

Algal bloom wildlife post-mortem report



Species – Giant petrel

Date collected – 22 June 2025

Location – Middle River, Kangaroo Island

History relating to the animal

One giant petrel (*Macronectes spp.*) was found dead at Snellings Beach at Middle River on Kangaroo Island on 22 June 2025.

Clinical examination

The animal was already dead and so could not be examined prior to death.

Necropsy

The necropsy (looking at the whole body) revealed that the giant petrel had marked putrefactive post-mortem autolytic change (decomposing after death) indicating that death was not recent. Both eye sockets were empty (no eyes remaining), with the lower beak also missing. The thoracic organs (within the chest) were gelatinous (jelly-like) and discoloured, indicating autolytic changes (decomposing tissue after death). The abdominal organs were also undergoing marked decomposition, with some organs difficult to distinguish, forming one large gelatinous mass (jelly-like). Reproductive organs were not able to be identified in this bird.

Samples were collected to test for avian influenza and Newcastle disease. Tissue samples were collected and tested for brevetoxins and other algal biotoxins (a possibility due to the algal bloom).

Virology

Testing results for avian influenza and Newcastle disease were negative.

Brevetoxins

No samples were above the limits of reporting.

Other algal biotoxins

No samples were above the limits of reporting.

Summary

One giant petrel was found dead. It was significantly decomposed and laboratory examination could not identify the cause of death. Testing for avian influenza and Newcastle disease was negative. Brevetoxins and other algal biotoxins were also not detected.

PATH RESULTS: GIANT PETREL, (Wi) [REDACTED]

From [REDACTED]
Date Wed 13/08/2025 5:00 PM
To [REDACTED]

[REDACTED]

Tested on 24/06/25
Reported on 13/08/25 17:30
Referred on 22/06/25 **by:**

[REDACTED]

[REDACTED]

Owner:
GIANT PETREL

Animal/s:
Wild Birds

DOB: N/A

Collected: 22/06/25 00:25 **Subm.No:** [REDACTED] **Lab No.:** [REDACTED]

Samples tested as received All Tests Complete

CLINICAL HISTORY

Giant Petrel at reported deceased at middle River, Snellinop Beach.
35'40.0283'S 137'4.409S'E.
Refrigerated from 1 PM 22nd June 2025 [REDACTED]; 23rd June 2025-
[REDACTED] Long haul migrator.

SAMPLES SUBMITTED

One dead petrel.

NECROPSY FINDINGS

There is marked putrefactive post-mortem autolytic changes. The bird weighs 6.2kg

Both eye sockets are empty (both eyes are missing). The caudal mandible is missing, exposing the ventral brain. The brain is liquified. The larynx and cranial 1/3 trachea is covered with sand. The subcutaneous fat and tissue are yellow-green coloured(post-mortem and autolytic changes).

The thoracic organs are gelatinous (autolytic changes). The pericardium is gelatinous. The heart contains a large blood clot within the left ventricle (post-mortem change). The lungs are yellow-green and gelatinous.

The abdominal organs are markedly autolysed. The mesentery is gelatinous. The intestinal segments difficult to distinguish, and are blended into a large gelatinous mass. The stomach contains green digested material.

The each kidney are a single dark red gelatinous mass.

The reproductive organs are not identified.

GROSS DIAGNOSIS

Marked putrefactive autolysis.

SAMPLES COLLECTED & TESTING

Tracheal and cloacal swabs in VTM -AI/ND PCR

Fresh tissues in 50 mL pots (liver, intestines, kidney, lung) - stored in -80

Fresh tissue in 5 mL tubes (liver, spleen, heart, kidney, brain, lung) - stored in -80



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Referred on 22/06/25 by:



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GIANT PETREL

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Lab No.:

Samples tested as received

All Tests Complete

Validated by

Number of samples 9

MOLECULAR DIAGNOSTICS

INFLUENZA A RNA PCR (REAL TIME REVERSE TRANSCRIPTASE)

Specimen type: Pooled trachea & cloaca swab

SPECIMEN ID Type A H5 H7

POOL Not detected

Validated by [REDACTED] Laboratory Scientist.

