

| | | | | | | |
|---|-----------|--|-----------------------|-------------------|----------|---|
| Case No: | 2025-0181 | Date of visit: | 20/05/2025 | | | |
| Additional inspector(s): | | Main Inspector: | | | | |
| Site No: | FS0500 | Site Name: | Applecross Smolt Unit | | | |
| Business No: | FB0169 | Business Name: | Bakkafrost Scotland | | | |
| Case Types: | 1 REP | 2 DIA | 3 REG | 4 | 5 | 6 |
| Water Temp (°C): | 14.7 | Thermometer No: | Site | FHI 045 completed | Y | |
| Observations: | Region: | HI | Water type: | F | 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. | | | | |
| Post mortem signs 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:

Inspection scheduled due to the business reporting mortality events attributed to fungus. Company biologist present during the inspection.

The stock was transferred from Kinlochmoidart (FS0146) in March and an internal report dated 21/03/2025 noted clinical signs of fungus and recommended treatment with elevated salinity to commence.

The salinity was raised from 3 parts per thousand (ppt) to 15 ppt for 3 hours (hrs) and flushed out. A mortality event notification, attributed to fungus and elevated salinity, of 1.93 % (13,832 fish) for week (wk) 13 was received.

The whole system was then raised to 10 ppt and was to be held there for 7 days but mortality began increasing on day 3 so salinity was reduced to 3 ppt. The process of elevating salinity has been performed before in the unit but this stock was on a 24 hr light regime; whereas, previous stocks were on a 12 hrs on/off regime.

The contracted company vet advised SmoltVision qPCR to be performed; third party report dated 19/05/2025 indicated the group is considered seawater tolerant. A third party report dated 20/05/2025 indicated signs of bacterial septicaemia in the fish sampled with the bacteria comparable with *Aeromonas* spp but furunculosis cannot be ruled out.

Mortality event notifications of 5.12 % (45,599 fish) for wk 18, attributed to fungus, and 10.02 % (84,724 fish) for wk 19, attributed to smoltification, were received.

Wk 20 mortality obtained onsite was 24.06 % (182,967 fish). Salinity has remained at 3 ppt and the stock is currently on a 12 hrs on/off light regime. Enhanced moribund and mortality removal is currently being conducted.

The stock is split across 4 tanks; with tanks S04 and S05 containing the smaller graded fish. Minimal clinical signs of fungus were observed across the tanks but approximately >50 moribund fish were present per tank showing signs of anorexia/muscle wastage and many had fixed mouths and were gasping. A five fish diagnostic was taken.

Case No: 2025-0181

Site No: FS0500

Date of Visit: 20/05/2025

Main Insp:

Registration/Authorisation Details

1. Business/site details summary checked by site representative?

Y

2. Changes made to details?

Y

Site Details (include cleaner fish for all sections)

| | | | | | |
|---------------------------------------|-----------------|------------------------|---------------------------------|-------------------------|---|
| Total No facilities | 7 | Facilities stocked | 4 | No facilities inspected | 4 |
| Species | Atlantic salmon | | | | |
| Age group | 2024 | | | | |
| No Fish | 562,523 | | | | |
| Mean Fish Wt | 75.2 g | | | | |
| Next Fallow Date (Site) | Uncertain | Next Input Date (Site) | Approximately week 23/24 | | |
| Recent (last 4 wks) disease problems? | | Y | Any escapes (since last visit)? | | N |
| If yes, detail: | Fungus | | | | |

Movement Records1. Movement records for **all species** held available for inspection?

Y

2. Date of last inspection:

19/11/2024

3. Are records complete and correctly entered?

N

4. Are movement records available for dead fish and waste?

Y

5. Are records complete and correctly entered?

Y

6. Have all introductions and imports (since last inspection) from outwith the GB health zone been recorded the movement records?

N/A

Transport Records

1. Are any movements carried out not using a STB (by (or on behalf of) the business)?

If yes, is there a system in place for maintenance of transportation records?

Mortality Records1. Mortality records for **all species** held available for inspection?

Y

2. How are mortalities disposed of?

Biogas - Barkip

If other detail:

3. Mortality records complete and correctly entered?

Y

4. Recent mortality (last 4 wks): wk 21 (partial) - 2.61 % (15,068 fish), wk 20 - 24.06 % (182,967 fish), wk 19 - 10.02 % (84,724 fish), wk 18 - 5.12 % (45,599 fish)

5. Evidence of recent increased/atypical mortalities?

Y

If yes, facility nos/no mortality per facility/no stock per facility/reason:

Highest mortality observed in tanks S04 and S05, peaking on 17/05 in S04; 11.42 % (21,532 fish).

6. Any other peaks in mortality during period checked?

Y

If yes, detail:

7. Have increased (unexplained) mortalities been reported to vet or FHI?

N/A

If yes, detail action:

8. Have 'mortality events' been reported to FHI? If no, enter details on mortality events sheet.

Y

Treatments and Medicines Records

1. Recent treatments (see comment)?

Y

If yes, detail:

T.M.S.

If other, detail:

2. Medicines records available for inspection?

Y

3. Are records complete and correctly entered?

N

4. Are fish in a withdrawal period?

N

5. If yes, what treatment(s)?

If other, detail:

6. Are medicines stored appropriately?

Y

Biosecurity Records

1. Biosecurity records available for inspection?

2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?

3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any *increased (unexplained)* mortality at the site been included?4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease is detected been included and *how* and *when* that will be notified to Scottish Ministers?

5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher health status, certification if required)?

6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?

7. Is documentation available regarding the measures in place to maintain the physical containment of aquaculture animals held on site?

8. Have the biosecurity procedures been adequately implemented on site?

If no, detail:

Results of Surveillance

1. Has any animal health surveillance been carried out by, or on behalf of, the business?

Y

2. If yes, are results available for inspection?

Y

3. Any significant results?

Y

If yes, detail (if not detailed under recent disease problems).

Third party report 19/05/2025 – smolt vision analysis conducted on 10 fish. Results indicated the group was considered seawater tolerant at the time of sampling.

Records checked between:

19/11/2024-20/05/2025

Case no:

2025-0181

Site No:

FS0500

Date of visit/
Sampling:

20/05/2025

20/05/2025

Priority samples:

VI

BA

PA

MG

HI

Time sampling
starts/ends:

13:50:00

15:05:00

Main Insp:

VMD No.

