Fig. S1: Overview of methodology for the systematic review.

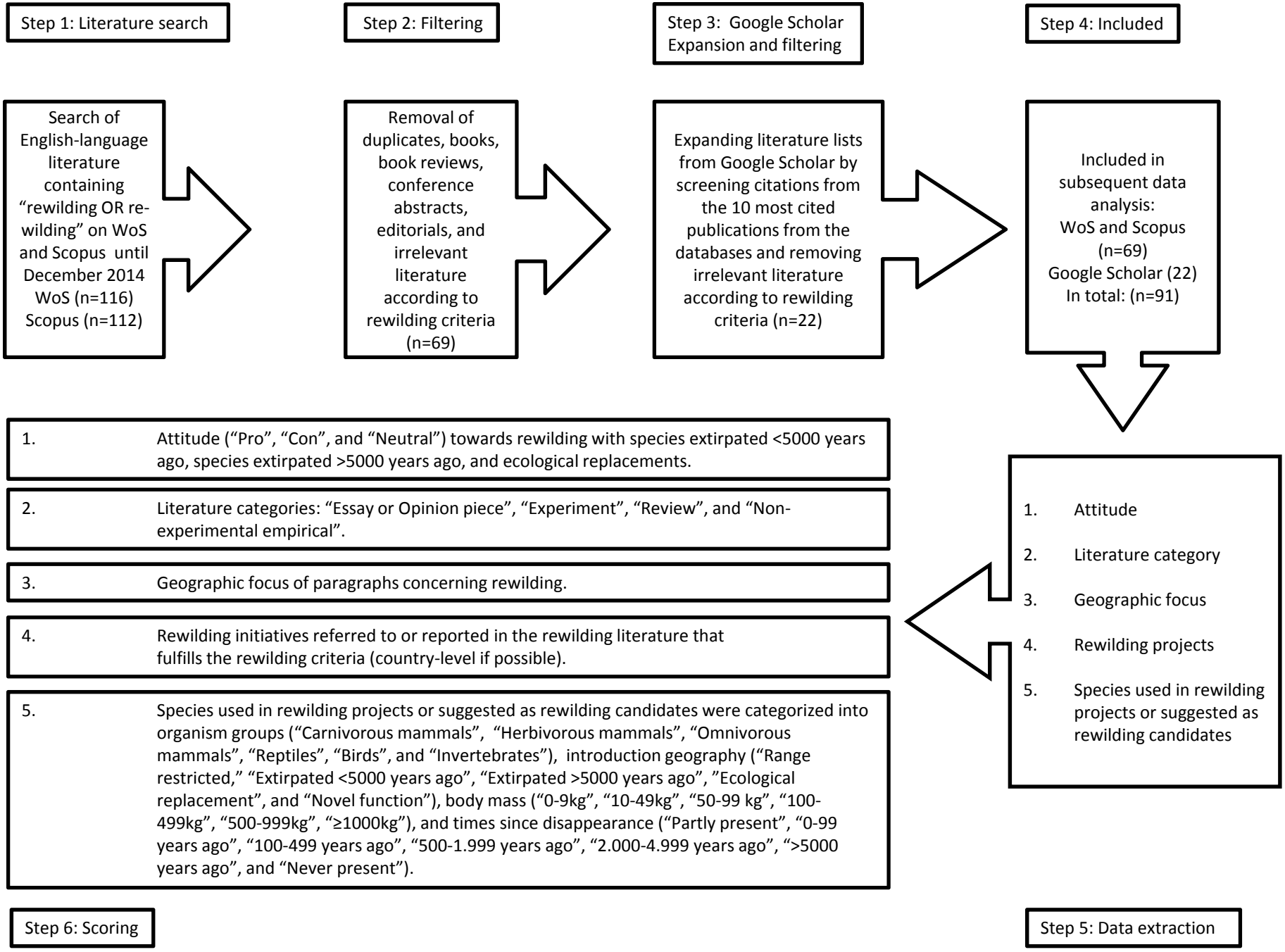
Step 1: Literature search
Step 2: Filtering
Step 3: Google Scholar Expansion and filtering
Step 4: Included
Search of English-language literature containing "rewilding OR re-wilding" on WoS and Scopus until December 2014
WoS (n=116)
Scopus (n=112)
Removal of duplicates, books, book reviews, conference abstracts, editorials, and irrelevant literature according to rewilding criteria (n=69)
Expanding literature lists from Google Scholar by screening citations from the 10 most cited publications from the databases and removing irrelevant literature according to rewilding criteria (n=22)
Included in subsequent data analysis:
WoS and Scopus (n=69)
Google Scholar (22)
In total: (n=91)
1. Attitude ("Pro", "Con", and "Neutral") towards rewilding with species extirpated <5000 years ago, species extirpated >5000 years ago, and ecological replacements.
2. Literature categories: "Essay or Opinion piece", "Experiment", "Review", and "Non-experimental empirical".
3. Geographic focus of paragraphs concerning rewilding.
4. Rewilding initiatives referred to or reported in the rewilding literature that fulfills the rewilding criteria (country-level if possible).
5. Species used in rewilding projects or suggested as rewilding candidates were categorized into organism groups ("Carnivorous mammals", "Herbivorous mammals", "Omnivorous mammals", "Reptiles", "Birds", and "Invertebrates"), introduction geography ("Range restricted," "Extirpated <5000 years ago", "Extirpated >5000 years ago", "Ecological replacement", and "Novel function"), body mass ("0-9kg", "10-49kg", "50-99 kg", "100-499kg", "500-999kg", "≥1000kg"), and times since disappearance ("Partly present", "0-99 years ago", "100-499 years ago", "500-1.999 years ago", "2.000-4.999 years ago", ">5000 years ago", and "Never present").
1. Attitude
2. Literature category
3. Geographic focus
4. Rewilding projects
5. Species used in rewilding projects or suggested as rewilding candidates
Step 6: Scoring
Step 5: Data extraction

Table S1: Characteristics of the articles used in the systematic review (n=91). Characteristics include our assessment of the authors' attitude (neutral, positive, negative, and NA (not available)) towards trophic rewilding (separately considering reintroductions of extant species that have been extirpated from the focal zoogeographical region within the last 5000 years, reintroductions of extant species that have been extirpated from a given region >5000 years ago, and introductions of ecological replacements for a globally extinct species), literature categories (essay or opinion, review, experiment, non-experimental empirical), and geographical focus of rewilding section in the publication.

