

SUPPLEMENTARY MATERIAL

Supplementary material S1. List of 187 *Solenopsis* specimens selected for DNA analyses

Sample_ID*	Process ID (BOLD)	Genus	Morpho-species	Caste	Sampling method	Sampling site	Elevation (m)	Size COI (bp)	Size wingless (bp)
33807Ssp141000QD	SOLEN024-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	571	
33788Ssp5	SOLEN028-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658	
33791Ssp201000QD	SOLEN029-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658	
33797Ssp121000QD	SOLEN030-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658	
33797Ssp12B	SOLEN031-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658	
33798Ssp121000QD	SOLEN032-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658	
33791Ssp6	SOLEN033-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658	
33791Ssp6B	SOLEN035-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658	
33786Ssp171000QD		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33795Ssp12		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33795Ssp12B		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33797Ssp12		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33799Ssp121000QD		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33799Ssp171000QD		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33801Ssp151000QD		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33801Ssp151000QE		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33801Ssp151000QF		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33802Ssp5		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33802Ssp51000QC		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33802Ssp5B		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33804Ssp12		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33804Ssp121000QD		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050		
33804Ssp12B		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro -	1050		

33809Ssp12		<i>Solenopsis</i>	sp01TD	Worker		Podocarpus National Park (1050m-B) Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33809Ssp121000QD		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33809Ssp201000QD		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33809Ssp5		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33809Ssp51000Q		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33809Ssp51000QB		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33809Ssp51000QC		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33809Ssp51000QD		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33809Ssp5B		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33810Ssp171000QD		<i>Solenopsis</i>	sp01TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33791Ssp61000Q	SOLEN034-12	<i>Solenopsis</i>	sp02TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658
33801Ssp6	SOLEN036-12	<i>Solenopsis</i>	sp02TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658
33803Ssp61000Q	SOLEN037-12	<i>Solenopsis</i>	sp02TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658
33788Ssp61000Q		<i>Solenopsis</i>	sp02TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33802Ssp6		<i>Solenopsis</i>	sp02TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33802Ssp61000Q		<i>Solenopsis</i>	sp02TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33802Ssp6B		<i>Solenopsis</i>	sp02TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33791Ssp14	SOLEN038-12	<i>Solenopsis</i>	sp07TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658 364
33802Ssp14	SOLEN039-12	<i>Solenopsis</i>	sp07TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658
33807Ssp141000QE		<i>Solenopsis</i>	sp07TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33808Ssp121000QD		<i>Solenopsis</i>	sp07TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33809Ssp14		<i>Solenopsis</i>	sp07TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33809Ssp14B		<i>Solenopsis</i>	sp07TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33768Ssp41000QC	SOLEN026-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	610
33768Ssp4	SOLEN040-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658
33786Ssp4	SOLEN041-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658

33795Ssp121000QD	SOLEN042-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658
33803ASsp16	SOLEN043-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658
33803BSsp16	SOLEN044-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658
33803CSsp16	SOLEN045-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658
33805Ssp4	SOLEN046-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658 353
33796Ssp181000QD		<i>Solenopsis</i>	sp16TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33801Ssp181000QD		<i>Solenopsis</i>	sp16TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
33810Ssp181000QD		<i>Solenopsis</i>	sp16TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
3380101sp16TD		<i>Solenopsis</i>	sp16TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
3381001sp16TD		<i>Solenopsis</i>	sp16TD	Worker		Bombuscaro - Podocarpus National Park (1050m-B)	1050	
4028902sp01TD		<i>Solenopsis</i>	sp01TD	Gyne	Queen	Copalinga Private Reserve-blue trail (1050m-C)	1050	
3463505sp01TD		<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050	
3463506sp01TD		<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050	
3463508sp01TD		<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050	
3515615sp01TD		<i>Solenopsis</i>	sp01TD	Worker	Winkler	Copalinga Private Reserve-blue trail (1050m-C)	1050	
3515615sp01TD		<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050	
3516422sp01TD		<i>Solenopsis</i>	sp01TD	Worker	Winkler	Copalinga Private Reserve-blue trail (1050m-C)	1050	
3516422sp01TD		<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050	
35336182sp01TD		<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050	
3533618sp01TD		<i>Solenopsis</i>	sp01TD	Worker	Nest found in dead wood	Copalinga Private Reserve-blue trail (1050m-C)	1050	
3533808sp01TD		<i>Solenopsis</i>	sp01TD	Worker	Nest found in dead wood	Copalinga Private Reserve-blue trail (1050m-C)	1050	
3533808sp01TD		<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050	
4022327sp01TD		<i>Solenopsis</i>	sp01TD	Worker	Winkler	Copalinga Private Reserve-blue trail (1050m-C)	1050	
4022327sp01TD		<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050	
4026827sp01TD		<i>Solenopsis</i>	sp01TD	Worker	Winkler	Copalinga Private Reserve-blue trail (1050m-C)	1050	
4026827sp01TD		<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050	
4028417sp01TD		<i>Solenopsis</i>	sp01TD	Worker	Winkler	Copalinga Private Reserve-blue trail	1050	

