

Supplementary material

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Tarantulas (Araneae: Theraphosidae) in the pet trade in South Africa

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Distribution modelling and climatic match

Native distribution records

To develop SDM, searches were conducted for native range occurrence records for *Brachypelma vagans* from the scientific literature, GBIF, and World Spider Catalog (World Spider Catalog 2018). We only considered the distribution records for this species because it is one of the popular species in the pet trade with invasive records elsewhere (Table S3). Most of the records were obtained from taxonomists (see Table S6). The data were prepared and cleaned with ArcGIS version 10.4 and Biogeo (Robertson *et al.* 2016). The coordinates in degrees, minutes and seconds were converted to decimal degrees and those falling into the ocean were removed using the Biogeo package in R (Robertson *et al.* 2016). All duplicate records per 10-minute grid cell were removed to avoid pseudoreplication.

Climatic match and distribution models

A global map of climate zones was used for climate matching (Metzger *et al.* 2013). A list of climate zones that contained native range distribution records was compiled for *Brachypelma vagans*, and a map of those climate zones that occur in South Africa was produced. To determine areas suitable for *Brachypelma vagans* in South Africa, bioclimatic variables at 10-minute spatial resolution were utilised as predictor variables. The model was built using 19 bioclimatic variables

(<http://www.worldclim.org/>) to describe the distribution of *Brachypelma vagans* in its native range. Only six variables that contributed most to the model prediction were included in the SDM.

The model was produced using Maxent software version 3.3.3e (Phillips *et al.* 2006). The recommended default setting values were used, given that convergence threshold was at 10^{-5} , maximum iterations were set at 500, and regularisation value of one was included to reduce overfitting of the model (Pearson *et al.* 2007). We generated Jackknife tests to determine the effect of predictor variables on the distribution of *Brachypelma vagans* and the effect of environmental variables on the climatic suitability of the species.

Model performance

Due to a small number of sample sizes for *Brachypelma vagans*, the binomial probability was used to test the statistical significance of the model in predicting climatic suitability in South Africa (following the approach of Pearson *et al.* 2007). Datasets were calibrated and tested using the jackknife approach in R (R Core Team 2014). The *p*-values and proportion test were calculated using the programme developed by Pearson *et al.* (2007). The proportion of records predicted correctly and *p*-value of jackknife prediction was reported. Because of the small number of sample size for *Brachypelma vagans*, a value of 0.5 was used to accept that a satisfactory proportion of records that were correctly predicted.

Table S1: A summary of COI sequences generated in this study for tarantula species sampled in the South African pet shops and the reference sequences obtained from BOLD and NCBI GenBank. The species names presented below have been corrected based on the BLAST match and the numbers in brackets are the specimen's ID used to discriminate those with the same names. The accession numbers with the asterisk are the GenBank number assigned to each tarantula specimen deposited to NCBI.

Species name	GenBank Accession number	Sample sites	Notes	Reference
<i>Lasiadora parahybana</i> (3)	MK234710*	South African pet shop	Pet species	This study
<i>Brachypelma albopilosum</i> (8)	MK234711*	South African pet shop	Pet species	This study
<i>Avicularia avicularia</i> (16)	MK234709*	South African pet shop	Pet species	This study
<i>Acanthoscurria geniculata</i> (6)	MK234720*	South African pet shop	Pet species	This study
<i>Nhandu chromatus</i> (20)	MK234718*	South African pet shop	Pet species	This study
<i>Lasiadora parahybana</i> (35)	MK234719*	South African pet shop	Pet species	This study
<i>Brachypelma albopilosum</i> (5)	MK213134*	South African pet shop	Pet species	This study
<i>Brachypelma albopilosum</i> (30)	MK234707*	South African pet shop	Pet species	This study
<i>Grammostola rosea</i> (33)	MK234708*	South African pet shop	Pet species	This study
<i>Brachypelma vagans</i> (11)	MK270587*	South African pet shop	Pet species	This study
<i>Brachypelma vagans</i> (26)	MK270585*	South African pet shop	Pet species	This study
<i>Brachypelma vagans</i> (31)	MK270586*	South African pet shop	Pet species	This study
<i>Davus fasciatus</i> (18)	MK234717*	South African pet shop	Pet species	This study
<i>Davus fasciatus</i> (22)	MK234715*	South African pet shop	Pet species	This study
<i>Grammostola rosea</i> (23)	MK234716*	South African pet shop	Pet species	This study
<i>Grammostola pulchripes</i> (10)	MK270576*	South African pet shop	Pet species	This study
<i>Lasiadora parahybana</i> (25)	MK270574*	South African pet shop	Pet species	This study
<i>Eupalaestrus campestratus</i> (34)	MK270575*	South African pet shop	Pet species	This study
<i>Grammostola rosea</i> (2)	MK270580*	South African pet shop	Pet species	This study
<i>Acanthoscurria geniculata</i> (9)	MK270588*	South African pet shop	Pet species	This study
<i>Grammostola rosea</i> (14)	MK270581*	South African pet shop	Pet species	This study
<i>Lasiadora parahybana</i> (17)	MK274713*	South African pet shop	Pet species	This study

Species name	GenBank Accession number	Sample sites	Notes	Reference
<i>Lasiodora parahybana</i> (21)	MK274714*	South African pet shop	Pet species	This study
<i>Brachypelma albopilosum</i> (36)	MK274712*	South African pet shop	Pet species	This study
<i>Davus fasciatus</i> (12)	MK234723*	South African pet shop	Pet species	This study
<i>Lasiodora klugi</i> (19)	MK234721*	South African pet shop	Pet species	This study
<i>Lasiodora parahybana</i> (29)	MK234722*	South African pet shop	Pet species	This study
<i>Lasiodora parahybana</i> (24)	MK234724*	South African pet shop	Pet species	This study
<i>Lasiodora parahybana</i> (27)	MK270573*	South African pet shop	Pet species	This study
<i>Lasiodora parahybana</i> (28)	MK234725*	South African pet shop	Pet species	This study
<i>Nhandu tripepii</i> (1)	MK270582*	South African pet shop	Pet species	This study
<i>Brachypelma vagans</i> (4)	MK270584*	South African pet shop	Pet species	This study
<i>Grammostola rosea</i> (7)	MK270583*	South African pet shop	Pet species	This study
<i>Poecilotheria regalis</i> (13)	MK270579*	South African pet shop	Pet species	This study
<i>Poecilotheria regalis</i> (15)	MK270578*	South African pet shop	Pet species	This study
<i>Poecilotheria regalis</i> (32)	MK270577*	South African pet shop	Pet species	This study
<i>Avicularia avicularia</i>	MG273535	Mexico, Caribbean, and central-South America	Wild Caught	Lüddecke et al. 2017
<i>Acanthoscurria geniculata</i>	TARWO015	Brazil	Captive bred Specimen, and wild caught	Unpublished (deposited by Michael Morra 2010)
<i>Acanthoscurria geniculata</i>	TARWO090	Brazil	Captive bred Specimen, and wild caught	Unpublished (deposited by Michael Morra 2012)
<i>Brachypelma sabulosum</i>	GBMIN115352	Mexico (Chiapas, Marques de Comillas)	Wild caught	Unpublished (deposited by Jimenez Marin, 2015)
<i>Brachypelma albopilosum</i>	TARWO053	Honduras	Captive bred specimen and wild caught	Unpublished (deposited by Michael Morra 2011)
<i>Brachypelma vagans</i>	KT995358	Mexico (Puebla, Pantepec)	Wild caught	Unpublished (deposited by Jimenez Marin, 2015)
<i>Brachypelma vagans</i>	GBMIN115368	Mexico (Oaxaca, El Escobillal)	Wild caught	Unpublished (deposited by Jimenez Marin, 2015)
<i>Davus</i> sp. DO-2015	KP757183	Central Mexico	Wild caught	Ortiz & Francke 2016
<i>Grammostola rosea</i>	GBMIN115307	Chile (Pelequen)	Wild caught	Montes de Oca <i>et al.</i> 2016
<i>Grammostola rosea</i>	GBMIN115308	Chile (Pelequen)	Wild caught	Montes de Oca <i>et al.</i> 2016
<i>Lasiodora parahybana</i>	GBCH7798	Online data	Not mentioned	Arabi <i>et al.</i> 2012
<i>Poecilotheria regalis</i>	TARWO047	India	Captive bred Specimen, and wild caught	Unpublished (deposited by Michael Morra 2010)
<i>Poecilotheria regalis</i>	TARWO049	India	Captive bred Specimen, and wild caught	Unpublished (deposited by Michael Morra 2010)

Table S2: The availability of tarantula species in online searches (On), pet store visits (St), and survey questionnaires (Su) in 2015 and 2016. The species name column is the species name verified from GBIF (Global Biodiversity Information Facility) or World Spider Catalog (World Spider Catalog 2018). The species with an asterisk in the species name column is the species that were not confirmed either by GBIF or World Spider Catalog.