No.	Publication	Source	Attitude			Literature categories	Geographic focus
			Extirpated <5000 years ago	Extirpated >5000 years ago	Ecological replacement		
1	Aslan CE, Zavaleta ES, Croll DON & Tershy B (2012) Effects of native and non-native vertebrate mutualists on plants. *Conservation Biology* 26(5):778-789.	Google Scholar	NA	NA	Pro	Essay/Opinion	Whole world
2	Biello D (2011) Tortoises to the rescue. Rewilding islands and even continents could prove an effective method for reversing ecological catastrophe. *Scientific American* 305(1):16.	WoS/Scopus	Pro	NA	Pro	Essay/Opinion	Many different places
3	Bowman D (2012) Conservation: Bring elephants to Australia? *Nature* 482(7383):30-30.	Google Scholar	NA	NA	Pro	Essay/Opinion	Australia
4	Brown C, McMorran R & Price MF (2011) Rewilding - A new paradigm for nature conservation in Scotland? *Scotish Geographical Journal* 127(4):288-314.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Europe (Scotland)

5	Buck HJ (2015) On the possibilities of a charming Anthropocene. *Annals of the Association of American Geographers* 105(2):369-377.[1]	WoS/Scopus	Neutral	Neutral	Neutral	Review	North America (plus Europe)
6	Burney DA & Burney LP (2007) Paleoecology and "inter-situ" restoration on Kaua'i, Hawai'i. *Frontiers in Ecology and the Environment* 5(9):483-490.	Google Scholar	Pro	Pro	Pro	Essay/Opinion	Hawaii
7	Cajal JL & Tonni EP (2006) Re-wilding in South America: Is it possible? *Mastozoologia Neotropical* 13:281-282.	WoS/Scopus	NA	NA	Neutral	Essay/Opinion	South America (Argentina)
8	Caro T (2007) The Pleistocene re-wilding gambit. *Trends in Ecology and Evolution* 22(6):281-283.	WoS/Scopus	Neutral	Neutral	Neutral	Review	North America
9	Caro T & Sherman, P (2009) Rewilding can cause rather than solve ecological problems. *Nature* 462:985.	WoS/Scopus	Pro	NA	Con	Essay/Opinion	North America
10	Chapron G (2005) Re-wilding: Other projects help carnivores stay wild. *Nature* 437(7057):318.	WoS/Scopus	NA	NA	Neutral	Essay/Opinion	Africa, Asia
11	Corlett RT (2013) The shifted baseline: Prehistoric defaunation in the tropics and its consequences for biodiversity conservation. *Biological Conservation* 163(1): 13-2.	WoS/Scopus	Pro	Pro	Pro	Review	Lowland tropics

[1] This article was Early View in 2014

12	Chrulew M (2011) Reversing extinction: restoration and resurrection in the Pleistocene rewilding projects. *Humanimalia* 2(2):4-27	WoS/Scopus	Neutral	Neutral	Neutral	Essay/Opinion	Siberia
13	Dinerstein E & Irvin WR (2005) Re-wilding: No need for exotics as natives return. *Nature* 437: 476.	WoS/Scopus	Pro	NA	Con	Essay/Opinion	North America
14	Donlan J, et al. (2005) Re-wilding North America. *Nature* 436:913-914.	WoS/Scopus	NA	Pro	Pro	Essay/Opinion	North America
15	Donlan CJ, et al. (2006) Pleistocene rewilding: an optimistic agenda for twenty-first century conservation. *American Naturalist* 168(5):660-681.	WoS/Scopus	NA	Pro	Pro	Essay/Opinion	North America (plus whole world)
16	Downer CC (2014) The horse and burro as positively contributing returned natives in North America. *American Journal of Life Sciences* 2(1):5-23.	Google Scholar	Pro	Pro	NA	Essay/Opinion	North America
17	Driscoll CA, et al. (2012) A postulate for tiger recovery: the case of the Caspian Tiger. *Journal of Threatened Taxa* 4(6):2637–2643.	Google Scholar	Pro	NA	NA	Essay/Opinion	Central and East Asia
18	Edwards T, et al. (2014) Genetic assessments and parentage analysis of captive Bolson tortoises (*Gopherus flavomarginatus*) inform their "rewilding" in New Mexico. *PLoS*	WoS/Scopus	NA	Pro	NA	Experiment	North America (New Mexico)

	One 9(7):e102787.						
19	Estrada A (2014) Reintroduction of the scarlet macaw (*Ara macao cyanoptera*) in the tropical rainforests of Palenque, Mexico: project design and first year progress. *Tropical Conservation Science* 7(3):342-364.	WoS/Scopus	Pro	NA	NA	Experiment	Central America (Mexico)
20	Featherstone A, (2004) Rewilding in the north-central Highlands - An update. *Ecos* 25(3-4):4-10.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Scotland
21	Foreman D (1999) The wildlands project and the rewilding of North America. *Denver University Law Review* 76:535-553.	WoS/Scopus	Pro	NA	NA	Review	North America
22	Fredrickson EL, Estell RE, Laliberte A & Anderson DM (2006). Mesquite recruitment in the Chihuahuan Desert: historic and prehistoric patterns with long-term impacts. *Journal of Arid Environments* 65(2):285-295.	Google Scholar	NA	NA	Pro	Essay/Opinion	North America
23	Fuhlendorf SD, Engle DM, Kerby J & Hamilton R (2009) Pyric herbivory: Rewilding landscapes through the recoupling of fire and grazing. *Conservation Biology* 23(3):588-598.	WoS/Scopus	Pro	NA	Pro	Essay/Opinion	North America
24	Gerlach J, Rocamora G, Gane J, Jolliffe K & Vanherck L (2013) Giant tortoise distribution and abundance in the Seychelles	Google Scholar	NA	NA	Pro	Review	Seychelles

