenopsis geminata</i>	×	
Myrmicinae	<i>Solenopsis picea</i>	×	
Myrmicinae	<i>Solenopsis bicolor</i>	×	
Myrmicinae	<i>Stegomyrmex manni</i>	×	
Myrmicinae	<i>Stenammas felixi</i>	×	
Myrmicinae	<i>Strumigenys alberti</i>		×

Myrmicinae	<i>Strumigenys augustandrewi</i>		×
Myrmicinae	<i>Strumigenys biolleyi</i>	×	
Myrmicinae	<i>Strumigenys borgmeieri</i>	×	
Myrmicinae	<i>Strumigenys brevicornis</i>		×
Myrmicinae	<i>Strumigenys calamita</i>	×	
Myrmicinae	<i>Strumigenys cascanteae</i>		×
Myrmicinae	<i>Strumigenys cassicuspis</i>		
Myrmicinae	<i>Strumigenys cordovensisi</i>	×	
Myrmicinae	<i>Strumigenys crementa</i>		
Myrmicinae	<i>Strumigenys depressiceps</i>		×
Myrmicinae	<i>Strumigenys dontopagis</i>		×
Myrmicinae	<i>Strumigenys eggersi</i>		×
Myrmicinae	<i>Strumigenys elongata</i>		×
Myrmicinae	<i>Strumigenys epinotalis</i>		×
Myrmicinae	<i>Strumigenys erikae</i>		×
Myrmicinae	<i>Strumigenys excisa</i>		×
Myrmicinae	<i>Strumigenys fridericimuelleri</i>		×
Myrmicinae	<i>Strumigenys gundlachi</i>		×
Myrmicinae	<i>Strumigenys lalassa</i>		×
Myrmicinae	<i>Strumigenys lanuginosa</i>	×	
Myrmicinae	<i>Strumigenys longinoi</i>		×
Myrmicinae	<i>Strumigenys ludia</i>	×	
Myrmicinae	<i>Strumigenys micretes</i>	×	
Myrmicinae	<i>Strumigenys microthrix</i>		×
Myrmicinae	<i>Strumigenys myllorhapha</i>		×
Myrmicinae	<i>Strumigenys nigrescens</i>		×
Myrmicinae	<i>Strumigenys oconitrilloae</i>		×
Myrmicinae	<i>Strumigenys paniaguae</i>		×
Myrmicinae	<i>Strumigenys pariensis</i>	×	
Myrmicinae	<i>Strumigenys probatrix</i>		×
Myrmicinae	<i>Strumigenys rogata</i>		×
Myrmicinae	<i>Strumigenys rogeri</i>	×	
Myrmicinae	<i>Strumigenys schulzi</i>		×
Myrmicinae	<i>Strumigenys smithii</i>	×	
Myrmicinae	<i>Strumigenys stauroma</i>		
Myrmicinae	<i>Strumigenys subedentata</i>		×
Myrmicinae	<i>Strumigenys trieces</i>		×
Myrmicinae	<i>Strumigenys tumida</i>		×
Myrmicinae	<i>Strumigenys turpis</i>		×
Myrmicinae	<i>Strumigenys zeteki</i>		
Myrmicinae	<i>Temnothorax salvini</i>		×
Myrmicinae	<i>Temnothorax subditivus</i>		×
Myrmicinae	<i>Tetramorium bicarinatum</i>		
Myrmicinae	<i>Tetramorium simillimum</i>		
Myrmicinae	<i>Trachymyrmex cornetzi</i>	×	
Myrmicinae	<i>Trachymyrmex zeteki</i>	×	
Myrmicinae	<i>Tranopelta gilva</i>	×	
Myrmicinae	<i>Wasmannia auropunctata</i>	×	
Myrmicinae	<i>Wasmannia scrobifera</i>		
Myrmicinae	<i>Xenomyrmex panamanus</i>		×
Paraponerinae	<i>Paraponera clavata</i>		×

Ponerinae	<i>Anochetus bispinosus</i>		
Ponerinae	<i>Anochetus diegensis</i>		
Ponerinae	<i>Anochetus mayri</i>		×
Ponerinae	<i>Anochetus minans</i>		
Ponerinae	<i>Anochetus orchidicola</i>		×
Ponerinae	<i>Anochetus striatulus</i>		×
Ponerinae	<i>Belonopelta deletrix</i>		
Ponerinae	<i>Centromyrmex alfaroi</i>		
Ponerinae	<i>Hypoponera distinguenda</i>	×	
Ponerinae	<i>Hypoponera nitidula</i>	×	
Ponerinae	<i>Hypoponera opacior</i>	×	
Ponerinae	<i>Hypoponera parva</i>	×	
Ponerinae	<i>Leptogenys punctaticeps</i>		
