


List of Alien Species Introduced into the Great Lakes and the St. Lawrence River
(Including the reported date of introduction for each region and the site of first report for the Great Lakes)

Taxon	Species	Family	Origin	Vector*	Great Lakes		St. Lawrence	
					Date	Site**	Date	
Algae	<i>Actinocyclus normanii form subsalsa</i>	Bacillariophyceae	Northern Europe	S(BW)	1938	LO		
	<i>Biddulphia laevis</i>	Bacillariophyceae	Africa	S(BW)	1978	LM		
	<i>Chaetoceros hohnii</i>	Bacillariophyceae	Unknown	S(BW)	1978	LH		
	<i>Cyclotella atomus</i>	Bacillariophyceae	Widespread	S(BW)	1964	LM		
	<i>Cyclotella cryptica</i>	Bacillariophyceae	Widespread	S(BW)	1964	LM		
	<i>Cyclotella pseudostelligera</i>	Bacillariophyceae	Widespread	S(BW)	1946	LM	<1998	
	<i>Cyclotella woltereki</i>	Bacillariophyceae	Widespread	S(BW)	1964	LM		
	<i>Diatoma ehrenbergii</i>	Bacillariophyceae	Widespread	S(BW)	1937	LM	Unknown	
	<i>Skeletonema potamos</i>	Bacillariophyceae	Widespread	S(BW)	1963	LE	1996	
	<i>Skeletonema subsalsum</i>	Bacillariophyceae	Baltic sea	S(BW)	1973	LE	1995	
	<i>Stephanodiscus binderanus</i>	Bacillariophyceae	Eurasia	S(BW)	1938	LM	1955	
	<i>Stephanodiscus subtilis</i>	Bacillariophyceae	Eurasia	S(BW)	1946	LM		
	+ <i>Terpsinoe musica</i>	Bacillariophyceae	Unknown	Unknown	1978	LM		
	<i>Thalassiosira guillardii</i>	Bacillariophyceae	Widespread	S(BW)	1973	LE	Unknown	
	<i>Thalassiosira lacustris</i>	Bacillariophyceae	Widespread	S(BW)	<1978	LE		
	<i>Thalassiosira pseudonana</i>	Bacillariophyceae	Widespread	S(BW)	1973	LE	1994	
	<i>Thalassiosira weissflogii</i>	Bacillariophyceae	Widespread	S(BW)	1962	LE	Unknown	
	<i>Enteromorpha intestinalis</i>	Chlorophyceae	Atlantic	R(A)	1926	LO	1995	
	<i>Enteromorpha prolifera</i>	Chlorophyceae	Atlantic	Unknown	1979	LSC	1999	
	<i>Nitellopsis obtusa</i>	Chlorophyceae	Eurasia	S(BW)	1983	LSC	1978	
	<i>Hymenomonas roseola</i>	Chrysophyceae	Eurasia	S(BW)	1975	LH		
	<i>Bangia atropurpurea</i>	Rhodophyceae	Atlantic N. coast	S(BW),S(F)	1964	LE	IND	
	<i>Chroodactylon ramosus</i>	Rhodophyceae	Atlantic	S(BW)	1964	LE	<1982	
	<i>Sphacelaria fluviatilis</i>	Sphacelariaceae	Asia	S(BW)	1975	LM		
	<i>Sphacelaria lacustris</i>	Sphacelariaceae	Unknown	S(BW)	1975	LM		
	Plants	<i>Conium maculatum</i>	Apiaceae	Eurasia	R(C)	<1843		1832
		+ <i>Pistia stratiotes</i>	Araceae	South-east US	R(C)	2000	LE	
<i>Cirsium palustre</i>		Asteraceae	Eurasia	Unknown	<1950	LS	1821	
