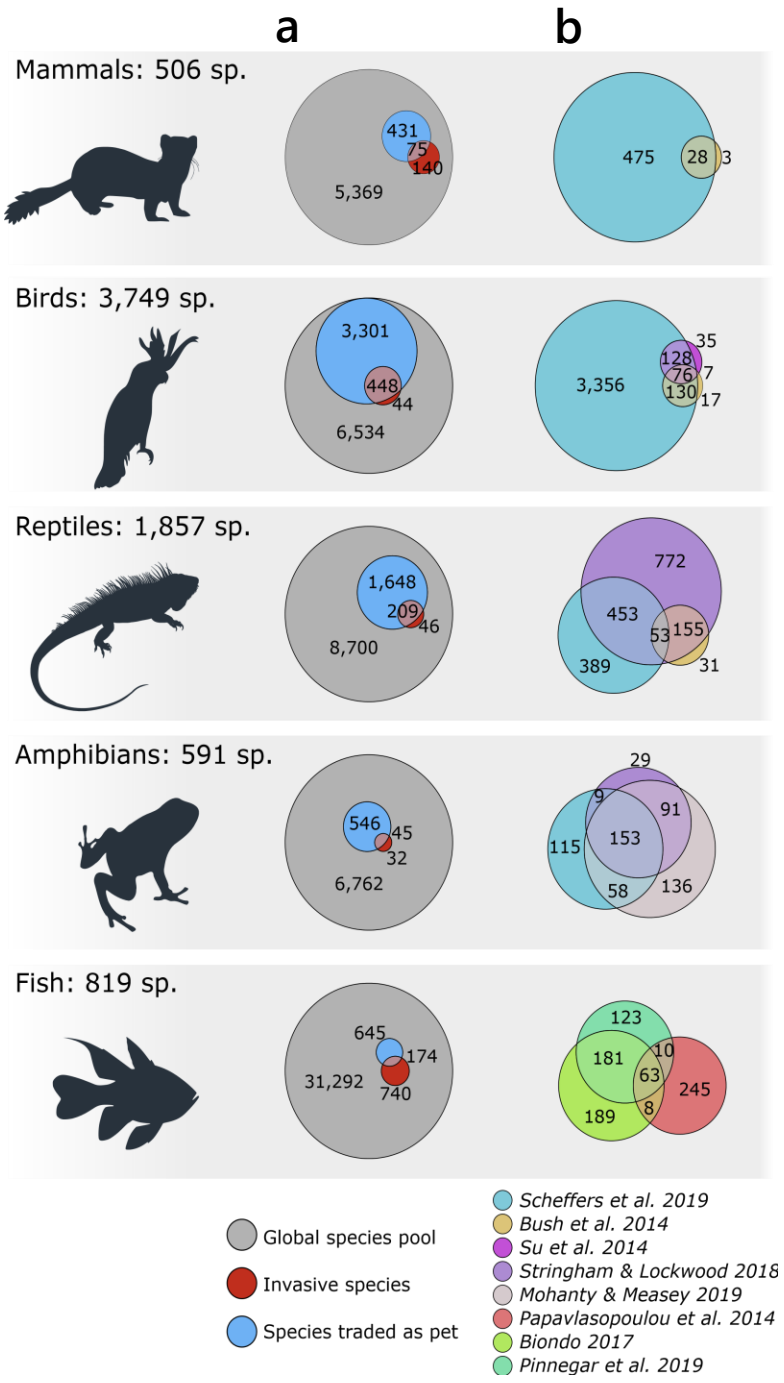

Figure S1. Euler diagram of the overlap between datasets used for studying the global pet trade. (A) Overlap between invasive and traded species, for each taxonomic group. **(B)** Overlap between the different pet trade datasets used, for each taxonomic group.

