

Major group	Scientific name	Common name	Risk category	Invasion Stage - England	Current trend in records or population	Mode of Dispersal in England	Species Impact - predation/herbivory	Species Impact - competition	Species Impact - disease	Species Impact - introgression	Ecosystem Impact - nutrient cycling	Ecosystem Impact - physical alteration	Ecosystem Impact - succession	Ecosystem Impact - foodwebs	Pathway of introduction	Pathway details	Control methods	Comments	Key References	
mammals	Alopex lagopus	Arctic fox	A	0.5	0	Nat	3	likely	likely	unlikely	1	1	1	likely	E,R	Potential escape/release from captivity	D		Baker 1990, Long 2003, Baker, S.J. & Hills, D. 2008	
mammals	Castor canadensis	American beaver	A	0.5	0	Nat	3	likely	likely	unlikely	2	3	3	unlikely	E,R	Potential escape/release from captivity	D		Baker 1990, Long 2003, Baker, S.J. & Hills, D. 2008	
mammals	Felis bengalensis	leopard cat	A	0.5	0	Nat	3	likely	likely	unlikely	1	1	1	likely	E,R	Potential escape/release from captivty	D		Baker 1990	
mammals	Hydrochoerus hydrochoeris	capybara	A	0.5	0	Nat	2	unlikely	likely	unlikely	2	3	2	likely	E,R	Potential escape/release from captivity	D		Baker 1990, Baker, S.J. & Hills, D. 2008	
mammals	Myocastor coypus	coypu	A	0.5	0	Nat	3	likely	likely	unlikely	2	3	2	likely	E,R	Potential escape/release from captivity	D	Previous establishment in wild - eradicated	Baker 1990, Long 2003	
mammals	Nyctereutes procyonoides	raccoon dog	A	0.5	0	Nat	3	3	3	unlikely	1	1	1	likely	E,R	Potential escape/release from captivity	D	Removed from Dangerous Wild Animals Act in 2007	Baker 1990, Long 2003, Baker, S.J. & Hills, D. 2008	
mammals	Ondatra zibethicus	muskrat	A	0.5	0	Nat	3	likely	likely	unlikely	2	3	3	likely	E,R	Potential escape/release from captivity	D	Previous establishment in wild - eradicated	Baker 1990, Long 2003	
mammals	Procyon lotor	raccoon	A	0.5	0	Nat	3	likely	likely	unlikely	1	1	1	likely	E,R	Potential escape/release from captivity	D		Baker 1990, Long 2003, Baker, S.J. & Hills, D. 2008	
mammals	Glis glis	edible dormouse	B	2	inc	Nat, Trans	3	3	likely	unlikely	1	2	1	unlikely	D,T	Dispersal/translocation from localised pops.	D	Established but not yet invasive	Baker 1990, Long 2003	
mammals	Hydropotes inermis	chinese water deer	B	2	inc	Nat	2	likely	likely	unlikely	1	2	2	unlikely	D,E,R	Dispersal from localised populations	D	Established but not yet invasive	Baker 1990, Long 2003	
mammals	Aonyx cinerea	short-clawed otter	B	0.5	0	Nat	2	likely	DD	unlikely	1	1	1	likely	E,R	Potential escape/release from captivty	D	Previous establishment in wild, breeding.	Baker 1990	
mammals	Cynomys ludovicianus	black-tailed prairie dog	B	0.5	0	Nat	2	likely	likely	unlikely	1	2	2	unlikely	E,R	Potential escape/release from captivity	D	Previous establishment in wild, breeding.	Baker 1990, Long 2003, Baker, S.J. & Hills, D. 2008	
mammals	Mephitis mephitis	striped skunk	B	0.5	0	Nat	2	likely	likely	unlikely	1	1	1	likely	E,R	Potential escape/release from captivity	D		Long 2003	
mammals	Nasua nasua	coatimundi	B	0.5	0	Nat	2	likely	DD	unlikely	1	1	1	unlikely	E,R	Potential escape/release from captivity	D	Removed from Dangerous Wild Animals Act in 2007	Baker 1990, Long 2003, Baker, S.J. & Hills, D. 2008	
mammals	Tamias sibiricus	Siberian chipmunk	B	0.5	0	Nat	3	2	likely	unlikely	1	1	1	likely	E,R	Potential escape/release from captivity	D		Baker 1990, Long 2003, Baker, S.J. & Hills, D. 2008	
mammals	Tamias striatus	Eastern chipmunk	B	0.5	0	Nat	3	likely	likely	unlikely	1	1	1	likely	E,R	Potential escape/release from captivity	D		Baker 1990, Long 2003, Baker, S.J. & Hills, D. 2008	
mammals	Callithrix spp	marmoset	C	0.5	0	Nat	1	likely	DD	unlikely	1	1	1	unlikely	E,R	Potential escape/release from captivity	D		Long 2003	
mammals	Cebus spp	capuchin	C	0.5	0	Nat	2	likely	DD	unlikely	1	1	1	unlikely	E,R	Potential escape/release from captivity	D		Long 2003, Baker, S.J. & Hills, D. 2008	
mammals	Chinchilla spp	chinchilla	C	0.5	0	Nat	1	1	DD	unlikely	1	1	1	1	E,R	Potential escape/release from captivity	D		Baker 1990, Long 2003, Baker, S.J. & Hills, D. 2008	
