进展

	董亚菲	孟凡祎	季振伟	朱颖悟
进展	修改小论文	翻译论文	阅读文献	阅读文献，学习R语言
计划	修改小论文	阅读文献，上课	学习机器学习	阅读文献，学习R语言

季振伟

Target Classification of Marine Debris

Using Deep LearningDeep learning for biological image classification

朱颖悟

1、Meta-analysis reveals variance in tolerance to climate change across marine trophic levels

2、Development of a prey-predator species distribution model for a large piscivorous fish: A case study for Japanese Spanish mackerel Scomberomorus niphonius and Japanese anchovy Engraulis japonicus

科学目的　　实验数据　　分析方法　　研究结论

ELSEVIER

Ecological Indicators

IF 6.9 SCIE JCI 1.49 Q1 环境科学与生态学2区 Top EI

Volume 147, March 2023, 109943

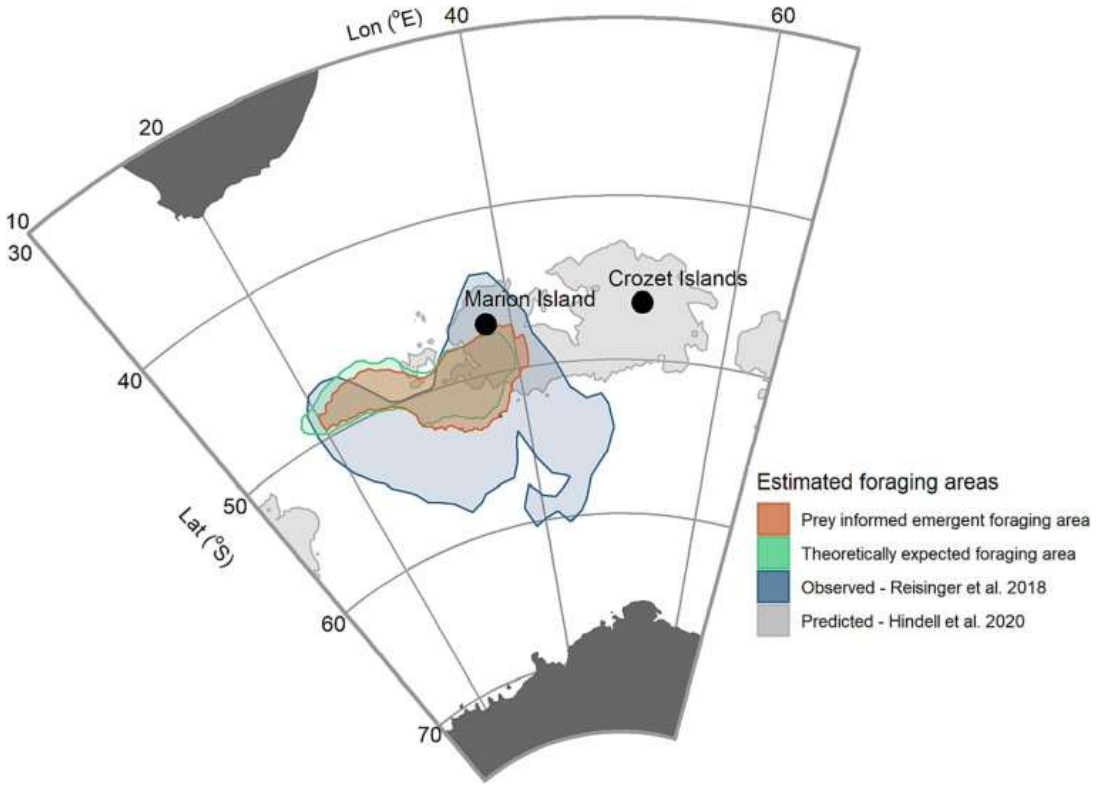
Original Articles

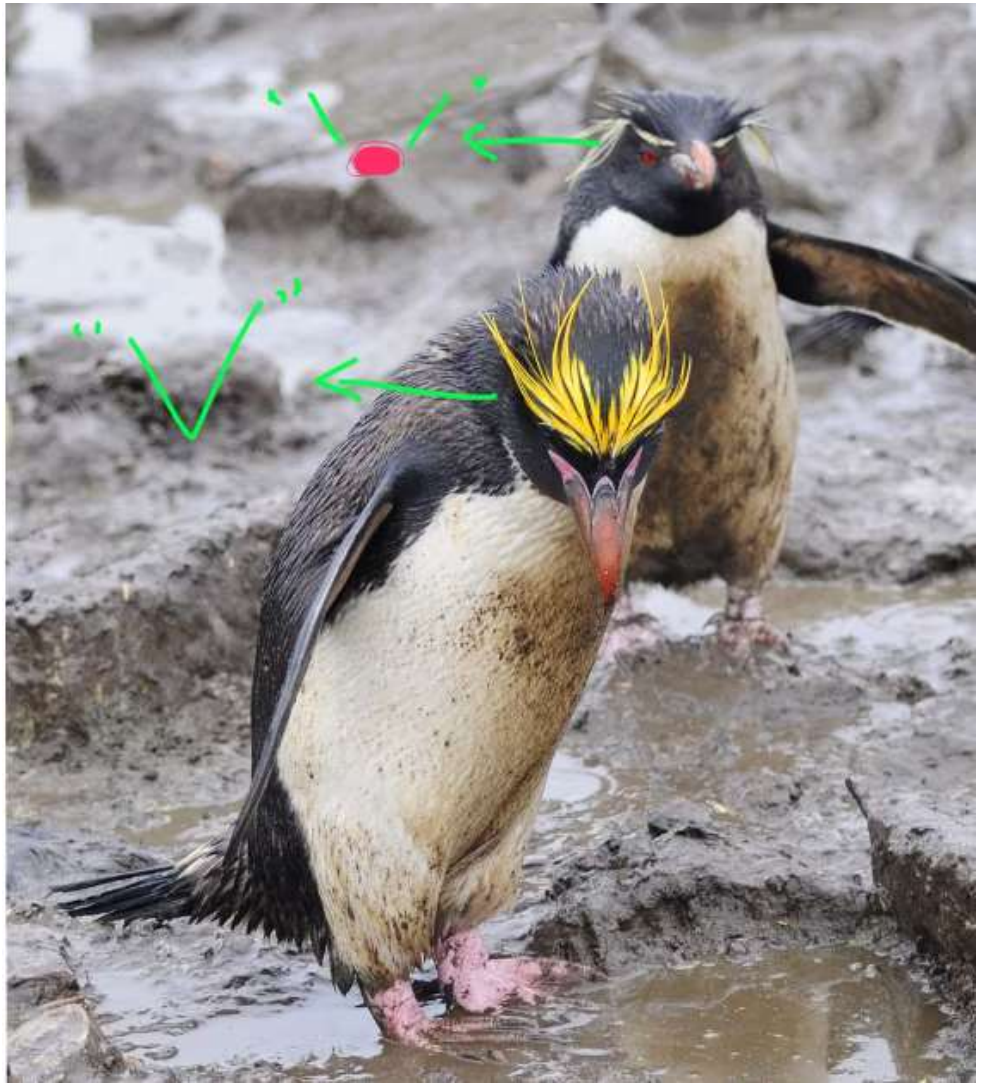
Modelled prey fields predict marine predator foraging success

David B. Green [a b c 1], Sophie Bestley [a d 2], Stuart P. Corney [a d 3], Rowan Trebilco [c e 4], Azwianewi B. Makhado [f g 5], Patrick Lehodey [h 6], Anna Conchon [i], Olivier Titaud [i 7], Mark A. Hindell [a 8]