	Islands: Past, present, and future. *Chelonian Conservation and Biology* 12(1):70-83.						
25	Gibbs JP, Hunter EA, Shoemaker KT, Tapia WH & Cayot LJ (2014) Demographic outcomes and ecosystem implications of giant tortoise reintroduction to Española Island, Galapagos. *PLoS One* 9(11): e114048.	Google Scholar	NA	NA	Pro	Experiment	Galapagos
26	Griffiths CJ, et al. (2010) The use of extant non-indigenous tortoises as a restoration tool to replace extinct ecosystem engineers. *Restoration Ecology* 18(1):1-7.	WoS/Scopus	NA	NA	Pro	Essay/Opinion	Mascarene islands
27	Griffiths CJ, Hansen DM, Jones CG, Zuel N & Harris S (2011) Resurrecting extinct interactions with extant substitutes. *Current Biology* 21(9):762-765.	WoS/Scopus	NA	NA	Pro	Experiment	Mascarene islands
28	Griffiths CJ, et al. (2012) The welfare implications of using exotic tortoises as ecological replacements. *PLoS One* 7(6):e39395.	Google Scholar	NA	NA	Pro	Experiment	Mascarene islands
29	Griffiths CJ, ZuëL N, Jones CG, Ahamud Z & Harris S (2013) Assessing the potential to restore historic grazing ecosystems with tortoise ecological replacements. *Conservation Biology* 27(4):690-700.	WoS/Scopus	NA	NA	Pro	Experiment	Mascarene islands

30	Guilherme JL & Pereira MH (2013) Adaptation of bird communities to farmland abandonment in a mountain landscape. *PLoS One* 8(9):e73619.	WoS/Scopus	NA	NA	NA	Non-experimental empirical	Europe (Portugal)
31	Götmark F (2013) Habitat management alternatives for conservation forests in the temperate zone: Review, synthesis, and implications. *Forest Ecology and Management* 306:292-307.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Temperate zone
32	Hansen DM, Kaiser CN & Muller CB (2008) Seed dispersal and establishment of endangered plants on Oceanic Islands: the Janzen-Connell model, and the use of ecological analogues. *PLoS One* 3(5):e2111	WoS/Scopus	NA	NA	Pro	Experiment	Mascarene islands
33	Hansen DM, Donlan CJ, Griffiths CJ & Campbell KJ (2010) Ecological history and latent conservation potential: large and giant tortoises as a model for taxon substitutions. *Ecography* 33(2):272-284.	WoS/Scopus	NA	NA	Pro	Review	Mascarene islands
34	Hayward MW & Marlow N (2014) Will dingoes really conserve wildlife and can our methods tell? *Journal of Applied Ecology* 51(4):835-838.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Australia
35	Hearn R, Watkins, C & Balzaretti R (2014) The cultural and land use	WoS/Scopus	Neutral	NA	NA	Essay/Opinion	Europe (Italy)

	implications of the reappearance of the wild boar in North West Italy: A case study of the Val di Vara. *Journal of Rural Studies* 36:52-63.						
36	Hintz, J. (2007) Some political problems for rewilding nature. *Ethics, Place and Environment* 10(2):177-216.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	North America
37	Hunter EA, Gibbs JP, Cayot LJ & Tapia W (2013) Equivalency of Galápagos giant tortoises used as ecological replacement species to restore ecosystem functions. *Conservation Biology* 27(4):701-709.	Google Scholar	NA	NA	Pro	Experiment	Galapagos
38	Hunter EA & Gibbs JP (2014) Densities of ecological replacement herbivores required to restore plant communities: A case study of giant tortoises on Pinta Island, Galápagos. *Restoration Ecology* 22(2):248-256.	Google Scholar	NA	NA	Pro	Non-experimental empirical	Galapagos
39	Hutton I, Parkes JP & Sinclair ARE (2007) Reassembling island ecosystems: the case of Lord Howe Island. *Animal Conservation* 10:22-29.	Google Scholar	Pro	Pro	Con	Essay/Opinion	Lord Howe Island
40	Huynh HM (2011) Pleistocene re-wilding is unsound conservation practice. *BioEssays* 33(2):100-102.	WoS/Scopus	NA	NA	Con	Essay/Opinion	North America
41	Jeeves M (2006) Rewilding	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Europe

	Middle England. *Ecos* 27(3-4):8-16.						(England)
42	Ji SN, et al. (2013) Behavioural and physiological stress responses to transportation in a group of Przewalski's horses (*Equus ferus prezwalskii*). *Journal of Animal and Plant Sciences* 23(4):1077-1084.	WoS/Scopus	Pro	NA	NA	Experiment	China
43	Jørgensen, D (2015) Rethinking rewilding. *Geoforum*, 10.1016/j.geoforum.2014.11.016	WoS/Scopus	Neutral	Neutral	Neutral	Review	Whole world
44	Kaiser-Bunbury CN, Traveset A & Hansen DM (2010) Conservation and restoration of plant-animal mutualisms on oceanic islands. *Perspectives in Plant Ecology, Evolution and Systematics* 12(2): 131-143.	WoS/Scopus	NA	NA	Pro	Review	Oceanic and para-oceanic islands
45	Kirby K (2004) Rewilding and the role of large herbivores. *Ecos* 25(3-4):59-62.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Europe (England)
46	Kirby K, Yannik R & Barr C (2006) Wilding (or re-wilding). *International Journal of Biodiversity Science and Management* 2(3):273-275.	WoS/Scopus	NA	NA	NA	Essay/Opinion	Europe (England)
47	Kitchener AC (2012) Re-wilding Ireland: restoring mammalian diversity or developing new mammalian communities? *Irish Naturalists' Journal* 30:4-13.	WoS/Scopus	Pro	Pro	Pro	Essay/Opinion	Europe (Ireland)

