Case No: 2019-0297 Date of visit: 08/06/2019

Time spent on site: 3 Hrs 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): 12.8 Thermometer No: T154 FHI 045 completed

Observations: Region: GR Water type: B CoGP MA

Dead/weak/abnormally behaving fish present?	Y	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:

Additional Case Information:

One Atlantic salmon sampled from the Pit Slug Beat - NO574991. It was reported that 3 fish including the one sampled had been observed displaying similar signs. The first fish was released prior to the ghillie observing it and upon catching the second fish the angler informed the ghillie that it was the second they had observed that day.
Third fish was very active, being line caught at time of inspection. Fish was observed from river bank and displayed slight haemorrhaging along ventral surface. This fish was released due to not being moribund and appeared in good condition.
No problems reported with water levels or temperatures.

Case no:	2019-0297	Site No:	FS1239	Date of visit/ Sampling:	08/06/2019	08/(							
Priority samples:	VI		BA		PA		MG		HI				
Time sampling starts/ends:	15:30:00	16:00:00	Inspector:		VMD No.	0							
Environmental conditions:	1	Sunny	2	Cloudy	3		4		5				
Summary samples	HIST	Y	BA	Y	MG	Y	VI	Y	PA	Y	Total Samples		

Add Fish/Pools - click

	Pool/Fish No												
	Fish nos	F1											
	Pool Group												
Stock Details	Species	SAL											
	Average weight	~6kg											
	Sex	Female											
	Water Type	FW											
	Stock Origin	Wild - River Dee - Ballogie, Pit Slug Pool											
	Facility No	N/A											

06/2019 Additional Sample Information:

0 Total Tests assigned 16

Case no: 2019-0297 Site No: FS1239 Method of killing: Percussive

Date of visit: 08/06/2019 Inspector(s): [redacted] Sheet Relevant: Y

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

Fish Number		1									
Time sampled after death (if > 45 minutes)											
External Signs											
Behaviour	**Moribund**										
	Lethargic										
	Hanging vertical										
	Spiralling										
	Flashing										
	Loss of equilibrium										
Body	**Dark**										
	Distended abdomen										
	Anorexic										
	Scale Oedema										
Opercula	**Shortened**										
	Flared										
Haemorrhaging	**Throat**										
	Ventrum	W									
	Base of fins	M									
	Elsewhere	W									
Eyes	**Exophthalmic**										
	Enophthalmic (sunken)										
	Cataract										
	Haemorrhagic										
Gills	**Pale**										
	Zoned										
	Necrotic										
Lesions	**Flank**										
	Elsewhere										
Vent	**Inflamed**	W									
	Trailing faeces										
Lice Load	**Estimate numbers**	0									
Internal Signs											
Ascites	**Clear**										
	Bloody										
Oedema	**In tissues**										
Heart	**Pale/anaemic**										
	Granulomas										
	Deformed										
Liver	**Petechial haem**	W									
	Gross haem										
	Tissue breakdown										
	Enlarged										
	Colour number(s)	4									
	Granulomas										
	Lesions										
Pyloric caeca	**Petechial haem**										
	Tubules mauve										
	Lack of fat										
Spleen	**Enlarged**										
	Granulomas										
Gut	**No food present**										
	Yellow pseudo-faeces										
	External haem										
	Internal haem										
Body wall	**Haemorrhaging**										
Swim bladder	**Haemorrhaging**										
	Fluid filled										
Kidney	**Swollen**										
	Grey										
	Granular										
	Liquefied										
General	**Parasites present**										
	Anaemia										

Case no: 2019-0297

Date of visit: 08/06/2019

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	Fluid filled										
Kidney	**Swollen**										
	Grey										
	Granular										
	Liquefied										
General	**Parasites present**										
	Anaemia										

Additional comments:

Haemorrhaging along ventral surface and flank. Some erosion of adipose fin

Site No: FS1239

Case No: 2019-0297

Nature of non-compliance:

Action taken (FHI):

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

Case No: 2019-0297 Date of visit: 08/06/2019

Site No: FS1239 Inspector: [redacted]