科学目的、实验数据

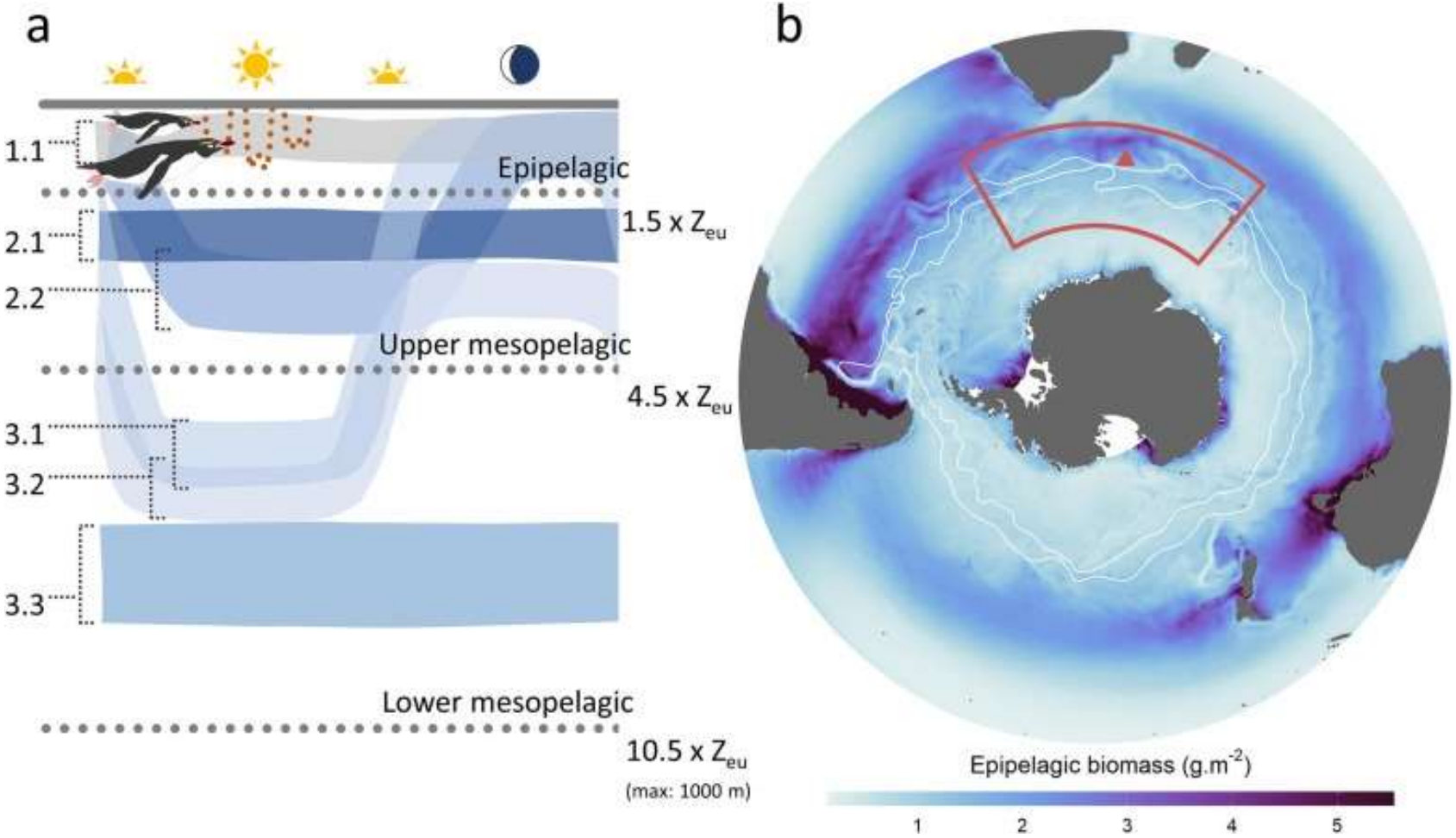
在没有追踪数据的情况下，正确估计长眉企鹅的觅食栖息地。



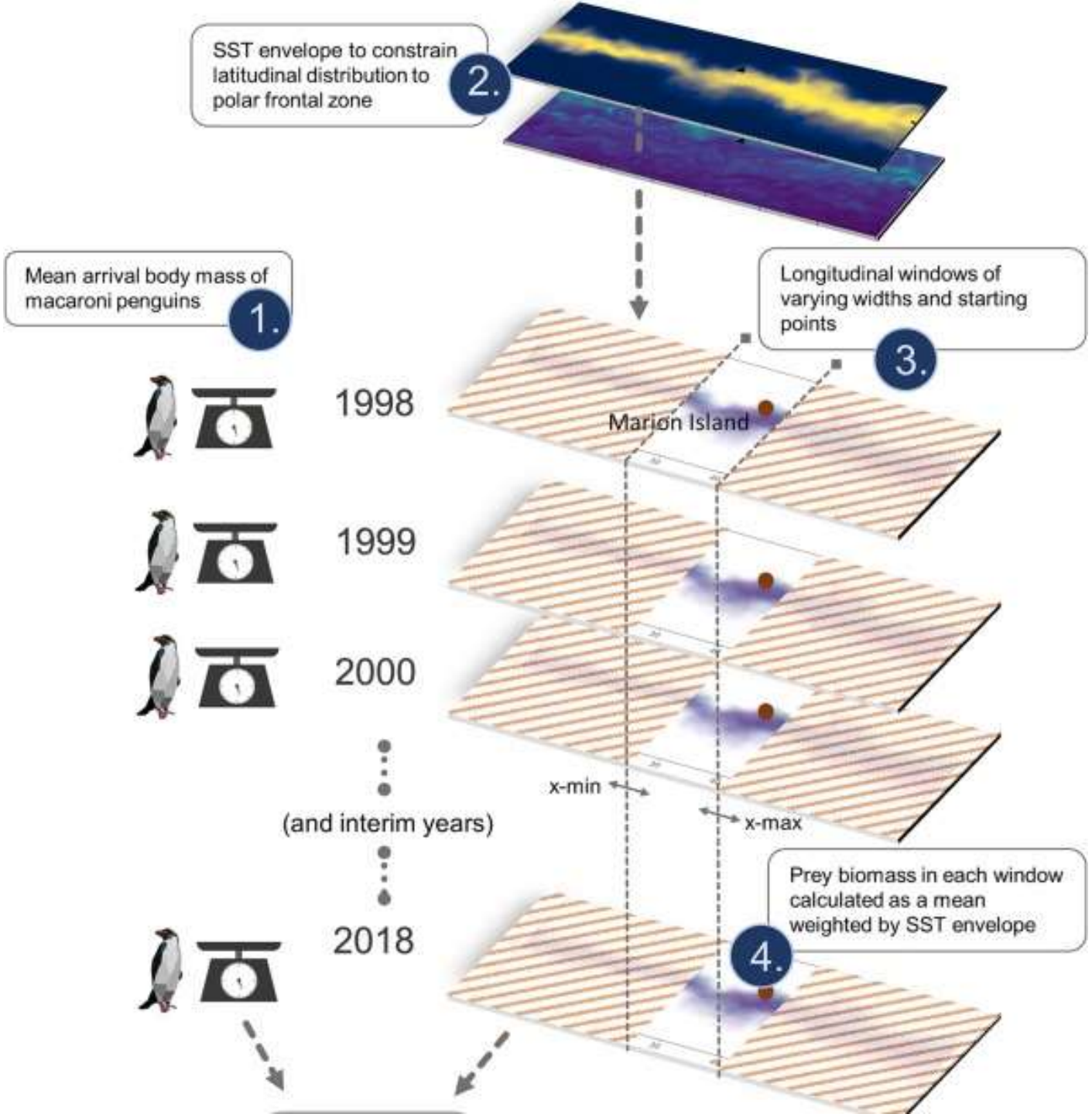


分析方法

The Spatial Ecosystems and Population Dynamics Model(SEAPODYM)



分析方法


SST envelope to constrain latitudinal distribution to polar frontal zone
2.
Mean arrival body mass of macaroni penguins
1.
Longitudinal windows of varying widths and starting points
3.
1998
1999
2000
(and interim years)
2018
Marion Island
x-min
x-max
Prey biomass in each window calculated as a mean weighted by SST envelope
4.

