Algal bloom wildlife post-mortem report

Government of South Australia
Department for Environment and Water

Species – Hooded plover

Date collected – 30 August 2025

Location – Emu Bay, Kangaroo Island

History relating to the animal

An adult female hooded plover (*Thinornis cucullatus*) was found dead at Emu Bay, Kangaroo Island on 30 August 2025.

Clinical examination

The animal was already dead and so could not be examined prior to death. There were no visible injuries.

Necropsy

The necropsy (looking at the whole body) revealed that the bird was in moderate body condition. There was mild to moderate post-mortem autolytic change (decomposition after death). There was haemorrhage (bleeding) within the coelomic cavity (space containing digestive tract and other organs), with multiple tears in the liver. There was minimal food material within the gut.

Tissues were collected for histopathology (looking at tissues under the microscope for more detailed information) and testing for brevetoxins and other algal biotoxins (a possibility due to the algal bloom).

Histopathology

Samples from every major body system were examined under the microscope. There was haemorrhage (bleeding) within the lung, and trauma to the liver, with associated bleeding. The other tissues were unremarkable.

Brevetoxins

No samples were above the limits of reporting.

Other algal biotoxins

No samples were above the limits of reporting.

Summary

An adult female hooded plover was found dead. Laboratory examination suggested that the cause of death was blunt force trauma, resulting in damage to the liver and internal bleeding. Brevetoxins and other algal biotoxins were not detected.

Outlook

PATH RESULTS: PLOVER HOODED, (Wi) [redacted]

From [redacted]
Date Tue 02/09/2025 3:30 PM
To [redacted]

[redacted]

[redacted]

Tested on 02/09/25
Reported on 02/09/25 16:00
Referred on 30/08/25 **by:** [redacted]

Owner:
PLOVER HOODED
EMU BAY BEACH
KANGAROO ISLAND

Animal/s:
Wild Birds

DOB: N/A

Collected: 30/08/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

NECROPSY REPORT

CLINICAL HISTORY
Please refer to the clinical history on the request form. A brief summary of the clinical history;
The hooded plover was found deceased at Emu Bay, Kangaroo island at 8:30 Am on Saturday 30/8/2025. The bird was reportedly underweight

SAMPLES SUBMITTED
One dead adult female hooded plover, Thinornis cucullatus

NECROPSY FINDINGS
There are mild to moderate post mortem autolytic changes.

The bird is in moderate body condition and weighs 121 g. The pectoral muscles are well formed and form a convex shape.

There is abundant clotted blood within the coelomic cavity. There are

multiple tears in the right liver lobe.

The gizzard contains scant gritty ingesta. The intestines contain scant pale brown ingesta.

GROSS SUMMARY
Acute hepatic rupture / tears and coelomic haemorrhage

SAMPLES COLLECTED & TESTING
Formalin fixed liver, spleen, heart, lung, kidney, brain, proventriculus, gizzard, duodenum, ileum, jejunum, caecum, colon, pectoral muscle are processed for histopathology.

The following samples are stored for 6 months;
Fresh liver, spleen, heart, lung, kidney, brain (approximately 1-5g of each organ) are stored if biotoxin and brevetoxin testing is required.

Cloacal and tracheal swabs in virus transport medium are stored if Avian influenza testing is required.

COMMENTS
Blunt trauma resulting in hepatic liver lobe tears and internal haemorrhage caused the death of the bird. External puncture or bite

[redacted]

[redacted]

Tested on 02/09/25
Reported on 02/09/25 16:00
Referred on 30/08/25 **by:** [redacted]

Owner:
PLOVER HOODED
EMU BAY BEACH
KANGAROO ISLAND

Animal/s:
Wild Birds

DOB: N/A

Collected: 30/08/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received

wounds (which can be found with predation) are not evident in the skin.

Histopathology is in progress to assess for chronic or subacute intercurrent disease processes.

