

# "The dynamics of spawning acts by a semelparous fish and its associated energetic expenses" manuscript:

## 1. Reviewer comments:

**P01L33** depletion of gametic stock, so that individuals get exhausted just after their last egg is laid.

[comment]: "...after their last egg is laid and fertilized."

**P09L202** before to weigh it

[comment]: "before weighing it"

**P16L369** , hence tag retrieval.

[comment]: "... , hence making tag retrieval impossible."

**P22L463** Moreover, the angle globally decreased over time for all individuals (LRT  $\chi^2=516.9$ ;  $p=0.001$ ;  $R^2_m=0.29$ ;  $R^2_c=0.78$ ; Fig. 6.B), with a slope of  $-0.21$  degree per eight hours, although it increased during some 8-hours periods.

[comment]: How much is the angle theta effected by the change in depth? Given that the swim bladder can make up much of the volume of a fish and therefore effect the body shape I would expect the depth to account for some change in this angle.

**P23L522** Interestingly, while data collected at the population level indicate that spawning activity increases with temperature (Paumier et al. 2019), our data collected at the individual level showed that temperature increased the probability that a female performed some acts during the night, but not the number of acts it performed.

[comment]: A somewhat long, and unclear sentence. It is not clear what "number of acts" is performed, or not performed during the nights.

**P28L601** ,due additional weight

[comment]: "... , due to additional weight"

**P28L613** Tagging did not seem to impair swimming activity either

[comment]: This is not a clear argument to me given that the fish could just be compensating for the injury, additional weight or drag. From the previous observations for analyzing the spawning events a baseline TBF could be retrieved (optically through tracking etc. ) in order to compare to the telemetry data.

## **2. Note to Authors:**

The manuscript titled "The dynamics of spawning acts by a semelparous fish and its associated energetic expenses" is well written and clearly structured. The question is interesting and the approach well executed and thoroughly applied. Further, the methodology applied in this study incorporates novel applications of established hardware which greatly improves the understanding of the study species and specifically their behaviour, while being minimally invasive.

Beside a few comments and requests I would consider this manuscript well suited for acceptance.