Ponerinae	<i>Leptogenys pusilla</i>	×	
Ponerinae	<i>Mayaponera constricta</i>		
Ponerinae	<i>Neoponera crenata</i>		
Ponerinae	<i>Odontomachus bauri</i>	×	
Ponerinae	<i>Odontomachus chelifer</i>	×	
Ponerinae	<i>Odontomachus erythrocephalus</i>	×	
Ponerinae	<i>Odontomachus laticeps</i>	×	
Ponerinae	<i>Odontomachus meinerti</i>	×	
Ponerinae	<i>Pachycondyla harpax</i>	×	
Ponerinae	<i>Platythyrea pilosula</i>		×
Ponerinae	<i>Platythyrea prizo</i>		×
Ponerinae	<i>Platythyrea punctata</i>		×
Ponerinae	<i>Platythyrea sinuata</i>		
Ponerinae	<i>Pseudoponera cognata</i>		
Ponerinae	<i>Pseudoponera stigma</i>		
Ponerinae	<i>Rasopone arhuaca</i>		
Ponerinae	<i>Simopelta andersoni</i>		×
Ponerinae	<i>Simopelta longinodus</i>		×
Ponerinae	<i>Simopelta oculata</i>		×
Ponerinae	<i>Simopelta paeminosa</i>		×
Ponerinae	<i>Simopelta pergandei</i>		×
Ponerinae	<i>Thaumatomyrmex ferox</i>	×	
Proceratiinae	<i>Discothyrea horni</i>	×	
Proceratiinae	<i>Discothyrea testacea</i>		
Proceratiinae	<i>Probolomyrmex boliviensis</i>		
Proceratiinae	<i>Probolomyrmex guanacastensis</i>		
Proceratiinae	<i>Proceratium convexiceps</i>		×
Proceratiinae	<i>Proceratium goliath</i>		×
Proceratiinae	<i>Proceratium micrommatum</i>		×
Proceratiinae	<i>Proceratium panamense</i>		×
Pseudomyrmecinae	<i>Pseudomyrmex</i> sp.		

Appendix S7: Entire species list for Iran including both non-available and available species, and source. Crosses indicate if images for species were available and from which source.

Subfamily	Species	AntWeb	Antbase	Antwiki	Lucidcentral
Formicinae	<i>Camponotus oasium</i>	×			
Formicinae	<i>Camponotus turkestanicus</i>	×			
Formicinae	<i>Cataglyphis foreli</i>	×			
Formicinae	<i>Cataglyphis cinnamomea</i>	×			
Formicinae	<i>Cataglyphis emeryi</i>	×			
Formicinae	<i>Cataglyphis isis</i>		×		
Formicinae	<i>Cataglyphis livida</i>	×			
Formicinae	<i>Cataglyphis niger</i>	×			
Formicinae	<i>Cataglyphis nodus</i>	×			
Formicinae	<i>Cataglyphis ruber</i>	×			
Formicinae	<i>Lepisiota frauenfeldi</i>	×			
Formicinae	<i>Lepisiota semenovi</i>	×			
Formicinae	<i>Paratrechina longicornis</i>	×			
Myrmicinae	<i>Messor caducus</i>	×			
Myrmicinae	<i>Messor intermedius</i>	×			
Myrmicinae	<i>Messor striaticeps</i>			×	
Myrmicinae	<i>Messor subgracilinodis</i>		×		
Myrmicinae	<i>Messor variabilis</i>	×			
Myrmicinae	<i>Monomorium dentigerum</i>	×			
Myrmicinae	<i>Monomorium destructor</i>				×
Myrmicinae	<i>Monomorium indicum kusnezovi</i>	×			
Myrmicinae	<i>Tetramorium armatum</i>	×			
Myrmicinae	<i>Tetramorium striaentre</i>	×			
Ponerinae	<i>Brachyponera sennaarensis</i>	×			
Ponerinae	<i>Pachycondyla sennaarensis</i>		×		

Appendix S8: List detailing the ground or arboreal classifications of the Costa Rican ants. Source column indicates the source of the classification. NA indicates that no source could be found but the classification was made based on other species in the genus. Longino Website: academic.evergreen.edu.