						(1050m-C)			
4028417sp01TD		<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050		
4129818sp01TD	SOLEN001-12	<i>Solenopsis</i>	sp01TD	Gyne		Copalinga Private Reserve-blue trail (1050m-C)	1050	198	
3463504sp01TD	SOLEN002-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler Nest found in dead wood	Copalinga Private Reserve-blue trail (1050m-C)	1050	248	
4127214sp01TD	SOLEN006-12	<i>Solenopsis</i>	sp01TD	Gyne	Winkler	Copalinga Private Reserve-blue trail (1050m-C)	1050	286	
4029009sp01TD	SOLEN010-12	<i>Solenopsis</i>	sp01TD	Gyne	Winkler	Copalinga Private Reserve-blue trail (1050m-C)	1050	319	
4128010sp01TD	SOLEN011-12	<i>Solenopsis</i>	sp01TD	Gyne		Copalinga Private Reserve-blue trail (1050m-C)	1050	319	
3463507sp01TD	SOLEN025-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler Nest found in dead wood	Copalinga Private Reserve-blue trail (1050m-C)	1050	576	
3464908sp01TD	SOLEN047-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Copalinga Private Reserve-blue trail (1050m-C)	1050	658	378
4026826sp01TD	SOLEN048-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Copalinga Private Reserve-blue trail (1050m-C)	1050	658	
4027026sp01TD	SOLEN049-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Copalinga Private Reserve-blue trail (1050m-C)	1050	658	379
4027028sp01TD	SOLEN050-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Copalinga Private Reserve-blue trail (1050m-C)	1050	658	351
3653105sp02TD		<i>Solenopsis</i>	sp02TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050		
3653104sp02TD	SOLEN023-12	<i>Solenopsis</i>	sp02TD	Worker	Nest found in dead wood	Copalinga Private Reserve-blue trail (1050m-C)	1050	518	375
3653106sp02TD	SOLEN051-12	<i>Solenopsis</i>	sp02TD	Worker	Nest found in dead wood	Copalinga Private Reserve-blue trail (1050m-C)	1050	658	
3534109sp06TD	SOLEN052-12	<i>Solenopsis</i>	sp06TD	Worker	Nest found in dead wood	Copalinga Private Reserve-blue trail (1050m-C)	1050	658	379
4030215sp08TD		<i>Solenopsis</i>	sp08TD	Worker	Winkler	Copalinga Private Reserve-blue trail (1050m-C)	1050		
4030215sp08TD		<i>Solenopsis</i>	sp08TD	Worker		Copalinga Private Reserve-blue trail (1050m-C)	1050		
4660902sp22TD	SOLEN012-12	<i>Solenopsis</i>	sp22TD	Worker	Visual search, arboreal species	Copalinga Private Reserve-red trail	1350		319
4038719sp01TD	SOLEN013-12	<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-red trail (1420m)	1420		319
4111406_2sp01TD	SOLEN053-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler Nest found in dead wood	Copalinga Private Reserve-red trail (1420m)	1420	658	379
4111406sp01TD	SOLEN054-12	<i>Solenopsis</i>	sp01TD	Worker	Nest found in dead wood	Copalinga Private Reserve-red trail (1420m)	1420	658	367
4038719sp01TD		<i>Solenopsis</i>	sp01TD	Worker		Copalinga Private Reserve-red trail (1420m)	1420		
4039526sp01TD		<i>Solenopsis</i>	sp01TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420		
4038215sp07TD	SOLEN055-12	<i>Solenopsis</i>	sp07TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	301
4035116sp14TD	SOLEN004-12	<i>Solenopsis</i>	sp14TD	Gyne	Winkler	Copalinga Private Reserve-red trail (1420m)	1420		252
4045308sp14TD	SOLEN005-12	<i>Solenopsis</i>	sp14TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420		273

