

# Thomas J. Del Santo O'Neill

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## Education

### DPhil. Biological Sciences

2019 - 2023

*School of Biological and Behavioural Sciences, Department of Biology - Queen Mary University of London (UK)*

- Thesis: "Methods and policy pathways to optimize production of mixed stocks of biological resources".
- Funded by the *Biotechnology and Biological Sciences Research Council (BBSRC)* through the *London Interdisciplinary Doctoral Programme (LIDo)* in collaboration with the *Centre for Environment, Fisheries and Aquaculture Sciences (CEFAS)*.

### MSc. Freshwater and Marine Ecology

2017 - 2018

*School of Biological and Behavioural Sciences, Department of Biology - Queen Mary University of London (UK)*

- Thesis: "Assessment of management options to attain Maximum Sustainable Yield from multiple interacting stocks in the North Sea". – 1<sup>st</sup> Class Honours (85%)

### BSc. Marine Sciences

2012 - 2016

*Marine and Environmental Sciences Faculty - University of Cadiz (Spain)*

- Thesis: "Usage of MS-222 as a soothing anaesthetic for gilthead sea bream juveniles (*Sparus aurata*) under a simulated stress condition of transport". – 1<sup>st</sup> Class Honours (76%)

## Employment and Experience

### Postdoc

Feb 2024 - Mar 2025

*School of Biological and Behavioural Sciences, Department of Biology - Queen Mary University of London (UK)*

- Project: "Towards Multispecies Fisheries Management".
- Project Investigator: Dr. Axel G. Rossberg.
- Funded by the *Fisheries and Seafood Scheme (FaSS)*.

### Teaching Demonstrator

2019 - 2021

*School of Biological and Behavioural Sciences, Department of Biology - Queen Mary University of London (UK)*

- *Object*: Support students in a lab and/or exercise lecture guiding and/or facilitating discussions, as directed by the Module Organiser.
- *Modules*: "Statistics for Bioinformaticians" (BSc) and "Ecological Theory and Applications" (MSc).

### Marine Conservation NGO Collaboration

Jul 2018

*Maio Biodiversity Foundation, Island of Maio, Cape Verde*

- *Object*: support the development of the "Turtle Protection" and "Marine Conservation" programmes.
- *Duties*: (i) nocturnal beach patrolling to decrease poaching, morphometric measurements and movement tags deployment on nesting sea turtles; (ii) cetacean, coral reef and Kentish plover surveys for predictive distribution/population-dynamics studies; and (iii) BRUVs usage as non-invasive survey technique.

### English Language Assistant

Sept 2016 - Jun 2017

*Bilingual School Programme - Madrid Ministry of Education and Research (Spain)*

- *Outline*: During an academic year my roles were diverse, including administrative responsibilities, resource production and front of class teaching.

### Research Assistant Intern

Oct 2015 - Jun 2016

*Department of Fish Physiology & Endocrinology - University of Cadiz (Spain)*

- *Object*: improve aquaculture practices by mitigating the stress response of different farmed teleosts.

- *Duties:* (i) lab inventory tracking; (ii) fish/tanks maintenance; (iii) biometric sampling and blood collection by caudal puncture; and (v) quantitative determination of plasmatic metabolites.

## Oceanographic Campaign

Jun 2014

Spanish Navy Hydrographic Institute, Bay of Cadiz, Spain

- *Object:* oceanographic data collection and hydrographic characterisation of the Bay of Cadiz.
- *Duties:* (i) manual CTD and Niskin bottles carousel deployment; (ii) bathymetric surveys; (iii) neuston and plankton sampling with bongo ring nets.

## Skills

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### Operating systems

- UNIX-like kernels (e.g. Mac OS and GNU/LINUX)
- Windows

### Programming Languages

- R, Python, C++, Visual Basic .NET and MATLAB

### Scientific Report Writing

- L<sup>A</sup>T<sub>E</sub>X alongside its *BEAMER* class for presentations
- *Markdown* via the R packages *Rmarkdown* / *bookdown* and *blogdown* for creating websites

### GUI Software

- Ecopath with Ecosim (EwE), Ocean Data View (ODV), GraphPad Prism, ArcGIS, Inkscape, Adobe and MS Office

## Publications

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### Journal

Del Santo O'Neill, T. J., Rossberg, A. G. and Thorpe, R. B. 2024. An efficient tool to find multispecies MSY for interacting fish stocks. *Fish and Fisheries*. [Manuscript under review]. Preprint available at [10.1101/2023.01.25.525330](https://doi.org/10.1101/2023.01.25.525330).