Genus	Species	Strata	Source
<i>Acanthognathus</i>	<i>ocellatus</i>	Ground	AntWeb
<i>Acanthognathus</i>	<i>teledectus</i>	Ground	AntWeb
<i>Acromyrmex</i>	<i>octospinosus</i>	Ground	AntWeb
<i>Acropyga</i>	<i>exsanguis</i>	Ground	AntWeb
<i>Acropyga</i>	<i>goeldii</i>	Ground	AntWeb
<i>Acropyga</i>	<i>keira</i>	Ground	AntWeb
<i>Acropyga</i>	<i>palaga</i>	Ground	AntWiki
<i>Acropyga</i>	<i>panamensis</i>	Ground	AntWeb
<i>Adelomyrmex</i>	<i>myops</i>	Ground	AntWeb
<i>Adelomyrmex</i>	<i>silvestrii</i>	Ground	AntWeb
<i>Amblyopone</i>	<i>mystriops</i>	Ground	Longino Website
<i>Anochetus</i>	<i>mayri</i>	Ground	AntWeb

<i>Anochetus</i>	<i>orchidicola</i>	Arboreal	Longino Website
<i>Anochetus</i>	<i>striatulus</i>	Arboreal	Longino Website
<i>Aphaenogaster</i>	<i>araneoides</i>	Ground	AntWeb
<i>Apterostigma</i>	<i>chocoensis</i>	Ground	AntWeb
<i>Apterostigma</i>	<i>collare</i>	Arboreal	AntWeb
<i>Apterostigma</i>	<i>dentigerum</i>	Ground	AntWeb
<i>Apterostigma</i>	<i>goniodes</i>	Ground	AntWeb
<i>Apterostigma</i>	<i>robustum</i>	Arboreal	AntWeb
<i>Atta</i>	<i>cephalotes</i>	Ground	AntWeb
<i>Azteca</i>	<i>alfari</i>	Arboreal	McCLURE 2008
<i>Azteca</i>	<i>chartifex</i>	Arboreal	AntWeb
<i>Azteca</i>	<i>coeruleipennis</i>	Arboreal	AntWiki
<i>Azteca</i>	<i>constructor</i>	Arboreal	AntWiki
<i>Azteca</i>	<i>flavigaster</i>	Ground	AntWeb
<i>Azteca</i>	<i>forelii</i>	Arboreal	AntWeb
<i>Azteca</i>	<i>gnava</i>	Arboreal	AntWeb
<i>Azteca</i>	<i>instibilis</i>	Ground	AntWeb
<i>Azteca</i>	<i>nigra</i>	Ground	AntWeb
<i>Azteca</i>	<i>ovaticeps</i>	Arboreal	AntWeb
<i>Azteca</i>	<i>schimperi</i>	Arboreal	AntWeb
<i>Azteca</i>	<i>sericeasur</i>	Arboreal	AntWeb
<i>Azteca</i>	<i>tonduzi</i>	Arboreal	AntWeb
<i>Azteca</i>	<i>velox</i>	Ground	AntWeb
<i>Basiceros</i>	<i>manni</i>	Ground	AntWeb
<i>Bothriomyrmex</i>	<i>paradoxus</i>	Ground	AntWeb
<i>Brachymyrmex</i>	<i>cavernicola</i>	Ground	AntWeb
<i>Brachymyrmex</i>	<i>coactus</i>	Ground	AntWeb
<i>Brachymyrmex</i>	<i>heeri</i>	Ground	AntWeb
<i>Brachymyrmex</i>	<i>longicornis</i>	Ground	AntWeb
<i>Brachymyrmex</i>	<i>nebulosus</i>	Ground	AntWeb
<i>Brachymyrmex</i>	<i>obscurior</i>	Ground	AntWeb
<i>Brachymyrmex</i>	<i>pictus balboae</i>	Arboreal	AntWeb
<i>Brachymyrmex</i>	<i>santschii</i>	Ground	AntWeb
<i>Camponotus</i>	<i>ager</i>	Ground	AntWeb
<i>Camponotus</i>	<i>albicoxis</i>	Arboreal	AntWeb
<i>Camponotus</i>	<i>atriceps</i>	Ground	AntWeb
<i>Camponotus</i>	<i>blandus</i>	Ground	AntWeb
<i>Camponotus</i>	<i>brettesi</i>	Arboreal	AntWeb
<i>Camponotus</i>	<i>championi</i>	Arboreal	AntWeb
<i>Camponotus</i>	<i>chartifex</i>	Arboreal	AntWeb
<i>Camponotus</i>	<i>claviscapus</i>	Arboreal	Longino Website