mammals	Eliomys quercinus	garden dormouse	C	0.5	0	Nat	2	likely	likely	unlikely	1	1	1	likely	E,R	Potential escape/release from captivity	D		Nowak, R.M. & Paradiso, J.L. 1983	
mammals	Hystrix brachyura	Himalayan porcupine	C	0.5	0	Nat	2	likely	likely	unlikely	1	2	1	likely	E,R	Potential escape/release from captivity	D	Previous establishment in wild, breeding - recaptured	Long 2003	
mammals	Hystrix cristata	crested porcupine	C	0.5	0	Nat	2	likely	likely	unlikely	1	2	1	likely	E,R	Potential escape/release from captivty	D	Previous establishment in wild - recaptured.	Baker 1990, Long 2003, Baker, S.J. & Hills, D. 2008	
mammals	Mesocricetus auratus	golden hamster	C	0.5	0	Nat	1	likely	likely	unlikely	1	1	1	unlikely	E,R	Potential escape/release from captivity	D	Previously numerous small transient colonies.	Long 2003	
mammals	Petaurus breviceps	sugar glider	C	0.5	0	Nat	2	likely	likely	unlikely	1	1	1	unlikely	E,R	Potential escape/release from captivity	D		Nowak, R.M. & Paradiso, J.L. 1983	
mammals	Atelerix abiventris	African pygmy hedgehog	B	0.5	0	Nat	3	likely	DD	unlikely	1	1	1	likely	E,R	Potential escape/release from captivity	D		Nowak, R.M. & Paradiso, J.L. 1983	
birds	Alopochen aegyptiaca	Egyptian goose	A	2	Inc	Nat	1	3	DD	1	2	2	1	1	D,E,R	Dispersal; escape/release from waterfowl collections.	D		Long 1981; Ogilvie et al. 2004; Blair 1999	
birds	Bubo bubo	eagle owl	A	1	Stab	Nat	3	2	unlikely	1	1	1	1	3	D,E,R	Dispersal; escape/release from aviary collections.	D	European SPEC 3.	Ogilvie et al. 2004	
birds	Acridotheres tristis	common mynah	A	0.5	0	Nat	3	3	2	1	1	1	1	3	E,R	Potential escape/release from collections.	D	Present in the pet trade	Long 1981	
birds	Threskionis aethiopicus	sacred ibis	A	0.5	0	Nat	3	3	likely	1	1	2	1	3	D,E,R	Potential dispersal from French colonies	D		Blair 1999; Banks <i>et al.</i> 2008	
birds	Corvus splendens	Indian House Crow	A	0	0	Nat	3	3	likely	1	1	1	1	3	D	Ship-assisted transfer from Netherlands or other	D	Increasing breeding population in the Netherlands	Long 1981; Ottens & Ryall 2003	
birds	Branta leucopsis	barnacle goose	B	2	Inc	Nat	2	1	DD	2	2	1	2	1	D,E,R	Dispersal; escape/release from waterfowl collections.	D	UK amber listed species. Potential to emulate Canada goose pop. growth.	Blair 1999; Banks <i>et al.</i> 2008	
birds	Anser caerulescens	snow goose	B	1	Stab	Nat	1	2	DD	1	1	1	1	1	E,R	Dispersal; escape/release from waterfowl collections.	D		Blair 1999; Banks <i>et al.</i> 2008	
birds	Anser indicus	bar-headed goose	B	1	Inc	Nat	1	2	DD	2	1	1	1	1	D,E,R	Dispersa; escape/release from waterfowl collections.	D		Blair 1999; Banks <i>et al.</i> 2008	
birds	Bubulcus ibis	cattle egret	B	1	Stab	Nat	2	1	DD	1	1	1	1	1	D,E,R	Dispersal; escape/release from waterfowl collections.	D		Blair 1999; Banks <i>et al.</i> 2008	
birds	Cairina moschata	Muscovy duck	B	1	Stab	Nat	1	2	DD	1	1	1	1	1	D,E,R	Dispersal; escape/release from waterfowl collections.	D		Blair 1999; Banks <i>et al.</i> 2008	
birds	Cygnus atratus	black swan	B	1	Inc	Nat	2	2	DD	1	1	1	1	1	D,E,R	Dispersal; escape/release from waterfowl collections.	D		Blair 1999; Banks <i>et al.</i> 2008	
birds	Netta rufina	red-crested pochard	B	1	Inc	Nat	1	1	DD	2	1	1	1	1	D,E,R	Dispersal; escape/release from waterfowl collections.	D		Blair 1999; Banks <i>et al.</i> 2008	
birds	Tadorna ferruginea	ruddy shelduck	B	1	Stab	Nat	1	2	likely	2	1	1	1	1	D,E,R	Dispersal; escape/release from waterfowl collections.	D		Blair 1999; Banks <i>et al.</i> 2008	
birds	Acridotheres cristellus	crested mynah	B	0.5	0	Nat	2	3	2	1	1	1	1	2	E,R	Potential escape/release from collections.	D	Present in the pet trade	Long 1981	
birds	Acridotheres ginginianus	bank mynah	B	0.5	0	Nat	2	3	2	1	1	1	1	2	E,R	Potential escape/release from collections.	D	Present in the pet trade	Long 1981	
birds	Chloephaga picta	upland goose	B	0.5	Stab	Nat	1	2	DD	1	1	2	1	1	E,R	Escape/release from waterfowl collections.	D		Blair 1999; Banks <i>et al.</i> 2008	
