



## Fanyi Meng

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Xiamen, China

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### OFFICE

WORD

PPT

EXCEL

PS

PR

NOTION

### PROGRAM

C++

Python

Matlab

R

FORTRAN

Javascript

### HOBBY

Photography, Swimming,  
Guitar



### PROFESSIONAL SUMMARY

A dedicated Master's student specializing in marine mammal ecology and behavioral ecology (GPA: 3.8/4.0). My research, conducted through a joint program with the Third Institute of Oceanography under the mentorship of Prof. Yuli Wei and Prof. Fuxing Wu, integrates robust fieldwork with advanced data analysis. My work is twofold: investigating cetacean habitat distribution along the Taiwan Strait, analyzing ecological hotspots of top predators in the Southern Ocean, and contributing to avian habitat and breeding behavior surveys.

I am proficient in applying mathematical modeling to ecological challenges and possess extensive fieldwork experience. I am driven by the process of discovering patterns in data and validating hypotheses in the field, and I am eager to tackle more complex questions in marine ecosystems at the doctoral level.



### EDUCATION

> B.S., Marine Science 2019.09 – 2023.06

Shanghai Ocean University, Shanghai

Thesis: Simulation Study of Marine Extreme Events in the Scotia Sea, Antarctica

> M.S., Marine Biology 2023.09 – present

Shanghai Ocean University, Shanghai

Third Institute of Oceanography, MNR, Xiamen



### RESEARCH EXPERIENCE

#### > Marine Mammal Ecology

1. Indo-Pacific Humpback Dolphins Survey (Core Member) 2024.02 – present

2. Indo-Pacific Finless Porpoises Survey (Core Member) 2024.10 – present

3. Polar Mammal Data Analysis (Core Member) 2023.12 – present

4. Cetacean Survey (Core Member) 2024.06 – present

5. Dugong Survey, Guangxi 2024.10 – present

#### > Avian Ecology

1. Monitoring of Blue-tailed Bee-eater Breeding Sites, Xiamen 2024.04 – present

2. Ecological Monitoring, Xiamen Airport Compensation Zone 2024.02 – present

3. Urban Bird Survey and Monitoring, Xiamen 2024.09 – present

4. Waterbird Survey and Monitoring, Multiple Regions 2024.02 – present

#### > Publications

Zhu, G., & Meng, F. (2023). Analysis of post-breeding movement characteristics of southern elephant seals on the Kerguelen Plateau, Antarctica. *Journal of Shanghai Ocean University*, 32(01), 181-189. (In Chinese)

Dai, Y., Meng, F., Wu, F., Miao, X., Yan, D., Zhong, M., ... & Lin, L. (2025). Predicting the potential distribution of major marine mammals in the Cosmonaut Sea. *Frontiers in Marine Science*, 12, 1529913. [IF: 3.0, Q1]

Meng, Fanyi, and Guoping Zhu. "Using a generative adversarial network-based model to simulate fishing behavior in Antarctic krill fishery." *Fisheries Research* 276 (2024): 107065. [IF: 2.3, Q2]

Meng, Fanyi, et al. "Preliminary Investigation of the Indo-Pacific Bottlenose Dolphins (*Tursiops aduncus*) Around the Taiwan Strait." *Marine Mammal Science* (2025): e70042. [IF: 1.9, Q1]

## RESEARCH HIGHLIGHTS

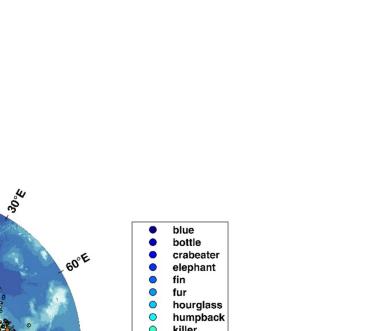
### • Cetacean Habitat Surveys along the Taiwan Strait

As a core team member, I contributed significantly to cetacean habitat surveys along the Taiwan Strait coast. My responsibilities included long-term monitoring of Indo-Pacific humpback dolphins (*Sousa chinensis*) and expanding survey efforts to broader regions.

Through systematic line-transect design and rigorous data analysis, my work supported the first identification of a stable hotspot for Indo-Pacific finless porpoises (*Neophocaena phocaenoides*) and confirmed a resident population of Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) in the Nanpeng Islands MPA. Key findings from this work, which provide critical data for regional conservation, have been published in *Marine Mammal Science*.



Yellow box indicates the Xiamen-Kinmen waters; blue box indicates the Nanpeng Islands MPA.



Line-transect design for the finless porpoise survey in Zhangzhou waters.

### • Ecological Hotspots of Top Predators in the Southern Ocean

Utilizing observational data from the 38th-41st Chinese National Antarctic Research Expeditions (CHINARE), I am analyzing the spatiotemporal distribution of apex predators in the Southern Ocean. My master's thesis aims to identify and explain the formation mechanisms of ecological hotspots for key species (e.g., southern elephant seals, cetaceans) by developing robust ecological niche models. This research will offer new insights into the impacts of climate change on polar ecosystems.



Legend:

blue

bottle

craebster

elephant

fin

fur

hairless

humpback

killer

leopard

longfin

minke

ross

seal

sperm

unreal

weddell

Summary of marine mammal sightings from the 38th-41st CHINARE.

Vanilla GAN

Data augmentation

Conditional GAN

Noise  $z$

fake data

real data

Generator  $G$

discriminator  $D$

discriminator  $D$