<i>Camponotus</i>	<i>conspicuus zonatus</i>	Ground	Longino Website
<i>Camponotus</i>	<i>constructor</i>	Arboreal	Longino Website
<i>Camponotus</i>	<i>cuneidorsus</i>	Ground	Longino Website
<i>Camponotus</i>	<i>curviscapus</i>	Ground	Longino Website
<i>Camponotus</i>	<i>fastigatus</i>	Ground	Longino Website
<i>Camponotus</i>	<i>limmaei</i>	Ground	Longino Website
<i>Camponotus</i>	<i>mucronatus</i>	Ground	Longino Website
<i>Camponotus</i>	<i>nitidior</i>	Ground	Longino Website
<i>Camponotus</i>	<i>novogranadensis</i>	Ground	Longino Website
<i>Camponotus</i>	<i>rectangularis</i>	Ground	Longino Website
<i>Camponotus</i>	<i>salvini</i>	Ground	Longino Website
<i>Camponotus</i>	<i>sanctaeidei</i>	Arboreal	Longino Website

<i>Camponotus</i>	<i>senex</i>	Ground	Longino Website
<i>Camponotus</i>	<i>substitutus coloratus</i>	Ground	Longino Website
<i>Camponotus</i>	<i>textor</i>	Arboreal	Longino Website
<i>Carebara</i>	<i>brevipilosa</i>	Ground	Longino Website
<i>Carebara</i>	<i>urichi</i>	Ground	Longino Website
<i>Carebarella</i>	<i>bicolor</i>	Ground	AntWeb
<i>Cephalotes</i>	<i>alfaroi</i>	Arboreal	Longino Website
<i>Cephalotes</i>	<i>cordiventris</i>	Arboreal	Longino Website
<i>Cephalotes</i>	<i>cristatus</i>	Arboreal	Longino Website
<i>Cephalotes</i>	<i>curvistriatus</i>	Arboreal	Longino Website
<i>Cephalotes</i>	<i>grandinosus</i>	Arboreal	Longino Website
<i>Cephalotes</i>	<i>maculatus</i>	Ground	Longino Website
<i>Cephalotes</i>	<i>minutus</i>	Ground	AntWeb
<i>Cephalotes</i>	<i>pallens</i>	Ground	AntWeb
<i>Cephalotes</i>	<i>peruviensis</i>	Arboreal	AntWiki
<i>Cephalotes</i>	<i>porrasi</i>	Ground	AntWeb
<i>Cephalotes</i>	<i>scutulatus</i>	Arboreal	AntWeb
<i>Cephalotes</i>	<i>setulifer</i>	Ground	AntWeb
<i>Cephalotes</i>	<i>umbraculatus</i>	Arboreal	AntWeb
<i>Crematogaster</i>	<i>carinata</i>	Arboreal	AntWeb
<i>Crematogaster</i>	<i>limata</i>	Ground	AntWeb
<i>Crematogaster</i>	<i>nigropilosa</i>	Ground	AntWeb
<i>Cyphomyrmex</i>	<i>cornutus</i>	Arboreal	AntWeb
<i>Cyphomyrmex</i>	<i>costatus</i>	Ground	AntWeb
<i>Discothyrea</i>	<i>horni</i>	Ground	AntWeb
<i>Dolichoderus</i>	<i>bispinosus</i>	Ground	AntWeb
<i>Dolichoderus</i>	<i>curvilobus</i>	Arboreal	AntWeb
<i>Dolichoderus</i>	<i>debilis</i>	Arboreal	AntWeb
<i>Dolichoderus</i>	<i>diversus</i>	Ground	AntWeb
<i>Dolichoderus</i>	<i>inermis</i>	Ground	AntWeb
<i>Dolichoderus</i>	<i>laminatus</i>	Arboreal	AntWeb
<i>Dolichoderus</i>	<i>lutosus</i>	Arboreal	AntWeb
<i>Dolichoderus</i>	<i>schulzi</i>	Arboreal	AntWeb
<i>Dolichoderus</i>	<i>setosus</i>	Arboreal	AntWeb
<i>Dolichoderus</i>	<i>validus</i>	Arboreal	AntWeb
