

Case No: 2020-0271 Date of visit: 28/08/2020

Time spent on site: 3 hours Main Inspector: [Redacted]

Site No: FS1239 Site Name: Grampian  
Business No: FB0544 Business Name: Scotland

Case Types: 1 DIA 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ]

Water Temp (°C): [ ] Thermometer No: [ ] FHI 045 completed [ ]

Observations: Region: GR Water type: B CoGP MA: [ ]

Dead/weak/abnormally behaving fish present? N If yes, see additional information/clinical score sheet.  
Clinical signs of disease observed? Y If yes, see additional information/clinical score sheet.  
Gross pathology observed? Y If yes, see additional information/clinical score sheet.  
Diagnostic samples taken? Y

UNI/REG only - if unable to carry out intended visit detail reason below:  
[Redacted]

**Additional Case Information:**

Fish rod caught and kept alive in keep net. Upper Crathes, NO 74430 96015

Contacted by river trust. Rod caught fish displaying RSD. Kept alive in keep net for collection. River Dee Upper Crathes NO74430 96015.

Case no:  Site No:  Date of visit/  
 Sampling:

Priority samples: VI  BA  PA  MG  HI

Time sampling starts/ends:   Inspector:  VMD No.

Environmental conditions: 1  2  3  4  5

Summary samples HIST  BA  MG  VI  PA  Total Samples

**Add Fish/Pools - click**

	Pool/Fish No	F1	P1										
	Fish nos	1	1										
	Pool Group	P1	P1										
Stock Details	Species	SAL	SAL										
	Average weight	6.0000	6.0000										
	Sex	Female	Female										
	Water Type	FW	FW										
	Stock Origin	River Dee upper Crathes	River Dee upper Crathes										
	Facility No	n/a	n/a										

08/2020

Additional Sample Information:

Additional skin lesion samples in histo. Scales, vent in 100% alcohol.

2

Total Tests assigned

8


Case no: **2020-0271**

Site No: **FS1239**

Method of killing: **Percussive**

Date of visit: **28/08/2020**

Inspector(s): **[Redacted]**

Sheet Relevant: **Y**

S for strong presence: M for medium presence: W for weak presence

<b>Fish Number</b>		<b>1</b>																	
<b>Time sampled after death (if &gt; 45 minutes)</b>																			
<b>External Signs</b>																			
<b>Behaviour</b>	<b>Moribund</b>																		
	<b>Lethargic</b>																		
	<b>Hanging vertical</b>																		
	<b>Spiralling</b>																		
	<b>Flashing</b>																		
	<b>Loss of equilibrium</b>																		
<b>Body</b>	<b>Dark</b>																		
	<b>Distended abdomen</b>																		
	<b>Anorexic</b>																		
	<b>Scale Oedema</b>																		
<b>Opercula</b>	<b>Shortened</b>																		
	<b>Flared</b>																		
<b>Haemorrhaging</b>	<b>Throat</b>																		
	<b>Ventrum</b>	<b>M</b>																	
	<b>Base of fins</b>																		
	<b>Elsewhere</b>																		
<b>Eyes</b>	<b>Exophthalmic</b>																		
	<b>Enophthalmic (sunken)</b>																		
	<b>Cataract</b>																		
	<b>Haemorrhagic</b>																		
<b>Gills</b>	<b>Pale</b>																		
	<b>Zoned</b>																		
	<b>Necrotic</b>																		
<b>Lesions</b>	<b>Flank</b>																		
	<b>Elsewhere</b>																		
<b>Vent</b>	<b>Inflamed</b>																		
	<b>Trailing faeces</b>																		
<b>Lice Load</b>	<b>Estimate numbers</b>																		
<b>Internal Signs</b>																			
<b>Ascites</b>	<b>Clear</b>																		
	<b>Bloody</b>																		
<b>Oedema</b>	<b>In tissues</b>																		
<b>Heart</b>	<b>Pale/anaemic</b>																		
	<b>Granulomas</b>																		
	<b>Deformed</b>																		
<b>Liver</b>	<b>Petechial haem</b>																		
	<b>Gross haem</b>																		
	<b>Tissue breakdown</b>																		
	<b>Enlarged</b>																		
	<b>Colour number(s)</b>																		
	<b>Granulomas</b>																		
	<b>Lesions</b>																		
<b>Pyloric caeca</b>	<b>Petechial haem</b>																		
	<b>Tubules mauve</b>																		
	<b>Lack of fat</b>																		
<b>Spleen</b>	<b>Enlarged</b>	<b>M</b>																	
	<b>Granulomas</b>																		
<b>Gut</b>	<b>No food present</b>																		
	<b>Yellow pseudo-faeces</b>																		
	<b>External haem</b>																		
	<b>Internal haem</b>																		
<b>Body wall</b>	<b>Haemorrhaging</b>																		
<b>Swim bladder</b>	<b>Haemorrhaging</b>																		
	<b>Fluid filled</b>																		
<b>Kidney</b>	<b>Swollen</b>																		
	<b>Grey</b>																		
	<b>Granular</b>																		
	<b>Liquefied</b>																		
<b>General</b>	<b>Parasites present</b>	<b>W</b>																	
	<b>Anaemia</b>																		

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	<b>Granular</b>								
	<b>Liquefied</b>								
<b>General</b>	<b>Parasites present</b>								
	<b>Anaemia</b>								

Additional comments:

Flank lesions. Nematode like parasite on surface of liver.

