

**Webtable 1. Aquatic invasive species introduced through the aquarium and ornamental trade**

Only those species with primary literature documentation of successful introduction through the aquarium or ornamental trade or associated activities are included.

**FRESHWATER**

Phylum: Chordata

Class: Osteichthyes

Scientific name	Common name	Family	Location	References
<i>Acipenser</i> spp	sturgeon	Acipenseridae	North America	Crossman and Cudmore 1999
<i>Atractosteus spatula</i>	alligator gar	Lepisosteidae	North America	Crossman and Cudmore 1999
<i>Osteoglossum bicirrhosum</i>	arawana	Osteoglossidae	North America	Crossman and Cudmore 1999
<i>Anabas testudineus</i>	climbing perch	Anabantidae	US	Courtenay and Stauffer 1990
<i>Ctenopoma nigropanosum</i>	two-spot climbing perch	Anabantidae	US	Courtenay and Stauffer 1990
<i>Barbus</i> spp	barb	Cyprinidae	Mexico	Contreras-MacBeath <i>et al.</i> 1998
<i>Brachydanio rerio</i>	zebra danio	Cyprinidae	North America	Crossman and Cudmore 1999
<i>Carassius auratus</i>	goldfish	Cyprinidae	North America, Australia, Israel	Crossman and Cudmore 1999; Golani 2000; McNee 2001
<i>Cyprinella lutrensis</i>	red shiner	Cyprinidae	North America	Crossman and Cudmore 1999
<i>Cyprinus carpio</i>	European carp	Cyprinidae	Australia	McNee 2001
<i>Danio malabaricus</i>	Malabar danio	Cyprinidae	North America	Crossman and Cudmore 1999
<i>Leuciscus ideus</i>	ide	Cyprinidae	North America	Crossman and Cudmore 1999
<i>Morulus chrysophekadion</i>	black shark minnow	Cyprinidae	North America	Crossman and Cudmore 1999
<i>Puntius conchromis</i>	rosy barb	Cyprinidae	Australia	McNee 2001
<i>Puntius nigrofasciatus</i>	black ruby barb	Cyprinidae	North America	Crossman and Cudmore 1999
<i>Puntius tetrazona</i>	Sumatra barb	Cyprinidae	Australia	McNee 2001
<i>Rhodeus sericeus</i>	bitterling	Cyprinidae	North America	Crossman and Cudmore 1999
<i>Tinca tinca</i>	tench	Cyprinidae	North America; Australia	Crossman and Cudmore 1999; McNee 2001
<i>Misgurnus anquillicaudatus</i>	weather loach	Cobitidae	North America; Australia	Crossman and Cudmore 1999; McNee 2001
<i>Colossoma/Piaractus</i> spp	pacu	Characidae	North America	Crossman and Cudmore 1999
<i>Colossoma cf bidens</i>	pacu	Characidae	North America	Crossman and Cudmore 1999
<i>Gymnocorymbus ternetzi</i>	black tetra	Characidae	North America	Crossman and Cudmore 1999
<i>Hyphessobrycon cf serpae</i>	serpae tetra	Characidae	North America	Crossman and Cudmore 1999
<i>Leporinus fasciatus</i>	banded leporinus	Characidae	North America	Crossman and Cudmore 1999
<i>Metynnis maculatus</i>	spotted metynnis	Characidae	North America	Crossman and Cudmore 1999
<i>Myleus cf rubripinnis</i>	Redhook myleus	Characidae	North America	Crossman and Cudmore 1999
<i>Piaractus brachypomus</i>	redbellied pacu	Characidae	North America	Crossman and Cudmore 1999
<i>Piaractus mesopotamicus</i>	small-scaled pacu	Characidae	North America	Crossman and Cudmore 1999
<i>Pygocentrus/Serrasalmus</i> spp	piranha	Characidae	North America	Crossman and Cudmore 1999
<i>Pygocentrus nattereri</i>	red-bellied piranha	Characidae	North America	Crossman and Cudmore 1999
<i>Serrasalmus rhombeus</i>	redeste piranha	Characidae	North America	Crossman and Cudmore 1999
<i>Serrasalmus humeralis</i>	green tiger piranha	Characidae	North America	Shaffland and Foote 1979
<i>Clarias batrachus</i> *	walking catfish	Clariidae	North America	Crossman and Cudmore 1999
<i>Platydoras costatus</i>	Raphael catfish	Doradidae	North America	Crossman and Cudmore 1999
<i>Pseudodoras costatus</i>	ripsaw catfish	Doradidae	North America	Crossman and Cudmore 1999
<i>Pterodoras granulosus</i>	granulated catfish	Doradidae	North America	Crossman and Cudmore 1999
<i>Pterodoras</i> spp	thorny catfish	Doradidae	North America	Crossman and Cudmore 1999
<i>Trachycorystes fisheri</i>	driftwood catfish	Doradidae	North America	Crossman and Cudmore 1999
<i>Perryichthys perruno</i>	leopard catfish	Pimelodidae	North America	Crossman and Cudmore 1999
<i>Phractocephalus hemiliopterus</i>	redtail catfish	Pimelodidae	North America	Crossman and Cudmore 1999
<i>Callichthys callichthys</i>	cascaudo	Callichthyidae	North America	Crossman and Cudmore 1999
<i>Corydoras</i> spp	corydoras	Callichthyidae	North America	Crossman and Cudmore 1999
<i>Hypostomus</i> spp	suckermouth catfish	Loricariidae	North America, Taiwan	Crossman and Cudmore 1999; Weng and Liao 2001
<i>Liposarcus multiradiatus</i>	sailfin catfish	Loricariidae	North America, Puerto Rico	Bunkley-Williams <i>et al.</i> 1994; Crossman and Cudmore 1999
<i>Liposarcus pardalis</i>	pleco	Loricariidae	North America	Crossman and Cudmore 1999