48	Kueffer C & Kaiser-Bunbury CN (2013) Reconciling conflicting perspectives for biodiversity conservation in the Anthropocene. *Frontiers in Ecology and the Environment* 12:131-137.	Google Scholar	Pro	Pro	NA	Essay/Opinion	Oceanic islands
49	Lee WG, Wood JR & Rogers GM (2010) Legacy of avian-dominated plant–herbivore systems in New Zealand. *New Zealand Journal of Ecology* 34(1):28-47.	Google Scholar	NA	NA	Pro	Essay/Opinion	New Zealand
50	Lindon A & Root-Bernstein M (2015) Phoenix flagships: Conservation values and guanaco reintroduction in an anthropogenic landscape. *Ambio* 44(5):458-471.[2]	WoS/Scopus	Pro	NA	NA	Essay/Opinion	South America (Chile)
51	Lockwood JA (2010) The fate of the Rocky Mountain locust, *Melanoplus spretus* Walsh: implications for conservation biology. *Terrestrial Arthropod Reviews* 3(2):129-160.	WoS/Scopus	Neutral	Neutral	Neutral	Essay/Opinion	North America
52	Lorimer J & Driessen C (2013) Bovine biopolitics and the promise of monsters in the rewilding of Heck cattle. *Geoforum* 48:249-259.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Europe (Holland)
53	Lorimer J & Driessen C (2014) Wild experiments at the Oostvaardersplassen: Rethinking environmentalism in the	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Europe (Holland)

[2] This article was Early View in 2014

	Anthropocene. *Transactions of the Institute of British Geographers* 39(2):169-181.						
54	Louys J, Corlett RT, Price GJ, Hawkins S & Piper PJ (2014) Rewilding the tropics, and other conservation translocations strategies in the tropical Asia-Pacific region. *Ecology and Evolution* 4(22): 4380-4398.	WoS/Scopus	Pro	Pro	Pro	Essay/Opinion	Tropical Asia-Pacific region
55	Miskelly CM, Charteris MR & Fraser JR (2012) Successful translocation of Snares Island snipe (*Coenocorypha huegeli*) to replace the extinct South Island snipe (*C. iredalei*). *Notornis* 59(1-2):32-38.	WoS/Scopus	NA	NA	Pro	Experiment	New Zealand
56	Navarro LM & Pereira HM (2012) Rewilding abandoned landscapes in Europe. *Ecosystems* 15:900-912.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Europe
57	Noss, R.F. (2003). A checklist for wildlands network designs. *Conservation Biology* 17(5):1270-1275.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	North America
58	Oliveira-Santos LGR & Fernandez FAS (2010) Pleistocene rewilding, Frankenstein ecosystems, and an alternative conservation agenda. *Conservation Biology* 24(1):4-5.	WoS/Scopus	Pro	Pro	Con	Essay/Opinion	Americas
59	Parker KA, Seabrook-Davison M & Ewen JG (2010) Opportunities	Google Scholar	NA	NA	Pro	Essay/Opinion	New Zealand

	for nonnative ecological replacements in ecosystem restoration. *Restoration Ecology* 18(3):269-273.						
60	Pedrono M, et al. (2013) Using a surviving lineage of Madagascar's vanished megafauna for ecological restoration. *Biological Conservation* 159: 501-506.	Google Scholar	NA	NA	Pro	Essay/Opinion	Madagascar
61	Pires MM, et al. (2014) Reconstructing past ecological networks: The reconfiguration of seed-dispersal interactions after megafaunal extinction. *Oecologia* 175(4):1247-1256.	WoS/Scopus	NA	NA	NA	Non-experimental empirical	South America (Brazil)
62	Pocklington D (2008) Industry soundings. *Environmental Law and Management* 20:379-380.	WoS/Scopus	Con	NA	NA	Essay/Opinion	Europe (England)
63	Price MRS (2011) Re-introductions in today's Arabian Peninsula: The first steps for a grander vision? *Zoology in the Middle East* 54(3):159-167.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Arabian Peninsula
64	Reardon S (2014) Rewilding: The next big thing? *New Scientist* 221(2958):40-43.	WoS/Scopus	Neutral	Neutral	Neutral	Essay/Opinion	Hawaii
65	Richmond OM, McEntee JP, Hijmans RJ & Brashares JS (2010) Is the climate right for Pleistocene rewilding? Using species distribution models to extrapolate climatic suitability for mammals	WoS/Scopus	NA	NA	Neutral	Non-experimental empirical	North America

	across continents. *PLoS One* 5(9):e12899.						
66	Robbins P & Moore SA (2013) Ecological anxiety disorder: Diagnosing the politics of the Anthropocene. *Cultural Geographies* 20(1):3-19.	WoS/Scopus	NA	NA	Neutral	Essay/Opinion	Mascarene islands
67	Rubenstein D, Sherman P, Rubenstein D & Caro T (2007) Rewilding rebuttal. *Scientific American* 297(4):12.	WoS/Scopus	Pro	Pro	Con	Essay/Opinion	North America
68	Rubenstein DR, Rubenstein DI, Sherman PW & Gavin TA (2006) Pleistocene Park: Does re-wilding North America represent sound conservation for the 21st century? *Biological Conservation* 132:232-238.	WoS/Scopus	Pro	NA	Con	Essay/Opinion	North America (Western North America)
69	Ruxton GD & Schaefer HM (2012) The conservation physiology of seed dispersal. *Philosophical Transactions of the Royal Society B: Biological Sciences* 367(1596):1708-1718.	WoS/Scopus	NA	NA	Pro	Essay/Opinion	Islands (in particular)
70	Sandom CJ, Hughes J & Macdonald DW (2013) Rooting for rewilding: Quantifying wild boar's *Sus scrofa* rooting rate in the scottish highlands. *Restoration Ecology* 21(3):329-335.	WoS/Scopus	Pro	NA	NA	Experiment	Europe (Scotland)
71	Sandom CJ, Hughes J & Macdonald DW (2013) Rewilding	WoS/Scopus	Pro	NA	NA	Experiment	Europe (Scotland)