birds	Nycticorax nycticorax	night heron	B	0.5	Dec	Nat	1	1	DD	1	1	2	1	1	D,E,R	Escape/release from waterfowl collections.	D		Blair 1999; Banks <i>et al.</i> 2008	
birds	Molothrus spp	cowbirds	B	0	0	Nat	1	3	DD	1	1	1	1	1	E,R	Not known to be present in pet trade; unlikely to enter.	D		http://www.issg.org/database/species/ecology.asp?si=310&f=r=1&sts=sss	
birds	Aix galericulata	Mandarin duck	C	1	Inc	Nat	1	2	unlikely	1	1	1	1	1	D,E,R	Dispersal; escape/release from waterfowl collections.	D		Long 1981; Ogilvie et al. 2004; Blair 1999	
birds	Myiopsitta monachus	monk parakeet	C	1	Inc	Nat	1	2	likely	1	1	1	1	1	D,E,R	Dispersal; escape/release from aviary collections.	D		Long 1981; www.hertsbirdclub.org.uk/monkparakeets.html	
birds	Aratinga acuticaudata	blue-crowned parakeet	C	0.5	Stab	Nat	2	2	likely	1	1	1	1	1	E,R	Escape/release from aviary collections.	D	Previous occurrences and breeding in the wild	Butler <i>et al.</i> 2002; Ogilvie <i>et al.</i> 2005	
birds	Branta sandvicensis	Hawaiian goose	C	0.5	0	Nat	1	1	DD	1	1	1	1	1	E,R	Escape/release from waterfowl collections.	D		Blair 1999; Banks <i>et al.</i> 2008	
birds	Psittacula eupatria	Alexandrine parakeet	C	0.5	Stab	Nat	2	2	likely	1	1	1	1	1	E,R	Escape/release from aviary collections.	D	Previous occurrences and breeding in the wild	Butler <i>et al.</i> 2002; Ogilvie <i>et al.</i> 2004	
birds	Pycnonotus cafer	red-vented bulbul	C	0.5	0	Nat	1	likely	DD	1	1	1	1	1	E,R	Escape/release from aviary collections.	D	Present in the pet trade	Long 1981	
birds	Passer hispaniolensis	Spanish sparrow	C	0	0	Nat	1	likely	DD	1	1	1	1	1	E,R	Escape/release from aviary collections.	D		Long 1981	
amphibian	Pelophylax ridibundus	marsh frog	A	2	Inc.	Nat	3	3	3	3	1	1	1	3	D, E,R	Dispersal; Escape/release from captivity	D		Froglife 1997; www.iucnredlist.org	
amphibian	Rana catesbeiana	North American bullfrog	A	1	Dec.	Nat	3	3	3	1	1	1	1	3	D, E,R	Dispersal; Escape/release from captivity	D	EC import ban 1997	Froglife 1997; www.issg.org	
amphibian	Xenopus laevis	African clawed toad	A	1	inc	Nat	3	3	3	1	1	1	1	3	D, E,R	Dispersal; Escape/release from captivity	D		Froglife 1997; www.iucnredlist.org	
amphibian	Alytes obstetricans	midwife toad	B	1	inc	Nat	2	likely	3	1	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D		Froglife 1997; www.iucnredlist.org	
amphibian	Rana esculenta	edible frog	B	1	inc	Nat	2	likely	3	3	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D		Froglife 1997	
amphibian	Triturus cristellus	Italian crested newt	B	1	inc	Nat	2	3	1	3	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D		Froglife 1997	
amphibian	Triturus alpestris	Alpine newt	B	1	inc	Nat	2	likely	3	1	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D		Froglife 1997	
amphibian	Bombina spp	fire-bellied toads	C	1	inc	Nat	2	likely	1	1	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D		Froglife 1997	
amphibian	Hyla arborea	European tree frog	C	1	DD	Nat	2	likely	1	1	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D		Froglife 1997	
amphibian	Bufo marinus	cane toad	A	0.5	0	Nat	3	3	3	1	1	1	1	3	E,R	Potential escape/release from captivity	D	Climate would inhibit establishment	Kearney <i>et al.</i> 2008; www.issg.org	
amphibian	Eleutherodactylus coqui	Caribbean tree-frog	B	0.5	0	Nat	2	likely	3	1	1	1	1	1	E,R	Potential escape/release from captivity	D	Climate would inhibit establishment	www.iucnredlist.org ; www.issg.org	
amphibian	Osteopilus septentrionalis	Cuban tree frog	B	0.5	0	Nat	3	3	1	1	1	1	1	3	E,R	Potential escape/release from collections.	D	Climate would inhibit establishment	www.iucnredlist.org	
reptile	Chelydra serpentina	snapping turtle	A	1	Stab	Nat	3	3	2	1	1	1	1	3	D, E,R	Dispersal; Escape/release from captivity	D	Very long-lived	www.britishecologygroup.org.uk	
reptile	Trachemys scripta	red-eared terrapin (slider)	A	1	Stab	Nat	3	3	2	1	1	1	1	3	D, E,R	Dispersal; Escape/release from captivity	D	Viable eggs have been discovered	www.issg.org	
reptile	Chrysemys plicata	painted turtle	B	1	Stab	Nat	2	2	2	1	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D		Froglife 1997; www.issg.org	