0

Environmental conditions:

1Indoors

2

3

4

5

Summary samples

HIST

Y

BA

Y

MG

Y

VI

PA

Y

Total Samples

Add Fish/Pools - click button

| | | | | | | | | | | | | | |
|---------------|----------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--|--|--|--|--|--|--|
| | Pool/Fish No | F1 | F2 | F3 | F4 | F5 | | | | | | | |
| | Fish nos | 1 | 2 | 3 | 4 | 5 | | | | | | | |
| | Pool Group | | | | | | | | | | | | |
| Stock Details | Species | SAL | SAL | SAL | SAL | SAL | | | | | | | |
| | Average weight | 0.0752 | 0.0752 | 0.0752 | 0.0752 | 0.0752 | | | | | | | |
| | Sex | N/A | N/A | N/A | N/A | N/A | | | | | | | |
| | Water Type | FW | FW | FW | FW | FW | | | | | | | |
| | | Kinlochmoidart Hatchery (FS0146) | Kinlochmoidart Hatchery (FS0146) | Kinlochmoidart Hatchery (FS0146) | Kinlochmoidart Hatchery (FS0146) | Kinlochmoidart Hatchery (FS0146) | | | | | | | |
| | Stock Origin | | | | | | | | | | | | |
| | Facility No | S04 | S05 | S05 | S07 | S06 | | | | | | | |

05/2025 Additional Sample Information:

| |
|--|
| |
|--|

5

Total Tests assigned

2

[illegible]

Case no: 2025-0181

Site No: FS0500

Method of killing: Anaesthetic

Date of visit: 20/05/2025

Main Insp: [REDACTED]

Sheet Relevant: Y

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

| Fish Number | | 1 | 2 | 3 | 4 | 5 | | | | | | | | |
|--|-----------------------|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|--|
| Time sampled after death (if > 45 minutes) | | | | | 50 | 65 | | | | | | | | |
| External Signs | | | | | | | | | | | | | | |
| Behaviour | Moribund | M | M | M | M | M | | | | | | | | |
| | Lethargic | M | M | M | M | M | | | | | | | | |
| | Hanging vertical | | | | | | | | | | | | | |
| | Spiralling | | | | | | | | | | | | | |
| | Flashing | | | | | | | | | | | | | |
| Body | Loss of equilibrium | | | | | | | | | | | | | |
| | Dark | | | | | | | | | | | | | |
| | Distended abdomen | | | | S | | | | | | | | | |
| | Anorexic | M | M | M | | | | | | | | | | |
| | Scale Oedema | | | | | | | | | | | | | |
| Opercula | Shortened | | | | | | | | | | | | | |
| | Flared | | | | | | | | | | | | | |
| Haemorrhaging | Throat | | | | | | | | | | | | | |
| | Ventrum | | W | | | | | | | | | | | |
| | Base of fins | | | | | | | | | | | | | |
| | Elsewhere | | | | | | | | | | | | | |
| Eyes | Exophthalmic | | | | | | | | | | | | | |
| | Enophthalmic (sunken) | | | | | | | | | | | | | |
| | Cataract | | | | | | | | | | | | | |
| | Haemorrhagic | | | | | | | | | | | | | |
| Gills | Pale | W | W | W | W | W | | | | | | | | |
| | Zoned | | | | | | | | | | | | | |
| | Necrotic | | | | | | | | | | | | | |
| Lesions | Flank | | | | | | | | | | | | | |
| | Elsewhere | | | | | | | | | | | | | |
| Vent | Inflamed | | | | | | | | | | | | | |
| | Trailing faeces | | | | | | | | | | | | | |
| Lice Load | Estimate numbers | N/A | N/A | N/A | N/A | N/A | | | | | | | | |
| | | | | | | | | | | | | | | |
| Internal Signs | | | | | | | | | | | | | | |
| Ascites | Clear | | | | | | | | | | | | | |
| | Bloody | | | W | | | | | | | | | | |
| Oedema | In tissues | | | | | | | | | | | | | |
| Heart | Pale/anaemic | | | | | | | | | | | | | |
| | Granulomas | | | | | | | | | | | | | |
| | Deformed | | | | M | | | | | | | | | |
| Liver | Petechial haem | W | W | | W | | | | | | | | | |
| | Gross haem | | | | | | | | | | | | | |
| | Tissue breakdown | | | | | | | | | | | | | |
| | Enlarged | | | | | | | | | | | | | |
| | Colour number(s) | 3 | 3 | 3 | 3 | 3 | | | | | | | | |
| | Granulomas | | | | | | | | | | | | | |
| | Lesions | | | | | | | | | | | | | |
| Pyloric caeca | Petechial haem | | | | | | | | | | | | | |
| | Tubules mauve | | | | | | | | | | | | | |
| | Lack of fat | M | S | S | S | S | | | | | | | | |
| Spleen | Enlarged | | W | | | | | | | | | | | |
| | Granulomas | | | | | | | | | | | | | |
| Gut | No food present | | S | S | | | | | | | | | | |
| | Yellow pseudo-faeces | | | | | | | | | | | | | |
| | External haem | | | | | | | | | | | | | |
| | Internal haem | | | | | | | | | | | | | |
| Body wall | Haemorrhaging | | W | | | | | | | | | | | |
| Swim bladder | Haemorrhaging | | | | | | | | | | | | | |
| | Fluid filled | | | | | | | | | | | | | |
| Kidney | Swollen | | | | W | | | | | | | | | |
| | Grey | | W | | | | | | | | | | | |
| | Granular | | | | | | | | | | | | | |
| | Liquefied | | | | | | | | | | | | | |
| General | Parasites present | | | | | | | | | | | | | |
| | Anaemia | | | | | | | | | | | | | |