CERTIFICATE OF ANALYSIS

Customer: [REDACTED]
Address: [REDACTED]
Contact: [REDACTED]

Submission Description: Biotoxin and Brevetoxins Giant Petrel
Sample Received Date: 11/12/2025
Contract Number: [REDACTED]
Client Order Number: [REDACTED]
Program/Quote Reference: [REDACTED] Biotoxin and Brevetoxins

Sample(s) analysed as received. Sampling date and time data supplied by the client. The document shall not be reproduced except in full.

Additional information relating to this submission can be found in the sample receipt notification.

This report supersedes any previous reports with this submission number.

Many tests specify a holding time which gives the recommended timeframe by which a sample should be preserved/extracted and/or analysed after the sample is taken.

Holding time information can be found on the AST website <https://analyticalservices.tas.gov.au/our-services/containers-samples-and-submissions>.

Whilst every effort is made to analyse samples within these timeframes, situations can occur where this is not possible.

Where a test has been conducted outside the recommended sample holding time this should be taken into account when interpreting results.

The results in this report were authorised by:

Name	Position
[REDACTED]	Section Head - Organic Chemistry

Test Information:

Method ID	Test Description	Date Commenced:
3411	Lipophilic Toxins in Shellfish by LC-MS/MS	11-02-2026
3411A	Brevetoxins in Shellfish by LC-MS/MS	13-02-2026
3416	PST in Biota by LC-MS/MS (Boundy Method)	11-02-2026

Chemistry Test Results (Biota - Food)		Sample Description	Lung	Kidney	Intestine	Liver	Spleen	Brain	Heart
Method ID	Analyte	Units	22/06/25 0:00	22/06/25 0:00	22/06/25 0:00	22/06/25 0:00	22/06/25 0:00	22/06/25 0:00	22/06/25 0:00
			391729	391730	391731	391732	391733	391734	391735
	AZA1	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	AZA2	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	AZA3	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	Domoic Acid	mg/kg WMB	<0.05*	<0.05*	<0.05*	<0.05*	*IS*	*IS*	<0.05*
	DTX1 Free	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	DTX1 Total	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	DTX2 Free	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	DTX2 Total	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
3411	GYM	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	Homo-YTX	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	*IS*	<0.02*
	OA Free	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	OA Total	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	PnTx-G	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	PTX2	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	SPX1	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	Total DST	OA eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
	YTX	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*	<0.01*
3411A	Brevetoxin 1	mg/kg WMB	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*
	Brevetoxin 2	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	Brevetoxin 3	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
3416	C1	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	<0.01*	<0.01*
	C2	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	<0.02*	<0.02*
	C3	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	<0.02*	<0.02*
	C4	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	<0.02*	<0.02*
	dcGTX1	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	<0.02*	<0.02*
	dcGTX2	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	<0.02*	<0.02*
	dcGTX3	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	<0.02*	<0.02*
	dcGTX4	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	<0.02*	<0.02*

IS - Insufficient Sample

* NATA accreditation does not cover this result

Chemistry Test Results (Biota - Food)		Sample Description	Lung	Kidney	Intestine	Liver	Spleen	Brain	Heart
Method ID	Analyte	Units	22/06/25 0:00	22/06/25 0:00	22/06/25 0:00	22/06/25 0:00	22/06/25 0:00	22/06/25 0:00	22/06/25 0:00
3416	dcNEO	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	<0.02*	<0.02*
	dcSTX	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	<0.01*	<0.01*
	doSTX	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	<0.01*	<0.01*
	GTX1	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	<0.01*	<0.01*
	GTX2	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	<0.01*	<0.01*
	GTX3	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	<0.01*	<0.01*
	GTX4	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	<0.01*	<0.01*
	GTX5	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	<0.02*	<0.02*
	GTX6	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	<0.02*	<0.02*
	NEO	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	<0.02*	<0.02*
	STX	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	<0.01*	<0.01*
	Total PST	STX.2HCl eq. mg/kg	<0.10*	<0.10*	<0.10*	<0.10*	*IS*	<0.10*	<0.10*

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