Species name	Common name	Total	Sources		
			On	St	Su
<i>Acanthopelma geniculata</i> *	Brazilian giant White Knee	5	5		
<i>Acanthoscurria acuminata</i> Schmidt & Tesmoingt, 2005	Brazilian Black Velve	1	1		
<i>Acanthoscurria antillensis</i> Pocock, 1903	Antilles Pink Patch	1	1		
<i>Acanthoscurria brocklehursti</i> F. O. Pickard-Cambridge, 1896	Brazilian giant black and white	3	3		
<i>Acanthoscurria chacoana</i> Brèthes, 1909	Bolivian red rump	22	16	3	3
<i>Acanthoscurria cordubensis</i> Thorell, 1894		1	1		
<i>Acanthoscurria geniculata</i> C. L. Koch, 1841	Brazilian giant white knee	73	35	25	13
<i>Acanthoscurria juruenicola</i> Mello-Leitão, 1923	Orange-banded bird eater	29	9	20	
<i>Aphonopelma bicoloratum</i> Struchen, Brändle & Schmidt, 1996	Mexican bloodleg	1	1		
<i>Aphonopelma chalcodes</i> Chamberlin, 1940	Desert blonde	2	2		
<i>Aphonopelma moderatum</i> Chamberlin & Ivie, 1939	Rio grande gold	1			
<i>Aphonopelma seemanni</i> F.O.P.-Cambridge, 1897	Costa Rican zebra	30	24	6	
<i>Augacephalus breyeri</i> Hewitt, 1919		7	4	3	
<i>Augacephalus junodi</i> Simon, 1904		8	4	2	2
<i>Avicularia avicularia</i> Linnaeus, 1758	Pinktoe	61	21	31	9
<i>Avicularia azuraklaasi</i> Tesmoingt, 1996	Powder blue pink toe	4	4		
<i>Avicularia bicegoi</i> Mello-Leitão, 1923	Red pink toe	1	1		
<i>Avicularia braunshauseni</i> Tesmoingt, 1999	Goliath pink toe	4	4		
<i>Avicularia diversipes</i> C.L. Koch 1842	Amazon sapphire	7	2	5	
<i>Avicularia geroldi</i> Tesmoingt, 1999	Antilles pinktoe	2	2		
<i>Avicularia hirschii</i> Bullmer, Thierer-Lutz & Schmidt, 2006	Unknown	1	1		
<i>Avicularia laeta</i> C. L. Koch, 1842	Puerto Rican pink toe	12	12		
<i>Avicularia metallica</i> Ausserer, 1875	White toe	1	1		
<i>Avicularia minatrix</i> Pocock, 1903	Venezuelan red slate pinktoe	1	1		
<i>Avicularia purpurea</i> Kirk, 1990	Purple blue	5	5		
<i>Avicularia</i> sp. Guyana Blue*	Guyana blue pinktoe	5	3	2	
<i>Avicularia</i> sp. Guyana*	Guyana blue pinktoe	2	2		
<i>Avicularia</i> sp. Peru Purple*	Peru Purple Pink toe	5	5		
<i>Avicularia velamina</i> *	Trinidad blue	1	1		
<i>Avicularia velutina</i> Simon, 1889	Trinidad pink toe	15	2	13	
<i>Avicularia versicolor</i> Walckenaer, 1837	Blue pink toe	37	15	16	6
<i>Brachypelma albiceps</i> Pocock, 1903	Golden red rump	79	16	55	8
<i>Brachypelma angustum</i> Valerio, 1980	Costa Rican red	2	2		
<i>Brachypelma auratum</i> Schmidt, 1992	Mexican flame knee	33	20	5	8
<i>Brachypelma boehmei</i> Schmidt & Klaas, 1993	Mexican fire leg	69	38	17	14

Species name	Common name	Total	Sources		
			On	St	Su
<i>Brachypelma collotaravillosum</i> *	Brazilian Black and White	1	1		
<i>Brachypelma emilia</i> White, 1856	Mexican true redleg	80	38	33	9
<i>Brachypelma hamorii</i> Tesmoingt, Cléton & Verdez, 1997	Redknee	1	1		
<i>Brachypelma kahlenbergi</i> Rudloff, 2008	Mexican bird eating	13	13		
<i>Brachypelma klaasi</i> Schmidt & Krause, 1994	Mexican pink beauty	16	16		
<i>Brachypelma sabulosum</i> F. O. P.-Cambridge, 1897	Guatemala red rump	43	21	22	
<i>Brachypelma schroederi</i> Rudloff, 2003	Mexican black velvet	4	4		
<i>Brachypelma smithi</i> F.O.P.-Cambridge, 1897	Costarican orange	75	37	28	10
<i>Brachypelma vagans</i> Ausserer, 1875	Mexican red rump	132	48	65	19
<i>Brachypelma albopilosum</i> Valerio, 1980	Curly hair	199	42	130	27
<i>Ceratogyrus darlingi</i> Pocock, 1897	Horned baboon spider	1	1		
<i>Ceratogyrus hillyardi</i> Smith, 1990	Horned baboon	1	1		
<i>Ceratogyrus marshalli</i> Pocock, 1897	Straight and horned baboon	1	1		
<i>Chilobrachys bicolor</i> (Pocock, 1895)	Asian two tone	1	1		
<i>Chilobrachys dyscolus</i> Simon, 1886	Vietnam blue	25	25		
<i>Chilobrachys fimbriatus</i> Pocock, 1899	Indian violet	14	14		
<i>Chilobrachys flavopilosus</i> Simon, 1884	Myanmar burrow	1	1		
<i>Chilobrachys huahini</i> Schmidt & Huber, 1996	Asian fawn	5	5		
<i>Chilobrachys pococki</i> Thorell, 1897	Not mentioned	1	1		
<i>Chilobrachys</i> sp. Blue*	Unknown	1	1		
<i>Chromatopelma cyaneopubescens</i> Strand, 1907	Green bottle blue	69	35	23	11
<i>Cyclosternum bicolor</i> Schiapelli & Gerschman, 1945	Brazilian	1	1		
<i>Cyclosternum fasciatum</i> O.P.-Cambridge, 1892	Costa Rica tiger rump	67	33	27	7
<i>Cyclosternum schmardae</i> Ausserer, 1871	Yellow backed ornamental	12	12		
<i>Cyriocosmus bertae</i> Pérez-Miles, 1998	Dwarf black tiger	19	19		
<i>Cyriocosmus elegans</i> Simon, 1889	Trinidad dwarf tiger	18	16	2	
<i>Cyriocosmus perezmilei</i> Kaderka, 2007	Bolivian dwarf beauty	13	13		
<i>Cyriocosmus</i> sp. Rio Nanay*	Unknown	6	6		
<i>Cyriocosmus venezuelensis</i> Kaderka, 2010	Unknown	7	6	1	
<i>Cyriopagopus hainanum</i> *	Unknown	1	1		
<i>Cyriopagopus lividum</i> *	Unknown	11	1	10	
<i>Cyriopagopus longipes</i> von Wirth & Striffler, 2005	Unknown	5	3		2
<i>Cyriopagopus schioedtei</i> Thorell, 1891	Malaysian earth tiger	13	13		
<i>Cyriopagopus</i> sp. Hati Hati*	Hati Hati	16	13	3	
<i>Cyriopagopus</i> sp. Minax*	Thailand black	1	1		
<i>Cyriopagopus</i> sp. Red*	Dwarf Chilean Flame	1		1	
<i>Cyriopagopus</i> sp. Sulawesi*	Sulawesi black tarantula	1	1		
<i>Cyriopagopus</i> sp. Sumatran tiger*	Unknown	1	1		
<i>Cyriopagopus vonwirthi</i> *	Vietnamese tiger	3	3		
<i>Encyocratella olivacea</i> Strand, 1907	Tanzanean black and olive baboon	3	3		
<i>Ephobopus cyanognathus</i> West & Marshall, 2000	Blue fang	2	2		
<i>Ephobopus murinus</i> Walckenaer, 1837	Skeleton	1	1		
<i>Ephobopus rufescens</i> West & Marshall, 2000	Red skeleton	7	7		

