

Supplementary materials

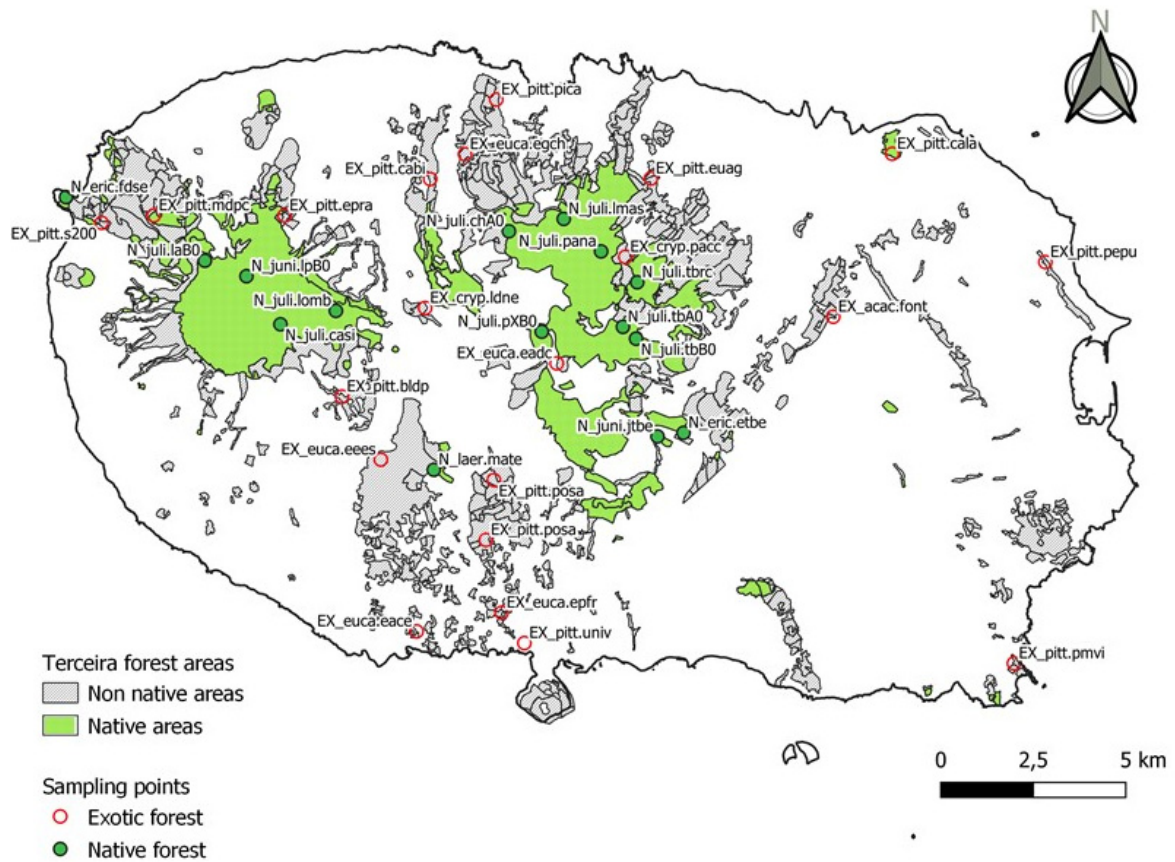


Figure S1.

Map of study area

Sites Ex_pitt.Cala and Ex_pitt.mdpc were originally native forest fragments but are now invaded by *Pittosporum*

Table S1

Sampling sites in native and exotic forests of Terceira island. The dominant trees species is indicated.