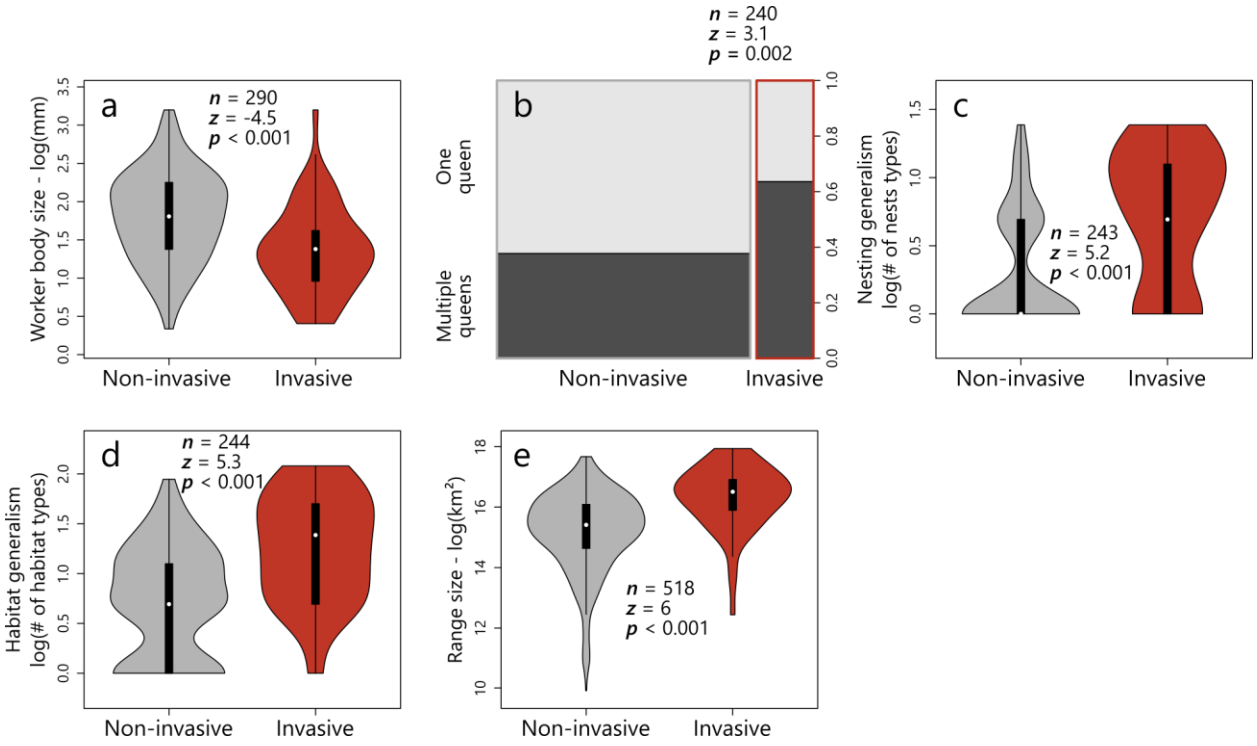

Figure S2. Characteristics of ants that are associated with invasiveness. We used univariate binomial GLMs to test the links between invasiveness and five ant species' characteristics: **(A)** worker body size, **(B)** Number of queens, **(C)** Nesting generalism, **(D)** Habitat generalism and **(E)** Range size. Sample size (*n*), tests' statistics (*z*) and p-values (*p*) are indicate in each panel. (**A**, **C**, **D**, **E)** Violin plots show the probability density of the data at different values (y axes). (**B**) Proportion (y axis; on the right) of monogynous (light grey) and polygynous (dark grey) species in non-invasive (*n* = 196) and invasive (*n* = 44) species. The width of the bars is relative to the number of species in each group.