<i>Eciton</i>	<i>burchelli parvispinum</i>	Ground	AntWeb
<i>Eciton</i>	<i>dulcinum crassinode</i>	Ground	AntWeb
<i>Eciton</i>	<i>hamatum</i>	Ground	AntWeb
<i>Eciton</i>	<i>lucanoides</i>	Ground	AntWeb
<i>Eciton</i>	<i>mexicanum</i>	Ground	AntWeb
<i>Eciton</i>	<i>vagans angustatum</i>	Ground	THEUNIS 2005
<i>Ectatomma</i>	<i>gibbum</i>	Ground	AntWeb
<i>Ectatomma</i>	<i>ruidum</i>	Ground	AntWeb
<i>Ectatomma</i>	<i>tuberculatum</i>	Ground	AntWeb
<i>Eurhopalothrix</i>	<i>gravis</i>	Ground	AntWeb
<i>Forelius</i>	<i>damiani</i>	Ground	Longino Website
<i>Gnamptogenys</i>	<i>hartmani</i>	Ground	AntWiki
<i>Gnamptogenys</i>	<i>mecotyle</i>	Ground	AntWiki
<i>Gnamptogenys</i>	<i>minuta</i>	Ground	DELABIE 2000
<i>Heteroponera</i>	<i>microps</i>	Ground	Longino Website
<i>Hylomyrma</i>	<i>dentiloba</i>	Ground	AntWeb
<i>Hypoconera</i>	<i>distinguenda</i>	Ground	AntWeb
<i>Hypoconera</i>	<i>nitidula</i>	Ground	AntWeb

<i>Hypoponera</i>	<i>opacior</i>	Ground	AntWeb
<i>Hypoponera</i>	<i>parva</i>	Ground	AntWeb
<i>Labidus</i>	<i>coecus</i>	Ground	Longino Website
<i>Labidus</i>	<i>praedator</i>	Ground	Longino Website
<i>Labidus</i>	<i>spininodis</i>	Ground	MIRANDA 2012
<i>Lachnomyrmex</i>	<i>scrobiculatus</i>	Ground	AntWeb
<i>Lenomyrmex</i>	<i>colwelli</i>	Ground	AntWeb
<i>Leptogenys</i>	<i>pusilla</i>	Ground	AntWeb
<i>Megalomyrmex</i>	<i>drifti</i>	Ground	AntWeb
<i>Megalomyrmex</i>	<i>modestus</i>	Ground	AntWeb
<i>Megalomyrmex</i>	<i>silvestrii</i>	Ground	AntWeb
<i>Monomorium</i>	<i>ebeninum</i>	Ground	ROIAS 2014
<i>Monomorium</i>	<i>floricola</i>	Ground	MIRANDA 2012
<i>Monomorium</i>	<i>pharaonis</i>	Arboreal	Longino Website
<i>Mycetosoritis</i>	<i>vinsoni</i>	Ground	AntWeb
<i>Mycocepurus</i>	<i>curvispinosus</i>	Ground	AntWeb
<i>Mycocepurus</i>	<i>smithii</i>	Ground	AntWeb
<i>Mycocepurus</i>	<i>tardus</i>	Ground	AntWeb
<i>Myrmelachista</i>	<i>ambigua</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>cooperi</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>flavocotea</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>flavoguarea</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>haberi</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>joycei</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>lauroatlantica</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>lauropacifica</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>longiceps</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>meganaranja</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>mexicana</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>nigrocotea</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>osa</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>plebecula</i>	Arboreal	LONGINO 2006