4034412sp14TD	SOLEN014-12	<i>Solenopsis</i>	sp14TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	319	
4034811sp14TD	SOLEN015-12	<i>Solenopsis</i>	sp14TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	319	
4040310sp14TD	SOLEN016-12	<i>Solenopsis</i>	sp14TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	319	
4038623sp14TD	SOLEN027-12	<i>Solenopsis</i>	sp14TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	632	
4035120sp14TD	SOLEN056-12	<i>Solenopsis</i>	sp14TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	379
4038226sp14TD	SOLEN057-12	<i>Solenopsis</i>	sp14TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	
4039527sp14TD	SOLEN058-12	<i>Solenopsis</i>	sp14TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	
4039528sp14TD	SOLEN059-12	<i>Solenopsis</i>	sp14TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	368
4034411sp14TD		<i>Solenopsis</i>	sp14TD	Worker		Copalinga Private Reserve-red trail (1420m)	1420		
4034413sp14TD		<i>Solenopsis</i>	sp14TD	Worker		Copalinga Private Reserve-red trail (1420m)	1420		
4035012sp14TD		<i>Solenopsis</i>	sp14TD	Worker		Copalinga Private Reserve-red trail (1420m)	1420		
4037219sp14TD		<i>Solenopsis</i>	sp14TD	Worker		Copalinga Private Reserve-red trail (1420m)	1420		
4038818sp14TD		<i>Solenopsis</i>	sp14TD	Worker		Copalinga Private Reserve-red trail (1420m)	1420		
4045210sp14TD		<i>Solenopsis</i>	sp14TD	Worker		Copalinga Private Reserve-red trail (1420m)	1420		
4041203sp15TD	SOLEN007-12	<i>Solenopsis</i>	sp15TD	Gyne	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	290	
4111002sp15TD	SOLEN008-12	<i>Solenopsis</i>	sp15TD	Gyne	Nest found in dead wood	Copalinga Private Reserve-red trail (1420m)	1420	314	
4037905sp15TD	SOLEN017-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	319	
4111005_3sp15TD	SOLEN060-12	<i>Solenopsis</i>	sp15TD	Worker	Nest found in dead wood	Copalinga Private Reserve-red trail (1420m)	1420	658	378
4036322sp15TD	SOLEN061-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	379
4040015sp15TD	SOLEN062-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	
4044510sp15TD	SOLEN063-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	
4110107sp15TD	SOLEN064-12	<i>Solenopsis</i>	sp15TD	Worker	Nest found in dead wood	Copalinga Private Reserve-red trail (1420m)	1420	658	370
4110108sp15TD	SOLEN065-12	<i>Solenopsis</i>	sp15TD	Worker	Nest found in dead wood	Copalinga Private Reserve-red trail (1420m)	1420	658	379
4111005_2sp15TD	SOLEN066-12	<i>Solenopsis</i>	sp15TD	Worker	Nest found in dead wood	Copalinga Private Reserve-red trail (1420m)	1420	658	
4111005sp15TD	SOLEN067-12	<i>Solenopsis</i>	sp15TD	Worker	Nest found in dead wood	Copalinga Private Reserve-red trail (1420m)	1420	658	379
4038212sp16TD	SOLEN009-12	<i>Solenopsis</i>	sp16TD	Male	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	315	
4039608sp16TD	SOLEN018-12	<i>Solenopsis</i>	sp16TD	Gyne	Winkler	Copalinga Private Reserve-red trail	1420	319	