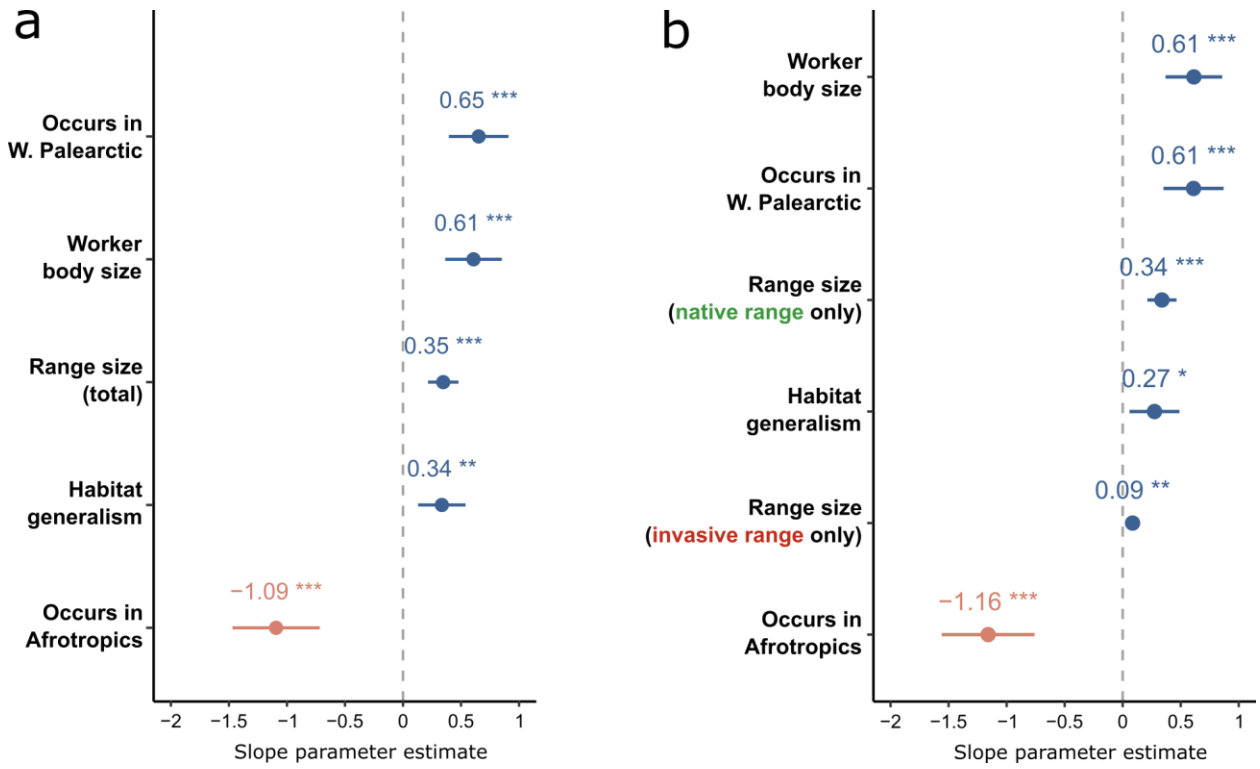

Figure S3. Predictors' estimates of the best-fitting model explaining ants' commercial success. For **(A)** the model considering the total range size (native and invasive parts of the range together) and **(B)** the model considering native and invasive parts of the range size as separate predictors. Dots represent mean estimates and associated lines 95% confidence intervals. Asterisks represent significant difference from 0 (***: P<0.001, **: P<0.01, *: P<0.05 and .:P<0.1).

Table S1. Invasive species overrepresentation in plants, vertebrates and ants traded as pets and ornamentals.

