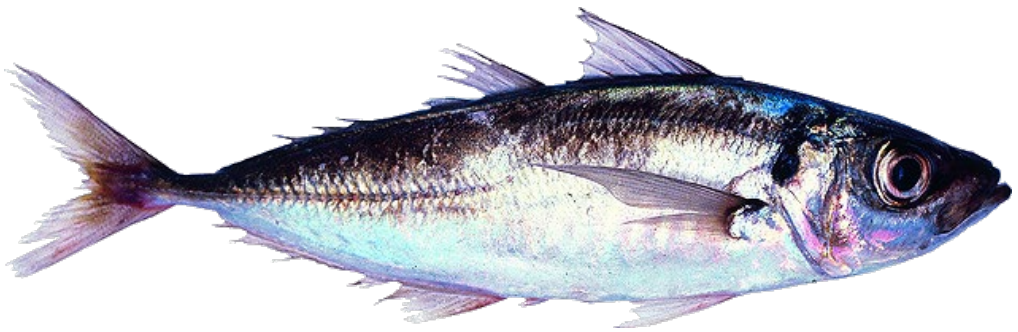
Trachurus lathami

A pelagic fish species of ecological and technological relevance currently sub exploited in the South West Atlantic (34°- 45°S)



Brenda Temperoni
Santiago A. Barbini
Francesca M. Mitton
Paula Orlando
Luciano Padovani
Agueda E. Massa
Claudio C. Buratti

PICES
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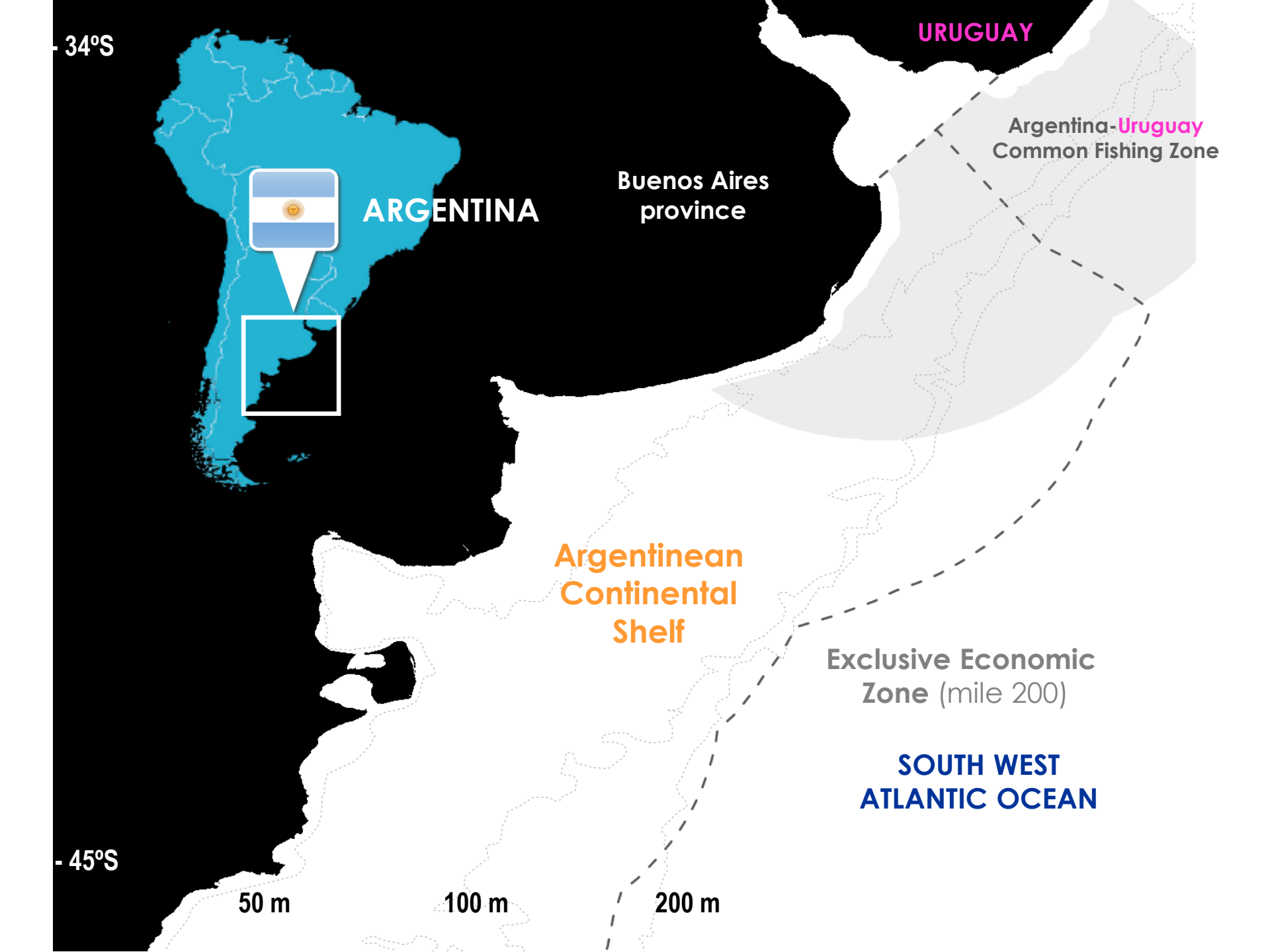
ENDORSED BY
2021 2030 United Nations Decade of Ocean Science for Sustainable Development
CONICET
INIDEP
INSTITUTO NACIONAL DE INVESTIGACIÓN Y DESARROLLO PESQUERO