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**Table 1. Continued**

Scientific name	Common name	Family	Location	References
<i>Otocinclus</i> spp	pygmy sucker catfish	Loricariidae	North America	Crossman and Cudmore 1999
<i>Panaque nigrolineatus</i>	royal panaque	Loricariidae	North America	Crossman and Cudmore 1999
<i>Melanotaenia nigrans</i>	blackbanded rainbowfish	Melanotaeniidae	North America	Crossman and Cudmore 1999
<i>Oryzias latipes</i>	Japanese medaka	Adrianichthyidae	North America	Crossman and Cudmore 1999
<i>Fundulus diaphanus</i>	banded killifish	Fundulidae	North America	Crossman and Cudmore 1999
<i>Ameba splendens</i>	butterfly splitfin	Goodeidae	North America	Crossman and Cudmore 1999
<i>Belonesox belizanus</i>	pike killifish	Poeciliidae	North America	Crossman and Cudmore 1999
<i>Gambusia affinis</i> *	western mosquitofish	Poeciliidae	North America, Australia	McKay 1984; Crossman and Cudmore 1999; McNee 2001
<i>Gambusia holbrooki</i>	mosquitofish	Poeciliidae	Australia	McKay 1984; McNee 2001
<i>Phalloceros caudimaculatus</i>	one-spot live-bearer	Poeciliidae	Australia	McKay 1984; McNee 2001
<i>Poecilia latipinna</i>	sailfin molly	Poeciliidae	North America, Australia, Taiwan	McKay 1984; Crossman and Cudmore 1999; McNee 2001
<i>Poecilia latipunctata</i>	broadspotted molly	Poeciliidae	North America	Crossman and Cudmore 1999
<i>Poecilia mexicana</i>	shortfin molly	Poeciliidae	North America	Crossman and Cudmore 1999
<i>Poecilia petenensis</i>	peten molly	Poeciliidae	North America	Crossman and Cudmore 1999
<i>Poecilia reticulata</i>	guppy	Poeciliidae	North America, Australia, Mexico, Taiwan	McKay 1984; Contreras- MacBeath et al. 1998; Crossman and Cudmore 1999; McNee 2001
<i>Poecilia sphenops</i>	liberty molly	Poeciliidae	North America	Crossman and Cudmore 1999
<i>Poecilia gracilis</i>	porthole livebearer	Poeciliidae	North America	Crossman and Cudmore 1999
<i>Xiphophorus helleri</i>	green swordtail	Poeciliidae	North America, Australia, Mexico	McKay 1984; Contreras- MacBeath et al. 1998; Crossman and Cudmore 1999; McNee 2001
<i>Xiphophorus maculatus</i>	southern platyfish; platy	Poeciliidae	North America, Australia, Taiwan	McKay 1984; Crossman and Cudmore 1999; McNee 2001
<i>Xiphophorus variatus</i>	variable platyfish	Poeciliidae	North America, Mexico	Contreras-MacBeath et al. 1998; Crossman and Cudmore 1999
<i>Poecilia latipinna</i> x <i>P. velifera</i> †	sailfin molly X black molly	Poeciliidae	North America	Crossman and Cudmore 1999
<i>Xiphophorus maculatus</i> x <i>X. variatus</i> †	southern platyfish X variable platyfish	Poeciliidae	North America	Crossman and Cudmore 1999
<i>Xiphophorus helleri</i> x <i>X. maculatus</i> †	green swordtail X southern platyfish	Poeciliidae	North America	Crossman and Cudmore 1999
<i>Xiphophorus helleri</i> x <i>X. variatus</i> †	green swordtail X variable platyfish	Poeciliidae	North America	Crossman and Cudmore 1999
<i>Monopterus albus</i>	swamp eel	Synbranchidae	North America	Crossman and Cudmore 1999
<i>Enneacanthus gloriossus</i>	blue spotted sunfish	Centrarchidae	North America	Crossman and Cudmore 1999
<i>Aequidens pulchurus</i>	blue acara	Cichlidae	Australia	Arthington 1986
<i>Aequidens rivulatus</i>	green terror	Cichlidae	Australia	Arthington 1986
<i>Amphilophus citrinellus</i>	red devil/Midas cichlid	Cichlidae	Australia	Arthington 1986
<i>Astronotus ocellatus</i>	oscar	Cichlidae	North America, Australia	Arthington 1986; Crossman and Cudmore 1999
<i>Cichlosoma beani</i>	Sinaloan cichlid	Cichlidae	North America	Crossman and Cudmore 1999
<i>Cichlosoma cyanoguttatum</i>	Rio Grande cichlid	Cichlidae	North America	Crossman and Cudmore 1999
<i>Cichlosoma managuense</i>	jaguar quapote	Cichlidae	North America	Crossman and Cudmore 1999
<i>Cichlasoma meeki</i>	firemouth cichlid	Cichlidae	North America, Australia	Arthington 1986; Crossman and Cudmore 1999
<i>Cichlasoma nigrofasciatum</i>	convict cichlid	Cichlidae	North America, Australia, Mexico	Arthington 1986; Crossman and Cudmore 1999
<i>Cichlasoma octofasciatum</i>	Jack Dempsey	Cichlidae	North America, Australia	Arthington 1986; Crossman and Cudmore 1999

