AQUATIC ANIMAL DISEASE REPORT - 2022

Country/territory: NEW ZEALAND

Item	Disease status/occurrence code a/b/												Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month													
FINFISH DISEASES	January	February	March	April	May	June	July	August	September	October	November	December		
OIE-listed diseases														
1. Infection with epizootic haematopoietic necrosis virus	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
2. Infection with infectious haematopoietic necrosis virus	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
3. Infection with spring viremia of carp virus	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
4. Infection with viral haemorrhagic septicaemia virus	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
5. Infection with *Aphanomyces invadans* (EUS)	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
6. Infection with red sea bream iridovirus	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
7. Infection with koi herpesvirus	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
Non OIE-listed diseases														
8. Grouper iridoviral disease	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
10.Enteric septicaemia of catfish	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
11. Carp Edema Virus Disease	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
12. Tilapia lake virus (TiLV)	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
MOLLUSC DISEASES														
OIE-listed diseases														
1. Infection with *Bonamia exitiosa*	- (2021)	+?	- (2022)	- (2022)	- (2022)	- (2022)	- (2022)	- (2022)	- (2022)	- (2022)	- (2022)	- (2022)		1
2. Infection with *Perkinsus olseni*	- (2021)	- (2021)	- (2021)	- (2021)	- (2021)	- (2021)	- (2021)	- (2021)	- (2021)	- (2021)	- (2021)	- (2021)		2
3. Infection with abalone herpesvirus	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
4. Infection with *Xenohaliotis californiensis*	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
5. Infection with *Bonamia ostreae*	- (2021)	- (2021)	- (2021)	+?	- (2022)	- (2022)	- (2022)	- (2022)	- (2022)	- (2022)	- (2022)	- (2022)		3
Non OIE-listed diseases														
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
CRUSTACEAN DISEASES														
OIE-listed diseases														
1. Infection with Taura syndrome virus	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
2. Infection with white spot syndrome virus	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
3. Infection with yellow head virus genotype 1	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
4. Infection with infectious hypodermal and haematopoietic necrosis virus	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
5. Infection with infectious myonecrosis virus	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
6. Infection with *Macrobrachium rosenbergii* nodavirus (White Tail disease)	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
7. Infection with *Hepatobacter penaei* (Necrotising hepatopancreatitis)	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
9. Infection with *Aphanomyces astaci* (Crayfish plague)	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
Non OIE-listed diseases														
10.Hepatopnacreatic Microsporidiosis caused by *Enterocytozoon hepatopenaei* (HPM-EHP)	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
12. *Spiroplasma eriocheiris* infection	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
13. Decapod iridescent virus 1 (DIV-1)	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
AMPHIBIAN DISEASES														
OIE-listed diseases														
1. Infection with *Ranavirus* species	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		
2. Infection with Batrachochytrium dendrobatidis	-(2019)	-(2019)	-(2019)	-(2019)	-(2019)	-(2019)	+	+	- (2022)	- (2022)	- (2022)	- (2022)		4
3. Infection with *Batrachochytrium salamandrivorans*	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000		

Prepared by:

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Position: Senior Surveillance Adviser

Date: 05/03/2024

ANY OTHER DISEASES OF IMPORTANCE														
1														
2														

DISEASES PRESUMED EXOTIC TO THE REGION[b] LISTED BY THE OIE

Finfish: Infection with HPR-deleted or HPR0 salmon anaemia virus; Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris* .

Molluscs: Infection with *Marteilia refringens* ; *Perkinsus marinus* .

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following occurrence code:

Occurrence code and symbol	Definition	Occurrence code and symbol	Definition
Disease present +	The disease is present with clinical signs in the whole country (in domestic species or wildlife)	Disease absent -	The disease was absent in the country during the reporting period (in domestic species or wildlife).
Disease limited to one or more zones +()	The disease is present with clinical signs, and limited to one or more zones/compartments (in domestic species or wildlife)	Never reported 0000	The disease has "never been reported" (historically absent) for the whole country in domestic species and wildlife.
Infection/infestation +?	Confirmed infestation or infection using diagnostic tests, but no clinical signs observed (in domestic species or wildlife)	No information ***	No information is available regarding the presence or the absence of this disease during the reporting period (in domestic species or wildlife).
Infection/infestation limited to one or more zones +?()	Confirmed infestation or infection using diagnostic tests, but no clinical signs observed and limited to one or more zones/compartments (in domestic species or wildlife)		
Disease suspected ?	The presence of the disease was suspected but not confirmed (in domestic species or wildlife)		
Disease suspected but not confirmed and limited to one or more zones ?()	The presence of the disease was suspected but not confirmed and limited to one or more zones/compartments (in domestic species or wildlife)		