						(1420m)			
4039522sp16TD	SOLEN068-12	<i>Solenopsis</i>	sp16TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	371
4039523sp16TD	SOLEN069-12	<i>Solenopsis</i>	sp16TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	
4039524sp16TD	SOLEN070-12	<i>Solenopsis</i>	sp16TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	379
4042106sp17TD		<i>Solenopsis</i>	sp17TD	Worker		Copalinga Private Reserve-red trail (1420m)	1420		
4037710_2sp18TD	SOLEN071-12	<i>Solenopsis</i>	sp18TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	379
4037710sp18TD	SOLEN072-12	<i>Solenopsis</i>	sp18TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	658	379
4039112sp19TD	SOLEN003-12	<i>Solenopsis</i>	sp19TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	249	
4037517sp20TD		<i>Solenopsis</i>	sp20TD	Worker		Copalinga Private Reserve-red trail (1420m)	1420		
4036323sp21TD	SOLEN019-12	<i>Solenopsis</i>	sp21TD	Worker	Winkler	Copalinga Private Reserve-red trail (1420m)	1420	319	
4049004sp01TD	SOLEN020-12	<i>Solenopsis</i>	sp01TD	Gyne	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	319	
4048807sp01TD	SOLEN073-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658	351
4053106sp01TD	SOLEN074-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658	
4054604sp01TD	SOLEN075-12	<i>Solenopsis</i>	sp01TD	Worker	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658	350
4131005sp01TD	SOLEN077-12	<i>Solenopsis</i>	sp01TD	Worker	Nest found in dead wood	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658	
4134704sp01TD	SOLEN078-12	<i>Solenopsis</i>	sp01TD	Worker	Nest found in dead wood	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658	
33662Ssp102000QC		<i>Solenopsis</i>	sp11TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070		
33688Ssp10		<i>Solenopsis</i>	sp11TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070		
33688Ssp10B		<i>Solenopsis</i>	sp11TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070		
33690Ssp10		<i>Solenopsis</i>	sp11TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070		
33709Ssp10		<i>Solenopsis</i>	sp11TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070		
33709Ssp10B		<i>Solenopsis</i>	sp11TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070		
33710Ssp10		<i>Solenopsis</i>	sp11TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070		
4266506sp11TD	SOLEN021-12	<i>Solenopsis</i>	sp11TD	Gyne	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	319	
4051712sp11TD	SOLEN079-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658	
4051713sp11TD	SOLEN080-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658	
4053010sp11TD	SOLEN081-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658	
4053011sp11TD	SOLEN082-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658	

4053012sp11TD	SOLEN083-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Francisco-NUMEX (2070m-R2) Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658
4052604_2sp12TD	SOLEN084-12	<i>Solenopsis</i>	sp12TD	Worker	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658
4052604sp12TD	SOLEN085-12	<i>Solenopsis</i>	sp12TD	Worker	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658
4053101sp13TD	SOLEN022-12	<i>Solenopsis</i>	sp13TD	Worker	Winkler	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	319
4130805sp01TD	SOLEN076-12	<i>Solenopsis</i>	sp13TD	Worker	Soil sample	Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	658
33692Ssp72000Q		<i>Solenopsis</i>	sp15TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	
33700Ssp72000Q		<i>Solenopsis</i>	sp15TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	
33701Ssp72000Q		<i>Solenopsis</i>	sp15TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	
33710_1		<i>Solenopsis</i>	sp15TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	
33710_2		<i>Solenopsis</i>	sp15TD	Worker		Reserva Biológica San Francisco-NUMEX (2070m-R2)	2070	
33688Ssp102000QC	SOLEN086-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33688Ssp102000QD	SOLEN087-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33690Ssp102000QC	SOLEN088-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33690Ssp102000QD	SOLEN089-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33709Ssp102000QC	SOLEN090-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33709Ssp102000QD	SOLEN091-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33710Ssp102000QC	SOLEN092-12	<i>Solenopsis</i>	sp11TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33688Ssp7	SOLEN093-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33688Ssp72000Q	SOLEN094-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33696Ssp72000Q	SOLEN095-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33702Ssp9	SOLEN096-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33703Ssp7	SOLEN097-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33703Ssp72000Q	SOLEN098-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33705Ssp7	SOLEN099-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33707Ssp7	SOLEN100-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658
33707Ssp72000Q	SOLEN101-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658

