

OHRC Advisory Committee

“Research Report”

11 June 2012

David L. G. Noakes

Professor & Senior Scientist
OSU - OHRC

Education and Outreach

- Chinook Surrogate Workshop - OHRC (June 2012)
- OCAMP Workshop - 20 April 2012
- OCAMP Colloquium – 4 May 2012
- OCAMP student project – 23 April 2012
- FW 488/489, Winter 2012, Spring 2012 – homing and straying
- FW 473 Fish Ecology – Spring 2012
- FW 599 Fish Ecology & Conservation – Spring 2012
- OR AFS historical and archival material – OSU Valley Library (David Noakes, Jim Hall, Larry Landis)
- Emily Thompson – MSc (Animal Science) – Graduate Committee
- Video: “OHRC” – Anup Gurang, Camille Leblanc, David Noakes

Presentations

“Chinook Surrogate research”, OSU, Fisheries & Wildlife, Stream Team Seminar, Monday 30 April

“Science Pub”, (HMSC), Toledo, Oregon 5 June 2012

Research Funding Applications

- Lincoln County & Tillamook County – Coast STEM – Ruth McDonald
- Noakes & Schreck – COE – Steelhead(2 years +)
- Noakes – Moore Foundation (in progress)

Research Discussions

- David Noakes, Kathleen Cole, Neil Thompson– “sex of individual hatchery and wild steelhead smolts”
- David Noakes, Carl Schreck, Cam Sharpe, David Griffiths, Eric Billman, Ryan Couture – “Steelhead surrogates”
- David Noakes, Andy Dittman, Ryan Couture, Joseph O’Neil – “olfactory imprinting”
- Kathleen O’Malley, David Noakes, Ryan Couture – coho mate selection
- Alsea Anglers, Kathleen O’Malley, Bob Buckman, ODFW, David Noakes – hatchery steelhead selection
- Haley Ohms, David Noakes – O. mykiss life history
- Ben Clemens, David Noakes – lamprey biology and conservation
- Carl Schreck, Luis Tort, David Noakes – stress and fish biology
- Desiree Tullos, Jason Dunham, David Noakes – woody debris, log jams and fish behavior

Publications

- Rand et al. 2012. Ecological interactions between wild and hatchery salmonids: an introduction to the special issue. *Environmental Biology of Fishes* 94: 1 – 6.
- Li, Noakes et al. Can humans coexist with fishes? *Environmental Biology of Fishes* DOI: 10.1007/s10641-011-9866-3
- Gao & Noakes. Introduction to the special issue on otolith microstructure and microchemistry. *Environmental Biology of Fishes* (in press)
- Noakes (Editor). Ecological interactions of hatchery and wild salmon. *Environmental Biology of Fishes* 94: 1 – 361.
- OnLine First
<http://springerlink.com/content/102877/>

“Salmon Migration”

D. Noakes & P. Klimley (co-editors)

Special Issue of Environmental
Biology of Fishes

OnLine First (December 2012)

[http://science.calwater.ca.gov/stage/
sci_news_0610_tags.html](http://science.calwater.ca.gov/stage/sci_news_0610_tags.html)

Threatened Fishes: Fish Conservation

D. Noakes

Special Issue of Environmental Biology of Fishes

OnLine First (October 2012)

<http://www.springerlink.com/content/102877/?Content+Status=Accepted>

“Otoliths: microstructure and microchemistry”

- Yongwen Gao & David Noakes (Co-Editors)
 - Environmental Biology of Fishes

<http://www.springerlink.com/content/102877/?Content+Status=Accepted>

Research Conferences

Annual AFS Meeting

2012 Award of Excellence

Research Conferences

Presentations

Research Conferences

- Steelhead Workshop, Fort Worden, Washington (steelhead smolts)
- World Fisheries Congress – Edinburgh, Scotland – May 2012 (temperature effects on steelhead sexual development)
- Ecology, Ethology & Evolution of Fishes – University of Windsor – June 2012 (4 papers)
- International Fish Biology Congress – Madison, Wisconsin – July 2012 (2 papers)
- American Fisheries Society – Minneapolis, August 2012 (2 papers)

Research Projects and Proposals

Stable Isotopes – passive marking

Otolith marking – operations research (oxygen isotopes)

Collaboration: Dr. Robbins Church, EPA; Dr. Yongwen Gao, Makah Tribal Fisheries

Research Project

- Olfactory Imprinting – incubation
- Andy Dittman, David Noakes, Ryan Couture
- Chinook salmon, steelhead
- Ongoing (research conference presentations)

Research Project

- Geomagnetic Imprinting
- David Noakes, Ken Lohmann, Andy Dittman, Sam Chan, Pete Klimley, Tom Quinn, Nathan Putman, Michael Banks, Jennifer Nielsen, Carl Schreck
- June 2012

OHRC Research

Homing and Straying

Oregon Sea Grant Funded – 2012 - 2013

Dr. Nathan Putman – North Carolina
State University – Postdoctoral
Researcher – June 2012

Research Projects

- Salmon carcass surrogates – discussion NW Fish Products
- Fish passage – discussions (Guillermo Giannico, Scott Heppell, “industry”)

Otolith Workshop

OHRC

September 2012

coordination with ODFW, OR AFS,
BPA, Oregon Sea Grant, GLFC,
Tribal groups

Chinook Salmon Workshop

OHRC

18 – 19 June 2012

coordination with ODFW, USACOE,
Bozeman, Abernathy Fish
Technology

Chinook Surrogate Project

- US ACOE, ODFW
- Dr. Eric Billman – Faculty Research Associate
- OHRC studies: feeding, density
- Presentation to OHRC Advisory Committee – September 2012

OHRC Research Projects: Applications and Implications

- First feed, fish health
- Smolt diets
- Triploid rainbow trout
- Handling and stress
- Wild broodstock
- Sterile hatchery adult steelhead - Clackamas
- Steelhead smolts
- Alsea steelhead genetics

Continued

- Silt, sediment and emergence
- Temperature and insect emergence
- Chinook jack spawning success
- Chinook surrogates
- Olfactory imprinting
- Mucus and stable isotopes
- Predators – hatchery and wild juveniles
- Spawning by hatchery and wild steelhead

Continued

- Moist air incubator
- Whitlock Vibert incubation boxes
- Temperature and steelhead sexual development
- Adult hatchery steelhead in Alsea River
- Clackamas River outplanting (imprinting)
- Lower Columbia River chum salmon
- Geomagnetic orientation

Continued

- Homing and straying workshop
- Fish nutrition workshop
- Fish genetics workshop
- Otolith workshop
- Hatchery surrogates
- OCAMP
- Fall Festival
- Fish passage

Continued

- Egg size and life history
- Lamprey trap
- Temperature and migration
- Bull trout expert panel
- Research conferences – oral and poster papers
- Hatchery research and reform
- Hatchery and wild ecological interactions

Continued

- Student interns
- Tag technology development (LOTEK, Vemco)
- Passive tagging
- Coho mate choice
- Woody debris, log jams and fish behavior
- Invited presentations
- Educational materials

OHRC Projects – Practical Applications and Implications:

details available on ODFW/OHRC
website