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## Sound investigation: effects of noise on marine animals across trophic levels

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### Citation

Hubert, J. (2021, September 9). *Sound investigation: effects of noise on marine animals across trophic levels*. Retrieved from <https://hdl.handle.net/1887/3209242>

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**Author:** Hubert, J.

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**Issue Date:** 2021-09-09

# Acknowledgements

First of all, I would like to thank Hans, my supervisor, for challenging me on both my research plans and manuscripts, and for all non-scientific conversations and activities. I would like to thank Carel, my promotor, for always being available for questions and advice, and for being such a stable factor in our research group. Thanks James and Inge, my fellow (former) PhD students within the overarching PCAD4Cod project, I have enjoyed working with you and learned a lot. I have been part of the Behavioural Biology research group, at which I have always felt at home. This has everything to do with all the nice colleagues including Judith, Annebelle, Temp, Jing, Ning, Katharina, Meike, Peter, Michelle, Merel, Fabian, Fleur and Roy. I have also collaborated and received advice from many people from other institutes, including Erwin, Jan, Floor, Michael, Len, Théo, Peter, and Rob: thanks for everything I learned from you. Many – if not all – of my projects would not have been possible without the effort of many students, thanks Jostijn, Daniël, Brigit, Joyce, Emily, Manon S., Tom, Rosalie, Daantje, Jordy, Manon den H., Rik and Laura for your great work. Even though this is officially not part of my thesis, I still – and again – would like to thank Errol and Michelle for having been the daily supervisors of my Master internships. I have learned so much about science from both of you: my thesis would not have been the same without you.

I have learned that research, especially in the field, is dependent on so many people that I am afraid to miss out on thanking many of them, but I am very aware that this thesis would not have been possible without the help of many. First of all, most of my research has been performed at Stichting Zeeschelp, I would like to thank Marco, Bernd, Mario, Hanno, Niels, Julia, Evert, and other colleagues for providing a relaxing and inspiring environment and giving advice on practical challenges. For catching the fish, I owe thanks to many people including Pieke and Michiel for teaching me how to catch and transport cod, Eef for allowing and helping me to bring huge transport boxes on his recreational fishing boat, and all recreational anglers for donating part of their catch, because I did not happen to be a very good angler. I would also like to thank Nelleke, Daniela and Melchior for advice on legal and welfare issues related to animal experiments. During my PhD, I had the opportunity to help out on the practical work on related research projects at the Belgian North Sea, I would like to thank the staff and divers from the VLIZ, and the crew of the Simon Stevin for these exciting field trips. During the last year of my PhD, I went to Saudi Arabia to collaborate on a project at the coral reefs of the Red Sea, I would like to thank my collaborators Michelle, Lloyd, Lucille, Leigh, Nathan, and Alex for this amazing experience.

Finally, I would like to thank my parents, sister, brother, family, and friends for

their support and – mostly – patiently listening to my extensive stories about my experiments. I especially want to thank my father for his drawing for this thesis and Victor and Werner for being my paranymphs. Last, but not least, I would like to thank Werner for his support, enthusiasm, and love.



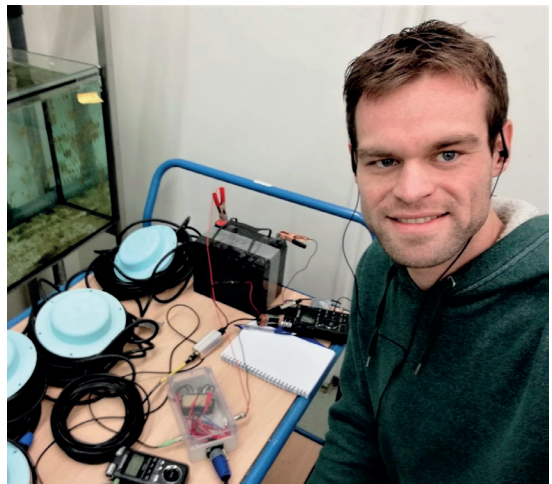
# Curriculum Vitae

Jeroen Hubert was born in 1991 in Zoetermeer, the Netherlands. He attended high school at Stedelijk College Zoetermeer and finished a HAVO programme in 2008. He received a Bachelor's degree in Animal Husbandry at the University of Applied Sciences Hogeschool Inholland Delft in 2012. He continued his education at Leiden University and obtained his Master's degree in Animal Sciences and Health in 2015.

During his Bachelor, he did two internships, one at bird park Avifauna, during which he set up the European Studbook for white-headed vultures. For his graduation internship at De Dierenbescherming, he developed methodology to assess the welfare of birds of prey in captivity. During his Master, he also did two research projects. For his first project he investigated the effects of sound on European seabass, with Dr. Errol Neo and Dr. Hans Slabbekoorn. For his second project, he studied the perception of rhythmic patterns in birds and humans, with Dr. Michelle Spierings and Prof. dr. Carel ten Cate.