<i>Pluchea odorata var. purpurescens</i>		Asteraceae	Atlantic	R(A)	1916	LE		
<i>Pluchea odorata var. succulenta</i>		Asteraceae	Atlantic	Unknown	<1950	LO		
<i>Solidago sempervirens</i>		Asteraceae	Atlantic	R(A)	1969	LM	IND	
<i>Sonchus arvensis</i>		Asteraceae	Eurasia	R(A)	1865	LO	1862	
<i>Sonchus arvensis var. glabrescens</i>		Asteraceae	Eurasia	R(A)	1902	LE		
<i>Impatiens glandulifera</i>		Balsaminaceae	Asia	R(C)	1912	LH	1943	
<i>Alnus glutinosa</i>		Betulaceae	Eurasia	R(C)	<1913			
<i>Myosotis scorpioides</i>		Boraginaceae	Eurasia	R(C)	1886	LO	1903	
<i>Rorippa nasturtium var. aquaticum</i>		Brassicaceae	Eurasia	R(C)	1847	LO	1970	

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	<i>Rorippa sylvestris</i>	Bassicaceae	Eurasia	S(SB),R(C)	1884	LO	1934
	<i>Butomus umbellatus</i>	Butomaceae	Eurasia	S(SB)	1930	LM	1905
	<i>Cabomba caroliniana</i>	Cabombaceae	Southern US	R(AQ),R(A)	1935	LM	
	<i>Stellaria aquatica</i>	Caryophylliaceae	Eurasia	Unknown	1894	LSC	1965
	<i>Chenopodium glaucum</i>	Chenopodiaceae	Eurasia	RH	1867	LO	1904
	<i>Carex acutiformis</i>	Cyperaceae	Eurasia	Unknown	1951	LM	
	<i>Carex disticha</i>	Cyperaceae	Eurasia	NBS	1866	LO	1927
	<i>Carex flacca</i>	Cyperaceae	Eurasia	Unknown	1896	LE	1975
	<i>Myriophyllum spicatum</i>	Haloragaceae	Eurasia	R(AQ),S(F)	1949	LE	1945
	<i>Hydrocharis morsus-ranae</i>	Hydrocharitaceae	Rideau Canal	R(AQ),R(D)	1972	LO	1932
	<i>Iris pseudacorus</i>	Iridaceae	Eurasia	R(C)	1886	LO	1943
	<i>Juncus compressus</i>	Juncaceae	Eurasia	R(A)	1895	LE	1904
	<i>Juncus gerardii</i>	Juncaceae	Atlantic	S(SB)	1862	LM	IND
	<i>Juncus inflexus</i>	Juncaceae	Eurasia	Unknown	1922	LO	
	<i>Lycopus asper</i>	Labiaceae	Mississippi	R(A)	1892	LE	1942
	<i>Lycopus europaeus</i>	Labiaceae	Eurasia	S(SB)	1903	LO	1964
	<i>Mentha gentilis</i>	Labiaceae	Eurasia	R(C)	1915	LO	1890
	<i>Mentha piperita</i>	Lamiaceae	Eurasia	R(C)	1933	LH	1935
	<i>Mentha spicata</i>	Lamiaceae	Eurasia	R(C)	<1843	WID	1821
	<i>Lythrum salicaria</i>	Lythraceae	Eurasia	S(SB),C	1869	LO	1865
	<i>Marsilea quadrifolia</i>	Marcileaceae	Eurasia	R(C)	1925	LE	
	<i>Nymphoides peltata</i>	Menyanthaceae	Eurasia	R(A)	1930	LE	1950
	<i>Najas marina</i>	Najadaceae	Eurasia	S(BW)	1864	LO	1901
	<i>Najas minor</i>	Najadaceae	Eurasia	R(D)	1934	LE	
	<i>Potamogeton crispus</i>	Najadaceae	Eurasia	R(D),S(F)	1879	LO	1932
	<i>Epilobium hirsutum</i>	Onagraceae	Eurasia	R(A),S(SB)	1874	LO	1940
