



WESTERN AUSTRALIAN PREVENTION LIST FOR INTRODUCED MARINE PESTS, DEPARTMENT OF FISHERIES

(NOVEMBER 2016)

This list contains species that may be spread via biofouling or ballast water that are (1) present on national aquatic pest lists or (2) of concern to the protection of WA aquatic resources.

Noxious Fish

This list also indicates which of these species are prescribed as noxious fish¹.

Under the *Fish Resources Management Act 1994* you must not do the following with any noxious fish:

- keep, breed, hatch or culture them;
- have them in your possession;
- consign or convey them;
- release them into any waters; or
- put them into a container or receptacle in which they might remain alive.

You also must not bring any fish —

- into the State if the fish is prescribed to be a noxious fish in the State or in any area of the State; or
- into an area of the State from another area of the State if the fish is prescribed to be a noxious fish in the first-mentioned area.

¹ For a definitive list of noxious fish, please refer to the most recent published version of the *Fish Resources Management Regulations 1995*.

Reporting Pests

ALL species listed below and any other species that appear to have clear impacts or invasive characteristics must be reported within 24 hours to the Department of Fisheries by:

- contacting **FISHWATCH** on 1800 815 507; or
- through the free WA PestWatch app.

This should be done following the:

- a) initial detection of a suspected Introduced Marine Pest; or
- b) subsequent analysis and confirmation of a suspected Introduced Marine Pest.

Sample Collection

If you collect samples please report this to FISHWATCH immediately.

Please also seek advice from the Department's Biosecurity Research branch at Hillarys for the best way to relax, fix and preserve samples for taxonomic and molecular analysis.

Please refer to www.fish.wa.gov.au for the most up-to-date version of this list.

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(Different management responses will apply to different species.)

Group	Genus	Species, subspecies or variant	Common name	Comments	X = Monitoring target species for Marine Pest Monitoring Programs (DAFF 2009)	DNA barcoding potentially acceptable to the Department of Fisheries ^{2,3}
Fish	<i>Acanthogobius</i>	<i>flavimanus</i>	Yellow Fin Goby	N* - any area of the State.		YES
Crustacean – shrimp etc	<i>Acartia</i> (<i>Acanthacartia</i>)	<i>tonsa</i>	Calanoid copepod	N - any area of the State.	X	YES
Toxic dinoflagellate	<i>Alexandrium</i>	<i>catenella</i>	Toxic dinoflagellate	N - any area of the State except in the Port of Fremantle.	X	No
Toxic dinoflagellate	<i>Alexandrium</i>	<i>minutum</i>	Toxic dinoflagellate	N - any area of the State.	X	No

² Generation of barcode data is to be conducted by a NATA- accredited laboratory meeting chain of custody criteria. Only reports produced by an accredited laboratory will be accepted as identification results.

³ Bolded species = held in local voucher collections.

Toxic dinoflagellate	<i>Alexandrium</i>	<i>monilatum</i>	Toxic dinoflagellate	N - any area of the State.	X	NO
Toxic dinoflagellate	<i>Alexandrium</i>	<i>tamarense</i>	Toxic dinoflagellate	N - any area of the State.	X	No
Crustacean - barnacle	<i>Amphibalanus</i>	<i>eburneus</i> (syn. <i>Balanus eburneus</i>)	Ivory barnacle	N - any area of the State.	X	No
Crustacean - barnacle	<i>Amphibalanus</i>	<i>improvisus</i> (syn. <i>Balanus improvisus</i>)	Bay barnacle	Marine/estuarine incursions only. N - any area of the State.	X	Yes
Bivalve mollusc	<i>Anadara</i>	<i>transversa</i> (syn. <i>A. demiri</i>)	Transverse arc clam	N - any area of the State.		YES
Bivalve mollusc	<i>Arcuatula</i>	<i>senhousia</i> (syn. <i>Musculista senhousia</i>)	Asian bag mussel; Asian date mussel	N - any area of the State except the Swan River and Port of Fremantle.	X	YES
Echinoderm – sea star	<i>Asterias</i>	<i>amurensis</i>	Northern Pacific seastar	N - any area of the State.	X	YES
Crustacean - barnacle	<i>Balanus</i>	<i>glandula</i>	Common acorn barnacle; White buckshot barnacle	N - any area of the State.		YES
Comb jelly	<i>Beroe</i>	<i>ovata</i>	-	N - any area of the State.	X	NO
Hydroid	<i>Blackfordia</i>	<i>virginica</i>	-	N - any area of the State.	X	Yes