	the Scottish highlands: Do wild boar, *Sus scrofa*, use a suitable foraging strategy to be effective ecosystem engineers? *Restoration Ecology* 21(3):336-343.						
72	Sandom CJ, Ejrnæs R, Hansen, MDD & Svenning, JC (2014) High herbivore density associated with vegetation diversity in interglacial ecosystems. *Proceedings of the National Academy of Sciences of the United States of America* 111(11):4162-4167.	WoS/Scopus	Pro	Pro	Pro	Non-experimental empirical	Europe (Great Britain)
73	Schlaepfer MA (2005) Re-wilding: A bold plan that needs native megafauna. *Nature* 437:951	WoS/Scopus	Pro	NA	Con	Essay/Opinion	North America
74	Seddon PJ, Moehrenschlager A & Ewen J (2014) Reintroducing resurrected species: Selecting DeExtinction candidates. *Trends in Ecology and Evolution* 29(3):140-147.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	North America, China, Australia
75	Seddon PJ, Griffiths CJ, Soorae PS & Armstrong DP (2014) Reversing defaunation: Restoring species in a changing world. *Science* 345(6195):406-412.	WoS/Scopus	Pro	Pro	Pro	Essay/Opinion	Whole world
76	Shay S (2005) Re-wilding: Don't overlook humans living on the plains. *Nature* 437(7058):476.	WoS/Scopus	Pro	NA	Con	Essay/Opinion	North America
77	Sims NK, John EA & Stewart AJ	Google	Pro	NA	NA	Experiment	Europe

	(2014) Short-term response and recovery of bluebells (*Hyacinthoides non-scripta*) after rooting by wild boar (*Sus scrofa*). *Plant Ecology* 215:1409-1416.	Scholar					(England)
78	Smit C, Ruifrok JL, van Klink R & Olff H (2015) Rewilding with large herbivores: The importance of grazing refuges for sapling establishment and wood-pasture formation. *Biological Conservation* 182:134-142.[3]	WoS/Scopus	NA	NA	NA	Essay/Opinion	Europe (Holland)
79	Smith CI (2005) Re-wilding: Introductions could reduce biodiversity. *Nature* 437:318.	WoS/Scopus	NA	NA	Con	Essay/Opinion	North America
80	Stolzenburg W (2006) Where the wild things were. *Conservation in Practice* 7(1):28-33.	Google ScholarScholar	NA	NA	NA	Essay/Opinion	North America
81	Tanentzap AJ, Lee WG & Monks A (2013) Increased nitrogen cycling facilitates native forest regeneration: Potential for restoring extinct ecological processes? *Ecological Applications* 23:36-45.	Google Scholar	NA	NA	Pro	Experiment	New Zealand
82	Taylor P (2006) Home counties wildland - The new nature at Knepp. *Ecos* 27(3-4):44-51.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Europe (England)
83	Taylor P (2009) Rewilding the political landscape. *Ecos* 30(3-	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Europe (Great

[3] This article was Early View in 2014

	4):78-84.						Britain)
84	Toledo D, Agudelo MS & Bentley AL (2011) The shifting of ecological restoration benchmarks and their social impacts: Digging deeper into Pleistocene re-wilding. *Restoration Ecology* 19(5):564-568.	WoS/Scopus	Pro	NA	Con	Essay/Opinion	North America
85	Truett J & Phillips M (2009) Beyond historic baselines: Restoring bolson tortoises to Pleistocene range. *Ecological Restoration* 27(2):144-151.	WoS/Scopus	Pro	Pro	NA	Essay/Opinion	North America
86	Waibel A, Griffiths CJ, Zuël N, Schmid B & Albrecht M (2012) Does a giant tortoise taxon substitute enhance seed germination of exotic fleshy-fruited plants? *Journal of Plant Ecology* 10.1093/jpe/rts003.	Google Scholar	NA	NA	Pro	Experiment	Mascarene islands
87	Whipple SD & Hoback WW (2012) A comparison of dung beetle (*Coleoptera: Scarabaeidae*) attraction to native and exotic mammal dung. *Environmental Entomology* 41(2):238-244.	WoS/Scopus	Neutral	NA	Neutral	Experiment	North America
88	Wolverton S (2010) The North American Pleistocene overkill hypothesis and the re-wilding debate. *Diversity and Distributions* 16(5):874-876.	WoS/Scopus	NA	NA	Neutral	Essay/Opinion	North America
89	Wood JR, et al. (2008) Coprolite	Google	NA	NA	Pro	Non-	New

	deposits reveal the diet and ecology of the extinct New Zealand megaherbivore moa (Aves, Dinornithiformes). *Quaternary Science Reviews* 27(27-28): 2593-2602.	Scholar				experimental empirical	Zealand
90	Wood JR, et al. (2013) Resolving lost herbivore community structure using coprolites of four sympatric moa species (Aves: Dinornithiformes). *Proceedings of the National Academy of Sciences of the United States of America* 110(42):16910-16915.	WoS/Scopus	NA	NA	Pro	Non-experimental empirical	New Zealand
91	Wynne-Jones S (2012). Heartlands and wildwoods. *Ecos* 33(1):15-20.	WoS/Scopus	Pro	NA	NA	Essay/Opinion	Europe (Great Britain)

Table S2: Summary of rewilding projects mentioned in the articles used in the systematic review (*SI Appendix*, Table S1). These include initiatives fulfilling the criteria for trophic rewilding used in the systematic review (ecological restoration involving conservation translocations explicitly aimed to restore ecological function) as well as initiatives otherwise referred to as rewilding projects in the articles themselves. The species introduction column lists both already introduced taxa (including temporary experimental introductions) and, in parentheses, taxa that are only mentioned as candidates for future introductions.