Date of visit: 20/05/2025

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

| | | | | | | | | | | |
|--|-----------------------|--|--|--|--|--|--|--|--|--|
| Fish Number | | | | | | | | | | |
| 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 | | | | | | | | | |
| | Base of fins | | | | | | | | | |
| | Elsewhere | | | | | | | | | |
| Eyes | Exophthalmic | | | | | | | | | |
| | Enophthalmic (sunken) | | | | | | | | | |
| | Cataract | | | | | | | | | |
| | Haemorrhagic | | | | | | | | | |
| Gills | Pale | | | | | | | | | |
| | Zoned | | | | | | | | | |
| | Necrotic | | | | | | | | | |
| Lesions | Flank | | | | | | | | | |
| | Elsewhere | | | | | | | | | |
| Vent | Inflamed | | | | | | | | | |
| | Trailing faeces | | | | | | | | | |
| Lice Load | Estimate numbers | | | | | | | | | |
| | | | | | | | | | | |
| Internal Signs | | | | | | | | | | |
| Ascites | Clear | | | | | | | | | |
| | Bloody | | | | | | | | | |
| Oedema | In tissues | | | | | | | | | |
| Heart | Pale/anaemic | | | | | | | | | |
| | Granulomas | | | | | | | | | |
| | Deformed | | | | | | | | | |
| Liver | Petechial haem | | | | | | | | | |
| | Gross haem | | | | | | | | | |
| | Tissue breakdown | | | | | | | | | |
| | Enlarged | | | | | | | | | |
| | Colour number(s) | | | | | | | | | |
| | 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 | | | | | | | | | |

Additional comments:

F1 and F4 - shortened snout.

F5 - adhesions present.

Case No:

2025-0181

Date of visit:

20/05/2025

Site No:

FS0500

Main Insp:

| Results Summary | Freq. | Date of Notification | | | | | |
|------------------|-------|----------------------|------|------------|------|------------|----------------------|
| | | Database | Insp | Phone | Insp | Writing | 2 nd Insp |
| MG_IHNQ | 0/5 | 26/05/2025 | | 26/05/2025 | | 26/06/2025 | |
| MG_SAV | 0/5 | 26/05/2025 | | 26/05/2025 | | 26/06/2025 | |
| MG_VHS | 0/5 | 26/05/2025 | | 26/05/2025 | | 26/06/2025 | |
| MG_IPN | 5/5 | 26/05/2025 | | 26/05/2025 | | 26/06/2025 | |
| GSAL | 0/5 | 28/05/2025 | | 28/05/2025 | | 26/06/2025 | |
| AERO (Isolate A) | 1/5 | 23/06/2025 | | 23/06/2025 | | 26/06/2025 | |
| AERO (Isolate B) | 1/5 | 23/06/2025 | | 23/06/2025 | | 26/06/2025 | |
| CARS (Isolate C) | 1/5 | 23/06/2025 | | 23/06/2025 | | 26/06/2025 | |
| ADHE | 2/5 | 16/07/2025 | | | | 16/07/2025 | |
| HPAT | 1/5 | 16/07/2025 | | | | 16/07/2025 | |
| KPAT | 4/5 | 16/07/2025 | | | | 16/07/2025 | |
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| Report Summary | | | |
|--------------------|------------|------|----------------------|
| Case Type | Date | Insp | 2 nd Insp |
| REG | 27/05/2025 | | |
| REP, DIA (interim) | 26/06/2025 | | |
| REP, DIA (final) | 17/06/2025 | | |
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FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

| | | | |
|--------------------|----------|----------------------|-----------------------|
| BUSINESS No | FB0169 | DATE OF VISIT | 20/05/2025 |
| SITE No | FS0500 | SITE NAME | Applecross Smolt Unit |
| CASE No | 20250181 | INSPECTOR | |

Inspection under the Aquatic Animal Health (Scotland) Regulations 2009

The above site was inspected following reports of increased mortality by the farm operator, in accordance with the Aquatic Animal Health (Scotland) Regulations 2009.

Samples were taken for diagnostic purposes. A separate report will be issued detailing the results of these tests.

Records

The information required for the public record of aquaculture production businesses regarding this site was verified and where necessary updated. The following records were also inspected to ensure that the conditions of authorisation for your Aquaculture Production Business (APB) are being met:

Aquaculture animal and aquaculture animal product movement records were inspected and appeared to be inadequately maintained.

Mortality records were inspected and found to be adequately maintained.

Mortality levels had exceeded the reporting criteria since the last inspection and had been reported to the Fish Health Inspectorate as required.

Medicine records were inspected and found to be inadequately maintained.

Reports detailing the results of animal health surveillance carried out by or on behalf of the business and/or Marine Directorate were available for inspection.

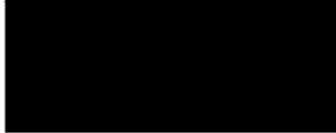
The following points were raised with the site representative during the inspection:

- Movements of fish, conducted over several consecutive days, have been grouped together and recorded in one line of the movement book. The movements will be recorded by day going forward. No further action required.
- The use of anaesthetic was not recorded in the medicine records. Usage will be recorded going forward. No further action required.



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

Signed:



Date: 27/05/2025

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at [Fish Health Inspectorate Service Charter - gov.scot \(www.gov.scot\)](https://www.gov.scot/resources/publications/2022/05/fish-health-inspectorate-service-charter/)



INTERIM FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

| | | | |
|--------------------|----------|----------------------|-----------------------|
| BUSINESS No | FB0169 | DATE OF VISIT | 20/05/2025 |
| SITE No | FS0500 | SITE NAME | Applecross Smolt Unit |
| CASE No | 20250181 | INSPECTOR | |

Section 1: Summary

The business submitted notifications of mortality above the Code of Good Practice for Scottish Finfish Aquaculture reporting threshold. These mortality events were attributed to fungus and smoltification. On inspection of the site, moribund and lethargic fish were observed in all tanks. Five fish were removed for diagnostic examination.

Samples were screened and all fish tested positive for infectious pancreatic necrosis virus by qPCR.

Two *Aeromonas* species were isolated from F2. The level and purity of growth would not suggest these bacteria are present as primary pathogens. The isolates were motile and exhibited biochemical characteristics inconsistent with *Aeromonas salmonicida*. *Carnobacterium divergens* was also identified from F2. This bacterium is not known as a primary fish pathogen and the overall level and purity of growth would not suggest it is present as a primary pathogen.

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 business reported a weekly mortality notification of 1.93 % in March for the site. This mortality was attributed to fungus. Subsequently, the salinity was elevated within the unit but mortality continued to increase. The business reported weekly mortality notifications of 5.12 %, 10.02 % and 24.06 % in May. This mortality was attributed to fungus and smoltification.

During the inspection of stock, moribund and lethargic fish were observed in all tanks. Many were gasping at the surface with fixed mouths. Five moribund and lethargic fish were removed for diagnostic sampling.

Externally, F4 presented with a distended abdomen; whereas, all others showed signs of anorexia/muscle wastage. Haemorrhaging of the ventrum was observed on F2.