Type of forest	Dominant trees	Name of sampling sites	Abbreviation name of sampling sites
Native forest	<i>-Erica azorica</i>	Farol da Serreta	N_eric.fdse
	Hochst. ex Seub. (Family: Ericaceae)	Erical Trilho Bestas	N_eric.etbe
	<i>-Juniperus</i>	Caldeira St. Barbara – Silvia	N_juli.casi
	<i>brevifolia</i>	Chambre A	N_juli.chA0
	(Hochst. ex	Lagoinha B	N_juli.laB0
	Seub.) Antoine	Labaçal -Morro Assombrado	N_juli.lmas
	subsp. <i>brevifolia</i>	Lomba	N_juli.lomb
	(Family:	Pico Alto Nascente	N_juli.pana
	Cupressaceae)	Pico X B	N_juli.pXB0
	<i>Laurus azorica</i>	Terra Brava -A	N_juli.tbA0
	(Seub.) Franco	Terra Brava -B	N_juli.tbB0
	(Family:	Terra-Brava Rocha Cedrorum	N_juli.tbrc
	Lauraceae)		
	<i>Ilex azorica</i> Gand. (Family: Aquifoliace)		
Exotic forest	<i>-Juniperus</i>	Juniperal Trilho Bestas	N_juni.jtbe
	<i>brevifolia</i>	Lagoa Pinheiro B	N_juni.lpB0
	(Hochst. ex		
	Seub.) Antoine		
	subsp. <i>brevifolia</i>		
	(Family:		
	Cupressaceae)		
	<i>-Erica azorica</i>	Matela 1	N_laer.mate
	Hochst. ex Seub. (Family: Ericaceae)		
	<i>Laurus azorica</i>		
	(Seub.) Franco		
	(Family: Lauraceae)		
	<i>-Acacia</i>	Fontinhas 1	EX_acac.font
	<i>melanoxylon</i> R.Br. (Family: Fabaceae)		
Exotic forest	<i>-Cryptomeria</i>	Lagoa do Negro	EX_cryp.ldne
	<i>japonica</i> D.Don	Pico Alto	EX_cryp.pacc
	(Family: Cupressaceae)		
	<i>-Eucalyptus</i>	Canada Entre Picos – S. Mateus	EX_euca.eace
	<i>globulus</i> Labill.	Eucaliptal Algar do Carvão	EX_euca.eadc
	(Family:	Escampadoro	EX_euca.eees
	Myrtaceae)	Gruta Chocolate	EX_euca.egch
		Ermida Penha de França	EX_euca.epfr

- <i>Pittosporum</i> <i>undulatum</i> Vent. (Family: Pittosporaceae)	Betulas_Lagoa das Patas	EX_pitt.bldp
	Caparica - Biscoitos	EX_pitt.cabi
	Caldeira Lajes	EX_pitt.cala
	Pico Rachado_Altares	EX_pitt.epra
	Agualva	EX_pitt.euag
	Mirador do Pico Carneiro	EX_pitt.mdpc
	Mata Estado - Veredas	EX_pitt.meve
	Pizza-UT – Praia da Vitória	EX_pitt.pepu
	Carpintaria dos Biscoitos	EX_pitt.pica
	Maria Vieira – Porto Judeu	EX_pitt.pmvi
	Posto Santo	EX_pitt.posa
	Serreta 200m	EX_pitt.s200
	Universidade Campus - Pico da Urze	EX_pitt.univ

Table S2

Abundance differences (mean number) of endemic species from four taxonomic groups in Azorean native and exotic forests. The differences between habitats were assessed using Wilcoxon test. Wilcoxon test estimates (W) and p-values are indicated with significant differences in bold.