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**Table 1. Continued**

Scientific name	Common name	Family	Location	References
<i>Cichlasoma bimaculatum</i>	black acara	Cichlidae	US	Clugston 1990
<i>Cichlasoma salvini</i>	yellowbelly cichlid	Cichlidae	North America	Crossman and Cudmore 1999
<i>Cichlasoma synspilum</i>	redhead cichlid	Cichlidae	North America, Australia	Arthington 1986; Crossman and Cudmore 1999
<i>Cichlasoma trimaculatum</i>	three-spot cichlid	Cichlidae	North America, Australia	Arthington 1986; Crossman and Cudmore 1999
<i>Cichlasoma urophthalmus</i>	Mayan cichlid	Cichlidae	North America	Crossman and Cudmore 1999
<i>Geophagus brasiliensis</i>	pearl cichlid	Cichlidae	Australia	Arthington 1986
<i>Geophagus surinamensis</i>	redstriped eartheater	Cichlidae	North America	Crossman and Cudmore 1999
<i>Haplochromis burtoni</i>	Burton's haplochromine	Cichlidae	Australia	Arthington 1986
<i>Hemichromis letournauxi</i>	African jewelfish	Cichlidae	North America	Crossman and Cudmore 1999
<i>Hemichromis bimaculatus</i>	jewel cichlid	Cichlidae	US, Australia	Arthington 1986; Clugston 1990
<i>Cichlasoma severum</i>	banded cichlid	Cichlidae	North America, Australia	Arthington 1986; Crossman and Cudmore 1999
<i>Labeotropheus spp</i>	mbuna	Cichlidae	North America	Crossman and Cudmore 1999
<i>Melanochromis auratus</i>	golden mbuna	Cichlidae	North America	Crossman and Cudmore 1999
<i>Melanochromis johanni</i>	blue gray mbuna	Cichlidae	North America	Crossman and Cudmore 1999
<i>Oreochromis aureus</i>	blue tilapia	Cichlidae	North America, Africa, Australia	Arthington 1986; DeMoor and Bruton 1996; Crossman and Cudmore 1999
<i>Oreochromis mossambicus</i> *	Mozambique tilapia	Cichlidae	North America, Australia	Arthington 1986; Crossman and Cudmore 1999
<i>Pseudotropheus spp</i>	African lake cichlid	Cichlidae	North America	Crossman and Cudmore 1999
<i>Pterophyllum scalare</i>	freshwater angelfish	Cichlidae	North America	Crossman and Cudmore 1999
<i>Sarotherodon melanotheron</i>	blackchin angelfish	Cichlidae	North America	Crossman and Cudmore 1999
<i>Telmatochromis cf bifrenatus</i>	Lake Tanganyika dwarf cichlid	Cichlidae	North America	Crossman and Cudmore 1999
<i>Tilapia mariae</i>	spotted tilapia; Niger cichlid	Cichlidae	US, Australia	Arthington 1986; Clugston 1990
<i>Tilapia mossambica</i>	Mozambique Tilapia	Cichlidae	US	Clugston 1990
<i>Tilapia melanotheron</i>	blackchin tilapia	Cichlidae	US	Clugston 1990
<i>Tilapia zillii</i>	redbelly tilapia	Cichlidae	Australia	Arthington 1986
<i>Helostoma temmincki</i>	kissing gourami	Helostomatidae	North America	Crossman and Cudmore 1999
<i>Betta splendens</i>	Siamese fightingfish	Belontiidae	North America	Crossman and Cudmore 1999
<i>Colisa fasciata</i>	banded gourami	Belontiidae	North America	Crossman and Cudmore 1999
<i>Macropodus opercularis</i>	paradise fish	Belontiidae	North America	Crossman and Cudmore 1999
<i>Trichogaster trichopterus</i>	three-spot gourami	Belontiidae	Australia	McKay 1984; McNee 2001
<i>Trichopis vittata</i>	croaking gourami	Belontiidae	US	Clugston 1990
<i>Osphronemus goramy</i>	giant gourami	Osphronemidae	North America	Crossman and Cudmore 1999
<i>Channa micropeltes</i>	giant snakehead	Channidae	North America	Crossman and Cudmore 1999
<i>Notopterus chitala</i>	clown knifefish	Notopteridae	North America	Crossman and Cudmore 1999
<i>Sciaenops ocellatus</i>	red drum	Sciaenidae	Taiwan	Weng and Liao 2001