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2nd Insp
NSIG	0/1	19/06/2019	[redacted]			17/06/2020	[redacted]	[redacted]
NEMA	1/1	02/07/2019	[redacted]			17/06/2020	[redacted]	[redacted]
MPAT	1/1	02/07/2019	[redacted]			17/06/2020	[redacted]	[redacted]
MYXO	1/1	02/07/2019	[redacted]			17/06/2020	[redacted]	[redacted]
VHS QCPR	0/1	12/06/2019	[redacted]			17/06/2020	[redacted]	[redacted]
IHN QPCR	0/1	12/06/2019	[redacted]			17/06/2020	[redacted]	[redacted]
IPN QPCR	0/1	12/06/2019	[redacted]			17/06/2020	[redacted]	[redacted]
ISA QPCR	0/1	12/06/2019	[redacted]			17/06/2020	[redacted]	[redacted]
SAV QPCR	0/1	12/06/2019	[redacted]			17/06/2020	[redacted]	[redacted]
ANIP	1/1	10/07/2019	[redacted]			17/06/2020	[redacted]	[redacted]
PRV QPCR	0/1	04/07/2019	[redacted]			17/06/2020	[redacted]	[redacted]
PMCV QPCR	0/1	04/07/2019	[redacted]			17/06/2020	[redacted]	[redacted]

Report Summary			
Case Type	Date	Insp	2nd Insp
DIA	17/06/2020	[redacted]	[redacted]

[redacted]
Dee District Salmon Fishery Board
River Office
Mill of Dinnet
Aboyne
Aberdeenshire
AB34 5LA

[redacted]

FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS NO	FB0544	**DATE OF VISIT**	08/06/2019
SITE NO	FS1239	**SITE NAME**	Grampian
INSPECTOR	[redacted]	**CASE NO**	20190297

Section 1: Summary

Histopathology examination revealed mild myositis and mild inflammation likely associated with the presence of Nematode. Myxosporidiosis is likely incidental.

The vent sample had a light infestation of *Anasakis simplex*. No pathogens were identified from bacterial cultures, virology cell cultures or QPCR samples.

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

The on-call inspector was contacted by the ghillies for the Pit Slug Beat (NO574991) on the River Dee. One fish had been caught and placed in a keep net. This was reported to be the second fish caught that day displaying similar symptoms.

The fish held in the keep net was sampled and upon examination displayed haemorrhaging to the flank, ventrum and base of fins. There was some erosion of the adipose fin and it also displayed slight inflammation of the vent. Internally the fish displayed petechial haemorrhaging to the liver.

Samples

Samples were collected from one fish according to the table below:

Marine Laboratory, 375 Victoria Road, Aberdeen, AB11 9DB
Tel – 0131 244 3498 Fax – 0131 244 0944 Email – ms.fishhealth@gov.scot
Website - www.gov.scot/Topics/marine/science

Fish number	Species	Origin
1	Atlantic salmon	River Dee – Pit Slug Beat

Results

Bacteriology: Kidney, gill, spleen and lesion material from fish one was inoculated onto appropriate media for the isolation of bacteria.

No significant bacteria were isolated.

Virology: Tissue samples were tested for segments of nucleic acid indicative of the presence of the pathogens specified below 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), piscine reovirus (PRV), piscine myocarditis virus (PMCV), salmonid alphavirus (SAV) and viral haemorrhagic septicemia virus (VHSV).

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.

Parasitology: A pectoral fin was 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.

The vent sample showed light infestation of *Anisakis simplex*

Histology: Tissue samples of skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney taken from one fish. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Heart - No abnormalities detected (NAD)
Liver - No abnormalities detected
Pancreas - No abnormalities detected
Adipose tissue - No abnormalities detected
Kidney - Low intensity focal intratubular myxosporidiosis with early spore formation. Host response absent.
Intestine - Cestode parasites in the lumen. No host response. Anisakid parasites embedded in the intestinal wall. Limited host response.
Spleen - Serositis involving most of the spleen section examined. Some evidence of spread from specific point on the surface of the spleen. Eosinophils and possibly plasma cells present. The response could be associated with the presence of nematodes if present in the visceral cavity.
Skin and muscle - Several focal regions of epithelial loss associated with mild dermatitis affecting the upper layers just beneath the epidermis, including mild haemorrhaging. Musculature shows several foci of myofibrillar degeneration and multiple nuclei not restricted to the periphery of the cells. Some with associated inflammatory cell component. A single focus of infiltrating inflammation between myofibrils.

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Website - www.gov.scot/Topics/marine/science

[redacted]

Signed: Date: 1706/2020

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at www.gov.scot/Topics/marine/Fish-Shellfish/FHI/charter

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