

EMERGING DISEASES IN SWEDEN

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18th Annual Workshop of the National Reference Laboratories for
Fish Diseases

Copenhagen, Denmark June 3rd-4th 2014



Outbreaks 2013

- 3 ASS/Furunculosis (2 in inland zone)
- 1 ERM – inland zone
- 1 BKD – inland zone
- 1 IPNab – Baltic sea coast

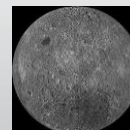


2014



Outbreak #1 - January

- Rainbow trout born 2013
- 3-5% monthly mortality
- 0°C in water
- Opacities in eyes
- Some fish vaccinated in December



Equal mortality rates in vacc/unvacc fish

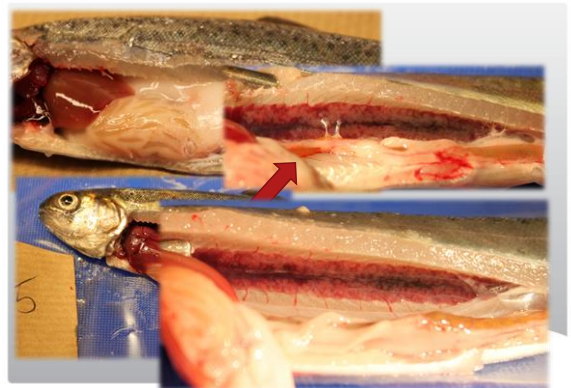
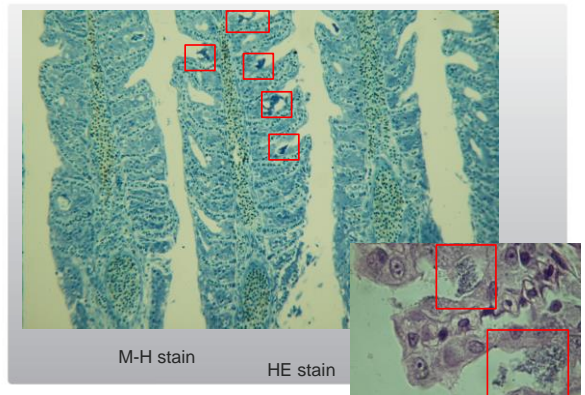


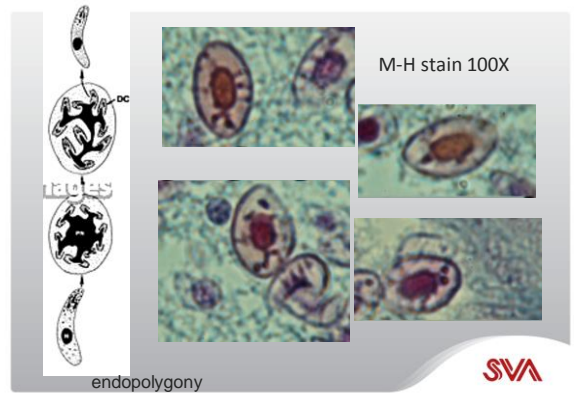
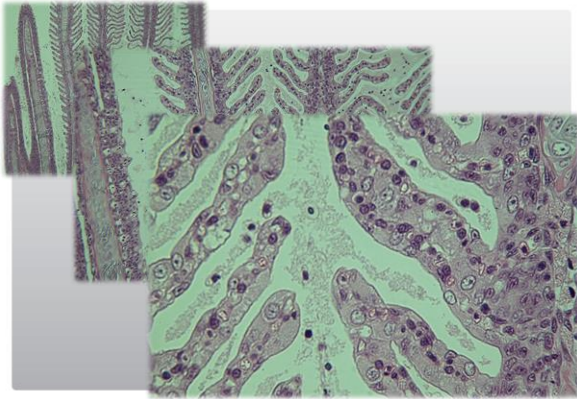
Viral cultures negative
BKD-ELISA negative
Bacterial cultures negative (*Lactococcus* spp.,
unidentified isolate)

Treatments:

saline, formaldehyde, and hydrogen peroxide baths
tetracycline

SVA





DIAGNOSIS

????



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Outbreak #2

- Atlantic salmon
- 1-year old presmolt and smolt
- Mortality 1% per day
- ~2°C in water
- Rainbow trout, Brown trout
- Anemia, abdominal swelling, petechial bleedings in abdominal fat

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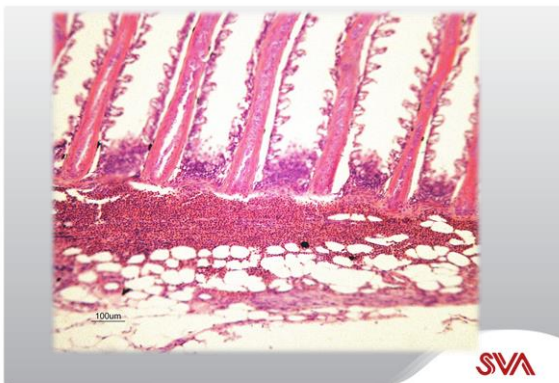