Traded taxon (Information source)	Number of species in global pool	Number of invasive species in global pool	Percent of global	Number of traded species	Number of traded invasive species	Percent of traded	Degree of overrepresent-ation	χ^2 test	Sources (global and traded species pools)
Plants (Global - Internet trade)	110,498	542	0.49	1,798	206	11.46	**23.4**	$\chi^2 = 4448.6$; $df = 1$ $P < 0.0001$	Humair et al. 2015
Marine and freshwater fish (Greece - Pet shops 2011)	32,851	914	2.78	326	119	36.50	**13.1**	$\chi^2 = 1370.5$; $df = 1$ $P < 0.0001$	www.fishbase.org Papavlasopoulou et al. 2014
Marine fish (Switzerland - Importations 2009)	13,778	261	1.89	408	56	13.73	**7.2**	$\chi^2 = 307.3$; $df = 1$ $P < 0.0001$	www.fishbase.org Biondo 2017
Marine fish (England - Aquarium shops 2011)				344	54	15.70	**8.3**	$\chi^2 = 352.7$; $df = 1$ $P < 0.0001$	www.fishbase.org Pinnegar & Murray 2019
Mammals (Global - CITES & IUCN)	6,015	215	3.57	503	75	14.91	**4.2**	$\chi^2 = 146.9$; $df = 1$ $P < 0.0001$	www.mammaldiversity.org Scheffers et al. 2019
Mammals (Global - CITES & litterature review 2006-2012)				31	8	25.81	**7.2**	$\chi^2 = 44.1$; $df = 1$ $P < 0.0001$	www.mammaldiversity.org Bush et al. 2014
Birds (Global - CITES & IUCN)	10,327	492	4.76	3,690	438	11.87	**2.5**	$\chi^2 = 410.6$; $df = 1$ $P < 0.0001$	www.birds.cornell.edu Scheffers et al. 2019
Birds (Global - CITES & litterature review 2006-2012)				230	81	35.22	**7.4**	$\chi^2 = 470.1$; $df = 1$ $P < 0.0001$	www.birds.cornell.edu Bush et al. 2014
Birds (Taiwan - Pet shops 2012)				246	70	28.46	**6.0**	$\chi^2 = 304.3$; $df = 1$ $P < 0.0001$	www.birds.cornell.edu Su et al. 2014
Reptiles (Global - CITES & IUCN)	10,603	255	2.40	899	86	9.57	**4.0**	$\chi^2 = 196.4$; $df = 1$ $P < 0.0001$	www.reptile-database.org Scheffers et al. 2019
Reptiles (Global - CITES & litterature review 2006-2012)				243	74	30.45	**12.7**	$\chi^2 = 814.4$; $df = 1$ $P < 0.0001$	www.reptile-database.org Bush et al. 2014
Reptiles (USA - LEMIS + internet trade)				1,433	196	13.68	**5.7**	$\chi^2 = 775.8$; $df = 1$ $P < 0.0001$	www.reptile-database.org Stringham & Lockwood 2018
Amphibians (Global - CITES & IUCN)	7,385	77	1.04	335	28	8.36	**8.0**	$\chi^2 = 173.8$; $df = 1$ $P < 0.0001$	www.amphibiaweb.org Scheffers et al. 2019
Amphibians (Global - Litterature review 1971-2018)				438	41	9.36	**9.0**	$\chi^2 = 293.7$; $df = 1$ $P < 0.0001$	www.amphibiaweb.org Mohanty & Measey 2019
Amphibians (USA - LEMIS + internet trade)				282	26	9.22	**8.8**	$\chi^2 = 182.8$; $df = 1$ $P < 0.0001$	www.amphibiaweb.org Stringham & Lockwood 2018
Ants (Global internet trade)	15,377	255	1.66	520	57	10.96	**6.6**	$\chi^2 = 276$; $df = 1$ $P < 0.0001$	www.antmaps.org This study

Table S2. Internet search for websites selling ants. Search expression used to detect websites on Google search.