	<i>Epilobium parviflorum</i>	Onagraceae	Eurasia	Unknown	1966	LM	
	<i>Agrostis gigantea</i>	Poaceae	Eurasia	R(C)	1884	LS	1981
	<i>Alopecurus geniculatus</i>	Poaceae	Eurasia	R(C)	1882	LE	1899
	<i>Echinochloa crus-galli</i>	Poaceae	Eurasia	R(C),S(SB)	<1843	WID	1862
	<i>Glyceria maxima</i>	Poaceae	Eurasia	R(C),S(SB)	1940	LO	
	<i>Poa trivialis</i>	Poaceae	Eurasia	R(C),S(SB)	<1843	WID	1899
	<i>Puccinellia distans</i>	Poaceae	Eurasia	S(SB),RH	1893	LO	1984
	<i>Polygonum caespitosum</i> var. <i>longisetum</i>	Polygonaceae	Asia	Unknown	1960	LE	
	<i>Polygonum persicaria</i>	Polygonaceae	Unknown	Unknown	<1843	WID	1945
	<i>Rumex longifolius</i>	Polygonaceae	Eurasia	R(C)	1901	LS	1960
	<i>Rumex obtusifolius</i>	Polygonaceae	Eurasia	Unknown	<1840	WID	1821
	<i>Lysimachia nummularia</i>	Primulaceae	Eurasia	R(C)	1882	LO	1895
	<i>Lysimachia vulgaris</i>	Primulaceae	Eurasia	R(C)	1913	LO	
	<i>Rhamnus frangula</i>	Rhamnaceae	Eurasia	R(C)	<1913	LO	1970
	<i>Salix alba</i>	Salicaceae	Eurasia	R(C)	<1886	WID	1945
	<i>Salix fragilis</i>	Salicaceae	Eurasia	R(C)	<1886	WID	1945
	<i>Salix purpurea</i>	Salicaceae	Eurasia	R(C)	<1886	WID	1943

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	<i>Veronica beccabunga</i>	Scrophulariaceae	Eurasia	S(SB),R(C)	1915	LO	1905
	<i>Solanum dulcamara</i>	Solonaceae	Eurasia	R(C)	<1843	WID	1891
	<i>Sparganium glomeratum</i>	Sparganiaceae	Eurasia	Unknown	1941	LS	1931
	<i>Trapa natans</i> ☐	Trapaceae	Eurasia	R(A),R(AQ)	<1959	LO	1998
	<i>Typha angustifolia</i>	Typhaceae	Eurasia	C,R(A)	1880s	LO	<1935
Invertebrates	<i>Argulus japonicus</i>	Argulidae	Asia	R(F), R(AQ)	<1988	LM	
	<i>Bithynia tentaculata</i>	Bithyniidae	Eurasia	S(SB),R(D)	1871	LM	1914
	<i>Eubosmina coregoni</i>	Bosminidae	Eurasia	S(BW)	1966	LM	1994
	+ <i>Eriocheir sinensis</i>	Branchiura	Asia	S(BW)	1965	LO	
	<i>Orconectes limosus</i>	Cambaridae	North America	Unknown			<1970
	+ <i>Orconectes rusticus</i>	Cambaridae	Mississippi	Unknown	1960	LS	
	<i>Bythotrephes cederstroemi</i>	Cercopagidae	Eurasia	S(BW)	1984	LH	
	+ <i>Cercopagis pengoi</i>	Cercopagidae	Eurasia	S(BW)	1998	LO	
	<i>Cordylophora caspia</i>	Clavidae	Unknown	R(A)	1956	LE	
	<i>Corbicula fluminea</i>	Corbiculidae	Asia	R(A),R(AQ)	1980	LE	
	+ <i>Corophium mucronatum</i>	Corophiidae	Ponto-Caspian	Unknown	1997	LSC	
	<i>Tanysphyrus lemnae</i>	Curcolionidae	Eurasia	Unknown	<1943	?	