Jerez-Cepa, I., Fernández-Castro, M., Del Santo O'Neill, T. J., Martos-Sitcha, J. A., Martínez-Rodríguez, G., Mancera, J. M. and Ruiz-Jarabo, I. (May) 2019. Transport and recovery of gilthead seabream (*Sparus aurata* L.) sedated with clove oil and MS-222: effects on stress axis regulation and intermediary metabolism. *Frontiers in Physiology*, 10:612. DOI: [10.3389/fphys.2019.00612](https://doi.org/10.3389/fphys.2019.00612).

### Technical Reports

ICES. 2024. Working Group on Multispecies Assessment Methods (WGSAM; outputs from 2023 meeting). ICES Scientific Reports. 6:13. 218 pp. <https://doi.org/10.17895/ices.pub.25020968>.

ICES. 2023. Working Group on Multispecies Assessment Methods (WGSAM; outputs from 2022 meeting). ICES Scientific Reports. 5:12. 233 pp. <https://doi.org/10.17895/ices.pub.22087292>.

ICES. 2021. Working Group on Multispecies Assessment Methods (WGSAM). ICES Scientific Reports. 3:115. 50 pp. <https://doi.org/10.17895/ices.pub.9562>.

ICES. 2021. Working Group on Multispecies Assessment Methods (WGSAM; outputs from 2020 meeting). ICES Scientific Reports. 3:10. 231 pp. <https://doi.org/10.17895/ices.pub.7695>.

### Talks

Jerez-Cepa, I., Fernández-Castro, M., Del Santo O'Neill, T. J., López, M. A., Manzano, G. G., Jarabo, I. R. and Mancera, J. M. (October) 2018. Sedation as an alternative to reduce the stress of farmed fish during transport. *1<sup>st</sup> Congress of Young Marine Researchers, Cadiz*. [Book of abstracts \(pp. 177-179\)](#).

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## Blog

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**Del Santo O'Neill, T. J.**, Francelle, P., Goodwin, A., Grey, J., Nash, L. and Nye, A. (December) 2017. Wood-plumpton Brook restoration: baffle-ing results! [The Wild Trout Trust Blog](#).

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## Posters

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Fernández-Castro, M., **Del Santo O'Neill, T. J.**, Jerez-Cepa, I. and Mancera, J. M. (July) 2017. Potential use of the anaesthetic MS-222 and clove oil to mitigate the stress response during transport in gilthead sea bream (*Sparus aurata*). *11<sup>th</sup> Congress of the Iberian Association for Comparative Endocrinology*, Vigo. [Link to file](#).

**Del Santo O'Neill, T. J.**, Fernández-Castro, M., Jerez-Cepa, I. and Mancera, J. M. (June) 2016. Usage of MS-222 as a soothing anaesthetic for gilthead sea bream juveniles (*Sparus aurata*) under a simulated stress condition of transport. *8<sup>th</sup> Meeting for the Aquaculture in the South Atlantic Littoral*, Huelva. [Link to file](#). | **-Note:** 1<sup>st</sup> prize for best poster (€300).

**Del Santo O'Neill, T. J.**, Fernández-Castro, M., Jerez-Cepa, I. and Mancera, J. M. (May) 2016. Effect of MS-222 (tricaine methanesulfonate) on the stress system of gilthead sea bream juveniles (*Sparus aurata*). *2<sup>nd</sup> Scientific Symposium of the Marine and Environmental Sciences Faculty*, Cadiz. [Link to file](#). | **-Note:** 1<sup>st</sup> prize for best poster (€100).

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## Courses & Conferences Attended

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### Courses

- **SysMIC** 2019 - 2020 *Biotechnology and Biological Sciences Research Council (BBSRC)*
- **Improving your statistical inferences** (online) Feb 2019  
*Eindhoven University of Technology*
- **Game Theory** (online) Mar 2018  
*Stanford University and the University of British Columbia*
- **Sustainable urban mobility. Planification, management and innovations** Mar 2016  
*Vice-chancellorship of Social Responsibility, Cultural Extension and Services, University of Cadiz*
- **Aquaculture in southern Europe: basic and applied aspects** Jul 2015  
*2<sup>nd</sup> International Summer School, Cadiz Marine Research Laboratory* | **-Note:** fully-funded place
- **PADI Open Water Diver** Aug 2012

### Conferences

- **Aquaculture in the Bay of Cadiz: cultivating the future** Nov 2015
- **15<sup>th</sup> National and 1<sup>st</sup> Iberian Aquaculture Congress** Oct 2015

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## Society Memberships

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- **British Ecological Society** Jan 2019 - Present