Viral culture negative (VHS, IHN, IPN, SVC)

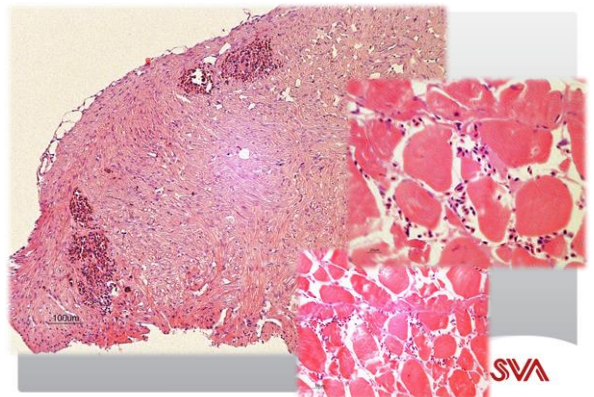
ISAV, SAV q-PCR negative (Dk)

No bacterial growth

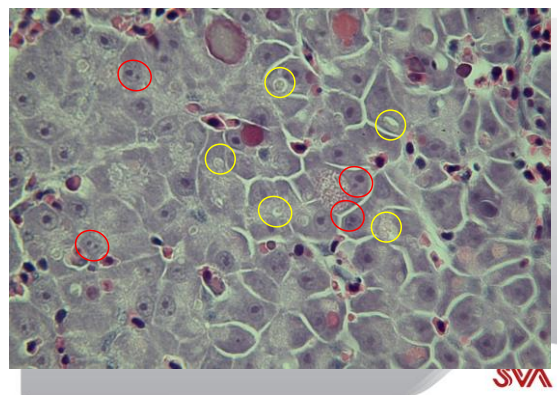
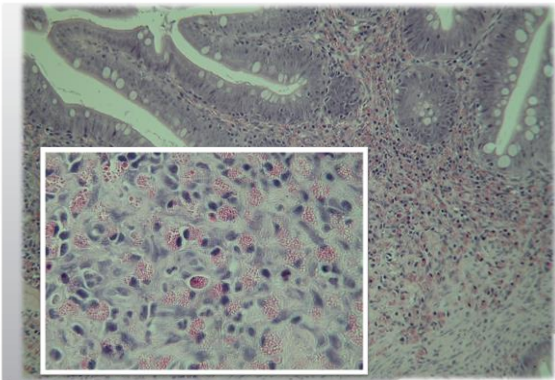
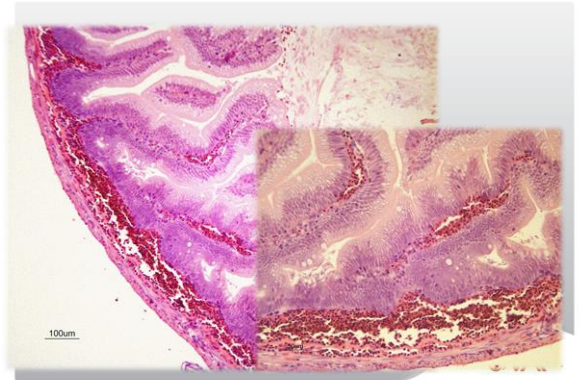
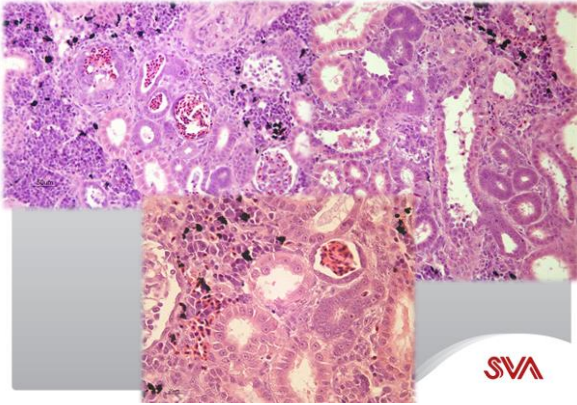
SVA



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DIAGNOSIS

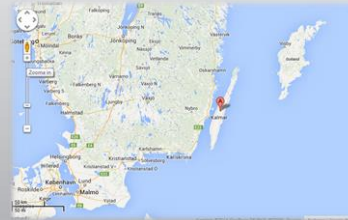
Haemorrhagic Smolt Syndrome



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Outbreak #3

Viviparous Eelpout (*Zoarces viviparus*)
Mass mortalities on east coast of Öland in May



SVA





RESULTS

Bacterial culture: *Vibrio anguillarum*

Viral culture: CPE on BF-2 cells

ELISA for IPN, VHS, IHN, SVC negative

Perch Rhabdovirus? Birnavirus?



Acknowledgements

Anne-Berit Olsen - Veterinary Institute, Bergen

Niels-Jørgen Olesen, Torsten Snogdal Boutrup,
Morten Sichlau Bruun - EURL