reptile	Emys orbicularis	European pond terrapin	B	1	Stab	Nat	2	2	2	1	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D			
reptile	Mauremys caspica	stripe-necked terrapin	B	1	Stab	Nat	2	2	2	1	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D			
reptile	Elaphe spp	rat snakes	B	0.5	0	Nat	2	2	2	1	1	1	1	1	likely	E,R	Potential escape/release from captivty	D	Commonest pet snake species	http://nationalzoo.si.edu/Animals/ReptilesAmphibians/Facts/FactSheets/Cornsnake.cfm
reptile	Lampropeltis spp	king/milk snakes	B	0.5	0	Nat	2	2	2	1	1	1	1	1	likely	E,R	Potential escape/release from captivity	D	Commonest pet snake species	http://nationalzoo.si.edu/Animals/ReptilesAmphibians/Facts/FactSheets/Commonkingsnake.cfm
reptile	Thamnophis spp	garter snakes	B	0.5	0	Nat	2	2	2	1	1	1	1	1	likely	E,R	Potential escape/release from captivity	D		
reptile	Elaphe longissima	Aesculapian snake	C	1	Stab	Nat	2	1	2	1	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D	Breeding population in North Wales		
reptile	Lacerta viridis	green lizard	C	1	Stab	Nat	1	2	2	1	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D			
reptile	Podarcis muralis	wall lizard	C	1	Stab	Nat	1	2	2	1	1	1	1	1	D, E,R	Dispersal; Escape/release from captivity	D			
reptile	Boa constrictor imperator	common boa	A	0.5	0</															

Fish	Proterorhinus marmoratus	Tubenose goby	A	0	0	Nat	2	3	likely	1	1	1	1	likely	T,D	Hull fouling	D,C	Arrival in England only likely as a hull foulant of ships coming from Rotterdam area, where species is now present.	
Fish	Ameiurus melas/ictalurus punctatus	Ictalurid catfishes	B	1	Stab	Nat, Trans	2	1	2	1	1	1	1	likely	T,R	Releases from aquaculture/aquaria/garden ponds	D,C	Temperature may be a limiting factor to populations expansion and dispersal but climate change may increase risk of introduction.	Wheeler et al. (2004)
Fish	Gambusia holbrooki	Eastern mosquitofish	B	0	0	Nat, Trans	1	2	likely	1	1	1	1	likely	T,R	Human-assisted transfer and introduction	D,C	Unlikely to arrive in the UK except by illegal introduction and release by anglers or aquarists.	
Fish	Acipenser ruthenus	Sterlet	C	1	Inc	Nat, Trans	2	1	2	1	1	1	1	1	T,R	Releases from aquaculture/aquaria/garden ponds	D,C	Increasingly present in UK waters due to releases.	Britton & Davies (2006); Copp et al. (2006a)
Fish	Aristichthys nobilis	Bighead carp	C	1	Inc	Nat, Trans	2	likely	likely	1	1	likely	1	likely	T,R	Releases from aquaculture/aquaria/garden ponds	D,C	Temperature and absence of long, large rivers a limiting factor to reproduction.	Britton & Davies (2007)
Fish	Catostomus commersoni	White sucker	C	1	Inc	Nat	1	likely	2	1	1	1	1	likely	T,E	Escape/release from aquaculture	D,C	Species may be established upstream of stream stretch where previously found, but this remains to be confirmed.	Copp et al. (2006b)
Fish	Ctenopharyngodon idella	Grass carp	C	1	Inc	Nat, Trans	2	likely	likely	1	1	likely	1	likely	T,R	Releases from aquaculture/aquaria/garden ponds	D,C	Temperature and absence of long, large rivers a limiting factor to reproduction.	Stott (1977)
Fish	Hypophthalmichthys molitrix	Silver carp	C	1	Inc	Nat, Trans	2	likely	likely	1	1	likely	1	likely	T,R	Releases from aquaculture/aquaria/garden ponds	D,C	Not yet found in the wild. Temperature and absence of long, large rivers a limiting factor to reproduction.	Britton & Davies (2007)
Fish	Misgurnus fossilis/anguillicaudatus	Weatherfishes	C	1	Stab	Trans	1	unlikely	likely	1	1	2	2	unlikely	T,R	Releases from aquaculture/aquaria/garden ponds	D,C	Species may be more widely distributed than known due to very cryptic style of live.	Wheeler et al. 2004
Fish	Pimephales promelas	Fathead minnow	C	1	Inc	Nat, Trans	1	1	2	1	1	1	1	unlikely	T,R	Releases from aquaculture/aquaria/garden ponds	D,C	change may increase risk of introduction.	Maitland (2004)
Fish	Cyprinella lutrensis	Red shiner	C	0.5	Stab	Nat, Trans	1	likely	2	2	2	1	1	likely	T,R	Releases from aquaculture/aquaria/garden ponds	D,C	change may increase risk of introduction.	