33708Ssp7	SOLEN102-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658	
33708Ssp72000Q	SOLEN103-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658	
33709Ssp9	SOLEN104-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658	
33710Ssp7	SOLEN105-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658	
33710Ssp9	SOLEN106-12	<i>Solenopsis</i>	sp15TD	Worker	Winkler	Reserva Biológica San Francisco-Transect T1 (2070m-R1)	2070	658	
434202spgem01	SOLEN110-12	<i>Solenopsis</i>	sp.01 (PAG) nr <i>geminata</i>	Worker	Pitfall 24h	Paraguay: Boqueron Fortin Mister Long	350	658	379
33806Ssp11000Q	SOLEN109-12	<i>Strumigenys</i>	sp. 01(EC)TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658	
33803Psp31000	SOLEN108-12	<i>Strumigenys</i>	sp. 03(EC)TD	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	655	376
33788Wa1000	SOLEN107-12	<i>Wasmannia</i>	<i>auropunctata</i>	Worker	Winkler	Bombuscaro - Podocarpus National Park (1050m-B)	1050	658	379

* In BOLD, specimens deposited have their Sample ID preceded by SOLEN.

Supplementary material S2:
Photos of workers and brief description of the
morphospecies (Figs S1-S24).

Original images were deposited in Morphbank (collection number: 801203;
<http://www.morphbank.net/801203>).

Fig. S1. *Solenopsis* sp. 02, worker, specimen 3653103.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker (diagnostic criteria in **bold**):

Compound eye circular with **4-5 ommatidia**; **scape curved and very short**, reaching a little less than midway between eyes and occipital corners; **petiolar node thickened**, with parallel anterior and posterior faces in lateral view; petiolar peduncle reduced.



Fig. S2. *Solenopsis* sp. 06.

A-C) Worker, specimen 3534106: A) Lateral view, B) dorsal view and C) frontal view.

D-F) Gyne, specimen 3534101: D) Lateral view, E) dorsal view and F) frontal view.

Short description of worker (diagnostic criteria in **bold**):

Brown ant but with head and gaster always darker than mesosoma and waist, petiole conspicuously laterally compressed, slightly polymorphic species. Nest in dead twigs on the ground.



Fig. S3. *Solenopsis* sp. 07, worker, specimen 4038214.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker (diagnostic criteria in **bold**):

Black ant, compound eye circular with 4 ommatidia, **mesopleuron and lateral sides of propodeum, petiole and postpetiole punctate**, dorsal face of propodeum curving into approximately perpendicular posterior face (therefore both faces are relatively well-differentiated), dorsal face short, about half the length of posterior face.



Fig. S4. *Solenopsis* sp. 16.

A-C) Worker, specimen 4039521: A) Lateral view, B) dorsal view and C) frontal view.

D-F) Gyne, specimen 4039608: D) Lateral view, E) dorsal view and F) frontal view.

G-I) Male, specimen 4038212: G) Lateral view, H) dorsal view and I) frontal view.

Short description of worker (diagnostic criteria in **bold**):

Eye reduced to 2 small ommatidia, **mandible with 4 sharp teeth**, **mesosoma compact** with relatively well-differentiated dorsal and declivitous faces.



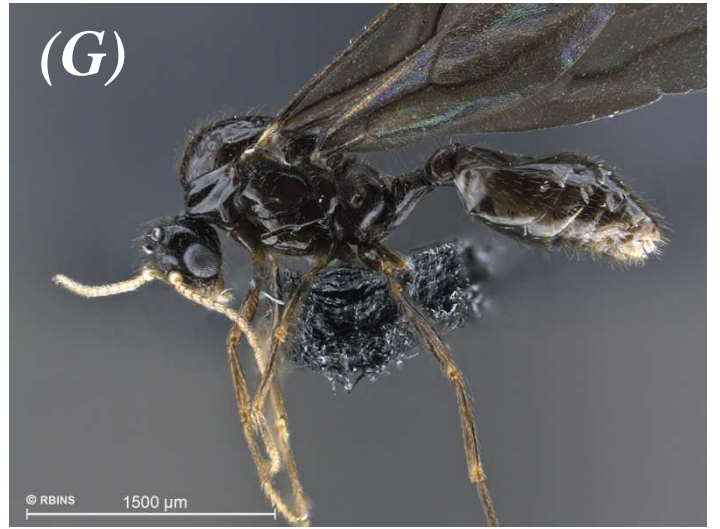


Fig. S5. *Solenopsis* sp. 18, worker, specimen 4037709.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker (diagnostic criteria in **bold**):

Compound eye circular with **5-6 ommatidia**, **petiolar node thickened and globular**, scape reaching two-thirds of the distance between eyes and occipital corners.



