

Tools and triggers for eel reproduction

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Curriculum vitae

Erik Burgerhout was born on 12 February 1981 in Zwijndrecht, The Netherlands. After completing his secondary school education at Walburg College in Zwijndrecht, he started his doctoral study Biology at Leiden University in 2000. During his study, two research projects were performed at Leiden University. The first concerned mate-choice preferences of two closely related Lake Victoria cichlids at the department of Animal Ecology. The second was focused on the effects of hypoxia on embryonic development in Lake Victoria cichlids at the department of Integrative Zoology, thereby combining his main fields of interest: physiology, morphology and embryology. After his graduation in 2006 he started to work as a secondary school teacher in Biology at Gymnasium Haganum in The Hague for a year and also worked voluntarily as a research assistant at the Integrative Zoology department of the Institute Biology Leiden, Leiden University.

In the period of 2007-2008 he worked as a research assistant and zootechnician/animal caretaker at the same department, which was followed by a position as Junior Researcher. During this time, he started working on the artificial reproduction of freshwater eels (*Anguilla* spp.). Also, he co-organized the "Special Workshop on Eel Reproduction" that was held at the European Aquaculture Society 2007 in Istanbul, Turkey, and assisted with editing the book "Spawning Migration of European eel. *Reproduction index, a useful tool for conservation management*" (Eds. G. van den Thillart, S. Dufour and C. Rankin), Fish & Fisheries Series 30, Springer, 2009.

In 2009, he began his PhD research on artificial maturation and reproduction of eels at the company NewCatch BV (a spin-off company of Leiden University) and Leiden University, supervised by Dr. G. van den Thillart and Prof. Dr. H. Spaink. During the last year of his PhD research he worked for the European project PRO-EEL. After the completion of his PhD he is planning to continue his research within the field of reproductive physiology.

Publications

- Vonk, F.J., Admiraal, J.F., Jackson, K., Reshef, R., de Bakker, M.A.G., Vanderschoot, K., van den Berge, I., van Atten, M., Burgerhout, E., Beck, A., Mirtschin, P.J., Kochva, E., Witte, F., Fry, B.G., Woods, A. & Richardson, M.K. 2008. Evolutionary origin and development of snake fangs. *Nature* 454: 630-633.
- Palstra, A.P., Tudorache, C., Rovira M, Brittijn, B., **Burgerhout, E.**, van den Thillart, G.E.E.J.M., Spaink, H.P. & Planas, J.V. 2010. Establishing zebrafish (*Danio rerio*) as a novel exercise model: swimming economy, swimming-enhanced growth and regulation of muscle growth marker gene expression. *PLoS ONE* 5: e14483
- Burgerhout, E., Brittijn, S.A., Kurwie, T., Decker, P., Dirks, R.P., Palstra, A.P., Spaink, H.P. & van den Thillart, G.E.E.J.M. 2011. First hybrid of the eel species Anguilla australis and Anguilla anguilla. BMC Developmental Biology, 11:16
- **Burgerhout, E.**, Manabe, R., Brittijn, S.A., Aoyama, J., Tsukamoto, K. & van den Thillart, G.E.E.J.M. 2011. Drastic effect of satellite tags on eel swimming. *Naturwissenschaften* 98: 631–634
- Henkel, C., **Burgerhout, E.**, de Wijze, D.L., Dirks, R.P., Minegishi, Y., Jansen, H.J., Spaink, H.P., Dufour, S., Weltzien, F-A., Tsukamoto, K. & van den Thillart, G.E.E.J.M. 2012. Primitve duplicate hox clusters in the European eel's genome. *PLoS ONE* 7: e32231
- Minegishi, Y., Dirks, R.P., de Wijze, D.L., Brittijn, S.A., **Burgerhout, E.**, Spaink, H.P. & van den Thillart, G.E.E.J.M. 2012. Quantitative bioassays for measuring biologically functional gonadotropins based on eel gonadotropic receptors. *General and Comparative Endocrinology* 178: 145-152
- Palstra, A.P., Beltran, S., **Burgerhout, E.**, Brittijn, S.A., Magnoni, L.J., Henkel, C.V., Jansen, H.J., van den Thillart, G.E.E.J.M., Spaink, H.P. & Planas, J.V. 2013. Deep RNA sequencing of the skeletal muscle transcriptome in swimming fish. *PLoS ONE* 8: e53171
- **Burgerhout, E.**, Tudorache, C., Brittijn, S.A., Palstra, A.P., Dirks, R.P. & van den Thillart, G.E.E.J.M. Schooling reduces energy consumption in swimming male European eels. Accepted for publication in Journal of Experimental Marine Biology and Ecology.
- Ager-Wick, E., Dirks, R.P., **Burgerhout, E.**, Nourizadeh-Lillabadi, R., de Wijze, D.L., Spaink, H.P., van den Thillart, G.E.E.J.M., Tsukamoto, K., Dufour, S., Weltzien, F-A. & Henkel, C.V. The pituitary gland of European eel reveals massive expression of genes involved in the melanocortin system. *Submitted to PLoS ONE*

- Tudorache, C., **Burgerhout, E.**, Brittijn, S.A. & van den Thillart, G.E.E.J.M. Eels with balls: the effect of additional drag on anguilliform swimming physiology, kinematics and behaviour. *In preparation*.
- **Burgerhout, E.**, Tudorache, C., Brittijn, S.A., de Wijze, D.L., Dirks, R.P. & van den Thillart, G.E.E.J.M. Male European eels are highly efficient long distance swimmers: Effect of endurance swimming on maturation. *In preparation*.
- **Burgerhout, E.**, Dirks, R.P. & van den Thillart, G.E.E.J.M. Natural triggers inducing maturation in freshwater eels (*Anguilla* spp.): a review. *In preparation*.