Species name	Common name	Total	Sources		
			On	St	Su
<i>Ephebobop uatuman</i> Lucas, Silva & Bertani, 1992	Emerald skeleton	6	6		
<i>Euathlus parvulus</i> Pocock, 1903	Chilean gold burst	1	1		
<i>Euathlus pulcherrimaklaasi</i> Schmidt, 1991	Chilean femur	2	2		
<i>Euathlus</i> sp. Red Dwarf*	Chilean flame	1	1		
<i>Euathlus</i> sp. Red*	Dwarf Chilean flame	3	3		
<i>Euathlus truculentus</i> L. Koch, 1875	Chilean beautiful	1	1		
<i>Eupalaestrus campestratus</i> Simon, 1891	Pink zebra beauty	14	14		
<i>Grammostola alticeps</i> Pocock, 1903	Brazilian grey smoke	1	1		
<i>Grammostola andreleetzi</i> Vol, 2008	Brazilian greysmoke	1	1		
<i>Grammostola aureostriata</i> Schmidt & Bullmer, 2001	Chaco golden knee	11	11		
<i>Grammostola porteri</i> Mello-Leitão, 1936	Common rose hair	8	5	3	
<i>Grammostola pulchra</i> Mello-Leitão, 1921	Brazilian black	7	7		
<i>Grammostola pulchripes</i> Simon, 1891	Chaco golden knee	101	37	44	20
<i>Grammostola rosea</i> Walckenaer, 1837	Chilean rose	120	31	73	16
<i>Grammostola vagans</i> *	Unknown	10		10	
<i>Hapalopus columbia</i> *	Columbia pumpkin patch	1	1		
<i>Hapalopus formosus</i> Ausserer, 1875	Pumpkin patch	39	39		
<i>Hapalopus</i> sp. Colombia*	Columbia Pumpkin Patch	5	5		
<i>Haplopelma albostratum</i> Simon, 1886	Thai zebra	4	4		
<i>Haplopelma hainanum</i> Liang <i>et al.</i> , 1999	Chinese bird spider	1	1		
<i>Haplopelma lividum</i> Smith, 1996	Cobalt blue	34	23	5	6
<i>Haplopelma longipes</i> von Wirth & Striffler, 2005	Vietnamese blue eathtiger	5	5		
<i>Haplopelma minax</i> Thorell, 1897	Thailand black	19	19		
<i>Haplopelma robustum</i> Strand, 1907	Blue femur	1	1		
<i>Haplopelma schmidti</i> von Wirth, 1991	Chinese giant gold birdeater	3	3		
<i>Haplopelma</i> sp. Big black minax*	Thai black	3	3		
<i>Haplopelma vonwirthi</i> Schmidt, 2005	Black eathtiger	1	1		
<i>Harpactira curator</i> Pocock, 1898	Unknown	2	1	1	
<i>Harpactira hamiltoni</i> Pocock, 1902	Golden Starburst	4	3	1	
<i>Harpactirella longipes</i> Purcell, 1902	Unknown	6	1	2	3
<i>Harpactirella overdijki</i> Gallon, 2010	Lesser	3	2	1	
<i>Heteroscodra maculata</i> Pocock, 1899	Chaco golden knee	16	7	1	8
<i>Heterothele villosella</i> Strand, 1907	Tanzanian chestnut	6	6		
<i>Holothele incei</i> F. O. Pickard-Cambridge, 1898	Trinidad olive	43	18	25	
<i>Holothele rondoni</i> Lucas & Bücherl, 1972	Not mentioned	1	1		
<i>Holothele sanguiniceps</i> F. O. P.-Cambridge, 1898	Trinidad pink	18	18		
<i>Holothele</i> sp. Gold*	Trinidad gold	1	1		
<i>Holothele</i> sp. Norte de Santander*	Unknown	13	13		
<i>Hysteroocrates gigas</i> Pocock, 1897	Cameroon red baboon	41	35		6
<i>Hysteroocrates hercules</i> Pocock, 1899	Hercules baboon	1	1		
<i>Iridopelma</i> sp. Recife*	Recife Beauty	7	7		
<i>Lampropelma nigerrimum</i> Simon, 1892	Sangihe Island black	21	21		
<i>Lampropelma</i> sp. Borneo Black*	Borneo Black	13	13		
<i>Lampropelma violaceopes</i> Abraham, 1924	Singapore blue	33	29		4

Species name	Common name	Total	Sources		
			On	St	Su
<i>Lasiadora cristata</i> Mello-Leitão, 1923	Brazilian red and white	1	1		
<i>Lasiadora difficilis</i> Mello-Leitão, 1921	Brazilian fire Red	52	45	7	
<i>Lasiadora klugi</i> C. L. Koch, 1842	Scarlet birdeater	59	30	19	10
<i>Lasiadora parahybana</i> Mello-Leitão, 1917	Salmon pink bird eater	79	27	35	17
<i>Lasiadora striatipes</i> Ausserer, 1871	Bahia gray birdeater	15	15		
<i>Lasiodorides polycusputatus</i> Schmidt & Bischoff, 1997	Peruvian blonde	13	13		
<i>Lyrognathus giannisposatoi</i> Nunn & West, 2013		1	1		
<i>Megaphobema robustum</i> Ausserer, 1875	Columbian giant redleg	2	2		
<i>Monocentropus balfouri</i> Pocock, 1897	Socotra Island baboon	29	18	7	4
<i>Nhandu carapoensis</i> Lucas, 1983	Brazilian giant blonde	11	11		
<i>Nhandu chromatus</i> Schmidt, 2004	Brazilian red and white birdeater	61	39	11	11
<i>Nhandu coloratovillosus</i> Schmidt, 1998	Brazilian black and white	43	12	31	
<i>Nhandu tripepii</i> Dresco, 1984	Brazilian giant blond	103	31	65	7
<i>Ornithoctonus aureotibialis</i> von Wirth & Striffler, 2005	Thailand velvet	14	14		
<i>Orphnaecus</i> sp. Cebu*	Philippine Brown	21	21		
<i>Orphnaecus</i> sp. Marinduque purple*	Marinduque Light Purple	15	15		
<i>Orphnaecus</i> sp. Panay blue*	Panay island blue	3	3		
<i>Orphnaecus</i> sp. Samar cave*	Samar Cave Tarantula	14	14		
<i>Pamphobeteus antinous</i> Pocock, 1903	Steely blue bloom	5	5		
<i>Pamphobeteus fortis</i> Ausserer, 1875		3	2	1	
<i>Pamphobeteus machala</i> *	Purple bloom Tarantula	8	8		
<i>Pamphobeteus platyomma</i> *	Pink bloom birdeater	11	11		
<i>Pamphobeteus</i> sp. Machala*	Purple Bloom	22	8	14	
<i>Pamphobeteus</i> sp. Platyomma*	Brazilian Pink bloom	20	4	16	
<i>Pamphobeteus vespertinus</i> Simon, 1889	Red bloom birdeater	7	7		
<i>Pelinobius muticus</i> Karsch, 1885	King baboon	7	7		
<i>Phormictopus cancerides</i> Latreille, 1806	Haitian brown	46	37	5	4
<i>Phormictopus cautus</i> Ausserer, 1875	Light violet	12	12		
<i>Phrixotrichus scrofa</i> Molina, 1782	Chilean copper	13	13		
<i>Poecilotheria fasciata</i> Latreille, 1804	Sri Lankan ornamental	48	23	19	6
<i>Poecilotheria formosa</i> Pocock, 1899	Salem ornamental	7	3	4	
<i>Poecilotheria hanumavilasumica</i> Smith, 2004	Rameshwaram parachute	2	1	1	
<i>Poecilotheria metallica</i> Pocock, 1899	Gooty sapphire ornamental	64	31	25	8
<i>Poecilotheria miranda</i> Pocock, 1900	Bengel ornamental	13	13		
<i>Poecilotheria ornata</i> Pocock, 1899	Fringed ornamental	15	7	8	
<i>Poecilotheria pedersenii</i> Kirk, 2001	Ghost ornamental	1	1		
<i>Poecilotheria regalis</i> Pocock, 1899	Indian ornamental	75	24	47	4
<i>Poecilotheria rufilata</i> Pocock, 1899	Red slate ornamental	26	8	18	
<i>Poecilotheria smithi</i> Kirk, 1996	Yellow backed Ornamental	14	14		
<i>Poecilotheria striata</i> Pocock, 1894	Striated parachute spider	23	8	15	
<i>Poecilotheria subfusca</i> Pocock, 1895	Ivory ornamental	28	5	23	
<i>Poecilotheria tigrinawesseli</i> Smith, 2006	Tigrina tiger wessel	14	14		
<i>Poecilotheria vittata</i> Pocock, 1895	Ghost ornamental	3	3		
<i>Psalmopoeus cambridgei</i> Pocock, 1895	Trinidad chevron	23	20	3	