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<b>Table 1. Continued</b>				
Class: Amphibia				
<b>Scientific name</b>	<b>Common name</b>	<b>Family</b>	<b>Location</b>	<b>References</b>
<i>Rana catesbeiana</i> *	bullfrog	Ranidae	Europe	Stumpel 1992
<i>Xenopus laevis</i>	African clawed frog	Ranidae	Worldwide	Tinsley and McCoid 1996
Class: Reptilia				
<b>Scientific name</b>	<b>Common name</b>	<b>Family</b>	<b>Location</b>	<b>References</b>
<i>Trychemys scripta</i> *	American red-eared terrapin	Emydidae	South Africa,	Newberry 1984; Servan et al. 1997
Phylum: Mollusca Class: Gastropoda				
<b>Scientific name</b>	<b>Common name</b>	<b>Family</b>	<b>Location</b>	<b>References</b>
<i>Marisa cornuarietis</i>	giant rams-horn	Pilidae (Ampularidae)	North America	Hunt 1958; Mackie 1999
<i>Pomacea paludosa</i>	Florida apple snail	Pilidae	US	Thompson 1984
<i>Pomacea canaliculata</i>	South American apple snail	Pilidae	US	Neck and Schultz 1992
<i>Melanoides (Thiara) tuberculata</i>	red-rim melania/screw snail	Thiaridae	North America	Abbot 1973
<i>Tarebia (Thiara) granfiera</i>	quilted melania	Thiaridae	North America	Mackie 1999
<i>Physella acuta</i>	European physa	Physidae	North America	Mackie 1999
<i>Stenophysa marmorata</i>	marbeled aplexa	Planorbidae	North America	Mackie 1999
<i>Stenophysa maugeriae</i>	tawny aplexa	Planorbidae	North America	Mackie 1999
<i>Biomphalaria glabrata</i>	bloodfluke planorb	Planorbidae	North America	Mackie 1999
<i>Biomphalaria straminea</i>	Brazilian snail	Planorbidae	Australia	Dudgeon and Yipp 1983
Phylum: Arthropoda Class: Crustacea				
<b>Scientific name</b>	<b>Common name</b>	<b>Family</b>	<b>Location</b>	<b>References</b>
<i>Procambarus clarkii</i>	red swamp crayfish	Cambariidae	Europe, Africa	Troschel and Dehus 1993; DeMoor and Bruton 1996
Division: Magnoliophyta Class: Magnoliopsida				
<b>Scientific name</b>	<b>Common name</b>	<b>Family</b>	<b>Location</b>	<b>References</b>
<i>Cabomba caroliniana</i>	cabomba	Cabombaceae	Australia	Batianoff and Butler 2002
<i>Hygrophila costata</i>	glush weed	Acanthaceae	Australia	Batianoff and Butler 2002
<i>Gymnocoronis spilanthoides</i>	Senegal tea	Asteraceae	Australia	Batianoff and Butler 2002
<i>Nymphaea caerulea</i>	blue lotus	Nymphaeaceae	Australia	Batianoff and Butler 2002
