



# Lumpsuckers in Salmon Farms

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# Biology and Ecology



- The ventral fins of the lump sucker are modified to form a suction disc used to cling to rocky substrates(see image).
- The skin is coloured slate grey to blue and is scaleless.
- Small bony lumps cover the body, with lateral rows of larger bony thorns along the body.
- The dorsal fin is situated behind a distinct dorsal ridge that is taller in the females.
- Inhabits deep waters from 50 m down to 300 m depth. However, migration to shallower waters occurs during spawning.
- Distributed throughout Britain and Ireland and known to spawn in Scottish and northern English waters. However, this species is rarely found on the south coast of England.

# Biology and Ecology

- Male fish are much smaller than females
- During breeding season, males develop a pinkish red underbelly and females develop a greenish blue underbelly and this coloration fades once breeding season is over
- They lay their eggs close to shore and are guarded by the males for about 6-10 weeks



# Reproduction and Behavior

Lumpsuckers are solitary swimmers who do not swim very efficiently due to a round body and short fins; often referred to as “Ping Pong Balls” of the sea. If disturbed or bumped they will swim aimlessly in whatever direction they end up in. They can often be found between rocks or amongst seaweed.

Reproduction takes place between the months of July-October. The female lay orange colored eggs in the appropriate nesting area and then the male takes over by fertilizing and protecting the eggs. The female swims aimlessly away now that her work is finished.



# Uses in Fisheries

- Lumpsuckers are used to control sea lice populations in fish pens
- Before fish farmers started using lumpsuckers, they used chemical treatments to kill the sea lice
- This is a photo of a lumpsucker doing its job!



# Sea Lice Before Lumpstickers

- Sea Lice used to be controlled by chemical treatments
- Although it does work, farmers have to change the chemicals regularly as sea lice evolve to resist the chemicals



# Limitations in Fisheries



- Lumpsuckers don't always do their job
- Even if they do, they need supplementary food
- They need shelter!
- They can and will fight each other and everything else

# Limitations in Fisheries

- Lumpsuckers are very susceptible to disease
  - Fungal infections, atypical furunculosis, bacterial infection, and amoebic gill disease
  - Can be preyed upon by sea lice as well
- They're too stressed in their environment!
  - Starvation
  - Cannibalism
  - No shelter
  - Bad water quality



# Limitations in Fisheries



- Very high mortality rate
- Known to escape
  - Cannot be transplanted
- Must be harvested every fall
- Lump sucker fisheries are detrimental for seabirds too



# Welfare and Rights

- Classified as near threatened on IUCN Red list
- Fished for:
  - Use as cleaner fish
  - Roe
- Unregulated in fishing
  - Only example: Iceland - closely regulated, requires a license and a catch report
- Detrimental fishing methods





# Welfare and Rights

- Animal Health and Welfare (Scotland) Act 2006
- Welfare of Animals (Transport) (Scotland) Regulations 2006
- Aquatic Animal Health (Scotland) Regulations 2009
  - Requires: mortality records, and fish farmers must report an unexplained death of a cleaner fish
- RSPCA and Code for Good Practice for Scottish Finfish Aquaculture

# Recommendations

We should stop using lumpsuckers in fisheries!

- High mortality
- High fishing rates
- No welfare rights

If we decide to keep using them, they need more regulations and rights!



# Amazing Pictures Slide



# Literature Cited

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