Fakulta rybářství
a ochrany vod
Faculty of Fisheries
and Protection
of Waters

Jihočeská univerzita
v Českých Budějovicích
University of South Bohemia
in České Budějovice
Czech Republic

Confidential

Supervisor´s Review of USB RIFCH PhD Thesis

Surname of the PhD student: Katsiaryna Lundová	Name of supervisor: **Vlastimil Stejskal**
Title of PhD thesis: Technology for the efficient prevention of early maturation in brook trout (*Salvelinus fontinalis* Mitchill)	

OVERALL COMMENTARY ON THE PhD THESIS

Field of intensive culture od brook trout with special regard to manipulation of photoperiods belongs to kind of research which is recently developed at Institute of Aquaculture and Protection of Waters in České Budějovice. M.Sc. Katsiaryna Lundova started to study Ph.D. level in October 2014. She starts firstly with topic related to Artemia enrichments for different fish species. Later on, she changed topic and work on elaborating literary background of research focused on photoperiod manipulations. She also performed and evaluate three experiments on this topic. I can characterize her as skillful and hardworking student. She has shown observation talent and considerable manual laboratory skills during realization of experiments. In terms of obligatory internships she worked in three different institutions. Namely, at Laboratory of Aquaculture and Artemia Reference Center, Ghent University, Gent, Belgium (Prof. Dr. Gilbert Van Stappen, studying the new methods of enrichment of Artemia nauplii), Department of Ichthyology, The Stanislav Sakowicz Inland Fisheries Institute, Olsztyn, Poland (Prof. Ryszard Kolman, studying the new methods of enrichment of Artemia nauplii) and Nofima, Ås, Norway (M.Sc. Gerrit Timmerhaus, Ph.D., studying the methods of gut and skin flora analyzing).

M.Sc. Katsiaryna Lundova experimental work was supported by Ministry of Education, Youth and Sports of the Czech Republic – projects "CENAKVA" (No. CZ.1.05/2.1.00/01.0024) and "CENAKVA II" (No. LO1205 under the NPU I program), Grant Agency of the University of South Bohemia (No. 060/2016/Z) and three projects of Ministry of Agriculture of the Czech Republic (No. QJ1510077, QJ1510119 and QK1810296).

Ph.D. thesis presented for defense is consisted from three published scientific publications (Katsiaryna Lundova is placed in two articles as first author) and one manuscript (Katsiaryna Lundova is first author) on the topic. These parts are supplemented by introductory and final comments (discussion). Author included to her Ph.D. thesis experiments focused on effect of a prolonged photoperiod and light source (1), effect of timing of extended photoperiod (2), and effect of non-circadian photoperiod (3). All effects were tested with emphasis growth, onset of puberty, somatic indexes, survival and sex hormones development in brook trout (*Salvelinus fontinalis*). Experiment on effect of photo-stimulation on flesh quality of brook trout (*Salvelinus fontinalis*) is included as well.

Activities of M.Sc. Katsiaryna Lundova mentioned above demonstrated her ability to fully orientate in investigation problems, formulate scientific hypotheses, prepare, realize and evaluate experiments, as well as write scientific publications with IF. Results in terms of Ph.D. thesis (see above) were published in scientific papers with corresponding impact factor. Except that, her results were presented on scientific international conferences in both abroad (Aquaculture Europe 2016 - Edinburgh, Aquaculture

Europe 2017. Dubrovnik, VI International Young Researchers' Conference of NACEE, Gorki) and the Czech Republic (Zvýšení a zefektivnění produkce lososovitých ryb v ČR s využitím jejich genetické identifikace, Brno) and on Ph.D. seminars at the faculty.

M.Sc. Katsiaryna Lundova executed specified exams in planned term and realized all other requirements according to the faculty rules. All presumptions were accomplished for correct finalization of Ph.D. study assessed by internal regulations of FFPW.

Therefore, I can recommend presented Ph.D. thesis „Technology for the efficient prevention of early maturation in brook trout (*Salvelinus fontinalis* Mitchill)" for defense with pleasure.

FINAL RECOMMENDATION

- [x] **can be recommended for defence of PhD Thesis**
- [ ] **can be recommended with reservations for defence of PhD Thesis**
- [ ] **can not be recommended for defence of PhD Thesis**

Č. B. 10. 5. 20 ..... Date and place

Stejskal ..... surname and signature