<i>Myriophyllum aquaticum</i>	parrot's feather	Haloragaceae	US, Australia	Clugston 1990; Batianoff and Butler 2002
<i>Rorippa nasturtium-aquaticum</i>	watercress	Brassicaceae	Australia	Batianoff and Butler 2002
<i>Nymphaea mexicana</i>	yellow waterlily	Nymphaeaceae	Australia	Batianoff and Butler 2002
<i>Hydrocotyle ranunculoides</i>	floating pennywort	Apiaceae	Australia	RuizAvila and Klemm 1996

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**Table 1. Continued**

Class: Liliopsida

Scientific name	Common name	Family	Location	References
<i>Pistia stratiotes</i>	water lettuce	Araceae	Australia	Batianoff and Butler 2002
<i>Cyperus involucreatus</i>	African sedge	Cyperaceae	Australia	Batianoff and Butler 2002
<i>Hydrilla verticillata</i>	hydrilla	Hydrocharitaceae	US	Clugston 1990
<i>Egeria densa</i>	egeria waterweed	Hydrocharitaceae	Australia	Batianoff and Butler 2002
<i>Juncus articulatus</i>	jointed rush	Juncaceae	Australia	Batianoff and Butler 2002
<i>Ruppia maritima</i>	sea tassel	Ruppiaceae	Australia	Batianoff and Butler 2002
<i>Sagittaria graminea</i>	sagittaria arrowhead	Alismataceae	Australia	Batianoff and Butler 2002
<i>Elodea nuttallii</i>	Nuttall waterweed	Hydrocharitaceae	Sweden	Josefsso and Andersson 2001
<i>Elodea canadensis</i>	Canada waterweed	Hydrocharitaceae	Sweden	Josefsso and Andersson 2001
<i>Eichornia crassipes</i>	water hyacinth	Pontederiaceae	Worldwide	Holm et al. 1979

Division: Pterophyta

Class: Polypodiopsida

Scientific name	Common name	Family	Location	References
<i>Salvinia molesta</i>	salvinia	Salviniaceae	Phillipines, Australia	Pablico et al. 1989; Batianoff and Butler 2002

**MARINE**

Phylum: Chordata

Class: Osteichthyes

Scientific name	Common name	Family	Location	References
<i>Pterios volitans</i>	red lionfish	Scorpaenidae	Western Atlantic	Whitfield et al. 2002

Division: Chlorophyta

Class: Bryopsidophyceae

Scientific name	Common name	Family	Location	References
<i>Caulerpa taxifolia</i> *	killer alga	Caulerpaceae	Mediterranean; California; Australia	Jousson et al. 1998, Wiedenmann et al. 2001

\*On the “100 of the World’s Worst Invasive Alien Species” list ([www.issg.org/booklet.pdf](http://www.issg.org/booklet.pdf)) of the Invasive Species Specialist Group of the Species Survival Commission of the World Conservation Union.

†Hybrid crosses between two species

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