freshwater invertebrate	Eriocheir sinensis	Chinese Mitten Crab	A	1	Inc	Nat, Trans	3	2	1	1	2	3	3	3	E,T,D	Natural spread of current pop. Maritime transportation through ballast water release.	D	Omnivorous, highly fecund represents a great threat to lower river stretches.	Gilby <i>et al</i> (2008)
freshwater invertebrate	Mytilopsis leucophaeta	False Dark Muscle	A	1	Stab	Nat, Trans	2	2	1	1	3	3	2	3	R,E,T,D	Human-assisted transfer and introduction. First UK record 1998 (Hoo Peninsula, Kent). Species believed to have been transported in ballast waters.	0	Like the zebra mussel (<i>Dreissena</i>) M.leucophaeta has a planktonic veliger larva and a byssus for attachment onto hard substrates. This species has the potential to spread and become a commercially significant fouling pest of water pipes and culverts. Halo tolerant.	Freshwater Bivalves of Britain and Ireland (2004)
freshwater invertebrate	Orchonectes limosus	Spiny Cheeked Crayfish	A	1	Inc	Nat, Trans	3	3	3	1	3	3	2	3	R,E,T,D	Releases from aquaria/garden ponds, human-assisted transfer and introduction	0	Omnivorous, highly fecund represents a great threat to native FW biodiversity.	Pockl <i>et al.</i> , (2006)
freshwater invertebrate	Procambarus sp.	Marbled Crayfish	A	0.5	Stab	Trans	2	2	3	1	2	2	2	2	R,E,T	Releases from aquaria/garden ponds, human-assisted transfer and introduction	0	Parthenogenic, highly fecund- represents a great threat to native FW biodiversity.	Pockl <i>et al.</i> , (2006), Jones <i>et al.</i> , (2008), Vogt <i>et al.</i> , (2004)
freshwater invertebrate	Astacus leptodactylus	Turkish Narrow-Clawed Crayfish	B	1	Inc	Nat, Trans	0	2	3	1	2	2	2	2	R,E,T,D	Releases from aquaria/garden ponds, human-assisted transfer and introduction	0	Presence of plague-bearing signal crayfish may limit population expansion.	Pockl <i>et al.</i> , (2006)
freshwater invertebrate	Corbicula fluminea	Asian Clam	B	1	Inc	Nat, Trans	2	2	1	1	2	2	2	2	R,E,T,D	Human-assisted transfer and introduction	0	Bio-fouling agent.	Belanger <i>et al</i> (1985)
freshwater invertebrate	Procambarus clarkii	Red Swamp Crayfish	B	1	Stab	Nat, Trans	2	2	3	1	2	2	2	2	R,E,T,D	Releases from aquaria/garden ponds, human-assisted transfer and introduction	0	Despite being a warmwater species it can survive in waterbodies that freeze during the winter months. Omnivorous, highly fecund represents a great threat to native FW biodiversity.	Pockl <i>et al.</i> , (2006)
freshwater invertebrate	Achtheres percarum	Parasitic Copepod	C	1	Stab	Nat, Trans	0	0	1	1	0	1	0	1	R,E,T,D	Natural spread + Human-assisted transfer and introduction	0	Distribution unclear	Piasecki (2004), Piasecki & Kuzminska (2007)
freshwater invertebrate	Branchiura sowerbyi	Oligochaete Worm	C	1	Stab	Trans	1	1	1	1	1	1	1	1	R,E,T,D	Releases from aquculture/aquaria/garden ponds	0	Distribution unclear. Possibly small isolated populations. Native of tropical and subtropical Asia. Thought to have been imported to Europe with plants around 1900.	Grabowski & Jablonska (2009); Paunovic <i>et al</i> (2005b); Mann (1958); GBIF Information Facility (2009); NBN Gateway (2009)
freshwater invertebrate	Corophium curvispinum	Freshwater Malacostracan	C	1	Inc	Trans	1	2	0	1	0	1	0	2	T,D	Human-assisted transfer and introduction	0	A limited, but increasing number of reports of occurrences in the UK since 1970s (e.g. Thames). Only Brink et al. (1993) have reported impacts, but from a highly altered river system.	Moon (1970), Bratten (1982), Brink <i>et al</i> (1993)
freshwater invertebrate	Craspedacusta sowerbyi	Amazonian Jellyfish	C	1	Inc	Nat, Trans	1	1	1	1	1	0	0	1	R,E,T,D	Releases from aquaria/garden ponds, human-assisted transfer and introduction	0	Impact unknown.	Smith <i>et al</i> (2008)
freshwater invertebrate	Ergasilus sieboldi	Parasitic Copepod	C	1	Inc	Nat, Trans	1	1	1	1	1	1	1	2	E,T,D	Stocking of infected fish is most common means of dissemination, free living stages may be transferred in water, on equipment or by aquatic animals.	0	EA Category 2 parasite. Damages fish gills. Wide UK distribution. Weakens fish populations/causes mortalities under conditions of low dissolved oxygen. All fish species can act as final hosts, tench (<i>Tinca tinca</i>), bream (<i>Abramis brama</i>) and pike (<i>Esox luc</i>).	National Fisheries Laboratory- Category 2 Parasite Guide (1999)