	Native forest	Exotic forest	W	P-value
Araneae				
<i>Acorigone acoreensis</i> (Wunderlich, 1992)	5.12	2.00	55.00	0.05
<i>Canariphantes acoreensis</i> (Wunderlich, 1992)		1.00		
<i>Emblyna acoreensis</i> Wunderlich, 1992	1.00	2.00	106.00	0.49
<i>Gibbaranea occidentalis</i> Wunderlich, 1989	5.90	6.20	70.50	0.22
<i>Lasaeola oceanica</i> Simon, 1883	1.00	1.00	92.00	0.67
<i>Minicia floresensis</i> Wunderlich, 1992	1.00			
<i>Neon acoreensis</i> Wunderlich, 2008	1.00	1.00	92.00	0.67
<i>Pisaura acoreensis</i> Wunderlich, 1992	1.90	12.00	77.5	0.33
<i>Porrhomma borgesii</i> Wunderlich, 2008	1.00			
<i>Rugathodes acoreensis</i> Wunderlich, 1992	12.89	7.25	41.00	0.01
<i>Sancus acoreensis</i> (Wunderlich, 1992)	2.43	1.67	77.50	0.28
<i>Savigniorhipis acoreensis</i> Wunderlich, 1992	9.54	32.6	56.00	0.05
<i>Walckenaeria grandis</i> (Wunderlich, 1992)	4.67			
Coleoptera				
<i>Notothecta dryochares</i> (Israelson, 1985)	3.00	1.00	43.00	0.01
<i>Athous azoricus</i> Platia & Gudenzi, 2002		7.00		
<i>Atlantocis gillerforsi</i> Israelson, 1985	2.50			
<i>Calacalles subcarinatus</i> (Israelson, 1984)	4.37	9.33	64.00	0.40
<i>Crotchiella brachyptera</i> Israelson, 1985	1.00			
<i>Drouetius borgesii borgesii</i> (Machado, 2009)	2.67	4.00	62.00	0.14
<i>Euconnus azoricus</i> Franz, 1969		1.00		
<i>Heteroderes azoricus</i> (Tarnier, 1860)	1.00	5.00	104.00	0.11
<i>Hydroporus guernei</i> Régimbart, 1891	2.00			
<i>Metophthalmus occidentalis</i> Israelson, 1984		15.00		
<i>Phloeosinus gillerforsi</i> Bright, 1987	1.00			
Hemiptera				
<i>Aphrodes hamiltoni</i> Quartau & Borges, 2003	1.00	4.00	134.00	0.97
<i>Cixius azoterceirae</i> Remane & Asche, 1979	91.48	32.95	42.00	<0.001
<i>Eupteryx azorica</i> Ribaut, 1941	5.14	8.22	149.50	0.59
<i>Nysius atlantidum</i> Horváth, 1890	2.00	1.00	140.00	0.74
<i>Pinalitus oromii</i> J. Ribes 1992	5.29	2.00	29.00	<0.001
<i>Strophingia harteni</i> Hodkinson, 1981	36.18	15.58	99.00	0.15
Psocoptera				
<i>Elipsocus azoricus</i> Meinander, 1975	24.57	18.85	175.00	0.05
<i>Elipsocus brincki</i> Badonnel, 1963	23.50	29.85	87.50	0.17

Table S3

Abundance differences (mean number) of native non-endemic species from four taxonomic groups in Azorean native and exotic forests. The differences between habitats were assessed using Wilcoxon test. Wilcoxon test estimates (W) and p-values are indicated with significant differences in bold.

	Native forest	Exotic forest	W	P-value
Araneae				
<i>Lathys dentichelis</i> (Simon, 1883)	4.87	1.83		
<i>Macaroeris cata</i> (Blackwall, 1867)	7.71	2.33	43.5	<0.001
<i>Macaroeris diligens</i> (Blackwall, 1867)		3.4		
<i>Microlinyphia johnsoni</i> (Blackwall, 1859)	2.86	31.73	178.5	0.19
<i>Palliduphantes schmitzi</i> (Kulczynski, 1899)	2	1	147	0.78
<i>Porrhoclubiona decora</i> (Blackwall, 1859)	1.5	11.92	231	<0.001
<i>Tenuiphantes miguelensis</i> (Wunderlich, 1992)	4	7.5	139.5	0.88
<i>Theridion musivivum</i> Schmidt, 1956	1	1.6	171	0.14
<i>Xysticus cor</i> Canestrini, 1873	1.33			
Coleoptera				
<i>Aloconota sulcifrons</i> (Stephens, 1832)	5	3	203.5	0.01
<i>Anaspis proteus</i> Wollaston, 1854	6.42	15.75	166	0.37
<i>Aspidapion radiolus</i> (Marshall, 1802)	1	1.25	158.5	0.31
<i>Astenus lyonessius</i> (Joy, 1908)		1		
<i>Attalus lusitanicus lusitanicus</i> Erichson, 1840		2		
<i>Carpelimus corticinus</i> (Gravenhorst, 1806)		2		
<i>Catops coracinus</i> Kellner, 1846	2.43	8.38	134.5	0.84
<i>Dryops algiricus</i> (Lucas, 1846)		2		
<i>Dryops luridus</i> (Erichson, 1847)		9		
<i>Hirticollis quadriguttatus</i> (Rossi, 1792)		3.6		
<i>Kalcapion semivittatum</i> (Gyllenhal, 1833)	1	2.7	202	0.01
<i>Microlestes negrita negrita</i> (Wollaston, 1854)	1			
<i>Ocypus aethiops</i> (Waltl, 1835)		1		
<i>Oligota pumilio</i> Kiesenwetter, 1858		1.25		
<i>Phloeonomus punctipennis</i> Thomson, 1867		1		
<i>Proteinus atomarius</i> Erichson, 1840	2.5	2	133.5	0.71
<i>Pseudophloeophagus truncorum</i> (Stephens, 1831)	3			
<i>Pseudophloeophagus tenax</i> Wollaston, 1854	7.21	19.18	124	0.58
<i>Pseudoplectus perplexus</i> (Jacquelin du Val, 1854)	1			
<i>Psylliodes marcida</i> (Illiger, 1807)	1	3	137.5	0.86
<i>Rhopalomesites tardyi</i> (Curtis, 1825)		4		
<i>Rhyzobius litura</i> (Fabricius, 1787)		1		
<i>Rugilus orbiculatus</i> (Paykull, 1789)		1		