Internally, a lack of fat was noted on the pyloric caeca of all fish. Petechial haemorrhaging of the liver was observed in F1-2 and F4. F2 also had haemorrhaging of the body wall. No food was present in F2 and F3. F2 kidney was grey in colour and an enlarged spleen was noted. F4 kidney was swollen. Bloody ascites was noted in F3.

R09

Samples

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

| Fish number | Facility number | Species | Stage | Origin |
|-------------|-----------------|-----------------|----------------|----------------------------------|
| F1 | S04 | Atlantic Salmon | 75.2 g 2024 | Kinlochmoidart Hatchery (FS0146) |
| F2 | S05 | | | |
| F3 | S05 | | | |
| F4 | S07 | | | |
| F5 | S06 | | | |

Results

Bacteriology: Kidney and spleen material from five fish were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated from F2:

- *Aeromonas* sp.(Isolate A): spleen
- *Aeromonas* sp. (Isolate B): spleen
- *Carnobacterium divergens*: spleen

DNA sequence analysis was performed on the gram positive bacteria colony. Results showed the isolate to be *Carnobacterium divergens*.

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

Infectious pancreatic necrosis virus (IPNV)

| Fish Number | Endogenous control Cp value | Cp Values | | | Reported Result (PCR) |
|-------------|-----------------------------|-----------|-------|-------|-----------------------|
| F1 | 17.13 | 36.53 | 36.97 | 35.73 | POSITIVE |
| F2 | 16.96 | 36.51 | 36.60 | 36.70 | POSITIVE |
| F3 | 17.00 | 36.84 | 37.28 | 37.62 | POSITIVE |
| F4 | 17.17 | 36.18 | 37.07 | 35.23 | POSITIVE |
| F5 | 17.34 | 36.63 | 36.31 | 35.84 | POSITIVE |

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), salmonid alphavirus (SAV) 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.

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

Signed:



Date: 26/06/2025

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at [Fish Health Inspectorate Service Charter - gov.scot](https://www.gov.scot/policies/fish-health-inspectorate/) (www.gov.scot)



FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

| | | | |
|--------------------|----------|----------------------|-----------------------|
| BUSINESS No | FB0169 | DATE OF VISIT | 20/05/2025 |
| SITE No | FS0500 | SITE NAME | Applecross Smolt Unit |
| CASE No | 20250181 | INSPECTOR | |

Section 1: Summary

The business submitted notifications of mortality above the Code of Good Practice for Scottish Finfish Aquaculture reporting threshold. These mortality events were attributed to fungus and smoltification. On inspection of the site, moribund and lethargic fish were observed in all tanks. Five fish were removed for diagnostic examination.

Histopathology examination revealed features of renal tubular degeneration which may compromise on the osmotic homeostasis. F4 displayed an extended area of myocardial necrosis with haemorrhage associated and low level of inflammation with numerous unidentified structures of varying sizes, though this observation may be anecdotal and not reflective of a consistent pattern within the wider population.

Please refer to the previous fish health report issued on 26/06/2025 for all other results.

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 business reported a weekly mortality notification of 1.93 % in March for the site. This mortality was attributed to fungus. Subsequently, the salinity was elevated within the unit but mortality continued to increase. The business reported weekly mortality notifications of 5.12 %, 10.02 % and 24.06 % in May. This mortality was attributed to fungus and smoltification.

During the inspection of stock, moribund and lethargic fish were observed in all tanks. Many were gasping at the surface with fixed mouths. Five moribund and lethargic fish were removed for diagnostic sampling.

Externally, F4 presented with a distended abdomen; whereas, all others showed signs of anorexia/muscle wastage. Haemorrhaging of the ventrum was observed on F2.

Internally, a lack of fat was noted on the pyloric caeca of all fish. Petechial haemorrhaging of the liver was observed in F1-2 and F4. F2 also had haemorrhaging of the body wall. No food was present in F2 and F3. F2 kidney was grey in colour and an enlarged spleen was noted. F4 kidney was swollen. Bloody ascites was noted in F3.

R09

Samples

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

| Fish number | Facility number | Species | Stage | Origin |
|-------------|-----------------|-----------------|----------------|----------------------------------|
| F1 | S04 | Atlantic Salmon | 75.2 g 2024 | Kinlochmoidart Hatchery (FS0146) |
| F2 | S05 | | | |
| F3 | S05 | | | |
| F4 | S07 | | | |
| F5 | S06 | | | |

Results

The outstanding results for this case are:

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

Histopathological examination revealed the following:

Gill: Within normal range.

Skin & Muscle: Within the normal range.

Heart: F4 extended focal area of myocardial necrosis with haemorrhage associated and low level of inflammation. Numerous unidentified structures of varying dimensions were noted, some positive to Gram stain. Focal, moderate, epicarditis observed at proximity of the necrosis. F1: no atrium tissue present.

Gut and pyloric caeca: reduced abdominal fat observed in all fish. F3 displayed food content associated with bacteria (hindgut). Peritonitis (F3, F4), mild up-to-moderate.

Pancreas: Within the normal range.

Liver: Hepatocellular vacuolation (macrovesicles), mild, multifocal (F2-F5).

Kidney: Some renal tubule dilation. Several tubules displaying vacuoles in the lining epithelium observed in F1 and F5 and to a lesser extent in F2 and F3. F2 and F3 exhibited occasional tubules filled with eosinophilic material.

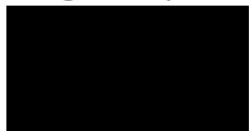
Spleen: Capsulitis (F3, F4), moderate up-to-marked. Splenic necrosis, mild.

