



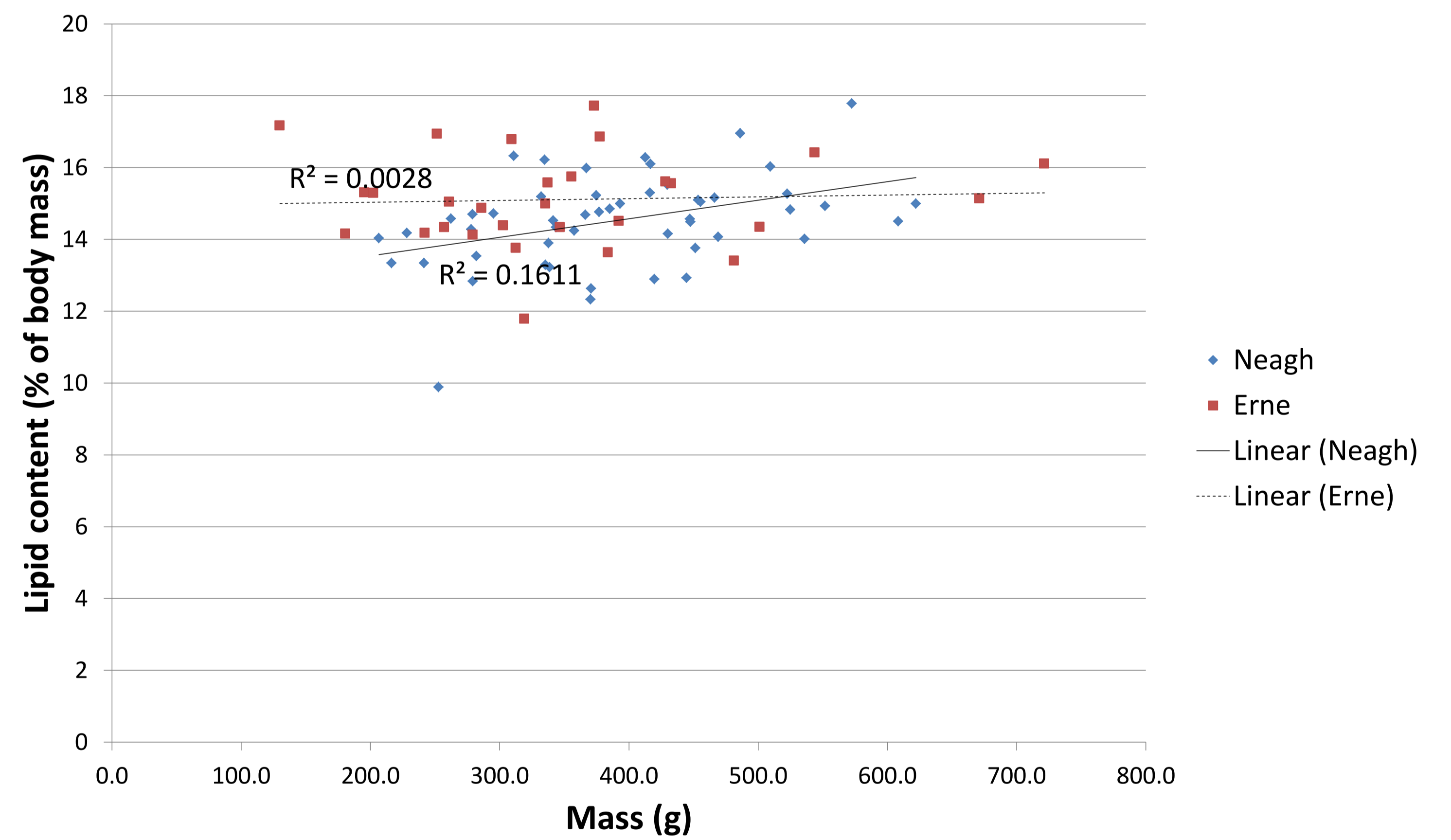
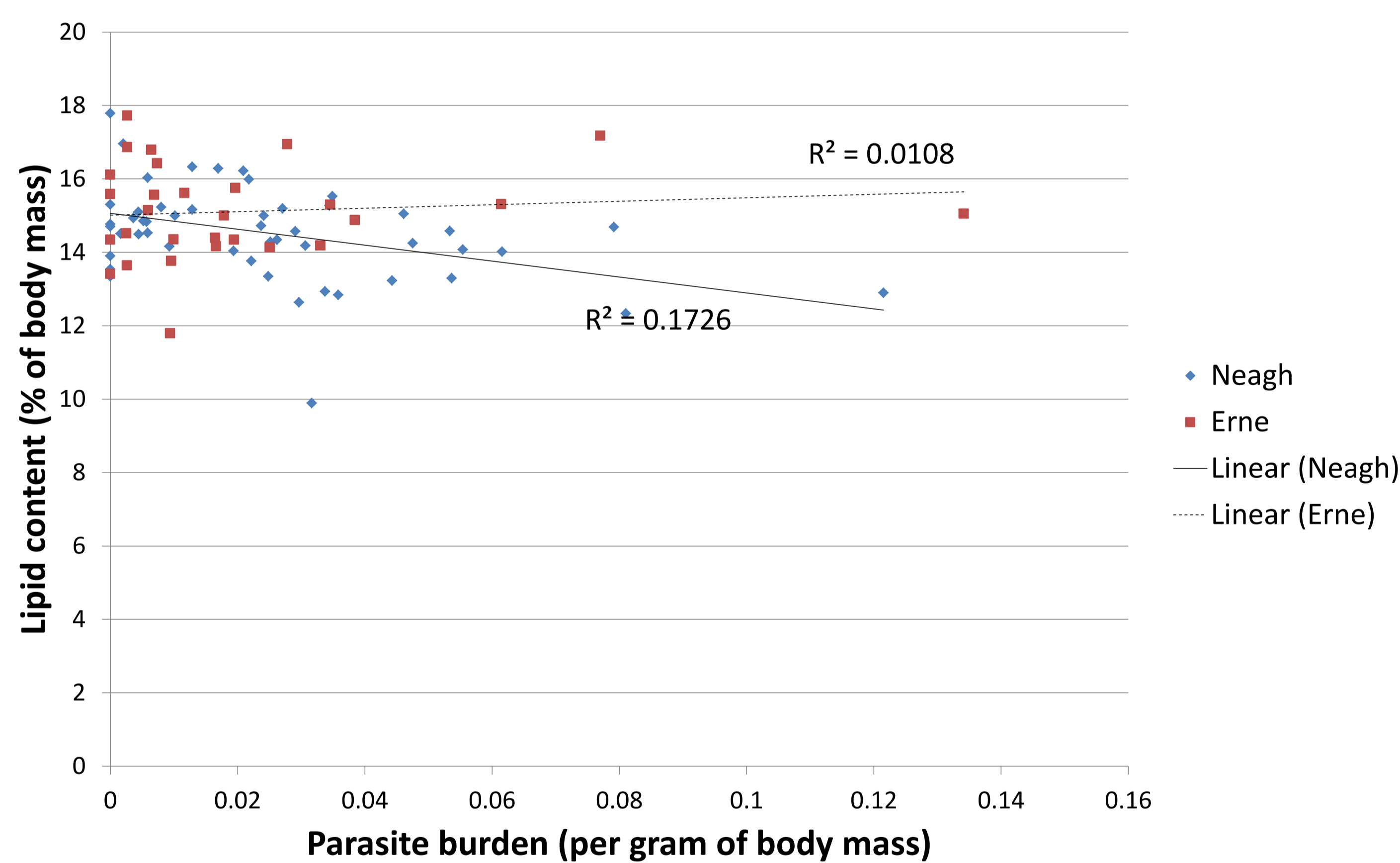
The effect of infection with the swim bladder parasite, *Anguillicola crassus*, on the lipid content of the European eel, *Anguilla anguilla*