<i>Sepedophilus lusitanicus</i> Hammond, 1973		1			
<i>Stenolophus teutonus</i> (Schränk, 1781)	1	1	127	0.37	
<i>Stethorus pusillus</i> (Herbst, 1797)		4			
<i>Stilbus testaceus</i> (Panzer, 1797)	1	3	166.5	0.17	
Hemiptera					
<i>Anthocoris nemoralis</i> (Fabricius, 1794)		1			
<i>Aphanus rolandri</i> (Linnaeus, 1758)		1			
<i>Brachysteles parvicornis</i> (A. Costa, 1847)		2			
<i>Campyloneura virgula</i> (Herrich-Schaeffer, 1835)	1	13	219	0.01	
<i>Cinara juniperi</i> (De Geer, 1773)	28.06	24.5	41.5	<0.001	
<i>Cyphopterum adscendens</i> (Herrich-Schäffer 1835)	52.3	68.22	123.5	0.39	
<i>Emblethis denticollis</i> Horváth, 1878		1			
<i>Eremocoris maderensis</i> (Wollaston, 1858)		1			
<i>Eupteryx filicum</i> (Newman, 1853)		4.88			
<i>Euscelidius variegatus</i> (Kirschbaum, 1858)		1			
<i>Geotomus punctulatus</i> (A. Costa, 1847)	1				
<i>Heterotoma planicornis</i> (Pallas, 1772)	1				
<i>Kelisia ribauti</i> Wagner, 1938	3.67	1.57	172	0.37	
<i>Kleidocerys ericae</i> (Horváth, 1909)	112.43	17.17	135	0.54	
<i>Loricula elegantula</i> (Bärensprung, 1858)	7	6.75	218	0.01	
<i>Megamelodes quadrimaculatus</i> (Signoret, 1865)	2				
<i>Monalocoris filicis</i> (Linnaeus, 1758)	6	9.44	184	0.19	
<i>Nabis pseudoferus ibericus</i> Remane 1962	2.17	1	103	0.03	
<i>Orius laevigatus laevigatus</i> (Fieber, 1860)	1	1.25	170.5	0.27	
<i>Piezodorus lituratus</i> (Fabricius, 1794)		2.33			
<i>Pilophorus confusus</i> (Kirschbaum, 1856)	6	2.17	182	0.13	
<i>Pilophorus perplexus</i> Douglas & Scott, 1875	3	1	147	0.84	
<i>Plinthisus brevipennis</i> (Latreille, 1807)	62				
<i>Plinthisus minutissimus</i> Fieber, 1865	1				
<i>Saldula palustris</i> (Douglas, 1874)		1			
<i>Scolopostethus decoratus</i> (Hahn, 1833)	2	3	148	0.90	
<i>Trioza laurisilvae</i> Hodkinson, 1990	8.71	5.63	82.5	0.02	
Psocoptera					
<i>Atlantopsocus adustus</i> (Hagen, 1865)	6.80	4.77	198.5	0.06	
<i>Bertkauia lucifuga</i> (Rambur, 1842)	7	2.86	162	0.54	
<i>Ectopsocus strauchi</i> Enderlein, 1906	2	3.67	169.5	0.31	
<i>Trichopsocus clarus</i> (Banks, 1908)	6.45	30.25	250	<0.001	
<i>Valenzuela burmeisteri</i> (Brauer, 1876)	2.33	12.85	201.5	0.04	
<i>Valenzuela flavidus</i> (Stephens, 1836)	7.79	32.90	205	0.053	