R09



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

Signed:



Date: 16/07/2025

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at [Fish Health Inspectorate Service Charter - gov.scot](https://www.gov.scot/policies/fish-health-inspectorate/) (www.gov.scot)

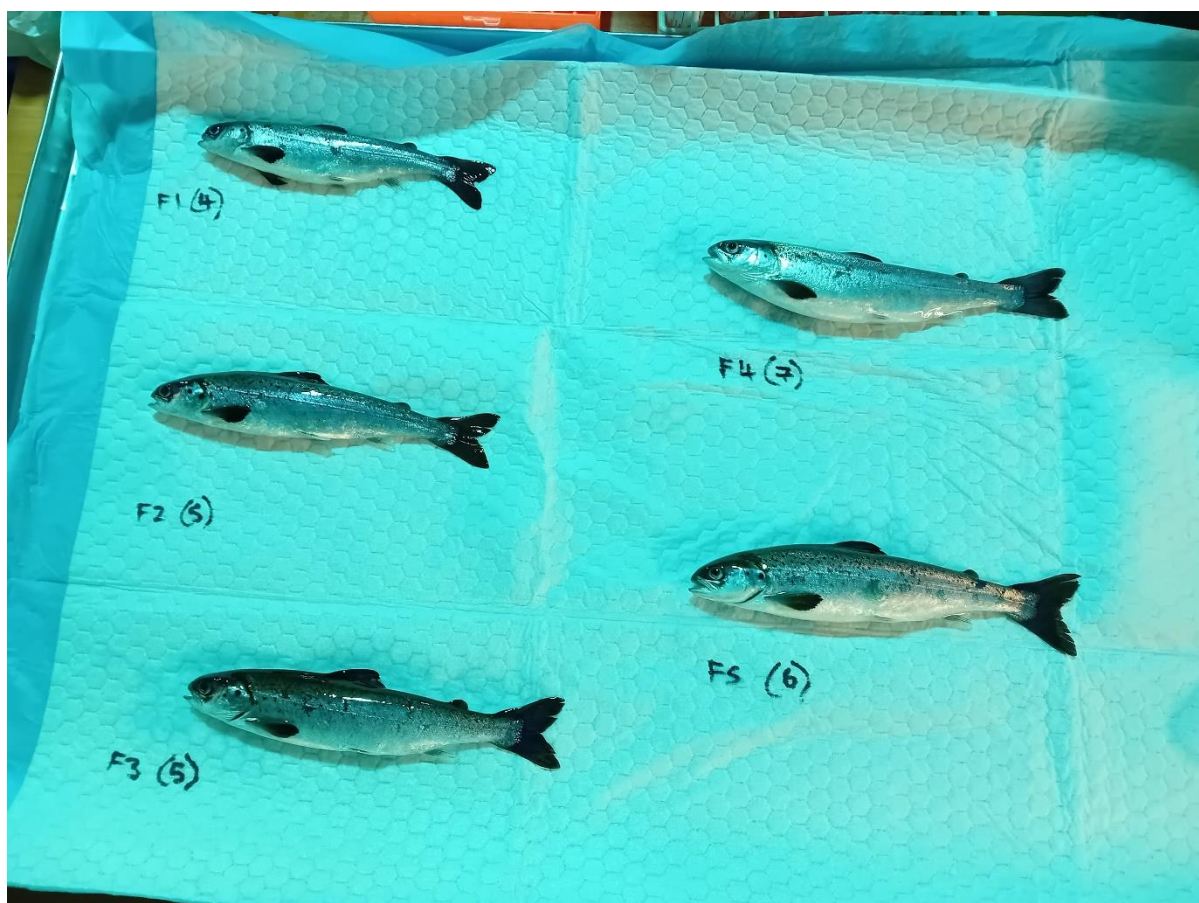


Photo 1. Overview of the five fish sampled. F no. is the fish number and the number in brackets is the tank number.

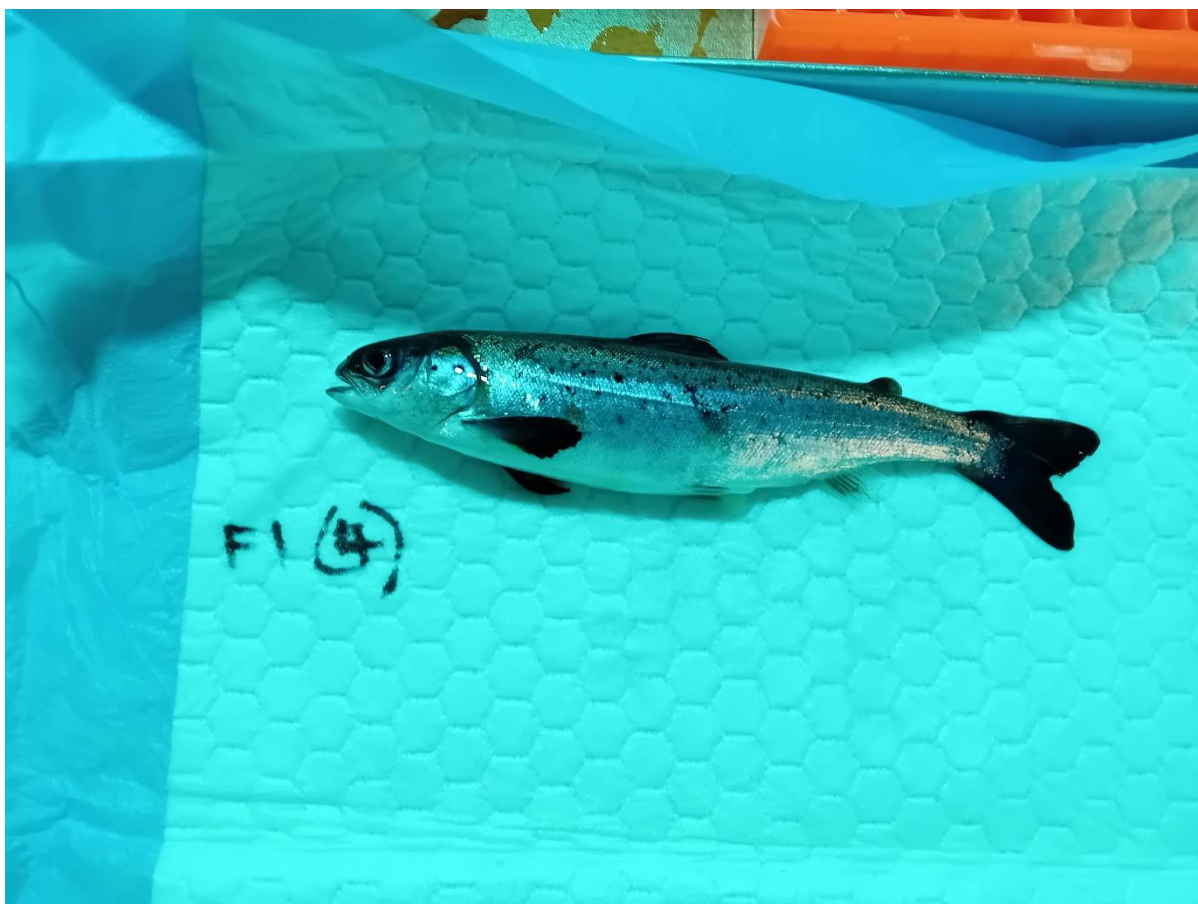


Photo 2. Overview of F1.