Species name	Common name	Total	Sources		
			On	St	Su
<i>Psalmopoeus irminia</i> Saager, 1994	Venezuelan suntiger	51	32	14	5
<i>Psalmopoeus pulcher</i> Petrunkevitch, 1925	Panama blonde	33	29	4	
<i>Psalmopoeus reduncus</i> Karsch, 1880	Orange bucal tree spider	44	22	22	
<i>Psednocnemis brachyramosa</i> West & Nunn, 2010		2	1		1
<i>Pterinochilus murinus</i> Pocock, 1897	Mombassa golden starburst	9	9		
<i>Schizopelma</i> sp. Veracruz*	Veracruz beauty	1	1		
<i>Selenocosmia aruana</i> Strand, 1911	Unknown	5	5		
<i>Selenocosmia crassipes</i> L. Koch, 1874	Queensland whistling	1	1		
<i>Selenocosmia obscura</i> Hirst, 1909	Borneo rust	1	1		
<i>Selenocosmia similis</i> Kulczyński, 1911	Samar rusty cave	1	1		
<i>Sericopelma rubronitens</i> Ausserer, 1875	Panama red rump	3	3		
<i>Sphaerobothria hoffmanni</i> Karsch, 1879	Central American horned baboon	2	2		
<i>Stromatopelma calceatm</i> Fabricius, 1793	Feather leg baboon	21	13	4	4
<i>Tapinauchenius cupreus</i> Schmidt & Bauer, 1996	Violet tree spider	18	18		
<i>Tapinauchenius elenae</i> Schmidt, 1994	Ecuadorian orange tree spider	4	4		
<i>Tapinauchenius gigas</i> Caporiacco, 1954	Orange tree spider	12	12		
<i>Tapinauchenius plumipes</i> C. L. Koch, 1842	Trinidad mahogany	1	1		
<i>Tapinauchenius</i> sp. Colombia*	Ghost Tree Spider	12	12		
<i>Tapinauchenius subcaeruleus</i> Bauer & Antonelli, 1997	Ornate Metallic Tree	2	1	1	
<i>Tapinauchenius violaceus</i> Mello-Leitão, 1930	Purple tree Spider	1	1		
<i>Theraphosa apophysis</i> Tinter, 1991	Pink foot goliath bird eater	3	3		
<i>Theraphosa blondi</i> Latreille, 1804	Goliath birdeater	21	2	19	
<i>Theraphosa stirmi</i> Rudloff & Weinmann, 2010	Burgundy goliath birdeater	3	3		
<i>Thrixopelma lagunas</i> Schmidt & Rudloff, 2010	Blue bird eater	1	1		
<i>Thrixopelma ockerti</i> Schmidt, 1994	Peru flame rump	18	18		
<i>Thrixopelma pruriens</i> Schmidt, 1998	Peruvian green velvet	8	5	3	
<i>Trichopelma maculatum</i> Banks, 1906	Bahamas Island	1	1		
<i>Xenesthis immanis</i> Ausserer, 1875	Columbian Lesser Black	1	1		
<i>Xenesthis intermedia</i> Schiapelli & Gerschman, 1945	Amazon blue bloom	1	1		

Table S3: Common names and scientific names of the species listed in the pet trade, South Africa. The common names and scientific names of this species obtained from the online pet shops in 2015 and 2016. The scientific names of each species have been verified from GBIF and World Spider Catalog (World Spider Catalog 2018). The species without the Author are “unconfirmed” species.

Common name	Scientific name
Giant white banded birdeater	<i>Acanthoscurria brocklehursti</i> F. O. Pickard-Cambridge, 1896
Brazilian giant black and white	<i>Acanthoscurria brocklehursti</i> F. O. Pickard-Cambridge, 1896
Black and white	<i>Acanthoscurria brocklehursti</i> F. O. Pickard-Cambridge, 1896
Brazilian giant black and white	<i>Acanthoscurria brocklehursti</i> F. O. Pickard-Cambridge, 1896
Bolivian red rump	<i>Acanthoscurria chacoana</i> Brèthes, 1909
White knee	<i>Acanthoscurria geniculata</i> Koch, 1841
Brazilian giant white knee birdeater	<i>Acanthoscurria geniculata</i> Koch, 1841
Brazilian giant white knee	<i>Acanthoscurria geniculata</i> Koch, 1841
Brazilian orange banded	<i>Acanthoscurria juruenicola</i> Mello-Leitão, 1923
Orange banded birdeater	<i>Acanthoscurria juruenicola</i> Mello-Leitão, 1923
Mexican bloodleg	<i>Aphonopelma bicoloratum</i> Struchen, Brändle & Schmidt, 1996
Desert blonde	<i>Aphonopelma chalcodes</i> Chamberlin, 1940
Costa Rican zebra	<i>Aphonopelma seemanni</i> F.O.P.-Cambridge, 1897
Golden brown baboon	<i>Augacephalus junodi</i> Simon, 1904
Pinktoe	<i>Avicularia avicularia</i> Linnaeus, 1758
Powder blue pink toe	<i>Avicularia azuraklaasi</i> Tesmoingt, 1996
Red pink toe	<i>Avicularia bicegoi</i> Mello-Leitão, 1923
Goliath pink toe	<i>Avicularia braunshauseni</i> Tesmoingt, 1999
Amazon sapphire	<i>Avicularia diversipes</i> C.L. Koch 1842
Antilles pink toe	<i>Avicularia geroldi</i> Tesmoingt, 1999
Puerto Rican pink toe	<i>Avicularia laeta</i> C. L. Koch, 1842
White toe	<i>Avicularia metallica</i> Ausserer, 1875
Venezuelan red slate pinktoe	<i>Avicularia minatrix</i> Pocock, 1903
Purple blue	<i>Avicularia purpurea</i> Kirk, 1990
Trinidad pink toe	<i>Avicularia velutina</i> Simon, 1889
Antilles pink toe	<i>Avicularia versicolor</i> Walckenaer, 1837
Pinktoe	<i>Avicularia versicolor</i> Walckenaer, 1837
Pink toe versicolor	<i>Avicularia versicolor</i> Walckenaer, 1837
Vercolour pink toe	<i>Avicularia versicolor</i> Walckenaer, 1837
Blue pink toe	<i>Avicularia versicolor</i> Walckenaer, 1837
Mexican golden red rump	<i>Brachypelma albiceps</i> Pocock, 1903
Red rump	<i>Brachypelma albiceps</i> Pocock, 1903
Golden red rump	<i>Brachypelma albiceps</i> Pocock, 1903
Honduran curly hair	<i>Brachypelma albopilosum</i> Valerio, 1982
Curley	<i>Brachypelma albopilosum</i> Valerio, 1982
Costa Rican red	<i>Brachypelma angustum</i> Valerio, 1980
Mexican flame knee	<i>Brachypelma auratum</i> Schmidt, 1992
Mexican fire leg	<i>Brachypelma boehmei</i> Schmidt & Klaas, 1993
Mexican redleg	<i>Brachypelma emilia</i> White, 1856

Common name	Scientific name
Mexican true redleg	<i>Brachypelma emilia</i> White, 1856
Mexican bird eating	<i>Brachypelma kahlenbergi</i> Rudloff, 2008
Mexican pink beauty	<i>Brachypelma klaasi</i> Schmidt & Krause, 1994
Guatemala red rump	<i>Brachypelma sabulosum</i> F. O. P.-Cambridge, 1897
Mexican black velvet	<i>Brachypelma schroederi</i> Rudloff, 2003
Mexican red Knee	<i>Brachypelma smithi</i> F.O.P.-Cambridge, 1897
Red knee	<i>Brachypelma smithi</i> F.O.P.-Cambridge, 1897
Costarican orange	<i>Brachypelma smithi</i> F.O.P.-Cambridge, 1897
Vagans red rump	<i>Brachypelma vagans</i> Ausserer, 1875
Red rump	<i>Brachypelma vagans</i> Ausserer, 1875
Guatemalan red rump	<i>Brachypelma vagans</i> Ausserer, 1875
Mexican red rump	<i>Brachypelma vagans</i> Ausserer, 1875
Curly hair	<i>Brachypelma albopilosum</i> Valerio, 1980
Horned baboon spider	<i>Ceratogyrus darlingi</i> Pocock, 1897
Straight and horned baboon	<i>Ceratogyrus marshalli</i> Pocock, 1897
Burma chocolate brown	<i>Chilobrachys fimbriatus</i> Pocock, 1899
South Vietnam Blue	<i>Chilobrachys fimbriatus</i> Pocock, 1899
Asian Smokey blue	<i>Chilobrachys fimbriatus</i> Pocock, 1899
Vietnam blue	<i>Chilobrachys fimbriatus</i> Pocock, 1899
Indian violet	<i>Chilobrachys fimbriatus</i> Pocock, 1899
Huahini birdeater	<i>Chilobrachys huahini</i> Schmidt & Huber, 1996
Asian fawn	<i>Chilobrachys huahini</i> Schmidt & Huber, 1996
Green bottle blue	<i>Chromatopelma cyaneopubescens</i> Strand, 1907
Tiger Rump	<i>Cyclosternum fasciatum</i> O.P.-Cambridge, 1892
Costa Rica tiger rump	<i>Cyclosternum fasciatum</i> O.P.-Cambridge, 1892
Yellow backed ornamental	<i>Cyclosternum schmardae</i> Ausserer, 1871
Peruvian dwarf beauty	<i>Cyriocosmus bertae</i> Pérez-Miles, 1998
Dwarf black tiger	<i>Cyriocosmus bertae</i> Pérez-Miles, 1998
Trinidad dwarf tiger rump	<i>Cyriocosmus elegans</i> Simon, 1889
Trinidad dwarf tiger	<i>Cyriocosmus elegans</i> Simon, 1889
Bolivian dwarf beauty	<i>Cyriocosmus perezmilei</i> Kaderka, 2007
Earth tiger	<i>Cyriopagopus schioedtei</i> Thorell, 1891
Malaysian earth tiger	<i>Cyriopagopus schioedtei</i> Thorell, 1891
Thailand black	<i>Cyriopagopus</i> sp. Minax
Vietnamese tiger	<i>Cyriopagopus vonwirthi</i>
Tanzanian	<i>Encyocratella olivacea</i> Strand, 1907
Tanzanean black and olive baboon	<i>Encyocratella olivacea</i> Strand, 1907
Blue fang	<i>Ephebopus cyanognathus</i> West & Marshall, 2000
Skeleton	<i>Ephebopus murinus</i> Walckenaer, 1837
Burgundy skeleton	<i>Ephebopus rufescens</i> West & Marshall, 2000
Red skeleton	<i>Ephebopus rufescens</i> West & Marshall, 2000
Emerald skeleton	<i>Ephebopus uatuman</i> Lucas, Silva & Bertani, 1992
Chilean gold burst	<i>Euathlus parvulus</i> Pocock, 1903
Chilean femur	<i>Euathlus pulcherrimaklaasi</i> Schmidt, 1991
Chilean flame	<i>Euathlus</i> sp. Red Dwarf
Dwarf Chilean flame	<i>Euathlus</i> sp. Red Dwarf
Pink zebra beauty	<i>Eupalaestrus campestratus</i> Simon, 1891