分析方法

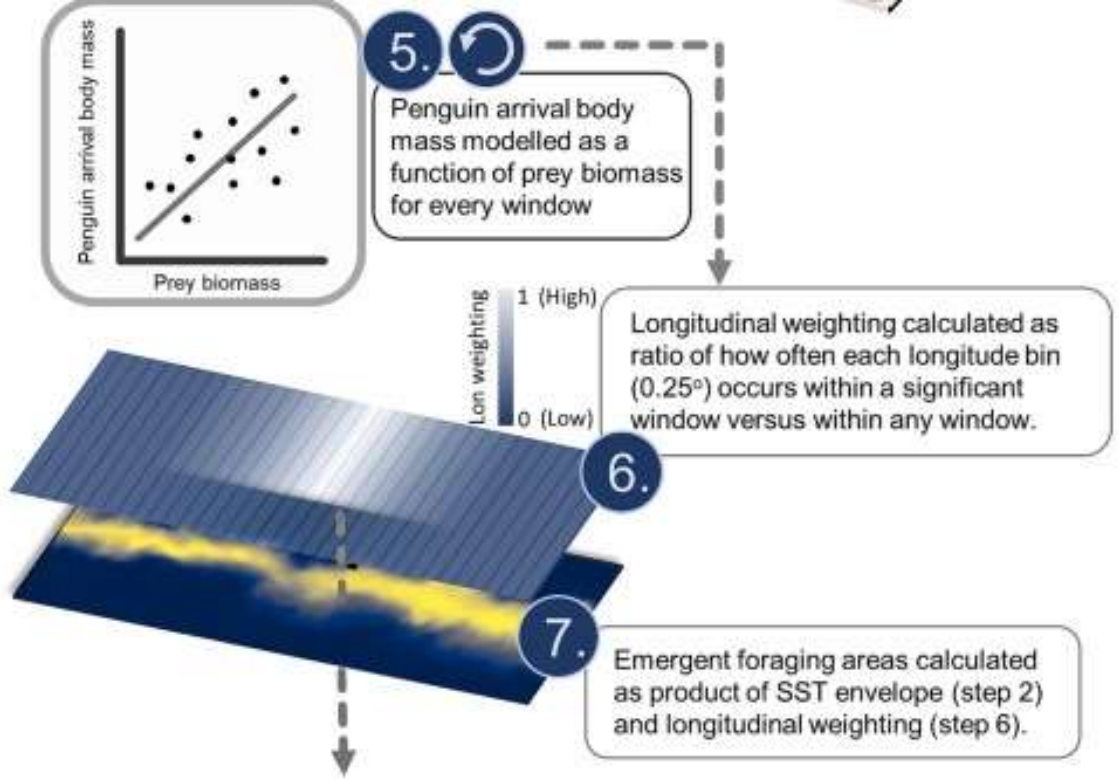
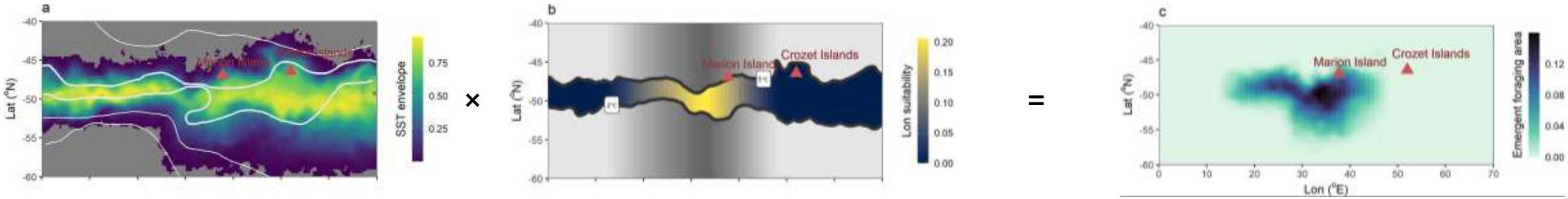

Penguin arrival body mass
Prey biomass
5.
Penguin arrival body mass modelled as a function of prey biomass for every window
Lon weighting
1 (High)
0 (Low)
Longitudinal weighting calculated as ratio of how often each longitude bin (0.25°) occurs within a significant window versus within any window.
6.
7.
Emergent foraging areas calculated as product of SST envelope (step 2) and longitudinal weighting (step 6).

Fig. 3.


a
b
c
Lat (°N)
SST envelope
0.75
0.50
0.25
Marion Island
Crozet Islands
Lon suitability
0.20
0.15
0.10
0.05
0.00
Lon (°E)
Emergent foraging area
0.12
0.08
0.04
0.00

研究结论

- 实现目标
- 新的生态指标
- 顶级捕食者觅食与竞争行为研究
- SEABODYM模型拓展性