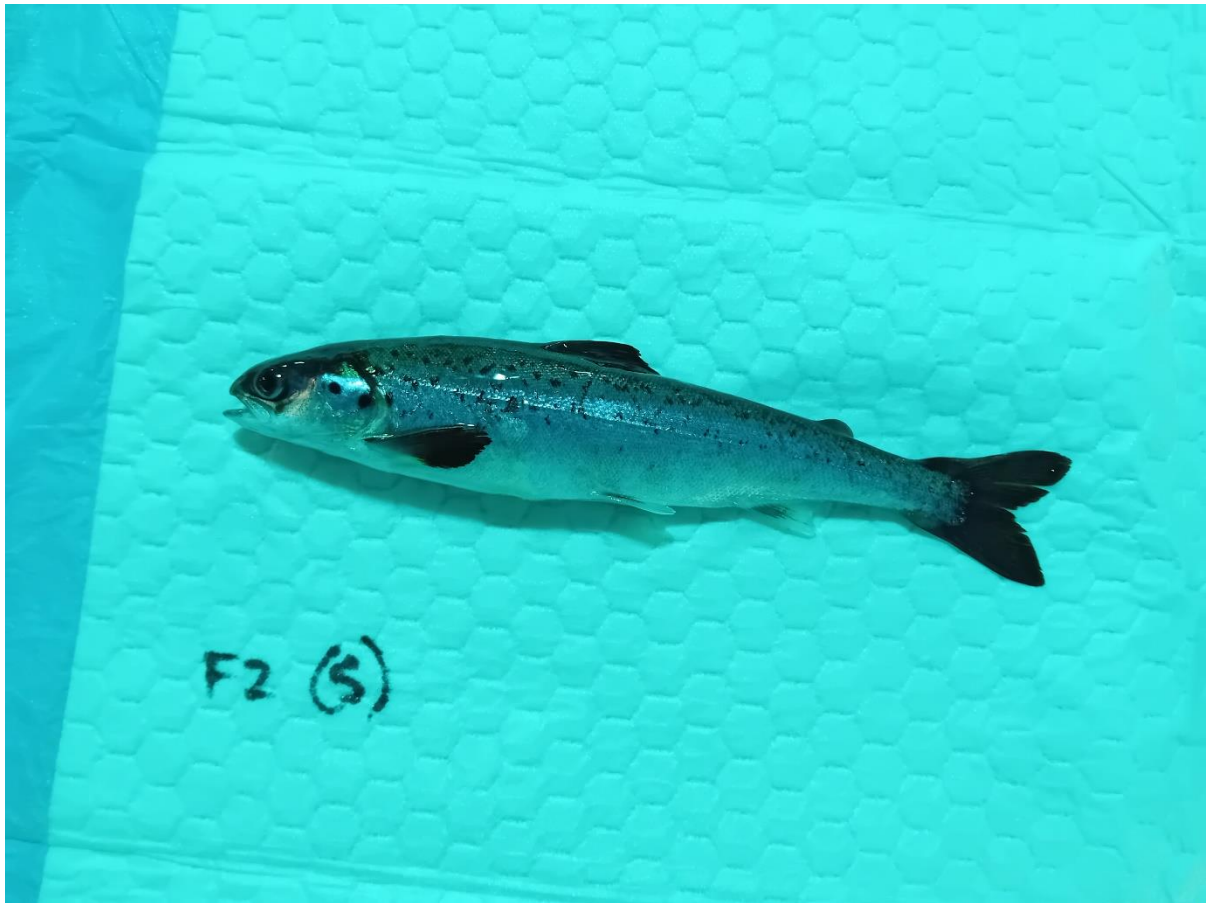


Photo 3. Overview of F2.