Geographic location	Name	Species introductions	Publications (cf. *SI Appendix*, Table S1)
Chile	Nature Reserve Altos de Cantillana, central Chile (0.496 ha)	Guanaco	50
England	Knepp Estate, West Sussex (1400ha)	Tamworths/red-brown pig, English longhorn cattle, fallow deer, Exmoor pony (Heck cattle, beaver, European bison, red deer)	82
Europe	Rewilding Europe (10 areas, aiming to reach 1,000,000 ha in total)		2, 35, 64
Galapagos	Pinta Island (6000 ha), Floreana Island (17,300 ha), and Espaniola island (6000 ha)	Galapagos giant tortoise	25, 33
Hawaii	Makauwahi Cave Reserve (6.9 ha)	African spurred tortoise	6, 64, 75
Holland	Oostvaardersplassen (5600 ha)	Konik horse, red deer, Heck cattle (European bison, wild boar)	2, 15, 35, 52, 53, 62, 64 75, 78, 82
Latvia	Lake Pape (250 ha)	Konik horse	35
Madagascar	Beanka Nature Reserve (14,000 ha)	Aldabran tortoise	33, 60
Mascarene Islands	Ile aux Aigrettes (25 ha), Round Island (215 ha) Rodrigues (19 ha)	Aldabran tortoise, Madagascan radiated tortoise	11, 15, 24, 26, 27, 29, 32, 33, 44, 55, 60, 64, 66, 69, 86,
Mexico	Palenque National Park (1800 ha)	Scarlet macaw	19

New Zealand	Putauhinu Island (141 ha)	Snare Island snipe	55
Russia	Pleistocene Park (1600 ha)	Yakutian horse, bison, musk ox (Siberian tiger)	12,15, 47, 64, 68
Scotland	Alladale Wilderness Reserve (9300 ha - attempt to achieve 20,000 ha fenced reserve)	Wild boar	47, 70
Scotland	Knapdale Forest, Argyll (19,800 ha)	Beaver	47
Scotland	Trees for Life, Glen Afric (260,000 ha)	None	20, 70
Seychelles	~17 small islands (maximum size: 460 ha)	Aldabran tortoise	24, 26, 33
USA	Yellowstone National Park (~900,000 ha)	Wolf	14, 15, 47, 62, 64
USA	Armendaris Ranch, New Mexico (~147000 ha)	Bolson tortoise	15, 18, 67, 85

Table S3: Species mentioned for rewilding in the articles used in the systematic review (*SI Appendix*, Table S1). Characteristics include organism group (invertebrates, reptiles, birds, and mammals; the latter is further divided according to diet), introduction geography (range restriction [extant within the focal zoogeographic region, but with reduced range], species extirpated <5000 years ago [extant species that have gone extinct within the focal region within the last 5000 years], species extinct >5000 years ago [extant species that have gone extinct within the focal region more than 5000 years ago], ecological replacement for a globally extinct species, and novel function [introduction to achieve novel ecological function]), body mass, and times since disappearance (partly present, 0-99 years ago, 100-499 years ago, 500-2000 years ago, 2000-5000 years ago, >5000 years ago, and never present).

Species (latin name)	Species (common name)	Reference (*Appendix SI*, Table S1)	Source	Organism group	Introduction geography	Body mass (kg)	Time since disappearance (ya)
Acinonyx jubatus	Cheetah	15	WoS/Scopus	Carnivorous mammal	Ecological replacement	10-49	>5000
Acinonyx jubatus	Cheetah	14	WoS/Scopus	Carnivorous mammal	Ecological replacement	10-49	>5000
Aldabrachelys gigantea	Aldabran tortoise	32	WoS/Scopus	Reptile	Ecological replacement	100-499	100-499
Aldabrachelys gigantea	Aldabran tortoise	33	WoS/Scopus	Reptile	Ecological replacement	100-499	500-1999
Aldabrachelys gigantea	Aldabran tortoise	33	WoS/Scopus	Reptile	Range restricted	100-499	Partly present
Aldabrachelys gigantea	Aldabran tortoise	33	WoS/Scopus	Reptile	Ecological replacement	100-499	100-499
Aldabrachelys gigantea	Aldabran tortoise	26	WoS/Scopus	Reptile	Ecological replacement	100-499	100-499
Aldabrachelys gigantea	Aldabran tortoise	27	WoS/Scopus	Reptile	Ecological replacement	100-499	100-499
Aldabrachelys gigantea	Aldabran tortoise	29	WoS/Scopus	Reptile	Ecological replacement	100-499	100-499
Aldabrachelys gigantea	Aldabran tortoise	24	Google Scholar	Reptile	Range restricted	100-499	Partly present
Aldabrachelys gigantea	Aldabran tortoise	28	Google Scholar	Reptile	Ecological replacement	100-499	100-499