Macroalga	<i>Bonnemaisonia</i>	<i>hamifera</i>	Bonnemaison's hook weed; Pink cotton wool	N - any area of the State.	X	YES
Bivalve mollusc	<i>Brachidontes</i>	<i>pharaonis</i>	Variable mussel	Since last dry-docking, if vessel has an operational history that includes the Red or Mediterranean Sea, suspected <i>Brachidontes</i> samples should be submitted for molecular identification to verify that they are not <i>B. pharaonis</i> . N - any area of the State.		YES
Crustacean – crab	<i>Callinectes</i>	<i>sapidus</i>	Chesapeake blue crab; Atlantic blue crab; Blue crab	N - any area of the State.	X	YES
Crustacean – crab	<i>Carcinoscorpius</i>	<i>rotundicauda</i>	Mangrove horseshoe crab	N - any area of the State.		YES
Crustacean – crab	<i>Carcinus</i>	<i>maenas</i>	European green crab; European shore crab	N - any area of the State.	X	YES
Macroalga	<i>Caulerpa</i>	<i>taxifolia</i>	Aquarium weed; Feather alga; Killer alga	Exotic strains only. N - any area of the State except in the Pilbara and Kimberley Regions, non-endemic spp. or variants.	X	Yes
Diatom	<i>Chaetoceros</i>	<i>conconvicornis</i>	Centric diatom	N - any area of the State.	X	No
Diatom	<i>Chaetoceros</i>	<i>convolutus</i>	Centric diatom	N - any area of the State.	X	No

Crustacean – crab	<i>Charybdis (Charybdis)</i>	<i>japonica</i>	Asian paddle crab	This species is not established in WA, but as three were found in the Swan River in 2012, public awareness raising is continuing. N - any area of the State.	X	YES
Crustacean - barnacle	<i>Chthamalus</i>	<i>proteus</i>	Atlantic barnacle; Caribbean barnacle	N - any area of the State.		YES
Sponge	<i>Cliona</i>	<i>thoosina</i>	Boring sponge; Sulfur sponge	N - any area of the State.		NO
Macroalga	<i>Codium</i>	<i>fragile fragile (syn. C. fragile tomentosoides)</i>	Dead man's fingers; Oyster thief; Broccoli weed	Control measures to manage this species are being carried out by the Department. N - any area of the State except in the Port of Albany.	X	YES
Bivalve mollusc (freshwater)	<i>Corbicula</i>	<i>fluminea</i>	Asian clam; Asiatic clam	N - any area of the State.		YES
Bivalve mollusc	<i>Corbula</i>	<i>gibba (syn. Varicorbula gibba)</i>	Basket shell; European or basket shell clam	N - any area of the State.	X	YES
Bivalve mollusc	<i>Crassostrea</i>	<i>ariakensis</i>	Suminoe oyster; Asian oyster	N - any area of the State.		YES
Bivalve mollusc	<i>Crassostrea</i>	<i>gigas</i>	Giant oyster; Pacific oyster; Japanese oyster; Miyagi oyster		X	YES
Bivalve mollusc	<i>Crassostrea</i>	<i>virginica</i>	American oyster; Eastern oyster	N - any area of the State.		Yes

Gastropod mollusc	<i>Crepidula</i>	<i>fornicata</i>	Slipper limpet; Atlantic slipper snail	N - any area of the State.	X	YES
Ascidian – sea squirt	<i>Didemnum</i>	<i>perlucidum</i>	White sea squirt, white ascidian	Suspected and confirmed detections throughout the State should be reported as soon as possible. If moving vessels or immersible equipment into, or adjacent to, high value assets ⁴ , stakeholders are requested to comply with any specific Departmental management advice at www.fish.wa.gov.au N – Montebello Islands Marine Park.	X	YES
Ascidian – sea squirt	<i>Didemnum</i>	spp.	Colonial sea squirt; colonial ascidian	Exotic invasive species only. N - any area of the State, non-endemic spp.	X	NO
Ascidian – sea squirt	<i>Didemnum</i>	<i>vexillum</i>	Colonial sea squirt	N - any area of the State.	X	YES
Crustacean – shrimp etc	<i>Dikerogammarus</i>	<i>villosus</i>	Killer shrimp	N - any area of the State.		YES
Toxic dinoflagellate	<i>Dinophysis</i>	<i>norvegica</i>	Toxic dinoflagellate	N - any area of the State.	X	No

⁴ Including, for example, State marine parks, A class reserves, lands and waters adjacent to A class reserves, pearling and aquaculture facilities.