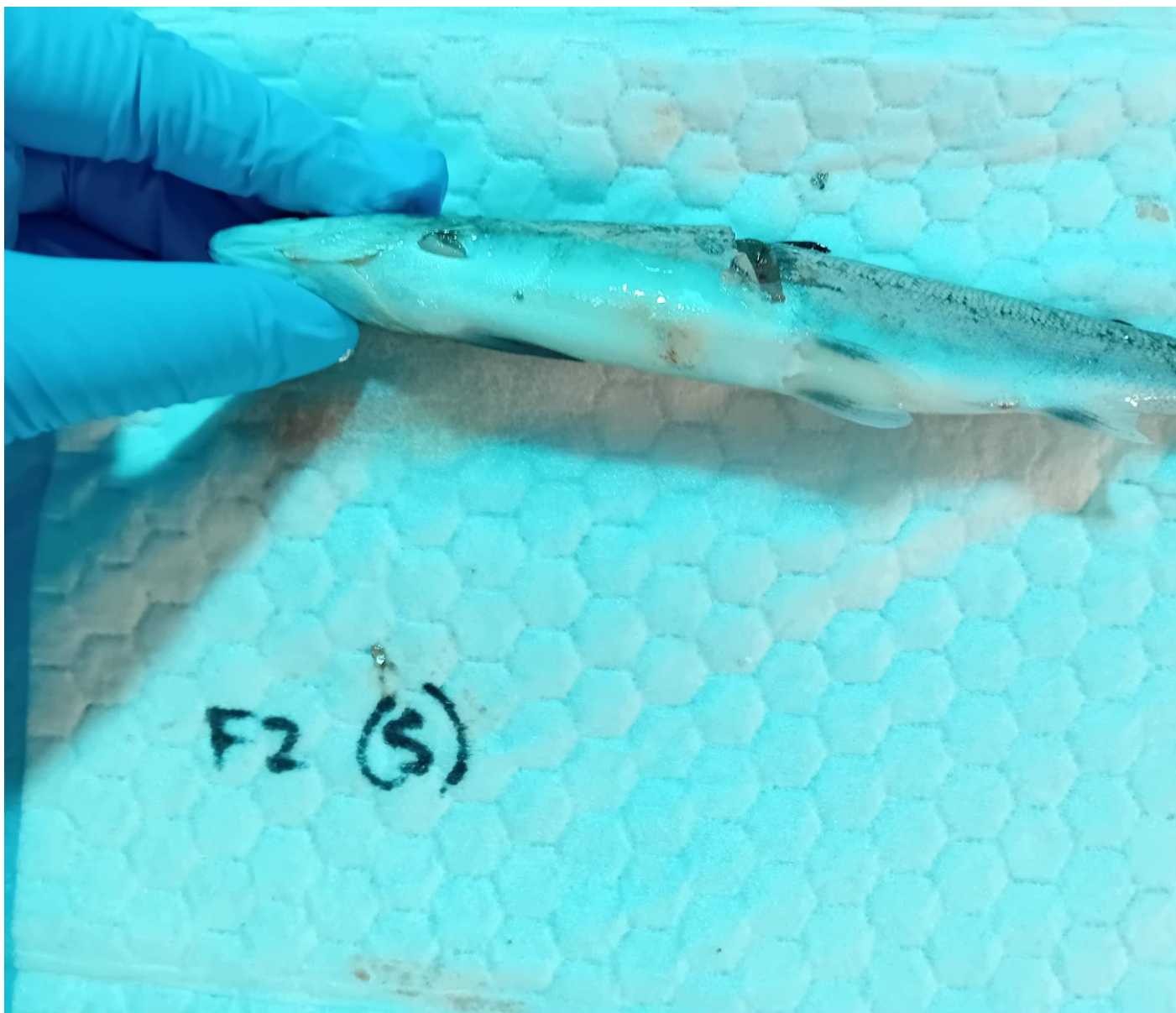


Photo 3. Ventrums of F2.

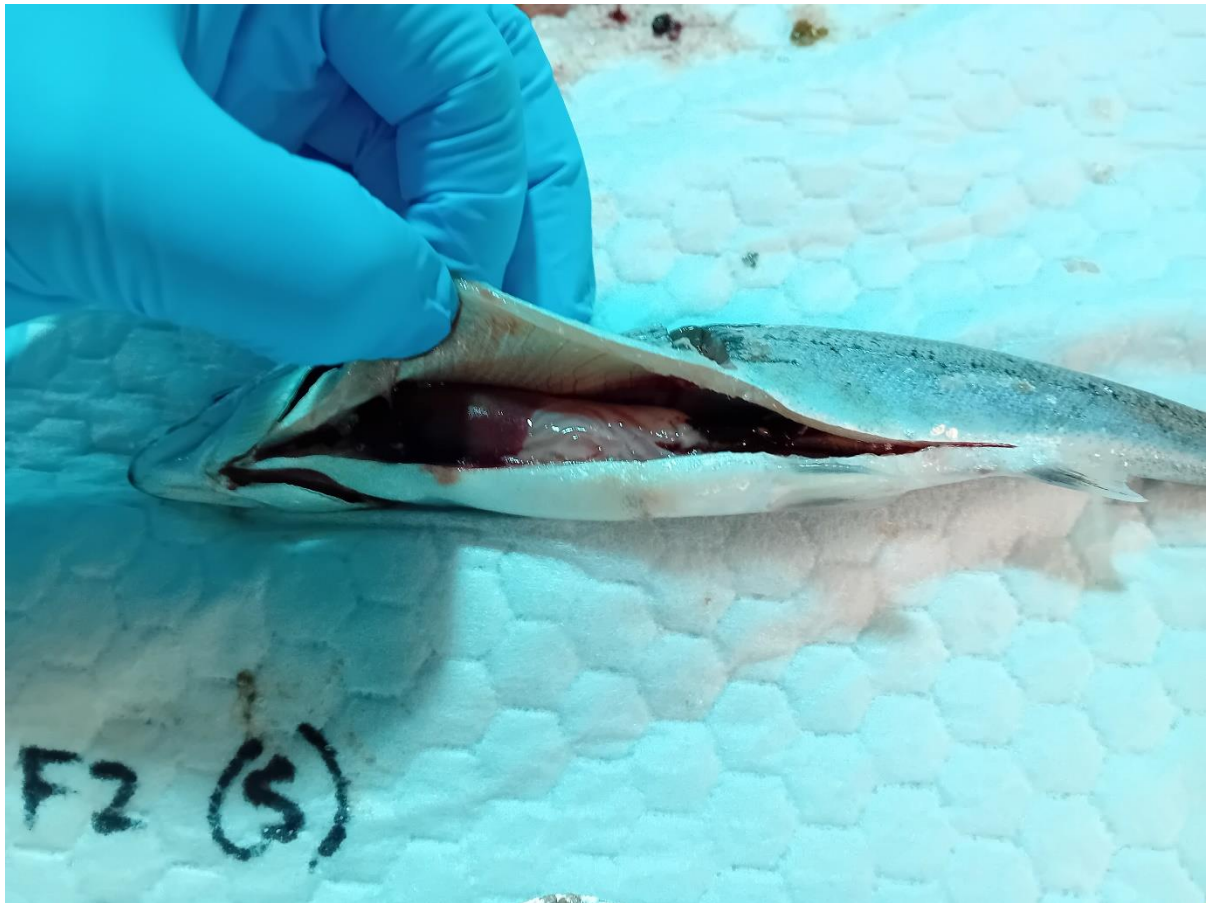


Photo 4. Internal view of F2.



Photo 5. Overview of F3.



Photo 6. Internal view of F3.



Photo 7. Overview of F4.