<i>Myrmelachista</i>	<i>zeledoni</i>	Arboreal	LONGINO 2006
<i>Neivamyrmex</i>	<i>adnepos</i>	Ground	AntWiki
<i>Neivamyrmex</i>	<i>alfaroi</i>	Ground	NA
<i>Neivamyrmex</i>	<i>asper</i>	Ground	AntWeb
<i>Neivamyrmex</i>	<i>compressinodis</i>	Ground	AntWeb
<i>Neivamyrmex</i>	<i>gibbatus</i>	Ground	Longino Website
<i>Neivamyrmex</i>	<i>humilis</i>	Ground	Longino Website
<i>Neivamyrmex</i>	<i>impudens</i>	Ground	Longino Website
<i>Neivamyrmex</i>	<i>pilosus mexicanus</i>	Arboreal	Longino Website
<i>Neivamyrmex</i>	<i>postcarinatus</i>	Ground	NA
<i>Neivamyrmex</i>	<i>punctaticeps</i>	Ground	WILKIE 2007
<i>Neivamyrmex</i>	<i>sumichrasti</i>	Arboreal	CASTANO-MENESES 2014
<i>Neivamyrmex</i>	<i>swainsonii</i>	Ground	AntWeb
<i>Nesomyrmex</i>	<i>anduzei</i>	Arboreal	AntWeb
<i>Nesomyrmex</i>	<i>asper</i>	Arboreal	Longino Website
<i>Nesomyrmex</i>	<i>dalmasi</i>	Arboreal	Longino Website
<i>Nesomyrmex</i>	<i>echinatinodis</i>	Arboreal	Longino Website
<i>Nesomyrmex</i>	<i>pittieri</i>	Arboreal	Longino Website
<i>Nesomyrmex</i>	<i>pleuriticus</i>	Ground	Longino Website
<i>Nesomyrmex</i>	<i>tonsuratus</i>	Ground	NA
<i>Nesomyrmex</i>	<i>vargasi</i>	Ground	AntWeb

<i>Octostruma</i>	<i>iheringi</i>	Ground	AntWeb
<i>Odontomachus</i>	<i>bauri</i>	Arboreal	AntWeb
<i>Odontomachus</i>	<i>chelifer</i>	Ground	AntWeb
<i>Odontomachus</i>	<i>erythrocephalus</i>	Ground	AntWeb
<i>Odontomachus</i>	<i>laticeps</i>	Ground	PERFECTO 1995
<i>Odontomachus</i>	<i>meinerti</i>	Ground	AntWeb
<i>Pachycondyla</i>	<i>harpax</i>	Ground	AntWeb
<i>Paraponera</i>	<i>clavata</i>	Ground	AntWeb
<i>Paratrechina</i>	<i>austroccidua</i>	Ground	AntWeb
<i>Paratrechina</i>	<i>caeciliae</i>	Arboreal	AntWeb
<i>Paratrechina</i>	<i>longicornis</i>	Ground	Longino Website
<i>Paratrechina</i>	<i>steinheili</i>	Ground	Longino Website
<i>Pheidole</i>	<i>anastasii</i>	Ground	AntWeb
<i>Pheidole</i>	<i>boruca</i>	Ground	AntWeb
<i>Pheidole</i>	<i>browni</i>	Ground	AntWeb
<i>Pheidole</i>	<i>celaena</i>	Ground	AntWeb
<i>Pheidole</i>	<i>citrina</i>	Ground	AntWeb
<i>Pheidole</i>	<i>fimbriata</i>	Ground	AntWeb
<i>Pheidole</i>	<i>fiorii</i>	Ground	AntWeb
<i>Pheidole</i>	<i>flavens</i>	Ground	AntWeb
<i>Pheidole</i>	<i>hirsuta</i>	Ground	AntWeb
<i>Pheidole</i>	<i>indagatrix</i>	Ground	AntWeb
<i>Pheidole</i>	<i>nebulosa</i>	Ground	AntWeb
<i>Pheidole</i>	<i>nigricula</i>	Ground	AntWeb
<i>Pheidole</i>	<i>nitella</i>	Ground	AntWeb
<i>Pheidole</i>	<i>otisi</i>	Ground	AntWeb
<i>Pheidole</i>	<i>prostrata</i>	Ground	AntWeb
<i>Pheidole</i>	<i>psilogaster</i>	Ground	AntWeb