Aldabrachelys gigantea	Aldabran tortoise	60	Google Scholar	Reptile	Ecological replacement	100-499	500-1999
Aldabrachelys gigantea	Aldabran tortoise	60	Google Scholar	Reptile	Ecological replacement	100-499	500-1999
Aldabrachelys gigantea	Aldabran tortoise	86	Google Scholar	Reptile	Ecological replacement	100-499	100-499
Anas laysanensis	Laysan teal	6	Google Scholar	Bird	Range restricted	0-9	Partly present
Ara macao cyanoptera	Scarlet Macaw	19	WoS/Scopus	Bird	Range restricted	0-9	Partly present
Astrochelys radiata	Madagascan radiated tortoise	33	WoS/Scopus	Reptile	Ecological replacement	10-49	100-499
Astrochelys radiata	Madagascan radiated tortoise	26	WoS/Scopus	Reptile	Ecological replacement	10-49	100-499
Astrochelys radiata	Madagascan radiated tortoise	29	WoS/Scopus	Reptile	Ecological replacement	10-49	100-499
Astrochelys radiata	Madagascan radiated tortoise	28	Google Scholar	Reptile	Ecological replacement	10-49	100-499
Axis calamianensis	Calamian Hog deer	54	WoS/Scopus	Herbivorous mammal	Range restricted	10-49	Partly present
Bison bison	American bison	12	WoS/Scopus	Herbivorous mammal	Extirpated <5000	500-999	500-1999
Bison bonasus	European bison	82	WoS/Scopus	Herbivorous mammal	Range restricted	500-999	Partly present
Bos primigenius	Aurochs/Heck cattle	82	WoS/Scopus	Herbivorous mammal	Extirpated <5000	500-999	500-1999
Buteo solitarius	Hawaiian hawk	6	Google Scholar	Bird	Range restricted	0-9	Partly present
Camelus bactrianus	Wild Bactrian camel	15	WoS/Scopus	Herbivorous mammal	Ecological replacement	500-999	>5000
Camelus bactrianus	Wild Bactrian camel	14	WoS/Scopus	Herbivorous mammal	Ecological replacement	500-999	>5000
Canis lupus	Wolf	4	WoS/Scopus	Carnivorous mammal	Range restricted	10-49	Partly present

Canis lupus	Wolf	20	WoS/Scopus	Carnivorous mammal	Range restricted	10-49	Partly present
Canis lupus	Wolf	47	WoS/Scopus	Carnivorous mammal	Range restricted	10-49	Partly present
Canis lupus dingo	Dingo	34	WoS/Scopus	Carnivorous mammal	Ecological replacement	10-49	0-99
Canis lupus dingo	Dingo	3	Google Scholar	Carnivorous mammal	Ecological replacement	10-49	0-99
Castor fiber	Beaver	4	WoS/Scopus	Herbivorous mammal	Range restricted	10-49	Partly present
Castor fiber	Beaver	20	WoS/Scopus	Herbivorous mammal	Range restricted	10-49	Partly present
Castor fiber	Beaver	82	WoS/Scopus	Herbivorous mammal	Range restricted	10-49	Partly present
Castor fiber	Beaver	47	WoS/Scopus	Herbivorous mammal	Range restricted	10-49	Partly present
Centrochelys sulcata	African spurred tortoise	64	WoS/Scopus	Reptile	Ecological replacement	50-99	500-1999
Cervus elaphus	Red deer (elk/wapiti)	4	WoS/Scopus	Herbivorous mammal	Range restricted	100-499	Partly present
Cervus elaphus	Red deer (elk/wapiti)	82	WoS/Scopus	Herbivorous mammal	Range restricted	100-499	Partly present
Chelonoidis carbonaria	Red-footed tortoise	33	WoS/Scopus	Reptile	Ecological replacement	0-9	1999-5000
Chelonoidis nigra	Galapagos giant tortoise	25	Google Scholar	Reptile	Range restricted	50-99	Partly present
Chelonoidis nigra	Galapagos giant tortoise	38	Google Scholar	Reptile	Range restricted	50-99	Partly present
Chelonoidis nigra	Galapagos giant tortoise	37	Google Scholar	Reptile	Range restricted	50-99	Partly present
Chelonoidis nigra	Galapagos giant tortoise	33	WoS/Scopus	Reptile	Range restricted	50-99	Partly present
Chelonoidis nigra	Galapagos giant	33	WoS/Scopus	Reptile	Range	50-99	Partly present

	tortoise				restricted		
Chelonoidis nigra	Galapagos giant tortoise	54	WoS/Scopus	Reptile	Ecological replacement	50-99	1999-5000
Coenocorypha huegeli	Snares island nipe	55	WoS/Scopus	Bird	Ecological replacement	0-9	0-99
Coturnix ypsilophora	Australian brown quail	59	Google Scholar	Bird	Ecological replacement	0-9	100-499
Dicerorhinus sumatrensis	Sumatra rhinoceros	54	WoS/Scopus	Herbivorous mammal	Range restricted	≥ 1000	Partly present
Elephas maximus	Asian elephant	15	WoS/Scopus	Herbivorous mammal	Ecological replacement	≥ 1000	>5000
Elephas maximus	Asian elephant	14	WoS/Scopus	Herbivorous mammal	Ecological replacement	≥ 1000	>5000
Elephas maximus	Asian elephant	54	WoS/Scopus	Herbivorous mammal	Range restricted	≥ 1000	Partly present
Elephas maximus	Asian elephant	54	WoS/Scopus	Herbivorous mammal	Ecological replacement	≥ 1000	>5000
Equus africanus asinus	Burro	16	Google Scholar	Herbivorous mammal	Ecological replacement	100-499	>5000
Equus ferus	Yakutian horse	12	WoS/Scopus	Herbivorous mammal	Extirpated <5000	100-499	1999-5000
Equus ferus przewalskii	Przewalski horse	16	Google Scholar	Herbivorous mammal	Extirpated >5000	100-499	>5000
Equus ferus przewalskii	Przewalski horse	15	WoS/Scopus	Herbivorous mammal	Extirpated >5000	100-499	>5000
Equus ferus przewalskii	Przewalski horse	14	WoS/Scopus	Herbivorous mammal	Extirpated >5000	100-499	>5000
Equus ferus przewalskii	Przewalski horse	42	WoS/Scopus	Herbivorous mammal	Range restricted	100-499	0-99
Equus hemionus	Asian wild ass	15	WoS/Scopus	Herbivorous mammal	Ecological replacement	100-499	>5000
Equus hemionus	Asian wild ass	14	WoS/Scopus	Herbivorous mammal	Ecological replacement	100-499	>5000
Felis silvestris	European wildcat	4	WoS/Scopus	Carnivorous	Range	0-9	Partly present