freshwater invertebrate	Ergasilus briani	Parasitic Copepod	C	1	Inc	Nat, Trans	1	1	1	1	1	1	1	2	E,T,D	Stocking of infected fish is most common means of dissemination, free living stages may be transferred in water, on equipment or by aquatic animals.	0	EA Category 2 parasite. Damages fish gills. Wide UK distribution. Weakens fish populations. Preferentially infects smaller fish often leading to mortality. All fish species can act as final hosts, tench (<i>Tinca tinca</i>) and bream (<i>Abramis brama</i>) are most vulnerable.	National Fisheries Laboratory- Category 2 Parasite Guide (1999)
freshwater invertebrate	Ferissia wautieri	Wautier's Limpet	C	1	Stab	Nat, Trans	1	1	1	1	1	1	1	1	R,E,T,D	Releases from aquaria/garden ponds, human-assisted transfer and introduction	0	Very little information available.	NBN Gateway (2009)
freshwater invertebrate	Masculinum traversum	Long fingernail clam, Oblong orb mussel	C	1	Dec	Nat, Trans	1	1	1	1	1	1	1	1	R,T,D	Unknown inoculation pathway. Introduced 1856 predominantly inhabiting canal basins of the industrial north-west.	0	Present day records show a show a dramatic decline such that this is now a rare species.	Freshwater Bivalves of Britain and Ireland (2004)
freshwater invertebrate	Marstoniopsis scholtzi	Taylor's Spire Shell	C	1	Dec	Nat, Trans	1	1	1	1	1	1	1	1	R,E,T,D	Releases from aquculture/aquaria/garden ponds	0	Very little information available. Minute freshwater gastropod. Only found in lentic habitats. IUCN Red listed: Rare in native country.	NBN Gateway (2009), IUCN Red List (2009).
freshwater invertebrate	Menetus dilatatus	Trumpet Ramshorn	C	1	Inc	Nat, Trans	0	0	1	1	1	1	1	0	R,E,T,D	Human-assisted transfer and introduction	0	Naturalised. Does not present obvious problems.	Conchological Society of Great Britain & Irland
freshwater invertebrate	Neorgasilus japonicus	Parasitic Copepod	C	1	Inc	Nat, Trans	1	0	1	1	1	1	1	1	E,T,D	Stocking of infected fish is most common means of dissemination, free living stages may be transferred in water, on equipment or by aquatic animals.	0	Previous EA Category 2 parasite. Small + easy to miss in field surveys. Presents threat to a large range of coarse and salmonid fish species.	Hayden and Rogers (1998); Hudson and Bowen (2002); Baud et al. 2004; National Fisheries Laboratory- Category 2 Parasite Guide (1999)
freshwater invertebrate	Physella acuta	Tadpole snail	C	1	Stab	Nat, Trans	2	2	0	1	1	1	1	1	R,E,T,D	Releases from aquculture/aquaria/garden ponds	0	Reduced to synonymy with <i>P. heterostopha</i> by Anderson (2003). There is debate as to whether this is a North American species introduced into Europe or a European species which has become dispersed around the world.	Anderson (2003)
freshwater invertebrate	Physella gyrina	Pouch snail	C	1	Stab	Nat, Trans	2	2	0	1	1	1	1	1	R,E,T,D	Releases from aquculture/aquaria/garden ponds	0	Small isolated populations in England	Anderson (1996)
freshwater invertebrate	Physella heterostopha	Pond snail	C	1	Stab	Nat, Trans	2	2	0	1	1	1	1	1	R,E,T,D	Releases from aquaria/garden ponds	0	Reduced to synonymy with <i>P. acuta</i> by Anderson (2003). There is debate as to whether this is a North American species introduced into Europe or a European species which has become dispersed around the world.	Anderson (2003)
freshwater invertebrate	Tracheliastes polycolpus	Parasitic Copepod	C	1	Stab	Nat, Trans	1	1	1	1	1	1	1	1	R,E,T,D	Stocking of infected fish is most common means of dissemination, free living stages may be transferred in water, on equipment or by aquatic animals.	0	Distribution unclear. Ectoparasite of fish fins.Causes loss of fin surface area and impacts swimming ability.	Loot <i>et al</i> (2004)
freshwater invertebrate	Astacus astacus	Noble Crayfish	C	0.5	Stab	Nat, Trans	2	0	1	1	0	0	0	0	R,E,T,D	Releases from aquaria/garden ponds, human-assisted transfer and introduction	0	Presence of plague-bearing signal crayfish is likely to limit population expansion as species is equally susceptible as white-clawed crayfish	Pockl <i>et al.</i> , (2006), Renai&Gherardi (2004)
freshwater invertebrate	Asellus communis	Freshwater Malacostracan	C	0.5	Stab	Trans	1	0	1	0	0	1	0	0	R,E,T,D	Human-assisted transfer and introduction	0	Population contained in a single Northumbrian Lake. Unlikely to have a significant impact.	