<i>Pheidole</i>	<i>rectispina</i>	Ground	AntWeb
<i>Pheidole</i>	<i>rogeri</i>	Ground	AntWeb
<i>Pheidole</i>	<i>scalaris</i>	Ground	AntWeb
<i>Pheidole</i>	<i>sensitiva</i>	Ground	AntWeb
<i>Pheidole</i>	<i>simonsi</i>	Ground	AntWeb
<i>Pheidole</i>	<i>specularis</i>	Ground	AntWeb
<i>Pheidole</i>	<i>vestita</i>	Ground	AntWeb
<i>Platythyrea</i>	<i>pilosula</i>	Arboreal	Longino Website
<i>Platythyrea</i>	<i>prizo</i>	Ground	NA
<i>Platythyrea</i>	<i>punctata</i>	Arboreal	Longino Website
<i>Prionopelta</i>	<i>amabilis</i>	Ground	AntWeb
<i>Proceratium</i>	<i>convexiceps</i>	Ground	Longino Website
<i>Proceratium</i>	<i>goliath</i>	Ground	Longino Website
<i>Proceratium</i>	<i>micrommatum</i>	Ground	Longino Website
<i>Proceratium</i>	<i>panamense</i>	Ground	Longino Website
<i>Pyramica</i>	<i>alberti</i>	Ground	Longino Website
<i>Pyramica</i>	<i>augustandrewi</i>	Ground	Longino Website
<i>Pyramica</i>	<i>brevicornis</i>	Ground	Longino Website
<i>Pyramica</i>	<i>cascanteae</i>	Ground	Longino Website
<i>Pyramica</i>	<i>crementa</i>	Ground	Longino Website
<i>Pyramica</i>	<i>depressiceps</i>	Ground	Longino Website
<i>Pyramica</i>	<i>dontopagis</i>	Ground	Longino Website
<i>Pyramica</i>	<i>eggersi</i>	Ground	Longino Website
<i>Pyramica</i>	<i>epinotalis</i>	Ground	Longino Website
<i>Pyramica</i>	<i>erikae</i>	Ground	Longino Website

<i>Pyramica</i>	<i>excisa</i>	Ground	Longino Website
<i>Pyramica</i>	<i>fridericimuelleri</i>	Ground	Longino Website
<i>Pyramica</i>	<i>gundlachi</i>	Ground	Longino Website
<i>Pyramica</i>	<i>lalassa</i>	Ground	Longino Website
<i>Pyramica</i>	<i>longinoi</i>	Ground	Longino Website
<i>Pyramica</i>	<i>microthrix</i>	Ground	Longino Website
<i>Pyramica</i>	<i>myllorhapha</i>	Ground	Longino Website
<i>Pyramica</i>	<i>nigrescens</i>	Ground	Longino Website
<i>Pyramica</i>	<i>oconitrilloae</i>	Ground	Longino Website
<i>Pyramica</i>	<i>paniaguae</i>	Ground	Longino Website
<i>Pyramica</i>	<i>probatrrix</i>	Ground	Longino Website
<i>Pyramica</i>	<i>rogata</i>	Ground	Longino Website
<i>Pyramica</i>	<i>schulzi</i>	Arboreal	Longino Website
<i>Pyramica</i>	<i>subdentata</i>	Ground	Longino Website
<i>Pyramica</i>	<i>trieces</i>	Ground	Longino Website
<i>Pyramica</i>	<i>turpis</i>	Ground	Longino Website
<i>Pyramica</i>	<i>wheeleri</i>	Ground	Longino Website
<i>Rhopalothrix</i>	<i>weberi</i>	Ground	AntWeb
<i>Rogeri</i>	<i>blanda</i>	Arboreal	PFEIFFER 2011
<i>Rogeri</i>	<i>creightoni</i>	Ground	AntWeb
<i>Rogeria</i>	<i>cuneola</i>	Ground	AntWeb
<i>Rogeria</i>	<i>inermis</i>	Ground	AntWiki
<i>Rogeria</i>	<i>tonduzi</i>	Ground	AntWiki
<i>Sericomyrmex</i>	<i>amabilis</i>	Ground	AntWeb
<i>Simopelta</i>	<i>andersoni</i>	Ground	AntWeb
