

Emergence of paramoebiasis in edible crabs (*Cancer pagurus*) from UK waters



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Case History



- Anecdotal reports of decline in edible crab fishery
- Fish Health Inspectorate received report from member of public - 50 dead crabs washed up on a beach in Isle of Wight
- Site was visited by a fisheries officer from Inshore Fisheries and Conservation Authority (IFCA) – No samples identified at original site
- Crabs were identified on beach at site approximately 12 miles away – viable samples not possible



Sampling



- Liaised with local fishery
- Edible crabs were obtained from local fisherman
- First 30 crabs landed from a single vessel were kept for sampling
- Considered to be a representative sample of the affected population

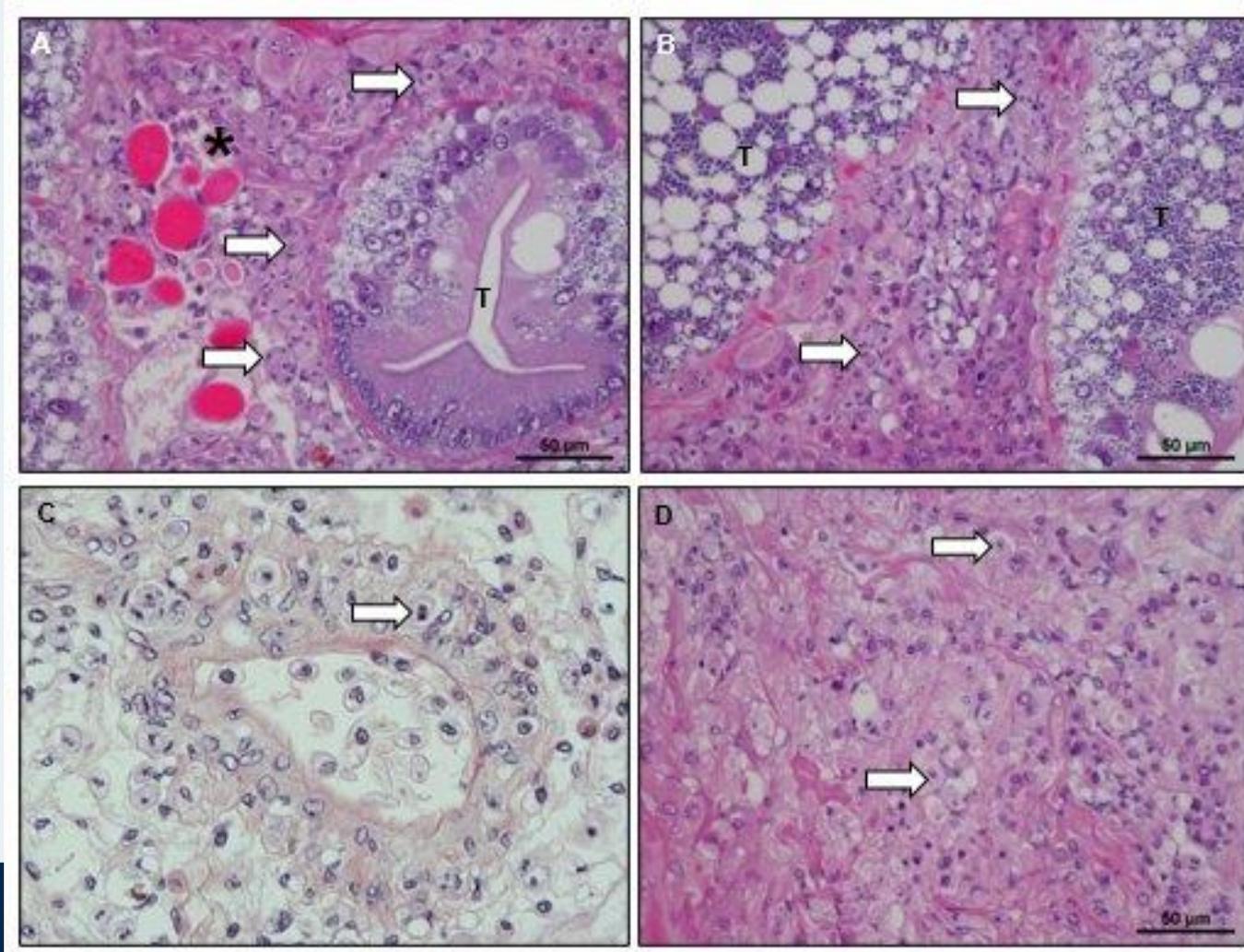
Sampling



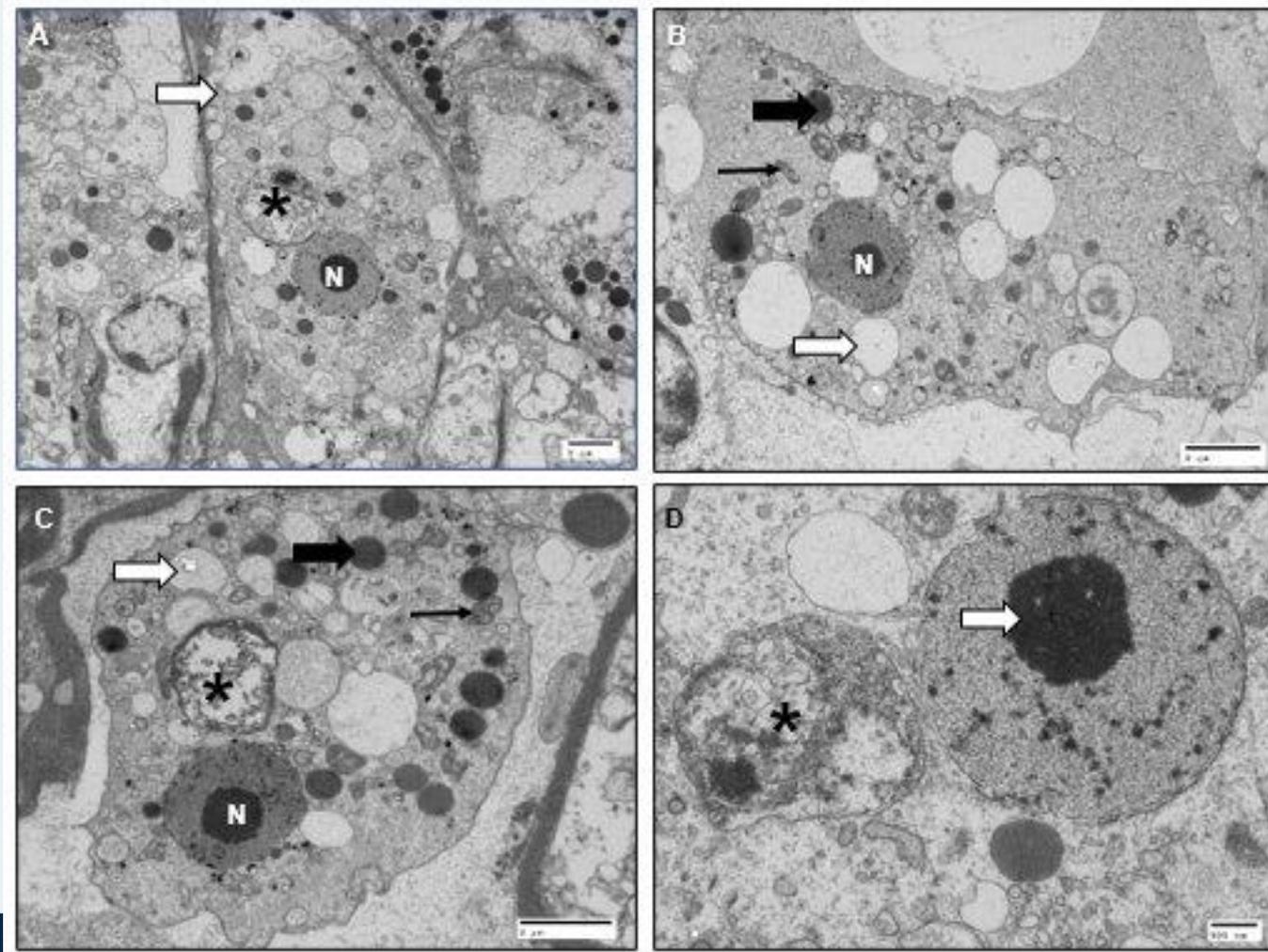
- Crabs transported back to the lab
- Crabs were stunned using Crustastun prior to dissection
- Histology (Gill, Heart, Hepatopancreas, Gonad and Muscle)
- Molecular (Gill, Heart, Hepatopancreas)
- TEM (Gill, Heart and Hepatopancreas)