Common name	Scientific name
Brazilian grey smoke	<i>Grammostola alticeps</i> Pocock, 1903
Chaco golden knee	<i>Grammostola aureostriata</i> Schmidt & Bullmer, 2001
Common rose hair	<i>Grammostola porteri</i> Mello-Leitão, 1936
Brazilian black	<i>Grammostola pulchra</i> Mello-Leitão, 1921
Golden knee	<i>Grammostola pulchripes</i> Simon, 1891
Chaco golden knee	<i>Grammostola pulchripes</i> Simon, 1891
Chilean rose	<i>Grammostola rosea</i> Walckenaer, 1837
Venezuelan suntiger	<i>Grammostola rosea</i> Walckenaer, 1837
Colombian banded	<i>Hapalopus formosus</i> Ausserer, 1875
Pumpkin patch	<i>Hapalopus formosus</i> Ausserer, 1875
Thai zebra	<i>Haplopelma albostriatum</i> Simon, 1886
Chinese bird spider	<i>Haplopelma hainanum</i> Liang <i>et al.</i> , 1999
Cobalt blue	<i>Haplopelma lividum</i> Smith, 1996
Vietnamese blue eathtiger	<i>Haplopelma longipes</i> Von Wirth & Striffler, 2005
Thailand big black	<i>Haplopelma minax</i> Thorell, 1897
Thailand black	<i>Haplopelma minax</i> Thorell, 1897
Chinese giant gold birdeater	<i>Haplopelma schmidti</i> von Wirth, 1991
Thai black	<i>Haplopelma</i> sp. Big black minax
Black eathtiger	<i>Haplopelma vonwirthi</i> Schmidt, 2005
Togo starburst	<i>Heteroscodra maculata</i> Pocock, 1899
Chaco golden knee	<i>Heteroscodra maculata</i> Pocock, 1899
Tanzanian dwarf chestnut	<i>Heterothele villosella</i> Strand, 1907
Tanzanian amani	<i>Heterothele villosella</i> Strand, 1907
Tanzanian chestnut	<i>Heterothele villosella</i> Strand, 1907
Trinidad olives gold	<i>Holothele incei</i> F. O. Pickard-Cambridge, 1898
Trinidad olive	<i>Holothele incei</i> F. O. Pickard-Cambridge, 1898
Trinidad pink	<i>Holothele sanguiniceps</i> F. O. P.-Cambridge, 1898
Cameroon red	<i>Hysteroocrates gigas</i> Pocock, 1897
Cameroon red baboon	<i>Hysteroocrates gigas</i> Pocock, 1897
Hercules baboon	<i>Hysteroocrates hercules</i> Pocock, 1899
Sangihe black	<i>Lampropelma nigerrimum</i> Simon, 1892
Sangihe Island black	<i>Lampropelma nigerrimum</i> Simon, 1892
Singapore blue	<i>Lampropelma violaceopes</i> Abraham, 1924
Brazilian red and white	<i>Lasiodora cristata</i> Mello-Leitão, 1923
Bahia scarlet	<i>Lasiodora difficilis</i> Mello-Leitão, 1921
Brazilian amazon fire red bird eater	<i>Lasiodora difficilis</i> Mello-Leitão, 1921
Fire red birdeater	<i>Lasiodora difficilis</i> Mello-Leitão, 1921
Brazilian fire red bird eater	<i>Lasiodora difficilis</i> Mello-Leitão, 1921
Brazilian fire Red	<i>Lasiodora difficilis</i> Mello-Leitão, 1921
Bahai scarlet birdeater	<i>Lasiodora klugi</i> C. L. Koch, 1841
Scarlet birdeater	<i>Lasiodora klugi</i> C. L. Koch, 1842
Pink salmon	<i>Lasiodora parahybana</i> Mello-Leitão, 1917
Brazilian salmon Pink	<i>Lasiodora parahybana</i> Mello-Leitão, 1917
Salmon pink bird eater	<i>Lasiodora parahybana</i> Mello-Leitão, 1917
Bahia gray birdeater	<i>Lasiodora striatipes</i> Ausserer, 1871
Peruvian blonde	<i>Lasiodorides polycuspulatus</i> Schmidt & Bischoff, 1997
Columbian giant redleg	<i>Megaphobema robustum</i> Ausserer, 1875

Common name	Scientific name
Socotra island blue baboon	<i>Monocentropus balfouri</i> Pocock, 1897
Socotra Island baboon	<i>Monocentropus balfouri</i> Pocock, 1897
Brazilian red birdeater	<i>Nhandu carapoensis</i> Lucas, 1983
Brazilian red	<i>Nhandu carapoensis</i> Lucas, 1983
Brazilian giant blonde	<i>Nhandu carapoensis</i> Lucas, 1983
Brazilian red and white	<i>Nhandu chromatus</i> Schmidt, 2004
Brazil striped	<i>Nhandu chromatus</i> Schmidt, 2004
Red and white	<i>Nhandu chromatus</i> Schmidt, 2004
Brazilian red and white birdeater	<i>Nhandu chromatus</i> Schmidt, 2004
Brazilian striped red rump	<i>Nhandu coloratovillosus</i> Schmidt, 1998
Brazilian red and white	<i>Nhandu coloratovillosus</i> Schmidt, 1998
Brazilian black and white	<i>Nhandu coloratovillosus</i> Schmidt, 1998
Venezuelan suntiger	<i>Nhandu tripepii</i> Dresco, 1984
Brazilian giant blonde	<i>Nhandu tripepii</i> Dresco, 1984
Thailand velvet	<i>Ornithoctonus aureotibialis</i> von Wirth & Striffler, 2005
Bolivian blue leg	<i>Pamphobeteus antinous</i> Pocock, 1903
Steely blue bloom	<i>Pamphobeteus antinous</i> Pocock, 1903
Purple bloom birdeater	<i>Pamphobeteus machala</i>
Pink bloom birdeater	<i>Pamphobeteus platyomma</i>
Red bloom	<i>Pamphobeteus vespertinus</i> Simon, 1889
Red bloom birdeater	<i>Pamphobeteus vespertinus</i> Simon, 1889
King baboon	<i>Pelinobius muticus</i> Karsch, 1885
Haitian brown	<i>Phormictopus cancerides</i> Latreille, 1806
Light violet	<i>Phormictopus cautus</i> Ausserer, 1875
Chilean copper	<i>Phrixotrichus scrofa</i> Molina, 1782
Sri Lankan ornamental	<i>Poecilotheria fasciata</i> Latreille, 1804
Salom ornamental	<i>Poecilotheria formosa</i> Pocock, 1899
Salem ornamental	<i>Poecilotheria formosa</i> Pocock, 1899
Gooty sapphire ornamental tree spider	<i>Poecilotheria metallica</i> Pocock, 1899
Gooty sapphire	<i>Poecilotheria metallica</i> Pocock, 1899
Gooty ornamental	<i>Poecilotheria metallica</i> Pocock, 1899
Gooty sapphire ornamental	<i>Poecilotheria metallica</i> Pocock, 1899
Bengel ornamental	<i>Poecilotheria miranda</i> Pocock, 1900
Fringed ornamental	<i>Poecilotheria ornata</i> Pocock, 1899
Ghost ornamental	<i>Poecilotheria pedersenii</i> Kirk, 2001
Indian ornamental	<i>Poecilotheria regalis</i> Pocock, 1899
Red slate ornamental	<i>Poecilotheria rufilata</i> Pocock, 1899
Yellow backed ornamental	<i>Poecilotheria smithi</i> Kirk, 1996
Mysore ornamental	<i>Poecilotheria striata</i> Pocock, 1894
Striated parachute spider	<i>Poecilotheria striata</i> Pocock, 1894
Lowland Ivory ornamental	<i>Poecilotheria subfusca</i> Pocock, 1894
Ivory ornamental	<i>Poecilotheria subfusca</i> Pocock, 1895
Tiger wessels	<i>Poecilotheria tigrinawesseli</i> Smith, 2006
Wessel tiger ornamental	<i>Poecilotheria tigrinawesseli</i> Smith, 2006
Tigrina tiger wessel	<i>Poecilotheria tigrinawesseli</i> Smith, 2006
Ghost ornamental	<i>Poecilotheria vittata</i> Pocock, 1895
Trinidad chevron	<i>Psalmopoeus cambridgei</i> Pocock, 1895