Fig. S6. *Solenopsis* sp. 22, worker, specimen 4660901.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker (diagnostic criteria in **bold**):

Black arboreal species; extralateral and lateral clypeal teeth very poorly developed, nearly absent; **masticatory mandibular margin with only 3 teeth**; **head subquadrate**; eye with 2-3 ommatidia; katepisternum with 15-20 short longitudinal striae; lateral face of propodeum with 5-7 longitudinal striae.



Fig. S7. *Solenopsis* sp. 19, worker, specimen 4039112.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker (diagnostic criteria in **bold**):

A medium-size, yellow-orange and **slender** *Solenopsis*; Weber's Length (the distance between the anterior edge of the pronotum and the posterior edge of the metapleural lobes) = 0.53 mm; eye with only 2-3 ommatidia; **masticatory mandibular margin with 4 sharp teeth**; lateral clypeal tooth small; dorsal and declivitous faces of propodeum relatively well-differentiated; petiolar peduncle almost as long as petiolar node.



Fig. S8. *Solenopsis* sp. 11.

A-C) Worker, specimen 4051714: A) Lateral view, B) dorsal view and C) frontal view.
D-F) Worker, specimen 3368801, after DNA extraction: D) Lateral view, E) dorsal view and F) frontal view.

G-I) Gyne, specimen 4052702: G) Lateral view, H) dorsal view and I) frontal view.

Short description of worker (diagnostic criteria in **bold**):

Brown ant; **head, mesosoma and waist finely foveate**; eye with only 2 ommatidia; extralateral clypeal tooth reduced to a small blunt projection; lateral clypeal tooth blunt and poorly developed; dorsal and declivitous faces of propodeum more differentiated than in *Solenopsis* sp. 13 (Fig. S9A).



(G)



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(H)



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(I)



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Fig. S9. *Solenopsis* sp. 13.

A-C) Worker, specimen 4130806: A) Lateral view, B) dorsal view and C) frontal view. D-E) Worker, specimen 4130807: D) Lateral view, E) dorsal view and F) frontal view.

Short description of worker (diagnostic criteria in **bold**):

Yellow ant; **body entirely smooth and shiny, except 5-8 longitudinal striae on lateral side of propodeum**; **eye reduced**, with two ommatia; extralateral clypeal tooth forming a blunt angle; lateral tooth acute, pointing outwards; dorsal face of propodeum sloping, curving gradually into declivitous face. A nest was found in soil.



Fig. S10. *Solenopsis* sp. 12, worker, specimen 4052606.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker (diagnostic criteria in **bold**):

Yellow ant; smaller than *Solenopsis* sp. 11 (Weber's Length= 0.56 vs 0.69 mm); **mesopleuron, propodeum and petiole finely foveate**; **head, pronotum and mesonotum smooth and shiny**; eye with two ommatia; extralateral clypeal tooth absent or reduced to a very blunt angle; lateral tooth acute, well-developed and pointing downwards; dorsal and declivitous faces of propodeum more differentiated than in *Solenopsis* sp. 13 (Fig. S9A).



Fig. S11. *Solenopsis* sp. 15.

A-C) Worker, specimen 4111006: A) Lateral view, B) dorsal view and C) frontal view.

D-F) Gyne, specimen 4111002: D) Lateral view, E) dorsal view and F) frontal view.

Short description of worker:

Blackish brown ant; eye with only 2 ommatidia; extralateral tooth sharp and well-differentiated; lateral tooth well-developed, acute and directed inwards; latero-basal part of propodeum with 2-3 longitudinal striae; in lateral view, dorsal face of propodeum almost as long as declivitous face, gently rounding posteriorly into declivitous face; lobate anteroventral petiolar projection usually present.



Fig. S12. *Solenopsis* sp. 01.

A-C) Worker, specimen 4131006: A) Lateral view, B) dorsal view and C) frontal view.

D-F) Gyne, specimen 4131004: D) Lateral view, E) dorsal view and F) frontal view.