Histology Results



TEM

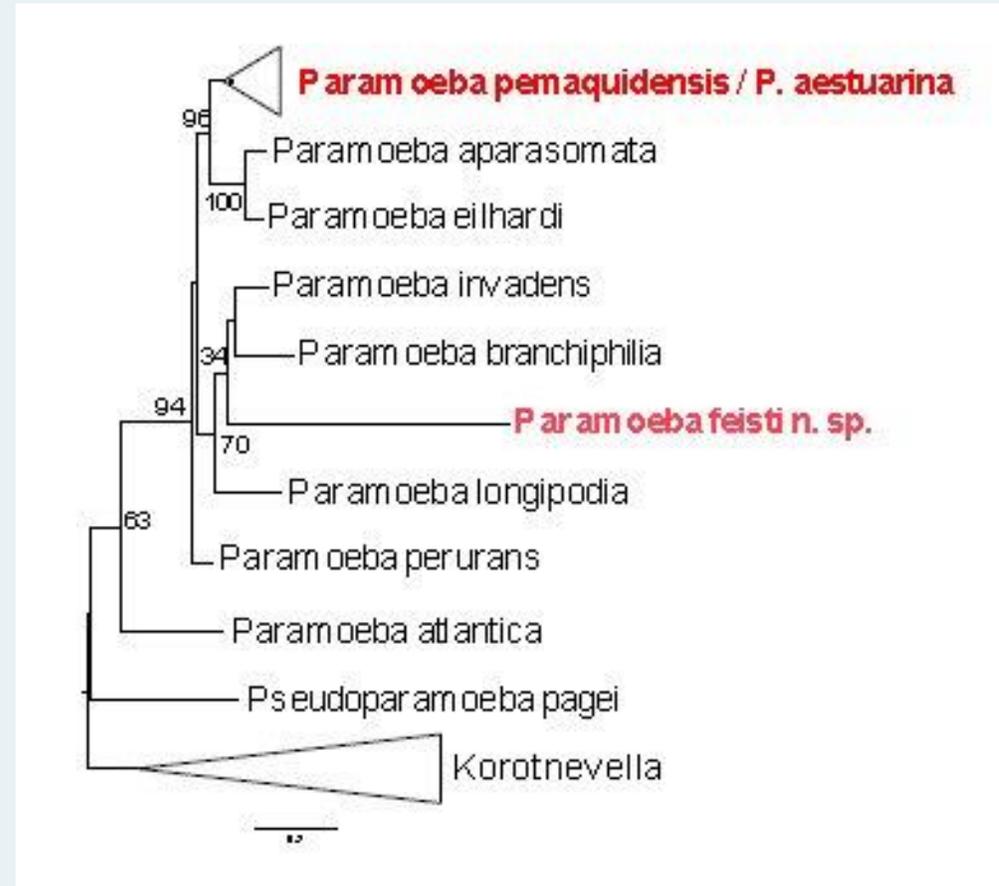


Molecular Screening



- WSSV testing was Negative
- Novel pathogen was detected in 53% of samples
- Intense infection noted in 16% – corresponding with pathology
- Co-infections with other species also identified (*P. pemaquidensis*, *P. aestuarina*)

Molecular Characterisation



Maximum likelihood tree based on partial 18s rRNA gene sequence

Conclusions and Further work

1. Emergent disease, hereby defined as paramoebiasis
2. Further work is underway to define whether the disease is caused by a single agent
3. At least one of the amoeba identified within this study is novel
4. Paramoebiasis has not been previously reported from *Cancer pagurus*
5. Geographic range of novel amoeba is unknown, further work is needed
6. Pathology observed is considered sufficient to lead to mortality in individual crabs
7. Currently being written up for peer-review publication





Aquatic Animal Health



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Thank you