

# Giancarlo Helar Morón Correa, Ph.D.

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## Research interests

Stock assessment models, community ecology, statistical modeling, fisheries management  
spatial ecology, individual-based models.

## Education

- 2018 – 2022     **Ph.D., Ocean, Earth, and Atmospheric Sciences.** Oregon State University.  
Thesis title: *Incorporating the impacts of Climate Variability on Growth in Fish Population Dynamics Models*  
Minor: *Statistics*
- 2015 – 2017     **M.Sc. (c) Applied Mathematics.** San Marcos National University.  
Thesis title: *A functional approach to study cohort spatial distribution of the Peruvian anchovy (Engraulis ringens)*
- 2009 – 2013     **B.Sc. Biological Sciences.** San Marcos National University.  
Thesis title: *Spatio-temporal analysis of the epipelagic biodiversity in the Peruvian sea*

## Employment History

- 2023 – present     **Researcher.** AZTI.  
Research in assessment models applied to tuna stocks in the North Atlantic and Indian Ocean.  
Supervisor: Josu Santiago
- 2022 – 2023     **Postdoctoral Researcher.** University of Washington.  
Research in state-space assessment models. Expand the features of the Woods Hole Assessment Model to include size-specific data and model time-variability in somatic growth.  
Supervisor: Dr. Andre E. Punt, Dr. Cole Monnahan, Msc. Jane Sullivan
- 2018 – 2022     **Graduate Research Assistant.** Oregon State University.  
Population dynamics of the Pacific cod in the eastern Bering Sea using stock assessment models and individual-based models.  
Supervisor: Dr. Lorenzo Ciannelli
- 2014 – 2018     **Researcher.** Marine Institute of Peru.  
Population dynamics and stock assessment of small pelagic fishes, especially the Peruvian anchovy.  
Supervisor: Msc. Erich Diaz

## Teaching Experience

- 2020 – 2022     **Quantitative ecology.** Cousteau Consultant Group.  
Main instructor in several courses in statistical modeling applied to marine ecology. Population dynamics models.
- 2020     **Data Fisheries Oceanography.** Oregon State University.  
Teaching Assistant. Statistical methods using oceanographic data.

## Teaching Experience (continued)

2017 – 2018      **Biomathematics.** San Marcos National University.  
Lectures on species competition and predator-prey dynamics

## Publications

### Journal Articles

- 1 Stevenson, D., Kotwicki, S., Thorson, J. T., **Correa, G. M.**, & Buckley, T. T. (2022). The influence of age and cohort on the distribution of walleye pollock (*Gadus chalcogrammus*) in the eastern bering sea. *Canadian Journal of Fisheries and Aquatic Sciences*. doi:10.1139/cjfas-2021-0300
- 2 **Correa, G. M.**, McGilliard, C., Lorenzo, C., & Claudio, F. (2021). Spatial and temporal variability in somatic growth in fisheries stock assessment models: Evaluating the consequences of misspecification. *ICES Journal of Marine Sciences*, 78(5), 1900–1908. doi:10.1093/icesjms/fsab096
- 3 **Correa, G. M.**, Ciannelli, L., Kotwicki, S., Barnett, L., & Fuentes, C. (2020). Improved estimation of age composition by accounting for spatiotemporal variability in somatic growth. *Canadian Journal of Fisheries and Aquatic Sciences*, 77(11), 1810–1821. doi:10.1139/cjfas-2020-0166
- 4 **Correa, G. M.**, Galloso, P., Gutierrez, D., & Torrejón-Magallanes, J. (2019). Temporal changes in mesoscale aggregations and spatial distribution scenarios of the peruvian anchovy (*Engraulis ringens*). *Deep Sea Research Part II: Topical Studies in Oceanography*, 159, 75–83. doi:10.1016/j.dsr2.2018.11.009

### Thesis

- 1 Correa, G. M. (2022). *Incorporating the impacts of climate variability on growth in fish population dynamics models* (Doctoral dissertation, College of Earth, Ocean, and Atmospheric Sciences, Oregon State University, Corvallis, OR, USA).
- 2 Correa, G. M. (2017). *Análisis espacio temporal de la biodiversidad en el ambiente epipelágico del mar peruano* (BSc thesis, School of Biological Sciences, San Marcos National University, Lima, Peru).

### Reports

- 1 Monnahan, C., Dorn, M., **Correa, G. M.**, Deary, A., Ferriss, B., Levine, M., ... Zador, S. (2022). *Assessment of the walleye pollock in the Gulf of Alaska*. NOAA Fisheries. Seattle, WA, USA.
- 2 **Correa, G. M.**, & Wetzel, C. (2021). *Catch only projection for canary rockfish (*Sebastes pinniger*) in 2021*. Pacific Fisheries Management Council. Portland, OR, USA.
- 3 **Correa, G. M.**, Wetzel, C., & Hamel, O. (2021). *Catch only projection for arrowtooth flounder (*Atheresthes stomias*) in 2021*. Pacific Fisheries Management Council. Portland, OR, USA.
- 4 Kapur, M., Qi, L., **Correa, G. M.**, Haltuch, M., Gertseva, V., & Hamel, O. (2021). *Draft: Status of sablefish (*Anoplopoma fimbria*) along the us west coast in 2021*. Pacific Fisheries Management Council. Portland, OR, USA.

## Oral Presentations

2022      **Think Tank - University of Washington**  
Responding to climate-driven changes in growth in the modern stock assessment models.

## Oral Presentations (continued)

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- Good Practices in Stock Assessment Modeling - CAPAM**  
Accounting for temporal variability in somatic growth improves state-space assessment model for walleye pollock in the Gulf of Alaska.
- 5th International Symposium on the Ocean in a High CO<sub>2</sub> World.**  
Modeling the multiple action pathways of projected climate change on the Pacific cod (*Gadus macrocephalus*) early life stages.
- ESSAS Annual Meeting.**  
Modeling the multiple action pathways of projected climate change on the Pacific cod (*Gadus macrocephalus*) early life stages.
- Ocean Sciences Meeting.**  
Modeling the Multiple Action Pathways of the effects of climate change on the Pacific cod (*Gadus macrocephalus*) larval growth and survival.
- 2021 **World Fisheries Congress.**  
Accounting for spatial and temporal variability in somatic growth improves age composition and stock assessment estimates.
- 2020 **UW: Quantitative Seminar Series.**  
Impacts of temporal and spatial variability in somatic growth on fish stock assessment models.
- Ocean Sciences Meeting.**  
Accounting for spatiotemporal variability in somatic growth in age composition data estimation for stock assessment models.
- 2018 **PICES International Symposium: Understanding changes in transitional areas of the Pacific.**  
Identifying biogeographical transition zones and nekton assemblages in the northern Humboldt Current System.
- 2017 **ICES/PICES International Symposium: Drivers of dynamics of small pelagic fish resources.**  
Effects of ENSO phases on Peruvian anchovy aggregation patterns.

## Skills

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| Languages | Spanish (native), English (advanced), Italian (intermediate)   |
| Coding    | R, Rmarkdown, L <sup>A</sup> T <sub>E</sub> X, TMB, Java, ADMB |
| Web Dev   | Shiny, Quarto, Markdown  |

## Awards

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- 2021 **Butler Family Scholarship**, Oregon State University.

## References

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Available on request