After his Master, he fulfilled two sequential positions as a research assistant at the Behavioural Biology lab of Leiden University. First, he studied the perception of iambic-trochaic grouping of acoustic patterns in zebra finches, with Dr. Michelle Spierings and Prof. dr. Carel ten Cate. For the second position, he studied acoustic deterrence of European seabass with Dr. Errol Neo and Dr. Hans Slabbekoorn. All Master research projects and research assistantships resulted in peer-reviewed scientific papers. In 2017, he started his PhD-project on the effects of anthropogenic sound on marine animals. During his PhD, he conducted several scientific studies in the field as well as in the lab. He worked on a variety of species including European seabass, Atlantic cod, shore crabs, spider conches, and several bivalves, and worked in the Netherlands, Belgium and Saudi Arabia. He also participated in teaching in courses on behavioural biology and supervised various internships of both Bachelor and Master students. After his PhD, he will continue his academic career as Postdoctoral researcher at Leiden University to study pelagic fish ecology and deterrence in offshore wind farms.







# Publications

## Under review

**Hubert, J.**, Booms, E., Witbaard, R., & Slabbekoorn, H. Blue mussels habituate to repeated sound exposures and respond just to the on-set of fast pulse trains.

## Peer-reviewed articles

van der Knaap, I., Reubens, J., Thomas, L., Ainslie, M., Winter, H. V., **Hubert, J.**, Martin, B., & Slabbekoorn, H. (2021) Effects of a seismic survey on movement of free- ranging Atlantic cod. *Current Biology*, 31, 1–8. DOI:10.1016/j.cub.2021.01.050.

**Hubert, J.**, van Bemmelen, J. J., & Slabbekoorn, H. (2021). No negative effects of boat sound playbacks on olfactory-mediated food finding behaviour of shore crabs in a T-maze. *Environmental Pollution*, 270, 116184. DOI:10.1016/j.envpol.2020.116184

**Hubert, J.**, Campbell, J. A., & Slabbekoorn, H. (2020). Effects of seismic airgun playbacks on swimming patterns and behavioural states of Atlantic cod in a net pen. *Marine Pollution Bulletin*, 160, 111680. DOI:10.1016/j.marpolbul.2020.111680

**Hubert, J.**, Neo, Y. Y., Winter, H. V., & Slabbekoorn, H. (2020). The role of ambient sound levels, signal-to-noise ratio, and stimulus pulse rate on behavioural disturbance of seabass in a net pen. *Behavioural Processes*, 170, 103992. DOI:10.1016/j.beproc.2019.103992

**Hubert, J.**, Campbell, J., van der Beek, J. G., den Haan, M. F., Verhave, R., Verkade, L. S., & Slabbekoorn, H. (2018). Effects of broadband sound exposure on the interaction between foraging crab and shrimp – A field study. *Environmental Pollution*, 243, 1923–1929. DOI:10.1016/j.envpol.2018.09.076

Neo, Y. Y., **Hubert, J.**, Bolle, L. J., Winter, H. V., & Slabbekoorn, H. (2018). European seabass respond more strongly to noise exposure at night and habituate over repeated trials of sound exposure. *Environmental Pollution*, 239, 367–374. DOI:10.1016/j.envpol.2018.04.018

Spierings, M., **Hubert, J.**, & ten Cate, C. (2017). Selective auditory grouping by zebra finches: testing the iambic–trochaic law. *Animal Cognition*, 20 (4), 665–675. DOI:10.1007/s10071-017-1089-3

Neo, Y. Y., **Hubert, J.**, Bolle, L., Winter, H. V., Ten Cate, C., & Slabbekoorn, H. (2016). Sound exposure changes European seabass behaviour in a large outdoor floating pen: Effects of temporal structure and a ramp-up procedure. *Environmental Pollution*, 214, 26–34. DOI:10.1016/j.envpol.2016.03.075

ten Cate, C., Spierings, M., **Hubert, J.**, & Honing, H. (2016). Can birds perceive rhythmic patterns? A review and experiments on a songbird and a parrot species. *Frontiers in Psychology*, 7 (May). 1–14. DOI:10.3389/fpsyg.2016.00730

## Conference proceedings

**Hubert, J.**, Wille, D. A., & Slabbekoorn, H. (2020). Exploring effects of sound on the time budget of fishes: An experimental approach with captive cod. In *Proceedings of Meetings on Acoustics* (Vol. 37, p. 010012). DOI:10.1121/2.0001253

**Hubert, J.**, Neo, Y. Y., Campbell, J. A., & Slabbekoorn, H. (2016). Particle motion and pressure soundscape in outdoor vs indoor set-up. In *Proceedings of Meetings on Acoustics* (Vol. 27, p. 070007). DOI:10.1121/2.0000273

## Popular article

Soudijn, F., **Hubert, J.**, van der Knaap, I. (2020). Herrie onder water. *Visionair*, 57, 38-41.