Language	Search expressions					
English	**buy living ants**	**buy queen ant**	**buy ant colony**	**living ants for sale**	**queen ant for sale**	**ant colony for sale**
Arabic	شراء النمل المعيشة	شراء ملكة النمل	شراء مستعمرة النمل	النمل المعيشة للبيع	ملكة النمل للبيع	مستعمرة النمل للبيع
Chinese (simplified)	买活蚂蚁	购买蚁后	购买蚁群	出售活蚂蚁	蚁后出售	蚂蚁殖民地出售
Dutch	koop levende mieren	koop koningin mier	koop mierenkolonie	levende mieren te koop	koningin mier te koop	mierenkolonie te koop
Finnish	ostaa eläviä muurahaisia	osta kuningatar muurahainen	osta muurahaiskolonia	eläviä muurahaisia myytävänä	kuningatar muurahainen myytävänä	ant kolonia myytävänä
French	acheter fourmis vivantes	acheter reine de fourmi	acheter colonie de fourmis	fourmis vivantes à vendre	reine de fourmi à vendre	colonie de fourmis à vendre
German	kaufen Sie lebende Ameisen	kaufen Sie Königin Ameise	ameisenkolonie kaufen	lebende Ameisen zu verkaufen	königin Ameise zu verkaufen	ameisenkolonie zu verkaufen
Hindi	जीवित चींटियों को खरीदें	रानी चींटी खरीदें	चींटी कॉलोनी खरीदें	बिक्री के लिए जीवित चींटियों	बिक्री के लिए रानी चींटी	बिक्री के लिए चींटी कॉलोनी
Italian	Compra le formiche viventi	acquista formica regina	acquista una colonia di formiche	formiche vive in vendita	Formica regina in vendita	colonia di formiche in vendita
Japanese	生きているアリを買う	女王アリを買う	アリのコロニーを購入する	生きているアリ	女王アリ	アリのコロニー販売
Korean	살아있는 개미를 사다	여왕 개미를 사다	개미 식민지 구매	살아있는 개미 판매	여왕 개미 판매	개미 식민지 판매
Malay	membeli semut hidup	beli semut ratu	beli koloni semut	semut hidup untuk dijual	semut ratu untuk dijual	koloni semut untuk dijual
Persian	مورچه های زنده بخرید	مورچه ملکه را بخرید	کلونی مورچه را بخرید	مورچه های زندگی برای فروش	مورچه ملکه برای فروش	مستعمره مورچه برای فروش
Polish	kup żywe mrówki	kup królową mrówkę	kup kolonię mrówek	żywe mrówki na sprzedaż	królowa mrówek na sprzedaż	kolonia mrówek na sprzedaż
Portuguese	comprar formigas vivas	comprar formiga rainha	comprar colônia de formigas	formigas vivas à venda	formiga rainha para venda	colônia de formigas à venda
Russian	купить живых муравьев	купить королеву муравьев	купить муравьиную колонию	живые муравьи на продажу	королева муравьев для продажи	колония муравьев для продажи
Spanish	comprar hormigas vivas	comprar reina de hormiga	comprar colonia de hormigas	hormigas vivas en venta	reina de hormigas en venta	colonia de hormigas en venta
Swedish	köpa levande myror	köp drottning myr	köp myrkoloni	levande myror till salu	drottningsmyr till salu	myrkoloni till salu
Turkish	canlı karıncalar satın al	kraliçe karınca satın al	karınca kolonisi satın Alın	satılık yaşayan karıncalar	satılık kraliçe karınca	satılık karınca kolonisi
Vietnamese	mua kiến sống	mua kiến chúa	mua đàn kiến	kiến sống để bán	kiến chúa để bán	bán kiến

Table S3. List of the 65 websites selling ant colonies detected in 2017. Each website corresponds to one seller, except for one (www.antcanada.com) which is a platform were ant sellers can register and propose ants for sale. This website corresponded, at the time of the survey, to 45 sellers (we considered one seller by country or states for North America). The internet archive tool Webarchive (http://web.archive.org/) can be used to visit past version of the websites.