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Case No: 2020-0271

Nature of non-compliance:

Action taken (FHI):

Non-compliance relevant to (delete): VirologyMolGen/Bacteriology/Histology/Parasitology





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 Site No: **FS1239** Inspector: **[Redacted]**

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp
MG AGD	0/1	03/09/2020				07/10/2020		
MG IHN	0/1	03/09/2020				07/10/2020		
MG IPN	0/1	03/09/2020				07/10/2020		
MG ISA	0/1	03/09/2020				07/10/2020		
MG Para ther	0/1	03/09/2020				07/10/2020		
MG SAL pox	0/1	03/09/2020				07/10/2020		
MG SAV	0/1	03/09/2020				07/10/2020		
MG VHS	0/1	03/09/2020				07/10/2020		
Histo SKIN	1/1	09/09/2020				07/10/2020		
AERO	1/1	25/09/2020				07/10/2020		
FLAF	1/1	25/09/2020				07/10/2020		
Anasakis sp	1/1	07/10/2020				07/10/2020		

Report Summary	Date	Insp	2 <sup>nd</sup> Insp
Case Type			
Diag	07/10/2020		

██████████  
River Dee Trust  
River Office  
Mill of Dinnet  
Aboyne  
Aberdeenshire  
AB34 5LA  
██████████

## FISH HEALTH INSPECTORATE VISIT REPORT

### SUMMARY FOR INFORMATION OF SITE OPERATOR

<b>BUSINESS No</b>	FB0544	<b>DATE OF VISIT</b>	28/08/2020
<b>SITE No</b>	FS1239	<b>SITE NAME</b>	Grampian – River Dee
<b>INSPECTOR</b>	██████████	<b>CASE No</b>	20200271

#### Section 1: Summary

A fish caught on the river Dee at the Crathes beat displayed flank and ventral surface lesions. The Fish Health Inspectorate was contacted and samples were collected for diagnostic examination.

Histopathology examination revealed mild, haemorrhagic and focal dermatitis.

Moderate pure growth was observed on a plate taken from lesion material and identified as a motile *Aeromonas* sp.

Nematodes identified as *Anisakis* sp. were found on the liver and within the vent of the fish sampled. This parasites are commonly found in wild salmon and is not currently considered to be a contributing factor for the presence of the lesions observed on the fish.

Please contact myself or the duty inspector should you require any further information, have any queries regarding this report or if any problems develop.

#### Section 2: Case Detail

##### Observations

A fish was caught on the rod in the river Dee at the Crathes beat. It displayed red haemorrhagic lesions on the flanks and ventral surface. The fish was held alive in a keep net at the river bank and the Fish Health Inspectorate was contacted. Internally there was no apparent gross pathology.

R09

Samples were collected for diagnostic examination.

### Samples

Samples were collected according to the table below:

Fish number	Species	Stage	Origin
1	Atlantic salmon	4kg	River Dee – Crathes beat

### Results

**Bacteriology:** Kidney, spleen and lesion material was inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated;

- *Aeromonas* sp (lesion)
- *Flavobacteria* spp. (lesion)

A bacteria from the *Flavobacteriaceae* family was also identified on a plate taken from lesion material. It did not match the phenotypic or biochemical characteristics of a pathogenic *Flavobacteria* spp. and is likely to be of environmental origin.

**Virology:** A general screen was conducted on tissue samples to test for the presence of viral pathogens by cell culture.

The result of this test was negative.

Tissue samples were tested for segments of nucleic acid indicative of the presence of the pathogens specified using real-time PCR (QPCR).

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), infectious salmon anaemia virus (ISAV), salmonid alphavirus (SAV), salmonid gill poxvirus and viral haemorrhagic septicemia virus (VHSV).

**Parasitology:** Fins were collected to determine the presence of *Gyrodactylus salaris* using light microscopy and molecular techniques (PCR).

No *G. salaris* parasites were detected in the samples examined.

From a vent sample several nematodes, morphologically consistent with Anisakid T4 larvae were identified. One encysted nematode consistent with Anisakid T4 larvae was identified from the surface of liver. DNA from the Anisakid T4 was extracted and sequenced, returning results showed the nematode to be Anisakis.

Tissue samples were tested for segments of nucleic acid indicative of the presence of the parasites specified below using real-time PCR (QPCR).

The samples tested negative for *Neoparamoeba perurans* (AGD) and *Paranucleospora theridion*.

R09

**Histology:** Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney were taken. The tissue samples were fixed in 10% neutral buffered formalin. Histopathological examination revealed the following:

Gill: Within normal range.

Skin & Muscle: The upper layer of dermis (stratum spongiosum) exhibited mild focal inflammatory cell infiltration with presence polymorphonuclear neutrophils and small foci of haemorrhage. The epidermal layer displayed a minimal spongiosis at the basement membrane and occasional small foci of epidermal necrosis. Partial absence of epidermal layer (possibly associated with processing).

Heart: Within normal range.

Gut and pyloric caeca: Absence of abdominal adipose tissue.

Pancreas: Within normal range.

Liver: Within normal range.

Kidney: Within normal range.

Spleen: Slightly congested.

Signed:



Date: 07/10/2020

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at <https://www.gov.scot/publications/fish-health-inspectorate-service-charter/>