Short description of worker (diagnostic criteria in **bold**):

Bicolored ant with head, mesosoma and waist orange and gaster brown to dark; Weber's Length= 0.48 mm; **eye with 3-4 more or less fused ommatidia**; extralateral clypeal tooth forming a short blunt projection; lateral clypeal tooth well-developed, acute and directed downwards or slightly inwards; lateral face of propodeum with 8-12 fine longitudinal striae; dorsal face of propodeum short, not distinctly differentiated from declivitous face; anteroventral petiolar process poorly developed but often present as a short blunt tooth-like projection.



Fig. S13. *Solenopsis* sp. 01, worker, specimen 3379802.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker:

Blackish brown ant; eye with only 2 ommatidia; extralateral tooth present but poorly developed; lateral tooth well-developed, acute and directed slightly outwards; latero-basal part of propodeum with 2-3 longitudinal striae; dorsum of promesotum rounded in lateral view; metanotal groove forming a narrow notch; dorsal face of propodeum very short and poorly differentiated; anteroventral petiolar projection forming a weak angle; head and gaster punctures coarse, much wider than hairs arising from them.



Fig. S14. *Solenopsis* sp. 14, worker, specimen 4038623.

A-D) Worker, specimen 4038623: A) Lateral view, B) dorsal view, C) frontal view, D) head in lateral view.

E-G) Worker, specimen 4038624: E) Lateral view, F) dorsal view, G) frontal view.

Short description of worker:

Reddish brown ant; eye with only 2 ommatidia; extralateral clypeal tooth poorly differentiated; lateral clypeal tooth well-developed, acute and directed slightly outwards; latero-basal part of propodeum with 4-5 longitudinal striae; dorsal face of propodeum longer than declivitous face (declivitous face $\sim 1/3$ length of dorsal face) although both faces are poorly differentiated.



(G)



Fig. S15. *Solenopsis* sp. 14/21, worker, specimen 4039529.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker (diagnostic criteria in **bold**):

Reddish brown ant with legs lighter and gaster darker; eye with two ommatidia; extralateral clypeal tooth reduced to a small blunt angle; lateral clypeal tooth well-developed, acute and directed inwards; katepisternum shagreen; lateral face of propodeum with 6-8 longitudinal striae; **declivitous face of propodeum and postpetiole somehow imbricate**; short anteroventral petiolar tooth present in some specimens.



Fig. S16. *Solenopsis* sp. 01/15, worker, specimen 4027029.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker:

Yellow brownish ant; eye with 2 ommatidia; head subquadrate; extralateral tooth poorly developed; lateral clypeal tooth well-developed, acute and directed outwards; dorsum of promesonotum rounded in lateral view; metanotal groove distinctly impressed; dorsal and declivitous faces of propodeum not well-differentiated, more or less in same plane; head and gaster punctures coarse, much wider than hairs arising from them; latero-basal face of propodeum with 2-3 striae; petiolar node antero-posteriorly compressed; anteroventral petiolar projection forming a short but distinct lamella.



Fig. S17. *Solenopsis* sp. 01, worker, specimen 4026826 after DNA extraction.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker:

Yellow brownish ant; eye with 2 ommatidia; head rectangular; extralateral tooth poorly developed; lateral clypeal tooth well-developed, acute and directed outwards; dorsum of promesonotum rounded in lateral view; metanotal groove distinctly impressed; dorsal and declivitous faces of propodeum not well-differentiated, more or less in same plane; head and gaster punctures coarse, much wider than hairs arising from them; latero-basal face of propodeum with 2-3 striae; petiolar node antero-posteriorly slightly compressed; anteroventral petiolar projection absent.



Fig. S18. *Solenopsis* sp. 01.

A-C) Worker, specimen 4027030: A) Lateral view, B) dorsal view and C) frontal view.

D-E) Worker, specimen 4027028 after DNA extraction: D) Lateral view, E) dorsal view and F) frontal view.

G-I) Gyne, specimen 4127214: G) Lateral view, H) dorsal view and I) frontal view.