	+ <i>Daphnia lumholtzi</i>	Daphniidae	Australia	Unknown	1999	LE	
	<i>Skistodiptomus pallidus</i>	Diaptomidae	Mississippi	R(A),R(F)	1967	LO	
	<i>Dreissena bugensis</i>	Dreissenidae	Eurasia	S(BW)	1989	LO	1992
	<i>Dreissena polymorpha</i>	Dreissenidae	Eurasia	S(BW)	1986	LSC	1989
	+ <i>Echinogammarus ischnus</i>	Gammaridae	Eurasia	S(BW)	1995	LE	1997
	<i>Gammarus fasciatus</i>	Gammaridae	Atlantic	S(SB),S(BW)	<1940	?	IND
	<i>Gillia altilis</i>	Hydrobiidae	Atlantic	C	1918	LO	
	+ <i>Potamopyrgus antipodarum</i>	Hydrobiidae	New Zealand	Unknown	1991	LO	
	+ <i>Lophopodella carteri</i>	Lophopodidae	Asia	S(F)	1934	LE	1989
	<i>Radix auricularia</i>	Lymnaeidae	Eurasia	R(AQ), R(A)	1901	LM	1996 ?
	<i>Ripistes parasita</i>	Naididae	Eurasia	S(BW)	1980	LH	1983
	<i>Eurytemora affinis</i>	O: Calanoida	Widespread	S(BW)	1958	LO	1992
	<i>Craspedacusta sowerbyi</i>	Petasidae	Asia	R(A)	1933	LE	
	<i>Dugesia polychroa</i>	Planariidae	Eurasia	S(BW)	1968	LO	1968
	+ <i>Ichthyocotylurus pileatus</i>	Plathelmintha	Europe	R(F)	1994	LSC	
	<i>Elimia virginica</i>	Pleuroceridae	Atlantic	C	1860	LE	
	<i>Glugea hertwigi</i>	Protozoa	Eurasia	R(F)	1960	LE	1980
	<i>Myxobolus cerebralis</i>	Protozoa	Europe	R(F)	1968	LE	
	+ <i>Sphaeromyxa sevastopoli</i>	Protozoa	Black Sea	R(F)	1994	LSC	
	<i>Aeromonas salmonicida</i>	Pseudomonadacea	Unknown	R(F)	<1902	WID	Unknown
	<i>Acentropus niveus</i>	Pyralidae	Eurasia	R(A)	1950	LE/LO	
	<i>Pisidium amnicum</i>	Sphaeriidae	Eurasia	S(SB)	1897	LO	1978
	+ <i>Pisidium henslowanum</i>	Spaeriidae	Europe	Unknown	1905	WID	<1980
	+ <i>Pisidium moitessierianum</i>	Spaeriidae	Europe	S(SB)	<1894	LE	
	+ <i>Pisidium supinum</i>	Spaeriidae	Europe	Unknown	1959	LO	
	<i>Sphaerium corneum</i>	Sphaeriidae	Eurasia	Unknown	1924	LO	1977
	<i>Branchiura sowerbyi</i>	Tubificidae	Asia	R(A)	1951	LM	

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Fishes	<i>Phallodrilus aquaedulcis</i>	Tubificidae	Eurasia	S(BW)	1983	LO	
	<i>Lasmigona subveridis</i>	Unionidae	Atlantic	C	<1959	LE	
	<i>Valvata piscinalis</i>	Valvatidae	Eurasia	S(SB)	1897	LO	1991
	<i>Cipangopaludina chinensis</i> <i>var. malleatus</i>	Viviparidae	Asia	R(AQ)	1931	LO	<1980
	<i>Cipangopaludina japonica</i>	Viviparidae	Asia	R(D)	1940s	LE	
	<i>Viviparus georgianus</i>	Viviparidae	Mississippi	R(AQ)	<1906	LM	<1977
	<i>Enneacanthus gloriosus</i>	Centrarchidae	Eastern coast U.S.	R(AQ),R(F)	1971	LO	
	<i>Lepomis humilis</i>	Centrarchidae	Mississippi	R(A),R(AQ)	1929	LE	
	<i>Lepomis microlophus</i>	Centrarchidae	Mississippi	R(D), R(AC)	1928	LM	
