

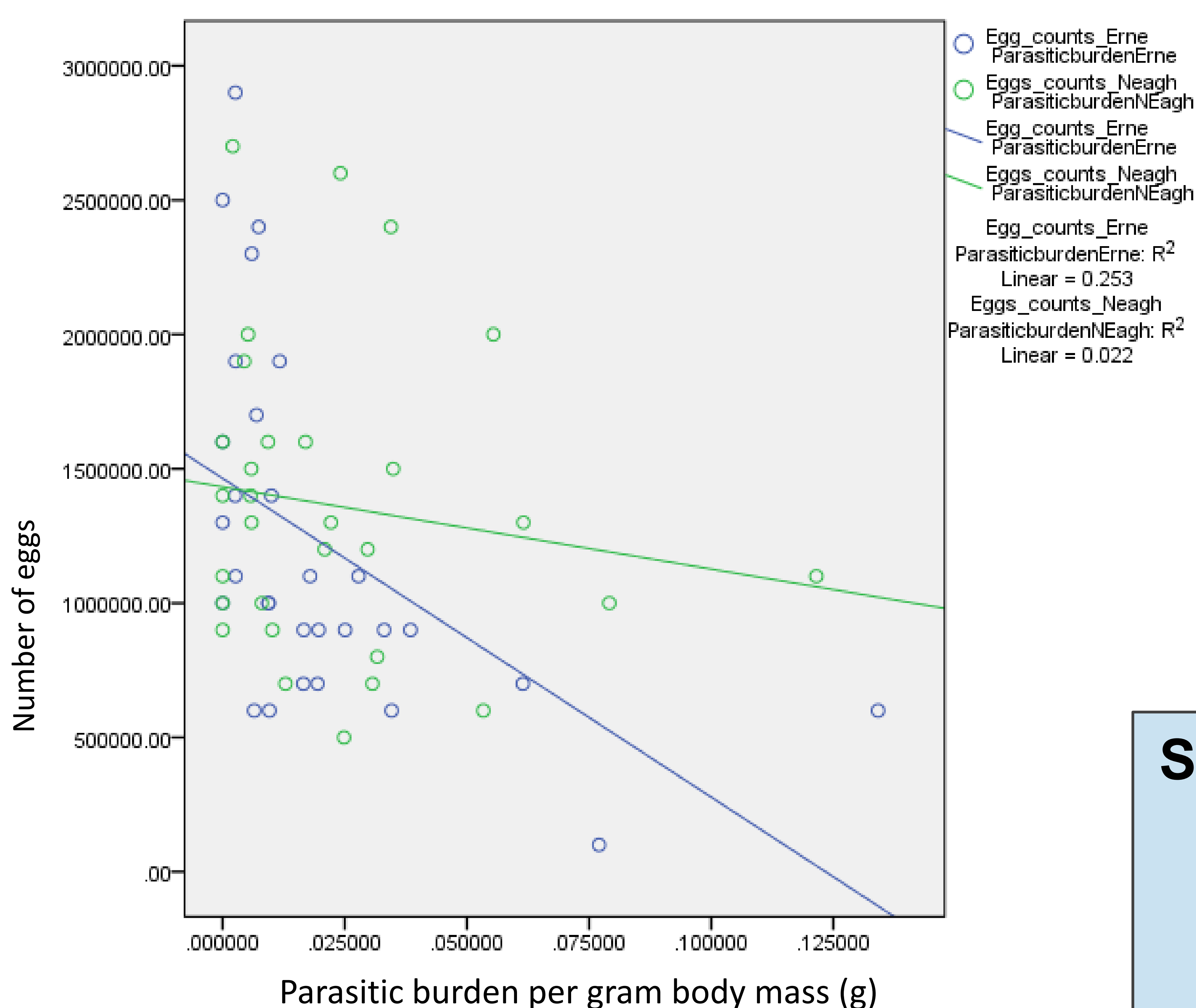
Factors influencing fecundity in the European Eel, *Anguilla anguilla*

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Introduction

- Catches of several species of migratory eels have declined dramatically over the last 40 years
- Although catch declines can be largely attributed to increased fishing pressure, other factors may have contributed to the declines
- One of the most important European eel fisheries is in Lough Neagh
- A. crassus* is known to be present in both Lough Neagh and Lough Erne and is thought to be affecting the ability of the eels to migrate to the Sargasso Sea to spawn
- This project will examine the influence of *A. crassus* on the fecundity of eels to highlight factors that may be contributing to stock declines and preventing their recovery

Improved understanding of factors other than fishing pressure that may limit recovery of declining stocks of the European eel



Applied outcome of research:

- Eels from Lough Neagh and Lough Erne are significantly similar in terms of weight, mass, parasite burden and fecundity
- ANOVA reveals *A. crassus* significantly influences eel fecundity in Lough Erne ($p = 0.005$) but not in Lough Neagh ($p = 0.231$)

Summary

- Catches of European eels have declined significantly over the last 40 years
- Research shows that *A. crassus* significantly influences both eel fecundity and mass in silver eels from Lough Erne
- Eels from Lough Neagh are less affected by *A. crassus* infection and have been exposed to the parasite for longer
- Further research should investigate the potential of European eels of adapting to *A. crassus* infection
- 'Mass' is very important in influencing fecundity and management should look at introducing maximum catch restrictions