

Skin conditions currently seen in fish

Guidance & Information - Spring 2021

There have been a small number of recent reports from the Severn and Wye catchments of salmon and trout in distress, due to suspected disease. The following facts may help in understanding why we are seeing this and our guidance is provided below on what action we need you to take.

Why is this happening?

We have experienced a prolonged period of low water temperatures this spring, which can lead to an increase in fungal infections and subsequent increased prevalence of fish in distress. It is not, therefore, unusual to see salmon or brown trout unwell or in some distress during this period. Unfortunately we are likely to see cases of this until we have warmer weather. In order to protect the watercourses and their inhabitants, we need anglers and the general public to report any sightings of distressed fish or those suspected of disease by contacting the Environment Agency's Incident line on 0800 80 70 60. In order to try and establish the cause of distress, and importantly whether these may be cases of Ulcerative Dermal Necrosis (UDN) or other skin conditions, we may need to take the fish for analysis.

Our guidance on what action to take:

- Call the Environment Agency 24 hour Incident line on 0800 80 70 60.
- Please do not remove any fish from any watercourse, but make a note of the species, location and numbers of fish seen, and take a photograph if possible. Please pass this information onto the Environment Agency.
- We will use this information to assess the potential risk and respond accordingly. If we decide it is appropriate to do so, we will attend the site to visually assess the fish.
- We will then decide, in consultation with our laboratory, if it is appropriate for the fish to be removed and sent alive to the laboratory for analysis.
- Please do not kill any fish, even if they appear in distress. In order for us to conduct a full laboratory analysis it is essential for the fish to be alive, where possible.
- Any fish caught should be returned to the river, irrespective of its condition.

Will this problem improve?

As the weather warms up, fish that have appeared distressed or diseased may make a full recovery. We understand it may be upsetting to see fish in distress, but for the good of our watercourses it is important our guidance is adhered to.

What is Ulcerative Dermal Necrosis (UDN)?

Ulcerative dermal necrosis (UDN) is a skin condition of wild Atlantic salmon and sea trout. It is a natural condition that usually affects low numbers of fish as they return to freshwater. UDN has been recorded in rivers throughout the British Isles and northern Europe. It is a complex condition that remains poorly understood.

What are the main symptoms of UDN?

Fish with UDN have skin lesions that often begin as round sores on the head. These lesions can occur at any time of the year and can heal without further complication. However, open sores can quickly develop secondary bacterial and fungal infections, increasing in both size and severity. These organisms are present in all water bodies and can multiply on areas of damaged skin, or when fish are already stressed or debilitated. UDN is often confused or masked by these infections, making an accurate diagnosis difficult. Badly affected fish may die as a result of ulceration, fungal infection and loss of normal function.

What is the cause of UDN?

Despite considerable efforts, the exact cause of UDN remains unclear. Studies conducted in the 1970s indicated that UDN may be caused by an infectious agent such as a virus. This has since been questioned, as no single cause has ever been identified.

UDN is a complex disease, which may occur for a number of reasons. Environmental conditions are known to be an important influence on the activity of bacteria and fungi and therefore lesion development.



A skin lesion on the head of a wild salmon, prior to laboratory examinations.

How is UDN diagnosed from other skin conditions?

UDN-type lesions can vary a lot in appearance and can be difficult to distinguish from other common skin diseases. Bacterial and fungal infections are often reported in wild salmonids during periods of stress, such as migration, spawning or adverse conditions. Fungal infections are more likely to develop during prolonged periods of low flows. Secondary infections reduce the likelihood of making an accurate diagnosis.

UDN can only be confirmed by the examination of live fish with early stages of the disease. Confirming UDN relies on taking skin samples from fish for histopathology, a process where thin sections of tissue are fixed, stained and examined for microscopic changes. Sacrificing live fish is seldom feasible and may not be necessary unless serious disease problems are observed.

What is the impact of UDN on our salmon stocks?

customer service line
08708 506 506

incident hotline
0800 80 70 60

floodline
0845 988 1188

www.environment-agency.gov.uk

Large-scale losses of salmon were reported in Britain around the end of the 19th century. These were attributed to 'salmon disease', a condition similar to what is now known as UDN. Mortalities of salmon with UDN-like lesions were widely reported in the UK in the 1960s and 1970s, with outbreaks confirmed in Ireland and Sweden. Since then, cases of UDN in Britain have remained at a low level with only occasional, isolated losses. It appears that cases of UDN can persist in rivers for a few years, but then disappear. Recent media attention was drawn to an 'outbreak' of UDN in the River Spey, Scotland, in spring 2012. Although the disease was confirmed in only a single fish and this was considered a natural case. There is currently no evidence to suggest that UDN is the cause of serious problems in wild salmon populations.



Fungal infections involving the head or body of salmon are most often caused by common Saprolegnia infections, not UDN.



Mortalities of wild salmon can result from many different diseases.

Good practice for anglers

Although UDN has not been linked to an infectious disease, we always advise anglers to be vigilant and act responsibly. Always disinfect your waders, nets and wet fishing equipment before moving to different water. This can either be done by thorough drying in sunlight or with the use of specific disinfectants.

This advice and guidance has been provided and approved by Environment Agency experts in the National Fisheries Service based at our Fish Diseases Laboratory in Brampton.

For further information on UDN, disinfection procedures or any fish health issue please contact the customer service line 08708 506 506 and ask to speak to a member of the West Midlands Fisheries Team.

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