Table S4

Abundance differences (mean number) of introduced species from four taxonomic groups in Azorean native and exotic forests. The differences between habitats were assessed using Wilcoxon test. Wilcoxon test estimates (W) and p-values are indicated with significant differences in bold.

	Native forest	Exotic forest	W	P-value
Araneae				
<i>Agyneta decora</i> (O. Pickard-Cambridge, 1871)	1			
<i>Agyneta fuscipalpa</i> (C. L. Koch, 1836)		2.75		
<i>Araneus angulatus</i> Clerck, 1757		1		
<i>Cheiracanthium erraticum</i> (Walckenaer, 1802)	1	1	122	0.31
<i>Cheiracanthium mildei</i> L. Koch, 1864	4.5	4.75	142	0.79
<i>Clubiona terrestris</i> Westring, 1851		3		
<i>Cryptachaea blattea</i> (Urquhart, 1886)		20.4		
<i>Dysdera crocata</i> C. L. Koch, 1838	3.11	5.67	141.5	0.87
<i>Erigone atra</i> Blackwall, 1833	1			
<i>Erigone autumnalis</i> Emerton, 1882		3		
<i>Erigone dentipalpis</i> (Wider, 1834)		2		
<i>Ero furcata</i> (Villers, 1789)	4	2.25	73	0.01
<i>Mangora acalypha</i> (Walckenaer, 1802)	1			
<i>Marinarozelotes lyonneti</i> (Audouin, 1826)		1		
<i>Metellina merianae</i> (Scopoli, 1763)		4		
<i>Neriere clathrata</i> (Sundevall, 1830)		1		
<i>Nigma puella</i> (Simon, 1870)		1.5		
<i>Oecobius navus</i> Blackwall, 1859		6.5		
<i>Oedothorax fuscus</i> (Blackwall, 1834)	2	1.33	134	0.91
<i>Pelecopsis parallela</i> (Wider, 1834)		1		
<i>Porrhoclubiona genevensis</i> (L. Koch, 1866)	3	6.57	156.5	0.35
<i>Prinerigone vagans</i> (Audouin, 1826)		1		
<i>Salticus mutabilis</i> Lucas, 1846		3		
<i>Segestria florentina</i> (Rossi, 1790)		3.33		
<i>Steatoda grossa</i> (C. L. Koch, 1838)		1		
<i>Steatoda nobilis</i> (Thorell, 1875)		1.83		
<i>Tegenaria pagana</i> C. L. Koch, 1842		59		
<i>Tenuiphantes tenuis</i> (Blackwall, 1852)	5.3	18.65	172	0.21
<i>Textrix caudata</i> L. Koch, 1872		1.75		
<i>Zygiella x-notata</i> (Clerck, 1757)		2		
Coleoptera				
<i>Aleochara bipustulata</i> (Linnaeus, 1760)	1.29	1.6	121.5	0.87
<i>Amischa analis</i> (Gravenhorst, 1802)	1	1	121.5	0.72
<i>Anisodactylus binotatus</i> (Fabricius, 1787)	1			
<i>Anobium punctatum</i> (De Geer, 1774)	1	9.75	167	0.05
<i>Atheta aeneicollis</i> (Sharp, 1869)	2	1.43	125.5	1.00
<i>Atheta fungi</i> (Gravenhorst, 1806)	1.5	59.17	146	0.33
<i>Brassicogethes aeneus</i> (Fabricius, 1775)		1		
<i>Calymmaderus solidus</i> (Kiesenwetter, 1877)		1		
<i>Carcinops pumilio</i> (Erichson, 1834)		1		
<i>Carpophilus fumatus</i> Boheman, 1851		1		