Common name	Scientific name
Suntiger	<i>Psalmopoeus irminia</i> Saager, 1994
Venezuelan suntiger	<i>Psalmopoeus irminia</i> Saager, 1994
Panama blonde	<i>Psalmopoeus pulcher</i> Petrunkevitch, 1925
Orange mouth tree spider	<i>Psalmopoeus reduncus</i> Karsch, 1879
Costa Rican orange mouth	<i>Psalmopoeus reduncus</i> Karsch, 1879
Orange bucal tree spider	<i>Psalmopoeus reduncus</i> Karsch, 1880
Usambara baboon	<i>Pterinochilus murinus</i> Pocock, 1897
Mombassa golden starburst	<i>Pterinochilus murinus</i> Pocock, 1897
Queensland whistling	<i>Selenocosmia crassipes</i> L. Koch, 1874
Borneo rust	<i>Selenocosmia obscura</i> Hirst, 1909
Panama red rump	<i>Sericopelma rubronitens</i> Ausserer, 1875
Central American horned baboon	<i>Sphaerobothria hoffmanni</i> Karsch, 1879
Feather leg	<i>Stromatopelma calceatum</i> Fabricius, 1793
Feather leg baboon	<i>Stromatopelma calceatum</i> Fabricius, 1793
Violet tree	<i>Tapinauchenius cupreus</i> Schmidt & Bauer, 1996
Ecuadorian orange tree spider	<i>Tapinauchenius elenae</i> Schmidt, 1994
Orange tree spider	<i>Tapinauchenius gigas</i> Caporiacco, 1954
Trinidad mahogany	<i>Tapinauchenius plumipes</i> C. L. Koch, 1842
Purple tree Spider	<i>Tapinauchenius violaceus</i> Mello-Leitão, 1930
Pink foot goliath bird eater	<i>Theraphosa apophysis</i> Tinter, 1991
Goliath birdeater	<i>Theraphosa blondi</i> Latreille, 1804
Burgundy goliath birdeater	<i>Theraphosa stirmi</i> Rudloff & Weinmann, 2010
Peruvian flame rump	<i>Thrixopelma ockerti</i> Schmidt, 1994
Peru flame rump	<i>Thrixopelma ockerti</i> Schmidt, 1994
Peruvian green velvet	<i>Thrixopelma pruriens</i> Schmidt, 1998

Table S4: Tarantula species reported being invasive elsewhere. Mode of introduction are the pathways in which tarantula species were translocated. The country introduced is the place where the species was reported introduced. The references are the source that the information was acquired for each species.

Species name	Status	Mode of introduction	Country introduced	Reference
<i>Brachypelma vagans</i>	Invasive	Pet trade	Florida (St. Lucie County)	Edwards & Hibbard 1999 & 2003
<i>Brachypelma vagans</i>	Introduced	Film production	Mexico (Cozumel Island, Quintana Roo)	Machkour-M'Rabet <i>et al.</i> 2012
<i>Brachypelma vagans</i>	Introduced	Film production company	Mexico (Cozumel Island)	Vilchis-Nestor <i>et al.</i> 2013
<i>Brachypelma vagans</i>	Establish	Natural dispersal	Belize (Lamanai Archaeological Reserve, Orange Walk District)	Reichling 2000

Table S5: Average prices of tarantula species that were advertised for sale in online sources in South Africa, in 2015 and 2016. Prices are given in South African Rand (R).

Trade names	Mean \pm SD Price (R)	
	2015	2016
<i>Acanthoscurria chacoana</i> Brèthes, 1909	403.33	450.00
<i>Acanthoscurria geniculata</i> C. L. Koch, 1841	260.15	403.85
<i>Acanthoscurria juruenicola</i> Mello-Leitão, 1923	468.75	825.00
<i>Aphonopelma chalcodes</i> Chamberlin, 1940	2500.00	
<i>Aphonopelma seemanni</i> F.O.P.-Cambridge, 1897	420.00	313.64
<i>Avicularia avicularia</i> Linnaeus, 1758	464.62	150.00
<i>Avicularia azuraklaasi</i> Tesmoingt, 1996	633.33	
<i>Avicularia braunshauseni</i> Tesmoingt, 1999	1700.00	
<i>Avicularia diversipes</i> C.L. Koch 1842	600.00	
<i>Avicularia geroldi</i> Tesmoingt, 1999	750.00	
<i>Avicularia laeta</i> C. L. Koch, 1842	300.00	455.00
<i>Avicularia purpurea</i> Kirk, 1990	650.00	
<i>Avicularia</i> sp. Peru purple	265.00	
<i>Avicularia velutina</i> Simon, 1889	1500.00	
<i>Avicularia versicolor</i> Walckenaer, 1837	263.33	650.00
<i>Brachypelma albiceps</i> Pocock, 1903	340.00	100.00
<i>Brachypelma albopilosum</i> Valerio, 1980	75.00	98.42
<i>Brachypelma auratum</i> Schmidt, 1992	635.71	641.25
<i>Brachypelma boehmei</i> Schmidt & Klaas, 1993	281.25	295.24
<i>Brachypelma collotaravillosum</i> *	150.00	
<i>Brachypelma emilia</i> White, 1856	416.25	229.52
<i>Brachypelma kahlenbergi</i> Rudloff, 2008	100.00	150.00
<i>Brachypelma klaasi</i> Schmidt & Krause, 1994	442.86	618.75
<i>Brachypelma sabulosum</i> F. O. P.-Cambridge, 1897	237.50	180.77
<i>Brachypelma schroederi</i> Rudloff, 2003	900.00	800.00
<i>Brachypelma smithi</i> F.O.P.-Cambridge, 1897	292.89	413.00
<i>Brachypelma vagans</i> Ausserer, 1875	184.44	163.00
<i>Chilobrachys dyscolus</i> Simon, 1886	332.80	389.13
<i>Chilobrachys fimbriatus</i> Pocock, 1899	412.50	290.00
<i>Chromatopelma cyaneopubescens</i> Strand, 1907	610.38	261.44
<i>Cyclosternum fasciatum</i> O.P.-Cambridge, 1892	250.00	211.25
<i>Cyclosternum schmardae</i> Ausserer, 1871	3000.00	
<i>Cyriocosmus bertae</i> Pérez-Miles, 1998		525.00
<i>Cyriocosmus elegans</i> Simon, 1889	300.00	205.00
<i>Cyriocosmus perezmilesi</i> Kaderka, 2007	226.67	158.89
<i>Cyriocosmus</i> sp. Rio Nanay		250.00
<i>Cyriocosmus venezuelensis</i> Kaderka, 2010	150.00	316.67
<i>Cyriopagopus albostriatum</i>		280.00
<i>Cyriopagopus lividum</i>		300.00
<i>Cyriopagopus schioedtei</i> Thorell, 1891	275.00	
<i>Cyriopagopus schioedtei</i>		278.57
<i>Cyriopagopus</i> sp. Hati Hati		300.00