Bivalve mollusc (freshwater)	<i>Dreissena</i>	<i>bugensis</i>	Quagga mussel	N - any area of the State.		YES
Bivalve mollusc (freshwater)	<i>Dreissena</i>	<i>polymorpha</i>	European zebra mussel; Wandering mussel	N - any area of the State.		YES
Bivalve mollusc	<i>Ensis</i>	<i>directus</i>	Jack-knife clam	N - any area of the State.	X	YES
Crustacean – crab	<i>Eriocheir</i>	<i>sinensis</i>	Chinese mitten crab	N - any area of the State.		YES
Crustacean – crab	<i>Eriocheir</i>	spp.	Mitten crabs	N - any area of the State.	X	-
Macroalga	<i>Fucus</i>	<i>evanescens</i>	Brown macroalga; Wrack	N - any area of the State.		Yes
Sponge	<i>Gelliodes</i>	<i>fibrosa</i>	Gray encrusting sponge	N - any area of the State.		NO
Bivalve mollusc	<i>Geukensia</i>	<i>demissa</i>	Ribbed mussel	N - any area of the State.		YES
Macroalga	<i>Grateloupia</i>	<i>turuturu</i>	Devil's tongue weed; Asian red seaweed	N - any area of the State.	X	YES
Toxic dinoflagellate	<i>Gymnodinium</i>	<i>catenatum</i>		N - any area of the State.	X	No

Crustacean – crab	<i>Hemigrapsus</i>	<i>penicillatus</i> [syn. <i>Grapsus</i> (<i>Eriocheir</i>) <i>penicillatus</i>]	Hairy-clawed shore crab	N - any area of the State.	X	No
Crustacean – crab	<i>Hemigrapsus</i>	<i>sanguineus</i>	Asian shore crab; Japanese shore crab	N - any area of the State.	X	YES
Crustacean – crab	<i>Hemigrapsus</i>	<i>takanoi</i>	Brush-clawed shore crab	N - any area of the State.	X	Yes
Polychaete worm	<i>Hydroides</i>	<i>dianthus</i>	Serpulid tube worm, limy tube worm	N - any area of the State.	X	Yes
Bivalve mollusc	<i>Limnoperna</i>	<i>fortunei</i>	Golden mussel	N - any area of the State.	X	YES
Gastropod mollusc	<i>Maoricolpus</i>	<i>roseus</i>	New Zealand screwshell	N - any area of the State.		YES
Polychaete worm	<i>Marenzelleria</i>	spp.	Red gilled mudworm	Invasive species and marine/estuarine incursions only. N - any area of the State, non-endemic spp.	X	YES
Comb jelly	<i>Mnemiopsis</i>	<i>leidyi</i>	Comb jelly	N - any area of the State.	X	YES
Bivalve mollusc	<i>Monia</i>	<i>nobilis</i> (syn. <i>Anomia nobilis</i>)	Jingle shell; Saddle oyster	N - any area of the State.		Yes
Bivalve mollusc	<i>Mya</i>	<i>arenaria</i>	Soft-shell clam; Long-neck clam; steamer	N - any area of the State.	X	YES