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Introduction

- ❑ The status of the European eel has caused much concern in recent years due to declining stocks and poor health status
- ❑ Transmission of *A. crassus* from its native host *Anguilla japonica* to *A. anguilla* has had severe effects on European populations
- ❑ Within Northern Ireland, Lough Neagh sustains the largest commercial wild eel fishery currently remaining in Europe, though the Lough Erne eel fishery is no longer active
- ❑ The unique life history of *A. anguilla* has raised many questions about their migratory behaviours
- ❑ Lipid content is an essential energetic component of migration as well as acting as a key trigger for inducing migration
- ❑ Literature suggests that infection with *A. crassus* may result in a high energy demand, negatively impacting on their spawning migration

The effect of body mass and parasite burden on the lipid content of female silver eels from Lough Neagh and Lough Erne



Outcome of research:

- ❑ Body mass significantly affects the lipid content of female silver eels in Lough Neagh ($F=9.41$, $p<0.05$), but not in Lough Erne ($F=0.07$, $p>0.05$)
- ❑ Parasite burden significantly affects the lipid content of female silver eels in Lough Neagh ($F=10.21$, $p<0.05$), but not in Lough Erne ($F=0.43$, $p>0.05$)

Summary

- ❑ Previous literature suggests that infection with *A. crassus* may cause eels to be more vulnerable to poor health and other diseases such as lymphocytosis
- ❑ However, other research has shown that wild European eels may be capable of adapting to parasitism with *A. crassus*, thus not greatly affecting lipid content
- ❑ *A. crassus* appears to have a significant effect on the lipid content of female silver eels in Lough Neagh but not Lough Erne