Short description of worker:

Worker similar to specimen 4026826 (Fig. S16). Yellow brownish ant; eye with 2 ommatidia; head rectangular; extralateral tooth poorly developed; lateral clypeal tooth well-developed, acute and directed outwards; dorsum of promesonotum rounded in lateral view; metanotal groove distinctly impressed; dorsal and declivitous faces of propodeum not well-differentiated, more or less in same plane; head and gaster punctures coarse, much wider than hairs arising from them; latero-basal face of propodeum with 2-3 striae; petiolar node antero-posteriorly slightly compressed; anteroventral petiolar projection absent.



(G)



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(H)



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(I)



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Fig. S19. *Solenopsis* sp. 01.

A-C) Worker, specimen 3464909: A) Lateral view, B) dorsal view and C) frontal view.

D-E) Worker, specimen 3464908 after DNA extraction: D) Lateral view, E) dorsal view and F) frontal view.

G-I) Gyne, specimen 4128010: G) Lateral view, H) dorsal view and I) frontal view.

Short description of worker:

Yellow ant with slightly darker gaster; eye with only two ommatidia; extralateral clypeal tooth forming a short blunt projection, lateral clypeal tooth well-developed, acute and directed inwards; lateral face of propodeum with 3-6 longitudinal striae; dorsal face of propodeum short, not distinctly differentiated from declivitous face; anteroventral projection forming a thin lamella.



(G)



© RBINS 1000 μ m

(H)



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(I)



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Fig. S20. *Solenopsis* sp. 01/14/15.

A-C) Worker, specimen 4035121: A) Lateral view, B) dorsal view and C) frontal view.

D-F) Gyne, specimen 4035116: D) Lateral view, E) dorsal view and F) frontal view.

Short description of worker:

Bicolored ant with head, mesosoma and waist yellow-orange and gaster brown to dark; Weber's Length= 0.42 mm; eye with only 2 ommatidia; extralateral clypeal tooth forming a short blunt projection; lateral clypeal tooth well-developed, acute and directed downwards; lateral face of propodeum with 5-8 longitudinal striae; dorsal face of propodeum short, not distinctly differentiated from posterior face; anteroventral petiolar process absent or very poorly developed.



Fig. S21. *Solenopsis* sp. 15.

A-C) Worker, specimen 4110106: A) Lateral view, B) dorsal view and C) frontal view.

D-F) Gyne, specimen 4110103: D) Lateral view, E) dorsal view and F) frontal view.

Short description of worker:

Blackish brown ant; eye with only 2 ommatidia; extralateral tooth sharp and well-differentiated; lateral tooth well-developed, acute and directed downwards; latero-basal part of propodeum with 8-10 longitudinal striae; in lateral view, dorsal face of propodeum slightly shorter than declivitous face, gently rounding posteriorly into declivitous face; anteroventral petiolar projection usually poorly developed, only forming a weakly acute angle.



Fig. S22. *Solenopsis* sp. 01/15, worker, specimen 3463509.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker:

Yellow ant; eye with 2-3 ommatidia; extralateral tooth sharp and well-differentiated; lateral tooth well-developed, acute and directed downwards; latero-basal part of propodeum with 6-8 longitudinal striae; in lateral view, dorsal face of propodeum as long as declivitous face; both faces are poorly differentiated: dorsal face gently rounding posteriorly into declivitous face; anteroventral petiolar projection forming a relatively well-developed blunt tooth.



Fig. S23. *Solenopsis* sp. 15, worker, specimen 3371001.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker:

Reddish brown ant; eye with only 2 ommatidia; extralateral tooth poorly differentiated but present as blunt projection; lateral tooth well-developed, acute and directed downwards or slightly inwards; latero-basal part of propodeum with 6-8 longitudinal striae; in lateral view, dorsal face of propodeum slightly shorter than declivitous face, gently rounding posteriorly into declivitous face; anteroventral petiolar projection poorly developed, only forming a thin lamella.



Fig. S24. *Solenopsis* sp. 14, worker, specimen 4044513.

A) Lateral view, B) dorsal view and C) frontal view.

Short description of worker:

Brown ant; eye with only 2 ommatidia; extralateral tooth short and blunt; lateral clypeal tooth well-developed, acute and directed somehow inwards; latero-basal part of propodeum with 5-8 longitudinal striae; in lateral view, dorsal face of propodeum short, not distinctly differentiated from declivitous face; anteroventral petiolar process present as a very short blunt tooth.