freshwater invertebrate	Dugesia tigrina	Freshwater triclad	C	0.5	Stab	Trans	1	0	0	1	0	1	0	1	R,E,T,D	Releases from aquaria/garden ponds, human-assisted transfer and introduction	0	Relatively little information available on this species, which is spreading across Europe, but appears to be relatively benign.	CABI (2005) Inventory of alien species in Switzerland
freshwater invertebrate	Planaria torva	Freshwater triclad	C	0.5	Stab	Trans	1	0	0	1	0	1	0	1	R,E,T,D	Releases from aquaria/garden ponds, human-assisted transfer and introduction	0	Present in R.Tweed. Introduced from aquarium trade. Little information on rate of spread.	NBN Gateway (2009), Reynoldson, T.B., Sefton, A.D. (2006). The food of Planaria torva (Müller) (Turbellaria-Tricladida), a laboratory and field study. Freshwater Biology. Volume, Pages 383 - 393 Preceedings of Glasgow Natural Histroy Soc 150th Anniversay
freshwater invertebrate	Limnodrilus cervix	Oligochaete Worm	C	0	Abs	Trans	0	0	1	1	1	1	0	0	R,T	Potential for releases from aquculture/aquaria/garden ponds	0	Distribution unclear. Nearest population to England appears to be in Belgium and the Netherlands. No clear evidence of detrimental impact on FW ecosystems.	GBIF Information Facility (2009)
freshwater invertebrate	Phagocata woodworthi	Freshwater triclad- American freshwater flatworm	C	0	Abs	Trans	1	0	0	1	0	1	0	1	R,E,T,D	Accidental releases from poorly disinfected survey equipment (human-assisted transfer and introduction)	0	Little information available on this species. Currently confined to Loch Ness in GB - Introduced on survey equipment brought by "monster hunters" !	Young, (1992), Preceedings of Glasgow Natural Histroy Soc 150th Anniversay Conference 2001.
Marine Invertebrate	Didemnum vexillum	Colonial ascidian	A	1	Inc	Nat, Trans	3	3	DD	1	1	2	2	2	T	Hull fouling, ballast water and with aquaculture transfers	E	Not tolerant of immersion in fresh water	Lambert, 2001
Marine Invertebrate	Paralithodes camtschaticus	Red king crab	A	0	0	Nat	3	3	1	1	1	2	1	2	D	Natural dispersal from stocks introduced for commercial exploitation	D	Dispersal to England across the North Sea may be restricted by depth and insufficiently low temperature.	Joergensen et al., 2007
Marine Invertebrate	Watersipora subtorquata	Bryozoan	B	1	Inc	Nat, Trans	2	2	DD	1	1	2	1	3	T	Hull fouling	0		
Marine Invertebrate	Marsupenaeus (Penaeus) japonicus	Japanese tiger prawn	B	0	0	Nat	2	2	3	2	1	2	1	1	D	Potential for escape from aquaculture facilities.	D	Temperature may be a limiting factor to self-sustaining populations but climate change may increase risk of introduction.	

Marine Invertebrate	Rapana venosa	Veined (Asian) rapa whelk	B	0	0	Nat, Trans	1	3	1	1	1	2	1	2	T, D	Natural dispersal of adults from nearby areas. Veliger larvae from ballast waters. Egg cases attached to aquaculture animals or products.	D		Kerckhof et al., 2006
Marine Invertebrate	Ammonothea hilgendorfi	Sea spider	C	1	Stab	Nat, Trans	1	1	DD	1	1	1	1	1	T	Shipping (carried on hulls or through ballast water).	0		Bamber, 1985
Invertebrate	Lymantria dispar	gypsy moth	A	2	Inc.	Nat, Trans	3	1	1	1	1	2	1	1	D/T	Natural dispersal / transported with plants or plant material or inert materials such as car tyres	C, D	Outbreaks around Aylesbury and London	Anon. (2008).