[redacted]

Specialist Veterinary Anatomic Pathologist
[redacted]

Validated by [redacted]

CASE MANAGEMENT DETAILS

Case Managed by:
Case Management Requested by: [redacted]
Case Management Requested on: 02/09/25

Case Details: Hooded plover found dead at Emu Bay Kangaroo Island

Outlook

PATH RESULTS: PLOVER HOODED, (Wi) [redacted]

From [redacted]
Date Fri 05/09/2025 1:00 PM
To [redacted]

[redacted]

[redacted]

Tested on 02/09/25
Reported on 05/09/25 13:30
Referred on 30/08/25 **by:** [redacted]

Owner:
PLOVER HOODED
EMU BAY BEACH
KANGAROO ISLAND

Animal/s:
Wild Birds

DOB: N/A

Collected: 30/08/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received All Tests Complete

SUMMARY DIAGNOSIS
Lung: Acute pulmonary haemorrhage
Liver: Hepatic trauma and haemorrhage

SUMMARY COMMENTS
Acute trauma leading to internal haemorrhage caused the death of the bird.

[redacted]
Specialist Veterinary Anatomic Pathologist
[redacted]

Validated by [redacted]

[redacted]

[redacted]

Tested on 02/09/25
Reported on 05/09/25 13:30
Referred on 30/08/25 **by:**
[redacted]

Owner:
PLOVER HOODED
EMU BAY BEACH
KANGAROO ISLAND

Animal/s:
Wild Birds

DOB: N/A

Collected: 30/08/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received All Tests Complete

HISTOPATHOLOGY FROM NECROPSY

REF: [redacted]
CLINICAL HISTORY
Please refer to the clinical history on the request form. A brief summary of the clinical history;
The hooded plover was found deceased at Emu Bay, Kangaroo island at 8:30 Am on Saturday 30/8/2025. The bird was reportedly underweight

One adult female hooded plover

MACROSCOPY
Cassettes contain the following tissues
A: liver, spleen, heart, lung
B: heart, kidney, ovary, pectoral skeletal muscle
C: proventriculus, ventriculus, duodenum, jejunum, ileum, colon, caecum
D: multiple sections of brain; Ae GK

MICROSCOPY
Lung: Multifocally there is haemorrhage into the air capillaries, infundibula and atria. (Acute pulmonary haemorrhage)

Liver: There are multiple tears in the hepatic parenchyma and the defect is expanded by haemorrhage. (Hepatic trauma and haemorrhage)

Those tissues not described appear unremarkable.

DIAGNOSIS
Lung: Acute pulmonary haemorrhage

Liver: Hepatic trauma and haemorrhage

COMMENTS
Multiorgan haemorrhage due to trauma contributed to the bird's death. A cause for the trauma can not be determined by gross examination. Bite marks are not evident in the skin.

[redacted]

Specialist Veterinary Anatomic Pathologist
[redacted]

[redacted]

Tested on 02/09/25
Reported on 05/09/25 13:30
Referred on 30/08/25 **by:**

[redacted]

[redacted]

Owner:
PLOVER HOODED
EMU BAY BEACH
KANGAROO ISLAND

Animal/s:
Wild Birds

DOB: N/A

Collected: 30/08/25 00:25 **Subm.No:** [redacted] **Lab No.:** [redacted]

Samples tested as received All Tests Complete

Validated by [redacted]

Tasmanian Government

ANALYTICAL SERVICES TASMANIA

18 St Johns Avenue New Town 7008 TAS
03 6165 3300
enquiries@ast.tas.gov.au
www.analyticalservices.tas.gov.au

Submission Number: [redacted]
Report Number:
Issue Date: 2/02/2026
Status: Final

CERTIFICATE OF ANALYSIS

Customer: [redacted]
Address:
Contact:

Submission Description: Biotoxin and Brevotoxins Bird
Sample Received Date: 11/12/2025
Contract Number:
Client Order Number: [redacted]
Program/Quote Reference: Biotoxin and Brevotoxins

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*	*Name*	*Position*
[redacted]	**Chemist**	[redacted]	**Section Head - Organic Chemistry**

Test Information:

Method ID	*Test Description*	*Date Commenced:*
3411	Lipophilic Toxins in Shellfish by LC-MS/MS	N/A
3411A	Brevetoxins in Shellfish by LC-MS/MS	29-01-2026
3416	PST in Biota by LC-MS/MS (Boundy Method)	28-01-2026