Website	Country	Year of first activity	Number of species sold
http://hormigalia.com	Spain	2002	5
www.antstore.net	Germany	2003	338
http://www.ant-home.idv.tw/888/shopping/shopping-Product/shopping-p-ant/shopping-p-a16.htm	Taiwan	2006	13
www.fourmis.fr	France	2006	4
www.bugdesign.com.ua/ant-colonies/	Ukraine	2006	12
www.ants-kalytta.com	Germany	2007	119
www.ongewoonongewerveld.nl	Netherlands	2008	3
www.antshop.ru	Russia	2008	9
www.anthouse.es	Spain	2008	10
http://arinko-spot.com/SHOP/16561/list.html	Japan	2010	3
www.fourmishome.fr	France	2010	55
http://fourmis-boutique.fr	France	2010	31
www.world-of-ants.com	Germany	2010	239
www.mierenboerderij.nl	Netherlands	2010	4
www.antscanada.com	Canada	2010	149
http://antroom.cart.fc2.com	Japan	2011	19
http://antsuk.com	UK	2011	6
www.antsfromasia.com	UK	2011	12
www.fourmis-city.com	France	2012	24
www.antdealer.com	Germany	2012	45
www.mrowkoyad.pl	Poland	2012	22
www.tropicalhouse.co.uk	UK	2012	2
www.tropicalhouse.co.uk	UK	2012	2
www.empireofants.com/onlineshop/	Taiwan	2013	21
https://myants.de	Germany	2013	22
http://antplanet.ru	Russia	2013	20
http://petsfunny.ru/nasekomye/muravi/	Russia	2013	25
http://昆虫-アリの飼育-販売のアントファーム.com/html/ari_itiran.html	Japan	2013	2
https://murashdom.ru	Russia	2014	18
https://antkit.uk	UK	2014	3
www.microfaune.com	France	2015	8
www.exotic-ants.de	Germany	2015	18
www.simants.de	Germany	2015	3
www.britishants.com	UK	2015	25
http://antcity.in.ua/collection/muravi	Ukraine	2015	4
https://planetexotic.ru/zhivotnye/muravi/	Russia	2015	13
www.surungenpazari.com/AltKategoriler.aspx?id=152	Turkey	2015	2
www.ants-squadshop.com	Taiwan	2016	28
www.gamergate.com.au	Australia	2016	25
www.mierenspecialist.nl	Netherlands	2016	14
http://4ants.ru/collection/muravi	Russia	2016	3
www.antskingdom.com	UK	2016	3
www.antkeeping.co.uk	UK	2016	2
www.leafcuttingants.com	UK	2016	1
https://antshome.at	Austria	2016	11
www.antworldafrica.com	South Africa	2017	4
http://antmalaysia.wixsite.com/mysite	Malaysia	2017	5
http://antshungary.com	Hungary	2017	26
www.antnederland.nl	Netherlands	2017	2
www.mundhormiga.com	Spain	2017	8
www.ameisenshop.ch	Switzerland	2017	3
www.ameisenhaltung.ch	Switzerland	2017	18
www.antsmynala.co.uk	UK	2017	38
www.antsrus.com	UK	2017	13
www.occultusants.com	UK	2017	2
http://117colonies.com	USA	2017	10
https://ausants.com	Australia	2017	15
https://hailesaquariums.com	Australia	2017	3
www.mondoformiche.it	Italia	2017	17
www.antnederland.nl	Netherlands	2017	2
www.antzforall.co.uk	UK	2017	2
https://aimayi.world.taobao.com/category-951704253.htm?spm=a312a.7700824.w4010-9325627583.8.4b83bbd9Iz0KqE&search=y&catName=%BE%AB%C6%B7%C2%EC%D2%CF#bd	China	na	52
https://antssingapore.wixsite.com/ants	Singapore	na	3
www.antmate.com.au	Australia	na	7
www.antcenter.pl	Poland	na	18

Table S4. The geography of the global ant trade. Contingency table representing the number of species from each ecozone (i.e. assuming that species were harvested in their native range) traded by sellers from each ecozone. Values correspond to Fig. 2.

		Species Native range							Number of sellers
		Af	**Au**	**In**	**Nea**	**Neo**	**EPa**	**WPa**	
Sellers location	**Af**	4	0	0	0	0	0	0	1
	Au	0	31	0	0	0	0	0	6
	In	10	8	72	8	12	6	14	11
	Nea	0	1	2	64	3	2	3	28
	Neo	0	0	0	0	5	0	0	2
	EPa	0	3	5	0	0	14	0	3
	WPa	18	33	72	30	85	47	132	58

Table S5. Parameter estimates and statistics for the best-fitting model. **(A)** When the model is fitted with the total range size (native + invasive). **(B)** When the model is fitted using native and invasive range size as two separate variables.

a	**Predictor**	**Slope ± s.e.**	**z value**	***P***	
	Intercept	-5.7 ± 1.10	-5.18	<0.0001	***
Possible geographical origin	Occurs in W. Palearctic	0.65 ± 0.13	4.98	<0.0001	***
	Occurs in Afrotropics	-1.09 ± 0.19	-5.69	<0.0001	***
Traits link to invasiveness	Range size (native + invasive)	0.34 ± 0.07	5.18	<0.0001	***
	Worker body size	0.61 ± 0.13	4.89	<0.0001	***
	Habitat generalism	0.33 ± 0.10	3.21	0.001	**

b	**Predictor**	**Slope ± s.e.**	**z value**	***P***	
	Intercept	-6.33 ± 1.13	-5.63	<0.0001	***
Possible geographical origin	Occurs in W. Palearctic	0.61 ± 0.13	4.61	<0.0001	***
	Occurs in Afrotropics	-1.16 ± 0.20	-5.68	<0.0001	***
Traits link to invasiveness	Native range size	0.34 ± 0.06	5.27	<0.0001	***
	Invasive range size	0.09 ± 0.03	2.74	0.006	**
	Worker body size	0.61 ± 0.13	4.92	<0.0001	***
	Habitat generalism	0.27 ± 0.11	2.5	0.013	*