	<i>Alosa pseudoharengus</i>	Clupeidae	Atlantic N. coast	C	1873	LO	IND
	+ <i>Alosa aestivalis</i>	Clupeidae	Atlantic N. coast	C	1995	LO	
	+ <i>Dorosoma cepedianum</i>	Clupeidae	Mississippi	C	1848	LE	1944
	<i>Misgurnus anguillicaudatus</i>	Cobitidae	Eastern Asia	R(A)	1939	LH	
	<i>Carassius auratus</i>	Cyprinidae	Asia	R(D),R(AQ)	<1878	WID	Unknown
	+ <i>Ctenopharyngodon idella</i>	Cyprinidae	Asia	R(D)	1986	LE	
	<i>Cyprinus carpio</i>	Cyprinidae	Eurasia	R(C),R(D)	1879	LE	1908
	+ <i>Hypophthalmichthys nobilis</i>	Cyprinidae	Asia	R(C)	1995	LE	
	<i>Notropis buchanani</i>	Cyprinidae	Mississippi	R(F)	1979	LSC	
	<i>Phenacobius mirabilis</i>	Cyprinidae	Mississippi	R(F)	1950	LE	
	<i>Scardinius</i>	Cyprinidae	Caspian-Aral Seas	R(F)	1955s	LE	1990
	<i>Tinca tinca</i> 	Cyprinidae	Europe	R(A)			1991
	<i>Apeltes quadracus</i>	Gasterosteidae	Atlantic N. coast	S(BW)	1986	LS	IND
	+ <i>Gasterosteus aculeatus</i>	Gasterosteidae	Atlantic N. coast	C	1980	LH	IND
	<i>Neogobius melanostomus</i>	Gobiidae	Eurasia	S(BW)	1990	LSC	1997
	<i>Proterorhinus marmoratus</i>	Gobiidae	Eurasia	S(BW)	1990	LSC	
	<i>Noturus insignis</i>	Ictaluridae	Atlantic N. coast	C,R(F)	1928	LO	1971
	<i>Osmerus mordax</i>	Osmeridae	Atlantic N. coast	C,R(F)	1912	LM	IND
	<i>Morone americana</i>	Perchichthyidae	Atlantic N. coast	C	1950	LO	IND
	<i>Gymnocephalus cernuus</i>	Percidae	Eurasia	S(BW)	1986	LS	
	<i>Petromyzon marinus</i>	Petromyzontidae	Atlantic N. coast	C,S(F)	1835	LO	IND
	+ <i>Platichthys flesus</i>	Pleuronectidae	Europe	Unknown	1974	LE	
	<i>Gambusia affinis</i>	Poeciliidae	Mississippi	R(D)	1923	LM	
	<i>Oncorhynchus gorbuscha</i>	Salmonidae	Pacific N. coast	R(A),R(F)	1956	LS	
<i>Oncorhynchus kisutch</i>	Salmonidae	Pacific N. coast	R(D)	1933	LE	1972	
<i>Oncorhynchus mykiss</i>	Salmonidae	Pacific N. coast	R(D)	1876	LH	1950	
<i>Oncorhynchus nerka</i>	Salmonidae	Pacific N. coast	R(D)	1950	LO		
<i>Oncorhynchus tshawytscha</i>	Salmonidae	Pacific N. coast	R(D)	1967	LM/LS	1983	
+ <i>Oncorhynchus clarki</i>	Salmonidae	Pacific N. coast	R(A)			1941	
<i>Salmo trutta</i>	Salmonidae	Eurasia	R(D)	1883	LO/LM	1890	

* R(D): Deliberate; R(AQ): Release of aquarium; R(C): Release of cultivation; R(F): Release of organisms with bait or other fish; R(A): Release accidental; S(BW): Shipping with ballast water; S(SB): Shipping with solid ballast; S(F): Shipping with fouling; C: Canals

**LO: Lake Ontario; LE: Lake Erie; LSC: Lake St. Clair; LH: Lake Huron; LM: Lake Michigan; LS: Lake Superior; WID:
Widespread
■ : Species introduced in the Richelieu River