Trade names	Mean \pm SD Price (R)	
	2015	2016
<i>Cyriopagopus</i> sp. Minax	1800.00	
<i>Cyriopagopus vonwirthi</i>	2300.00	1800.00
<i>Encyocratella olivacea</i> Strand, 1907	3000.00	
<i>Ephebopus cyanognathus</i> West & Marshall, 2000	800.00	
<i>Ephebopus rufescens</i> West & Marshall, 2000		600.00
<i>Euathlus</i> sp. Red	380.00	
<i>Euathlus</i> sp. Red Dwarf		350.00
<i>Eupalaestrus campestratus</i> Simon, 1891	371.43	261.54
<i>Grammostola porteri</i> Mello-Leitão, 1936	123.33	70.00
<i>Grammostola pulchripes</i> Simon, 1891	244.44	130.00
<i>Grammostola rosea</i> Walckenaer, 1837	371.67	205.52
<i>Hapalopus columbia</i>		200.00
<i>Hapalopus formosus</i> Ausserer, 1875	220.00	112.11
<i>Haplopelma albostriatum</i> Simon, 1886		470.00
<i>Haplopelma lividum</i> Smith, 1996	1425.00	958.67
<i>Haplopelma longipes</i> von Wirth & Striffler, 2005	30.00	
<i>Haplopelma minax</i> Thorell, 1897	966.67	400.00
<i>Haplopelma schmidti</i> von Wirth, 1991	800.00	
<i>Haplopelma</i> sp. Big black minax	600.00	375.00
<i>Haplopelma vonwirthi</i> Schmidt, 2005	2000.00	
<i>Harpactirella longipes</i> Purcell, 1902	500.00	500.00
<i>Harpactirella overdijki</i> Gallon, 2010		340.00
<i>Heteroscodra maculata</i> Pocock, 1899	200.00	233.33
<i>Heterothele villosella</i> Strand, 1907	232.50	387.50
<i>Holothele incei</i> F. O. Pickard-Cambridge, 1898		178.57
<i>Holothele</i> sp. Norte de Santander		200.00
<i>Holothele sanguiniceps</i>	150.00	215.00
<i>Hysteroocrates gigas</i> Pocock, 1897	550.00	260.69
<i>Iridopelma</i> sp. Recife		280.00
<i>Lampropelma nigerrimum</i> Simon, 1892	1330.00	254.00
<i>Lampropelma</i> sp. Borneo Black		280.00
<i>Lampropelma violaceopes</i> Abraham, 1924	468.18	289.67
<i>Lasiodora cristata</i> Mello-Leitão, 1923	200.00	
<i>Lasiodora difficilis</i> Mello-Leitão, 1921	450.00	191.38
<i>Lasiodora klugi</i> C. L. Koch, 1842	295.83	250.00
<i>Lasiodora parahybana</i> Mello-Leitão, 1917	220.00	554.00
<i>Megaphobema robustum</i> Ausserer, 1875	3000.00	3000.00
<i>Monocentropus balfouri</i> Pocock, 1897	675.00	362.17
<i>Nhandu carapoensis</i> Lucas, 1983	400.00	356.25
<i>Nhandu chromatus</i> Schmidt, 2004	300.00	94.17
<i>Nhandu coloratovillosus</i> Schmidt, 1998	350.00	
<i>Nhandu tripepii</i> Dresco, 1984	750.00	186.92
<i>Ormithoctonus aureotibialis</i> von Wirth & Striffler, 2005		550.00
<i>Orphnaecus</i> sp. Cebu	100.00	160.71
<i>Orphnaecus</i> sp. Marinduque purple	100.00	120.00

Trade names	Mean ± SD Price (R)	
	2015	2016
<i>Orphnaecus</i> sp. Panay blue	325.00	
<i>Orphnaecus</i> sp. Samar cave	150.00	120.00
<i>Pamphobeteus machala</i>	1600.00	1183.33
<i>Pamphobeteus platyomma</i>	1300.00	1428.57
<i>Pamphobeteus</i> sp. Machala	383.33	
<i>Pamphobeteus vespertinus</i> Simon, 1889	3150.00	
<i>Pelinobius muticus</i> Karsch, 1885	5000.00	1200.00
<i>Phormictopus cautus</i> Ausserer, 1875	500.00	285.71
<i>Phormictopus cancerides</i> Latreille, 1806	437.50	311.43
<i>Poecilotheria fasciata</i> Latreille, 1804	390.00	248.75
<i>Poecilotheria formosa</i> Pocock, 1899	307.69	160.00
<i>Poecilotheria metallica</i> Pocock, 1899	2500.00	465.63
<i>Poecilotheria miranda</i> Pocock, 1900	1000.00	800.00
<i>Poecilotheria ornata</i> Pocock, 1899	271.43	100.00
<i>Poecilotheria regalis</i> Pocock, 1899	341.67	320.00
<i>Poecilotheria rufilata</i> Pocock, 1899	275.00	
<i>Poecilotheria striata</i> Pocock, 1894	800.00	850.00
<i>Poecilotheria subfusca</i> Pocock, 1895	3000.00	700.00
<i>Poecilotheria tigrinawesseli</i> Smith, 2006	225.00	318.33
<i>Poecilotheria vittata</i> Pocock, 1895	1300.00	
<i>Psalmopoeus cambridgei</i> Pocock, 1895	178.27	275.00
<i>Psalmopoeus irminia</i> Saager, 1994	300.00	272.00
<i>Psalmopoeus pulcher</i> Petrunkevitch, 1925	166.67	260.00
<i>Psalmopoeus reduncus</i> Karsch, 1880	175.00	
<i>Sphaerobothria hoffmanni</i> Karsch, 1879		700.00
<i>Stromatopelma calceatm</i> Fabricius, 1793	625.00	332.50
<i>Tapinauchenius cupreus</i> Schmidt & Bauer, 1996	300.00	304.55
<i>Tapinauchenius gigas</i> Caporiacco, 1954	250.00	250.00
<i>Theraphosa apophysis</i> Tinter, 1991	6000.00	
<i>Theraphosa stirmi</i> Rudloff & Weinmann, 2010	7120.00	
<i>Thrixopelma ockerti</i> Schmidt, 1994	750.00	139.17

Table S6: The native distribution records of eight tarantula species in the South African pet trade. The country is the native country where species originates. The references are included at the end of the document.

Species name	Author	Country	Location	Localities		Reference
				Latitude	Longitude	
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Central Sur, Cedro, Frontera Echeverría, Chis	16.81372	-90.883766	Machkour-M'Rabet <i>et al.</i> 2011
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Belisario Domínguez 11, San Sebastián, 29910 Tila, Chis	17.302325	-92.423342	Machkour-M'Rabet <i>et al.</i> 2011
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Tercera Sur Pte. 1, Tumbalá, Frontera Echeverría, Chis	16.813723	-90.887179	Machkour-M'Rabet <i>et al.</i> 2011
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	José Gálvez Moya 25-41, La Martinica, 01620 Ciudad de México	19.360533	-99.226707	Machkour-M'Rabet <i>et al.</i> 2011
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Carr. a Salto del Agua, El Limar, Chis.	17.416295	-92.404817	Machkour-M'Rabet <i>et al.</i> 2011
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Unnamed Road, Quintana Roo	18.7	-88.25	Vilchis-Nestor <i>et al.</i> 2013
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Carr. a El Chico, Hidalgo, Mexico	20.181713	-98.747411	Vilchis-Nestor <i>et al.</i> 2013
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Caracolillo, Zoh-Laguna, Camp.	18.587538	-89.417908	Vilchis-Nestor <i>et al.</i> 2013
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Campeche Conhuas-Calakmul Zona Arqueológica, Campeche	18.116667	-89.766667	Arisqueta-Chablé <i>et al.</i> 2009
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Chetumal - Villahermosa, Torno Largo, Campeche	18.235867	-91.417421	Arisqueta-Chablé <i>et al.</i> 2009
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Calle 57 ^A 466A, Esperanza, 97169 Mérida, Yucatán	20.966667	-89.6	Arisqueta-Chablé <i>et al.</i> 2009
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Calle 29 145, Buenavista, 97127 Mérida, Yucatán	21	-89.616667	Arisqueta-Chablé <i>et al.</i> 2009
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Calle 57 ^B 651, Fraccionamiento del Parque, 97160 Del Parque, Yucatán	20.966667	-89.583333	Arisqueta-Chablé <i>et al.</i> 2009
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Calle 120 ^A 1028, México Poniente, 97246 Mérida, Yucatán	20.95	-89.666667	Arisqueta-Chablé <i>et al.</i> 2009
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Calle 25 ^c 225, Vergel II, 97173 Mérida, Yucatán	20.95	-89.583333	Arisqueta-Chablé <i>et al.</i> 2009
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Yucatán	21.083333	-89.616667	Arisqueta-Chablé <i>et al.</i> 2009
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Yucatán	20.85	-89.616667	Arisqueta-Chablé <i>et al.</i> 2009
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	YUC 18, Yucatán	20.333333	-89.416667	Arisqueta-Chablé <i>et al.</i> 2009
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Calle 43, Tzucacab, Yucatán	20.066667	-89.05	Arisqueta-Chablé <i>et al.</i> 2009
<i>Brachypelma vagans</i>	Ausserer, 1875	Mexico	Tanil - Ticimul, Itzincab Palomeque, Yuc.	20.883333	-89.716667	Arisqueta-Chablé <i>et al.</i> 2009