<i>Cartodere bifasciata</i> (Reitter, 1877)		7		
<i>Cartodere nodifer</i> (Westwood, 1839)		2.67		
<i>Cercyon haemorrhoidalis</i> (Fabricius, 1775)		1.67		
<i>Chaetocnema hortensis</i> (Fourcroy, 1785)		1.33		
<i>Clitostethus arcuatus</i> (Rossi, 1794)		1		
<i>Coccotrypes carpophagus</i> (Hornung, 1842)		1.4		
<i>Coelositona puberulus</i> (Reitter, 1903)	2	1	121	0.68
<i>Coproporus pulchellus</i> (Erichson, 1839)	1	2.5	128.5	0.88
<i>Cordalia obscura</i> (Gravenhorst, 1802)	1	1	121.5	0.72
<i>Cryptophagus cellaris</i> (Scopoli, 1763)		1		
<i>Dromius meridionalis</i> Dejean, 1825	5	1.57	154	0.17
<i>Epitrix cucumeris</i> (Harris, 1851)	1	1.5	140.5	0.40
<i>Epitrix hirtipennis</i> (Melsheimer, 1847)		1.33		
<i>Gonipterus platensis</i> (Marelli, 1926)		11.75		
<i>Gyrophypnus fracticornis</i> (Müller, 1776)	1	1	121.5	0.72
<i>Heteroderes vagus</i> Candèze, 1893		1		
<i>Litargus balteatus</i> LeConte, 1856		3		
<i>Longitarsus kutscherai</i> (Rye, 1872)		1		
<i>Mecinus pascuorum</i> (Gyllenhal, 1813)	1	3.2	148	0.23
<i>Naupactus cervinus</i> (Boheman, 1840)		12.5		
<i>Otiorhynchus cribricollis</i> Gyllenhal, 1834		4.75		
<i>Otiorhynchus rugosostriatus</i> (Goeze, 1777)		1		
<i>Phenolia limbata tibialis</i> (Boheman, 1851)		1		
<i>Popillia japonica</i> Newman, 1838	1	1.25	140	0.42
<i>Ptenidium pusillum</i> (Gyllenhal, 1808)	1	1.5	128	0.91
<i>Rhyzobius lophanthae</i> (Blaisdell, 1892)		1		
<i>Rodolia cardinalis</i> (Mulsant, 1850)	1	1.5	128	0.91
<i>Sericoderus lateral</i> (Gyllenhal, 1827)	11	6.92	183.5	0.02
<i>Sitona discoideus</i> Gyllenhal, 1834		1.43		
<i>Sphenophorus abbreviatus</i> (Fabricius, 1787)	4			
<i>Stelidota geminata</i> (Say, 1825)		4.75		
<i>Tachyporus chrysomelinus</i> (Linnaeus, 1758)	1	2.33	172.5	0.03
<i>Tachyporus nitidulus</i> (Fabricius, 1781)	4.38	3.82	120	0.83
<i>Trichiusa immigrata</i> Lohse, 1984		1		
<i>Typhaea stercorea</i> (Linnaeus, 1758)		1		
<i>Xantholinus longiventris</i> Heer, 1839	1			
<i>Xyleborinus alni</i> Nijima, 1909		2		
Hemiptera				
<i>Acizzia uncatoides</i> (Ferris & Klyver, 1932)	1	19.13	50	0.23
<i>Buchananiella continua</i> (White, 1880)		1		
<i>Empicoris rubromaculatus</i> (Blackburn, 1889)		1		
<i>Siphanta acuta</i> (Walker, 1851)		15.11		
<i>Sophonia orientalis</i> (Matsumura, 1912)		4		
<i>Taylorilygus apicalis</i> (Fieber, 1861)		1		
Psocoptera				
<i>Ectopsocus brigg</i> si McLachlan, 1899	3.82	14.79	170.5	<0.01