Bivalve mollusc	<i>Mytella</i>	<i>charruana</i>	Charru mussel	N - any area of the State.		Yes
Bivalve mollusc	<i>Mytilopsis</i>	<i>leucophaeata</i>	Dark false mussel; Conrad's false mussel	N - any area of the State.		YES
Bivalve mollusc	<i>Mytilopsis</i>	<i>sallei</i>	Black-striped mussel	N - any area of the State.	X	YES
Bivalve mollusc	<i>Mytilopsis</i> spp. (entire genus) and <i>Congeria</i> spp. (entire genus)		Black-striped mussel	N* - any area of the State.		NO
Fish	<i>Neogobius</i>	<i>melanostomus</i>	Round goby	Marine/estuarine incursions only. N - any area of the State.	X	YES
Crustacean – crab	<i>Pachygrapsus</i>	<i>fakaravensis</i>	Polynesian grapsid crab	N - any area of the State.		Yes
Bivalve mollusc	<i>Perna</i>	<i>canaliculus</i>	New Zealand Mussel; New Zealand green- lipped mussel; greenshell mussel; kuku; kutai	N - any area of the State.		YES
Bivalve mollusc	<i>Perna</i>	<i>perna</i>	Brown mussel	N - any area of the State.	X	YES

Bivalve mollusc	<i>Perna</i>	<i>viridis</i>	Asian green mussel	This species is not established in WA, but as many have been found here on international vessels, public awareness raising is underway. N - any area of the State.	X	YES
Toxic dinoflagellate	<i>Pfiesteria</i>	<i>piscicida</i>	Toxic dinoflagellate	N - any area of the State.	X	No
Bivalve mollusc	<i>Potamocorbula</i>	<i>amurensis</i> (syn. <i>Corbula amurensis</i>)	Asian clam; Amur River clam; Overbite clam; Brackish-water corbula	N - any area of the State.	X	YES
Crustacean – shrimp etc	<i>Pseudodiaptomus</i>	<i>marinus</i>	Calaniod copepod	N - any area of the State.	X	YES
Diatom	<i>Pseudo-nitzschia</i>	<i>seriata</i>	Pennate diatom	N - any area of the State.	X	No
Gastropod mollusc	<i>Rapana</i>	<i>venosa</i> (syn. <i>R. thomasi</i>)	Asian rapa whelk; Veined rapa whelk	N - any area of the State.	X	YES
Crustacean – crab	<i>Rhithropanopeus</i>	<i>harrisii</i>	Harris mud crab; White-fingered mud crab; Zuiderzee crab	N - any area of the State.	X	YES
Polychaete worm	<i>Sabella</i>	<i>spallanzanii</i>	European fan worm	N - any area of the State except in the West Coast Region and South Coast Region.	X	YES
Macroalga	<i>Sargassum</i>	<i>muticum</i>	Japweed; Wireweed; Strangle weed	N - any area of the State.	X	YES

Fish	<i>Siganus</i>	<i>luridus</i>	Dusky spinefoot	N - any area of the State.	X	YES
Fish	<i>Siganus</i>	<i>rivulatus</i>	Marbled spinefoot; rabbit fish	N - any area of the State.	X	Yes
Crustacean - barnacle	<i>Solidobalanus</i> (<i>Hesperibalanus</i>)	<i>fallax</i>	Warm-water barnacle	N - any area of the State.		Yes
Crustacean – shrimp etc	<i>Tortanus</i> (<i>Eutortanus</i>)	<i>dextrilobatus</i>		N - any area of the State.	X	YES
Fish	<i>Tridentiger</i>	<i>barbatus</i>	Shokihaze goby	N - any area of the State.	X	YES
Fish	<i>Tridentiger</i>	<i>bifasciatus</i>	Shimofuri goby	N - any area of the State.	X	YES
Fish	<i>Tridentiger</i>	<i>trigonocephalus</i>	Chameleon Goby, Striped Goby	N* - any area of the State except the Port of Bunbury, the Port of Fremantle and the Swan River.		YES
Macroalga	<i>Undaria</i>	<i>pinnatifida</i>	Japanese kelp; Wakame	N - any area of the State.	X	YES
Macroalga	<i>Womersleyella</i>	<i>setacea</i> (syn. <i>Polysiphonia</i> <i>setacea</i>)	Red polysiphonous macroalga	N - any area of the State.	X	YES

References:

Hewitt, C., Campbell, M., Coutts, A., Dahlstrom, A., Shields, D. & Valentine, J. (2011) Species Biofouling Risk Assessment, Canberra, Australia, Department of Agriculture, Fisheries and Forestry.

National System for the Prevention and Management of Marine Pest Incursions (2010). Australian Marine Pest Monitoring Guidelines: Version 2.0. Department of Agriculture, Fisheries and Forestry.