Chemistry Test Results (Biota - Food)

Method ID	Analyte	Units	Sample Description	Kidney	Liver	Spleen	Brain	Lung	Heart
			Sampled Date/ Time	02/09/25 0:00	02/09/25 0:00	02/09/25 0:00	02/09/25 0:00	02/09/25 0:00	02/09/25 0:00
				391333	391334	391335	391336	391337	391338
	AZA1	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	AZA2	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	AZA3	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	Domoic Acid	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	DTX1 Free	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	DTX1 Total	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	DTX2 Free	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	DTX2 Total	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
3411	GYM	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	Homo-YTX	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	OA Free	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	OA Total	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	PnTx-G	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	PTX2	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	SPX1	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	Total DST	OA eq. mg/kg		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	YTX	mg/kg WMB		*IS*	*IS*	*IS*	*IS*	*IS*	*IS*
	Brevetoxin 1	mg/kg WMB		<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*
3411A	Brevetoxin 2	mg/kg WMB		<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*
	C1	STX.2HCl eq. mg/kg		*IS*	<0.01	*IS*	*IS*	<0.01	*IS*
	C2	STX.2HCl eq. mg/kg		*IS*	<0.02	*IS*	*IS*	<0.02	*IS*
	C3	STX.2HCl eq. mg/kg		*IS*	<0.02	*IS*	*IS*	<0.02	*IS*
	C4	STX.2HCl eq. mg/kg		*IS*	<0.02	*IS*	*IS*	<0.02	*IS*
3416	dcGTX1	STX.2HCl eq. mg/kg		*IS*	<0.02*	*IS*	*IS*	<0.02*	*IS*
	dcGTX2	STX.2HCl eq. mg/kg		*IS*	<0.02	*IS*	*IS*	<0.02	*IS*
	dcGTX3	STX.2HCl eq. mg/kg		*IS*	<0.02	*IS*	*IS*	<0.02	*IS*
	dcGTX4	STX.2HCl eq. mg/kg		*IS*	<0.02*	*IS*	*IS*	<0.02*	*IS*

IS- Insufficient Sample

* NATA accreditation does not cover this result

Chemistry Test Results (Biota - Food)

Method ID	Analyte	Units	Sample Description	Kidney	Liver	Spleen	Brain	Lung	Heart
			Sampled Date/ Time	02/09/25 0:00	02/09/25 0:00	02/09/25 0:00	02/09/25 0:00	02/09/25 0:00	02/09/25 0:00
				391333	391334	391335	391336	391337	391338
3416	dcNEO	STX.2HCl eq. mg/kg		*IS*	<0.02	*IS*	*IS*	<0.02	*IS*
	dcSTX	STX.2HCl eq. mg/kg		*IS*	<0.01	*IS*	*IS*	<0.01	*IS*
	doSTX	STX.2HCl eq. mg/kg		*IS*	<0.01*	*IS*	*IS*	<0.01*	*IS*
	GTX1	STX.2HCl eq. mg/kg		*IS*	<0.01	*IS*	*IS*	<0.01	*IS*
	GTX2	STX.2HCl eq. mg/kg		*IS*	<0.01	*IS*	*IS*	<0.01	*IS*
	GTX3	STX.2HCl eq. mg/kg		*IS*	<0.01	*IS*	*IS*	<0.01	*IS*
	GTX4	STX.2HCl eq. mg/kg		*IS*	<0.01	*IS*	*IS*	<0.01	*IS*
	GTX5	STX.2HCl eq. mg/kg		*IS*	<0.02	*IS*	*IS*	<0.02	*IS*
	GTX6	STX.2HCl eq. mg/kg		*IS*	<0.02	*IS*	*IS*	<0.02	*IS*
	NEO	STX.2HCl eq. mg/kg		*IS*	<0.02	*IS*	*IS*	<0.02	*IS*
	STX	STX.2HCl eq. mg/kg		*IS*	<0.01	*IS*	*IS*	<0.01	*IS*
	Total PST	STX.2HCl eq. mg/kg		*IS*	<0.10	*IS*	*IS*	<0.10	*IS*

IS- Insufficient Sample

* NATA accreditation does not cover this result