<i>Simopelta</i>	<i>longinodus</i>	Arboreal	AntWeb
<i>Simopelta</i>	<i>oculata</i>	Arboreal	Longino Website
<i>Simopelta</i>	<i>paeminosa</i>	Ground	AntWeb
<i>Simopelta</i>	<i>pergandei</i>	Ground	AntWeb
<i>Solenopsis</i>	<i>geminata</i>	Ground	AntWeb
<i>Solenopsis</i>	<i>picea</i>	Arboreal	AntWeb
<i>Stegomyrmex</i>	<i>manni</i>	Ground	AntWeb
<i>Stenammas</i>	<i>felixi</i>	Ground	Longino Website
<i>Strumigenys</i>	<i>biolleyi</i>	Ground	AntWeb
<i>Strumigenys</i>	<i>borgmeieri</i>	Ground	AntWeb
<i>Strumigenys</i>	<i>calamita</i>	Ground	AntWeb
<i>Strumigenys</i>	<i>cordovens</i>	Ground	AntWeb
<i>Strumigenys</i>	<i>elongata</i>	Ground	AntWeb
<i>Strumigenys</i>	<i>lanuginosa</i>	Ground	AntWeb
<i>Strumigenys</i>	<i>ludia</i>	Ground	AntWeb
<i>Strumigenys</i>	<i>micretes</i>	Ground	AntWeb
<i>Strumigenys</i>	<i>pariensis</i>	Ground	AntWeb
<i>Strumigenys</i>	<i>rogeri</i>	Ground	AntWeb
<i>Strumigenys</i>	<i>smithii</i>	Ground	Longino Website
<i>Tatuidris</i>	<i>tatusia</i>	Ground	AntWeb
<i>Temnothorax</i>	<i>salvini</i>	Ground	AntWeb
<i>Temnothorax</i>	<i>subditivus</i>	Ground	AntWeb
<i>Tetramorium</i>	<i>bicarinarum</i>	Ground	AntWeb
<i>Tetramorium</i>	<i>simillimum</i>	Ground	AntWeb
<i>Thaumatomyrmex</i>	<i>ferox</i>	Ground	AntWeb
<i>Trachymyrmex</i>	<i>cornetzi</i>	Ground	AntWeb
<i>Trachymyrmex</i>	<i>zeteki</i>	Ground	AntWeb
<i>Tranopelta</i>	<i>gilva</i>	Ground	AntWeb

<i>Wasmannia</i>	<i>auropunctata</i>	Ground	AntWeb
<i>Xenomyrmex</i>	<i>panamanus</i>	Arboreal	Longino Website

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Appendix S9: Bootstrapped estimated differences of traits between biomes including standard deviation of the difference, 95% confidence intervals, the test statistic Z and permuted p-values using a dataset with all arboreal species excluded. Statistically significant results are shown in bold for Weber's length, relative eye width, relative femur length, relative tibia length and for colour, indicated by the lightness v.

Trait	Estimated difference between biomes	SD	95% Lower CI	95% Upper CI	Z	p
Weber's length	-0.71	0.21	-1.13	-0.29	-3.61	< 0.01
Relative mandible length	0.02	0.01	0	0.04	1.42	0.156
Relative clypeus length	-0.06	0.01	-0.08	-0.04	-4.69	< 0.01
Relative eye width	-0.30	0.07	-0.44	-0.17	-3.65	< 0.01
Relative femur length	-0.04	0.03	-0.09	0.01	-1.38	0.168
Relative interocular distance	0	0.02	-0.04	0.04	-0.01	0.99
Relative pronotum width	0.02	0.02	-0.02	0.05	0.55	0.583
Relative tibia length	-0.34	0.08	-0.50	-0.17	-4.90	< 0.01
Relative eye position	-0.03	0.02	-0.07	0.01	-1.39	0.165
Lightness index (v)	0.25	0.05	0.15	0.35	4.19	< 0.01