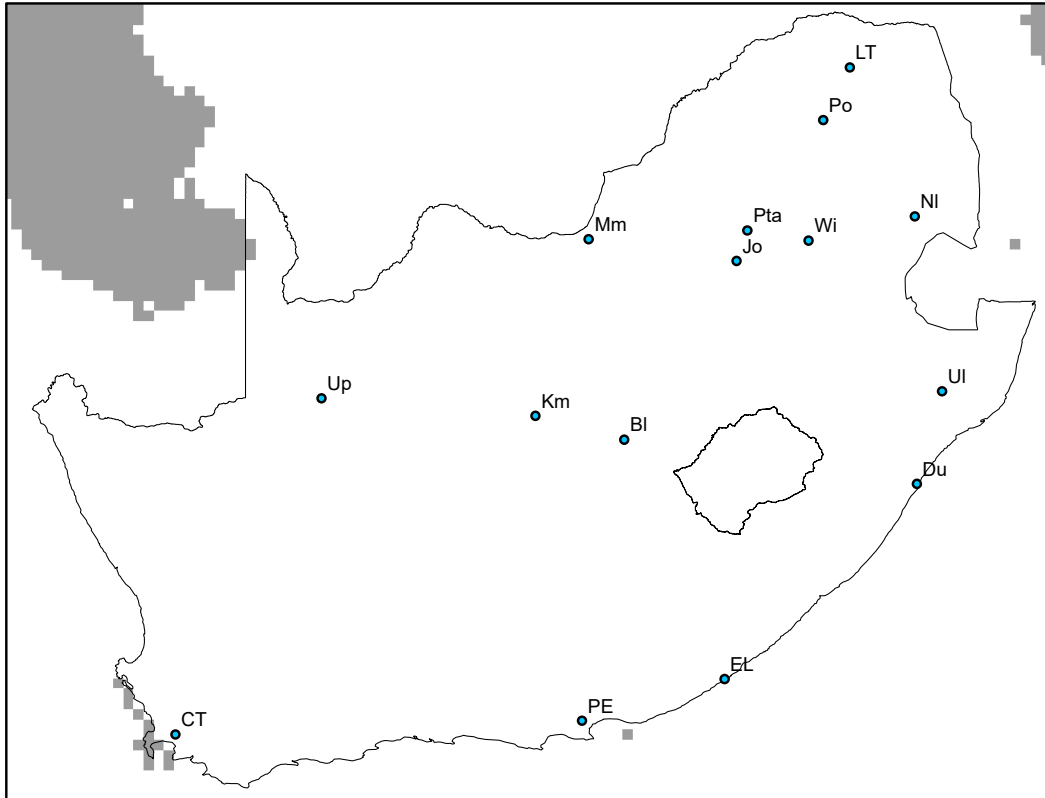


Figure S1: A map of potentially suitable regions for *Brachypelma vagans* in South Africa. Darker shades indicate greater climatic suitability and the blue dots are the major cities and towns in South Africa, each represented by abbreviation Th – Thohoyandou, LT – Louis Trichardt, PI – Polokwane, NI – Nelspruit, Wi – Witbank, Pta – Pretoria, Jo – Johannesburg, Mm – Mmabatho, UI – Ulundi, Du – Durban, Up – Upington, Km – Kimberly, BI – Bloemfontein, EL – East London, PE – Port Elizabeth, and CT – Cape Town.

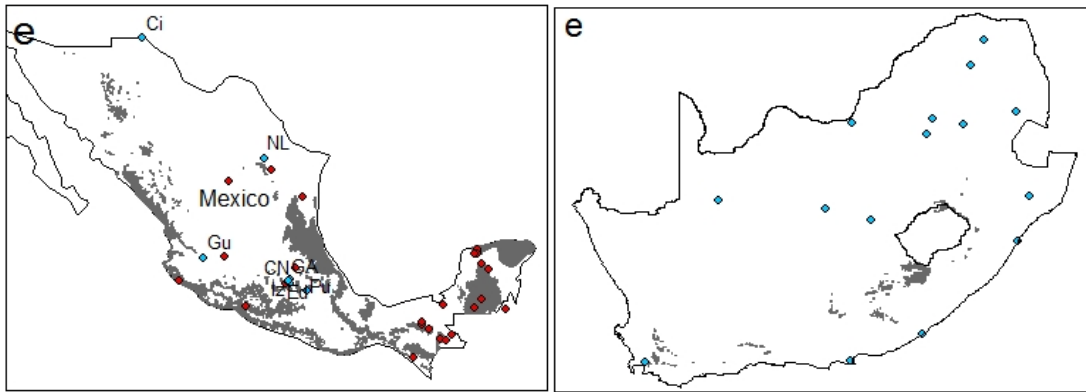


Figure S2: The world map of Metzger (Metzger *et al.* 2012), showing the native environmental classification of *Brachypelma vagans* in Mexico (a) matched to South Africa (b). The red dots represent presence native records, while grey shaded areas indicate the suitable areas and unshaded areas represent unsuitable areas. The blue dots are the major cities and town of each range showed in alphabet, a) Mexico: MC – Mexico City, Iz – Iztapalapa, Ed – Ecatepec de Morelos, Gu – Guadalajara, Pc – Puebla City, CJ – Ciudad Juárez, Ti – Tijuana, Ci – Ciudad, and Le – León.

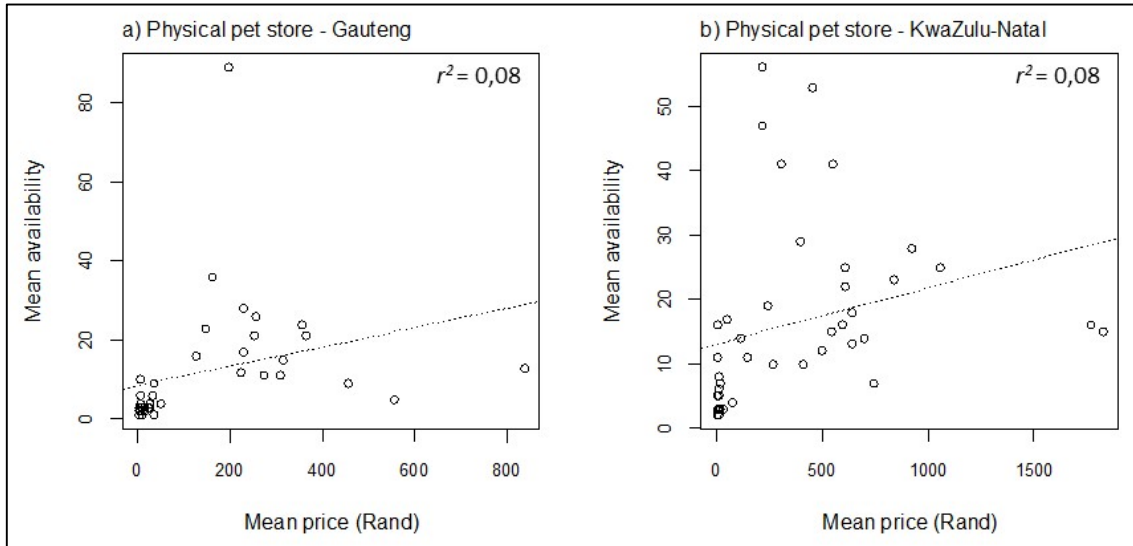


Figure S3: The relationship between mean tarantula species available and mean average price for species advertised from pet store visits in 2016; where a) represents physical pet stores in Gauteng province ($P = 0.08$), and b) pet store in KwaZulu-Natal province ($P = 0.07$). The black dotted line represents the regression line. The availability is the number of times that each species was advertised for sale in the pet trade.

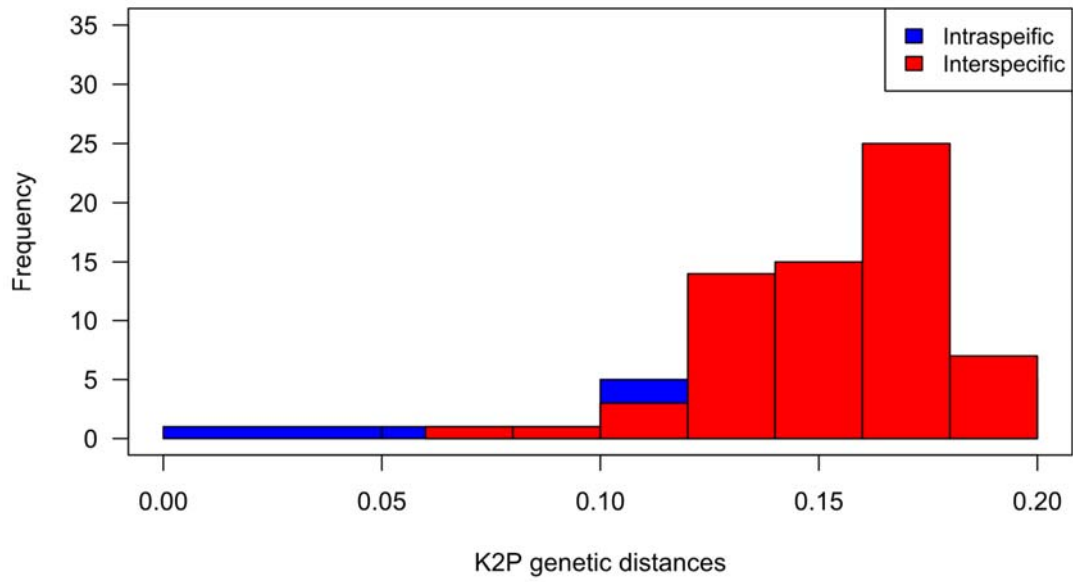


Figure S4: The frequency distributions of intraspecific and interspecific genetic distances from tarantula species CO1 sequences calculated using K2P model.

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