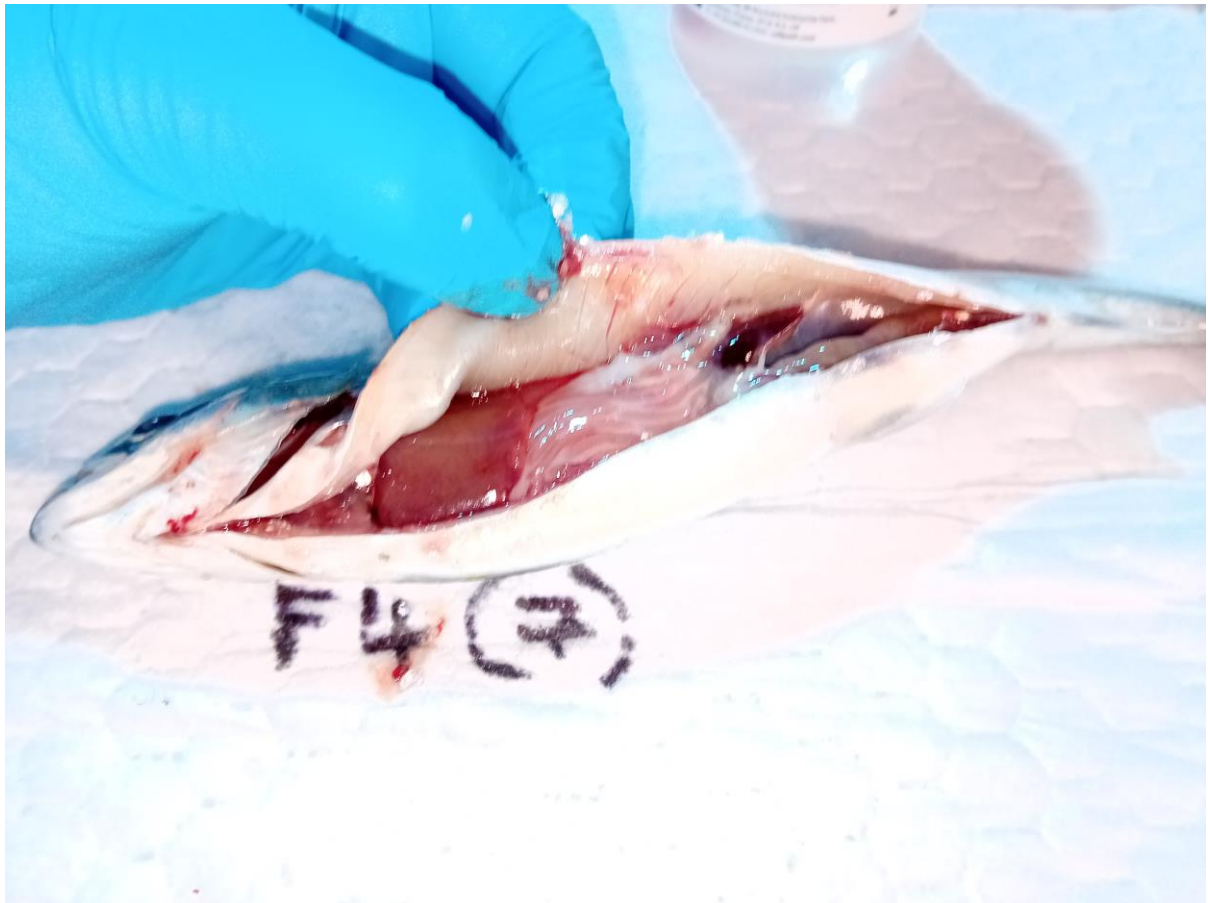


Photo 8. Internal view of F4.



Photo 9. Overview of F5.

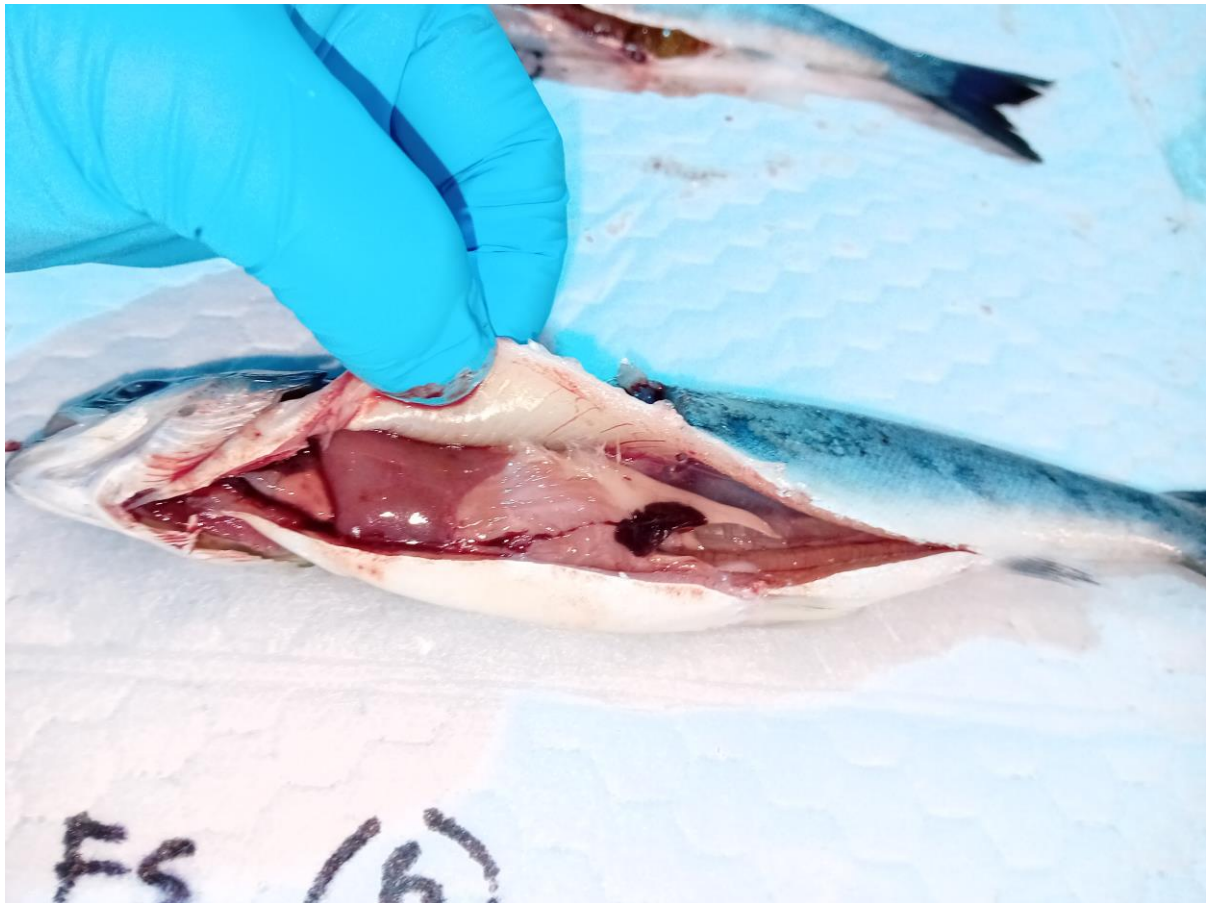


Photo 10. Internal view of F5.