Invertebrate	Agilus planipennis	emerald ash borer	A	0	0	Nat, Trans	3	1	1	1	1	3	1	1	T	Transported with plants or plant material	D	Present around Moscow	Anon(2005), Baranchikov <i>et al</i> (2008); CABI (2009) & Evans (2004)
Invertebrate	Anoplophora chinensis	citrus longhorn beetle	A	0	0	Nat, Trans	3	1	1	1	1	2	1	1	T	Transported with plants or plant material	D	Has been intercepte in mail order plants from China	CABI (2009), Lingafelter & Hoebeke (2002); van der Gaag <i>et al.</i> (2009)
Invertebrate	Anoplophora glabripennis	Asian longhorn beetle	A	0	0	Nat, Trans	3	1	1	1	1	2	1	1	T	Transported with plants or plant material	D	Found in wood packaging	CABI (2009)
Invertebrate	Bursaphelenchus xylophilus	pinewood nematode	A	0	0	Nat, Trans	3	unlikely	1	1	2	3	1	1	T	Transported with plants or plant material	D	Large outbreaks in Portugal	Dwinell (1997) & Eppe PM 7/4(1)
Invertebrate	Thaumetopoea processionea	oak processionary moth	B	1	Stab.	Nat, Trans	2	DD	unlikely	1	1	1	1	1	D/T	Natural dispersal / transported with plants or plant material	D, C	Outbreak in London under eradication	Forest Research advisory info
Invertebrate	Dryocosmus kuriphilus	oriental chestnut gall wasp	B	0	0	Nat, Trans	2	1	1	1	1	2	1	1	T	Transported with plants or plant material	D, C	Would be very difficult to contain once found	CABI (2009); Melika (2006)
Invertebrate	Ips typographus	eight-toothed bark beetle	B	0	0	Nat, Trans	2	1	1	1	1	3	1	1	T	Transported with plants for planting / timber	D		CABI/EPPO (2007); Forest pests.org; FC; Wermelinger (2004); CABI (2009)
Invertebrate	Lissorhoptrus oryzophilus	American water weevil	B	0	0	Nat, Trans	Likely	1	1	1	1	Likely	1	1	T	Transported with plants or plant material	C, E		CABI (2009) Chen <i>et al.</i> (2005); MacLeod (2001)
Invertebrate	Monochamus sartor	sawyer beetle	B	0	0	Nat, Trans	1	1	likely	1	1	2	1	1	T	Transported with plants for planting / timber	D	Doubts exist on potential as a nematode vector	Anderson (2008) Canadian food inspection agency (2007)
Invertebrate	Popillia japonica	Japanese beetle	B	0	0	Nat, Trans	Likely	1	1	1	1	likely	1	1	T	Transported with plants or plant material	C, B	Major problem in USA	Gvelshen & Hodges (2005)
Invertebrate	Selonochlamys ysbryda	ghost slug	B	0	DD	Nat, Trans	Likely	Likely	unlikely	unlikely	likely	unlikely	unlikely	unlikely	T/D	Transported with plants or plant material / natural	C, B, D	Newly discovered species	Rowson, B. & Symondson, W.O.C. (2008)
Invertebrate	Leptoglossus occidentalis	western conifer seedbug	C	2	Inc.	Nat	1	1	1	1	1	1	2	1	D/T	Natural dispersal / transported with plants or plant material	C		CABI (2009); Het News: 12: 7-9
Invertebrate	Diaphania perspectalis	a pyralid moth	C	1	Inc.	Nat, Trans	Likely	1	1	1	1	1	1	1	T/D	Transported with plants or plant material / natural	C, D		http://www.eppo.org/QUARANTINE/Alert_List/insects/diaphania_perspectalis.htm
Invertebrate	Dasineura oxycoccana	blueberry gall midge	C	1	DD	Nat, Trans	Likely	1	1	1	1	likely	1	1	T/D	Transported with plants or plant material / natural	C, D		http://extension.oregonstate.edu/catalog/html/em/em8889/
Invertebrate	Nysius huttoni	green chinch bug	C	1	Inc.	Nat, Trans	Likely	unlikely	1	1	1	1	1	1	D/T	Natural dispersal / transported with plants or plant material	C		Baker & Cannon (2006)*
Invertebrate	Tinocallis takachihoensis	aphid feeding on Ulmus sp.	C	1	DD	Nat, Trans	Likely	1	1	1	1	1	1	1	T/D	Transported with plants or plant material / natural	C		MacLeod (2002)*
Invertebrate	Callidiellum rufipenne	cedar longhorned beetle	C	0	0	Nat, Trans	1	1	1	1	1	1	1	1	T	Transported with plants or plant material	D		CABI (2004)
Invertebrate	Ceresa alta	buffalo treehopper	C	0	0	Nat, Trans	2	1	1	1	1	1	1	1	T	Transported with plants or plant material	C		
Invertebrate	Corythucha arcuata	oak lace bug	C	0	0	Nat, Trans	2	1	1	1	1	1	1	1	T	Transported with plants or plant material	C		Anderson (2007)*
Invertebrate	Diaprotus perniciosus	San Jose scale	C	0	0	Nat, Trans	2	1	1	1	1	1	1	1	T	Transported with plants or plant material	D, C		CABI (1999)
Invertebrate	Enapholodes rufulus	red oak borer	C	0	0	Nat, Trans	DD	1	1	1	1	DD	1	1	T	Transported with plants or plant material	D		http://www.forestpests.org/southern/reoakborer.html ;
Invertebrate	Liriomyza chinensis	onion leafminer	C	0	0	Nat, Trans	Likely	1	1	1	1	1	1	1	T	Transported with plants or plant material	D, C		omyza_chinensis.htm