b/ If there is any changes on historical data, please highlight in RED

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	1) Origin of the disease or pathogen (history of the disease): Detected via targeted surveillance 2) Species affected: wild flat oysters (*Ostrea chilensis*) 3) Disease characteristics (unusual clinical signs or lesions): n/a 4) Pathogen (isolated/sero-typed): *Bonamia exitiosa* 5) Mortality rate (high/low; decreasing/increasing): n/a 6) Death toll (economic loss, etc): n/a 7) Size of infected areas or names of infected areas: Foveaux Strait, Southland 8) Preventive/control measures taken: n/a 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories): histopathology and ddPCR (National Institute Water and Atmospheric Research) 10) Published paper (articles in journals/website, etc): n/a 11) Unknown diseases: describe details as much as possible.): n/a *Bonamia exitiosa* occurs in commercial flat oyster (*Ostrea chilensis*) beds in Foveaux Strait, Southland where it is highly prevalent and associated with mortalities in mid to late summer. It occurs intermittently around the South Island and the North Island of New Zealand. *Bonamia exitiosa* has been previously detected in flat oysters from Hauraki Gulf (Auckland region), Tauranga (Bay of Plenty region), the Marlborough Sounds and Wellington Harbour (Southern end of the North Island). Annual monitoring of the presence of *B. exitiosa* infection is undertaken in the flat oyster population in the Foveaux Strait, and in February 2022 6.7 % of surveyed flat oysters were positive. These detections were not associated with disease, however *B. exitiosa* is known to be associated with mortalities in mid to late summer.
2	*Perkinsus olseni* was first detected in New Zealand in 1999, in wild wedge shells (*Macomona liliana*). It was then found in wild populations of New Zealand cockles (*Austrovenus stutchburyi*), ark shells (*Barbatia novaezelandiae*) and pipi (*Paphies australis*) in 2000–2001. In July 2013, *P. olseni* was detected for the first time in farmed black foot pāua (*Haliotis iris*), an abalone species endemic to New Zealand. Further detections were made in wild *H. iris* populations in 2014. These mollusc species occur widely around the coast of New Zealand, but to date *P. olseni* has only been detected in these species from the Auckland region northwards. *Perkinsus olseni* was found for the first time on the South Island in New Zealand green lipped mussels (*Perna canaliculus*) in a land-based aquaculture facility in September 2014, and then in wild New Zealand scallops (*Pecten novaezelandiae*) in November 2014. Both of these findings were in the Marlborough region, and were incidental and not associated with mortality events. In November 2017, general surveillance detected *P. olseni* from New Zealand scallops in two sites within Kaipara harbour, Auckland region, and again the findings were incidental and not associated with significant pathology in scallops. In August 2018, there was another incidental finding of *P. olseni* in farmed green lipped mussels (*Perna canaliculus*) in the Coromandel region (North Island), that was not associated with mortalities. In October 2019, *P. olseni* was detected in *P. canaliculus* in a land-based aquaculture facility in Nelson that was experiencing low level mortalities. It remains unknown if *P. olseni* was related to the mortalities in *P. canaliculus* in this case. In January – March 2021, *P. olseni* was reported from a targeted survey of farmed greenlipped mussels (*Perna canaliculus*) in the Coromandel (Waikato region) and in Pelorus Sound (Malrborough region) and in wild greenlipped mussels in the Nelson region. A further detection of *P. olseni* was made during routine surveillance of broodstock greenlipped mussels in a land-based facility in November – December 2021. No detections from 2021 were associated with unusual mortalities.
3	1. Reported in Big Glory Bay and Foveaux Strait via targeted surveillance; 2. Species affected – wild flat oysters (*Ostrea chilensis*) 3. Clinical signs – n/a 4. Pathogen – *Bonamia ostreae* 5. Mortality rate – n/a 6. Economic loss – n/a 7. Geographic extent – Big Glory Bay, Stewart Island and Foveaux Strait (Southland) 8. Containment measures – n/a; 9. Laboratory confirmation – – ddPCR (National Institute Water and Atmospheric Research), qPCR and nucelotide sequencing (National Animal Health laboratory) 10. Publications – None. *Bonamia ostreae* was detected for the first time in New Zealand flat oysters (*Ostrea chilensis*) in January 2015. It was found in two regions in the northern part of the South Island: on one land-based aquaculture facility in the Nelson region, and on two marine farms in the Marlborough region. Since that time, movement controls have been in place to regulate the movement of susceptible shellfish from the northern regions of the South Island and active surveillance has been conducted for the purposes of early detection of spread. In 2016, *B. ostreae* was detected in both farmed and wild flat oysters within the Marlborough region (the same region as initially reported), and was associated with pathology and mortality in the farmed population. In May 2017 surveillance detected *B. ostreae* in marine flat oyster farms in Big Glory Bay, Stewart Island (situated in the Southland region, at the southern end of the South Island). No clinical signs or elevated mortality was observed in association with *B. ostreae* in farmed flat oysters in Big Glory Bay. Following this detection, movement controls to manage risk movements from Stewart Island were issued, and depopulation of all flat oyster farms within areas where *B. ostreae* had been detected commenced. Depopulation of farms in Big Glory Bay commenced on the 19 June 2017 and was completed September 2017. Depopulation of farms in Marlborough Sounds commenced on the 11 July and was completed in December 2017. In April 2022, targeted surveillance detected *B. ostreae* in 7/150 wild flat oysters collected from Big Glory Bay, Stewart Island (Southland region).
4	1. Reported in the Auckland, Gisbourne, and Manawatu-Whanganui regions via general surveillance 2. Species affected – green and golden bell frogs (*Ranoidea aurea*) 3. Clinical signs – Yes 4. Pathogen – *Batrachochytrium dendrobatidis* 5. Containment measures – n/a; 6. Laboratory confirmation – Post-mortem, histopathology, and molecular testing (National Animal Health laboratory). 10. Publications – The first isolation of *Batrachochytrium dendrobatidis* was made in 1999 in New Zealand. Since then the fungus has been detected both on the North and South Islands in both native and introduced frog species. In 2022, *B.dendrobatidis* was detected associated with the mortality of approximately 15 wild frogs from the Gisborne region, four wild green and golden bell frogs (*Ranoidea aurea*) from the Manawatu-Whanganui region and six wild sick/dead green and golden bell frogs in the city of Auckland. Green and golden bell frogs are an introduced species of Australian frog that has established in New Zealand. (Bingham P (2022). Quarterly report of investigations of suspected exotic diseases: July to September. Surveillance 29 (4) 23-24).
5	

2. New aquatic animal health regulations introduced within past six months (with effective date):