					mammal	restricted		
Felis silvestris	European wildcat	82	WoS/Scopus	Carnivorous mammal	Range restricted	0-9	Partly present
Geograpsus geayi	Land crab	6	Google Scholar	Invertebrate	Range restricted	0-9	Partly present
Glaucopsyche xerces	Xerces blue butterfly	74	WoS/Scopus	Invertebrate	Extirpated <5000	0-9	0-99
Gopherus flavomarginatus	Bolson tortoise	15	WoS/Scopus	Reptile	Extirpated >5000	10-49	>5000
Gopherus flavomarginatus	Bolson tortoise	14	WoS/Scopus	Reptile	Extirpated >5000	10-49	>5000
Gopherus flavomarginatus	Bolson tortoise	18	WoS/Scopus	Reptile	Range restricted	10-49	Partly present
Lama guanicoe	Guanaco	50	WoS/Scopus	Herbivorous mammal	Range restricted	100-499	Partly present
Loxodonta africana	African elephant	15	WoS/Scopus	Herbivorous mammal	Ecological replacement	≥ 1000	>5000
Loxodonta africana	African elephant	14	WoS/Scopus	Herbivorous mammal	Ecological replacement	≥ 1000	>5000
Loxodonta africana (?)	African elephant (?)	3	Google Scholar	Herbivorous mammal	Novel function	≥ 1000	Never present
Lutra lutra	European otter	82	WoS/Scopus	Carnivorous mammal	Range restricted	0-9	Partly present
Lynx lynx	Eurasian lynx	4	WoS/Scopus	Carnivorous mammal	Range restricted	10-49	Partly present
Lynx lynx	Eurasian lynx	20	WoS/Scopus	Carnivorous mammal	Range restricted	10-49	Partly present
Lynx lynx	Eurasian lynx	83	WoS/Scopus	Carnivorous mammal	Range restricted	10-49	Partly present
Lynx lynx	Eurasian lynx	82	WoS/Scopus	Carnivorous mammal	Range restricted	10-49	Partly present
Melanoplus spretus	Rocky mountain locust	51	WoS/Scopus	Invertebrate	Extirpated <5000	0-9	100-499
Mustela putorius	European polecat	4	WoS/Scopus	Carnivorous	Range	0-9	Partly present

				mammal	restricted		
Ovibos moschatus	Muskox	12	WoS/Scopus	Herbivorous mammal	Ecological replacement	100-499	1999-5000
Panthera leo persica	Asiatic lion	15	WoS/Scopus	Carnivorous mammal	Ecological replacement	100-499	>5000
Panthera leo persica	Asiatic lion	14	WoS/Scopus	Carnivorous mammal	Ecological replacement	100-499	>5000
Panthera tigris	Tiger	54	WoS/Scopus	Carnivorous mammal	Range restricted	100-499	Partly present
Panthera tigris altaica	Amur tiger	17	Google Scholar	Carnivorous mammal	Range restricted	100-499	Partly present
Pongo abelii	Sumatran orangutan	54	WoS/Scopus	Omnivorous mammal	Range restricted	50-99	Partly present
Pongo pygmaeus	Bornean orangutan	54	WoS/Scopus	Omnivorous mammal	Range restricted	50-99	Partly present
Rhinoceros sondaicus	Javan rhinoceros	54	WoS/Scopus	Herbivorous mammal	Range restricted	≥ 1000	Partly present
Rhinoceros unicornis	Indian rhinoceros	54	WoS/Scopus	Herbivorous mammal	Range restricted	≥ 1000	Partly present
Sarcophilus harrisii	Tasmanian devil	54	WoS/Scopus	Carnivorous mammal	Range restricted	10-49	Partly present
Sus scrofa	Wild boar	4	WoS/Scopus	Omnivorous mammal	Range restricted	100-499	Partly present
Sus scrofa	Wild boar	20	WoS/Scopus	Omnivorous mammal	Range restricted	100-499	Partly present
Sus scrofa	Wild boar	82	WoS/Scopus	Omnivorous mammal	Range restricted	100-499	Partly present
Sus scrofa	Wild boar	70	WoS/Scopus	Omnivorous mammal	Range restricted	100-499	Partly present
Sus scrofa	Wild boar	71	WoS/Scopus	Omnivorous mammal	Range restricted	100-499	Partly present
Sus scrofa	Wild boar	77	Google Scholar	Omnivorous mammal	Range restricted	100-499	Partly present
Tapirus indicus	Malayan tapir	54	WoS/Scopus	Herbivorous	Range	100-499	Partly present

				mammal	restricted		
Thylacinus cynocephalus	Thylacine	74	WoS/Scopus	Carnivorous mammal	Extirpated <5000	10-49	0-99
Ursus arctos	Brown bear	4	WoS/Scopus	Omnivorous mammal	Range restricted	100-499	Partly present
Ursus arctos	Brown bear	20	WoS/Scopus	Omnivorous mammal	Range restricted	100-499	Partly present
Varanus komodoensis	Komodo dragon	3	Google Scholar	Reptile	Ecological replacement	100-499	>5000
Zaglossus attenboroughi	Sir David´s long-beaked echidna	54	WoS/Scopus	Carnivorous mammal	Range restricted	0-9	Partly present
Zaglossus bartoni	Eastern long-beaked echidna	54	WoS/Scopus	Carnivorous mammal	Range restricted	0-9	Partly present
Zaglossus bruijinii	Western long-beaked echidna	54	WoS/Scopus	Carnivorous mammal	Range restricted	10-49	Partly present