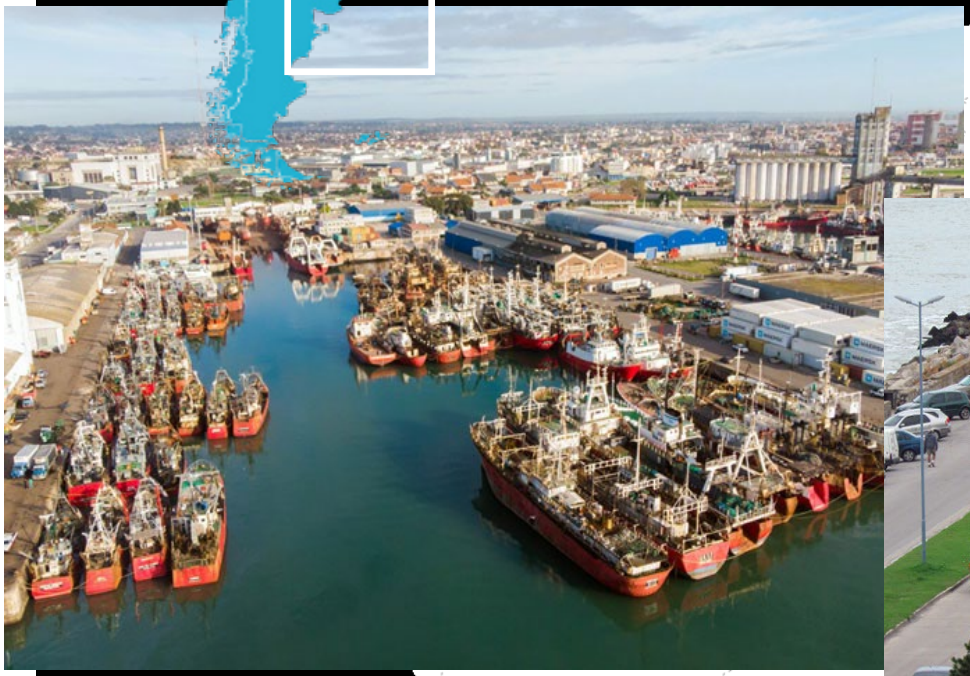

- 34ºS
URUGUAY
Argentina-Uruguay
Common Fishing Zone
ARGENTINA
Buenos Aires
province
Argentinean
Continental
Shelf
Exclusive Economic
Zone (mile 200)
SOUTH WEST
ATLANTIC OCEAN
- 45ºS
50 m
100 m
200 m

- 34ºS

ARGENTINA

Buenos Aires
province

Mar del Plata
38°00'S 57°33'W



- 45ºS

Instituto Nacional de Investigación y Desarrollo Pesquero
(National Institute for Fisheries Research and Development)

Argentina.gob.ar

Integral **research** and **development programs** related to **fishery resources** in Argentina

Pelagic Fish Fisheries Program

Instituto Nacional de Investigación y Desarrollo Pesquero
(National Institute for Fisheries Research and Development)

Argentine anchovy
Engraulis anchoita

Atlantic chub mackerel
Scomber colias

- Direct and indirect estimates of stock biomass, and its composition (age and length structure)
- Maximum sustainable catches and other management measures
- Distribution and abundance in relation with oceanographic and biological conditions

Silver warehou
Seriolella porosa

Fuegian sprat
Sprattus fuegensis

Blue fish
Pomatomus saltatrix

Rough scad
Trachurus lathami

Why *T. lathami*?

Pelagic Fish Fisheries Program

Instituto Nacional de Investigación y Desarrollo Pesquero
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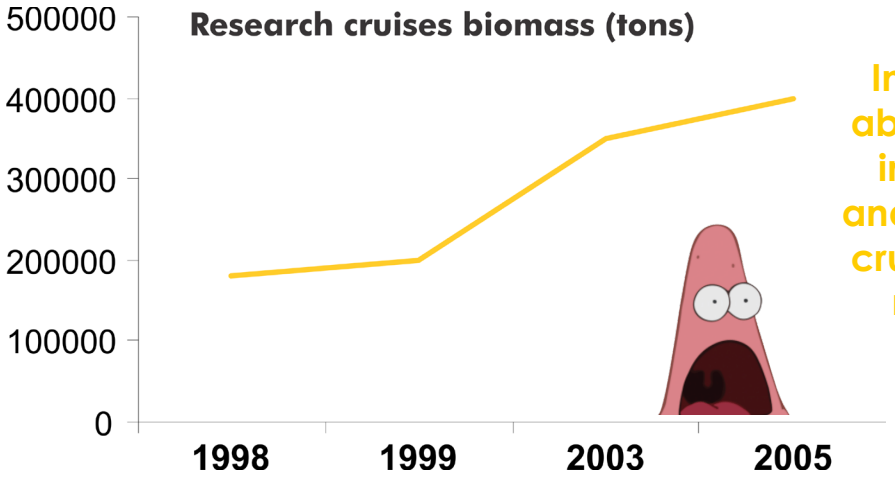
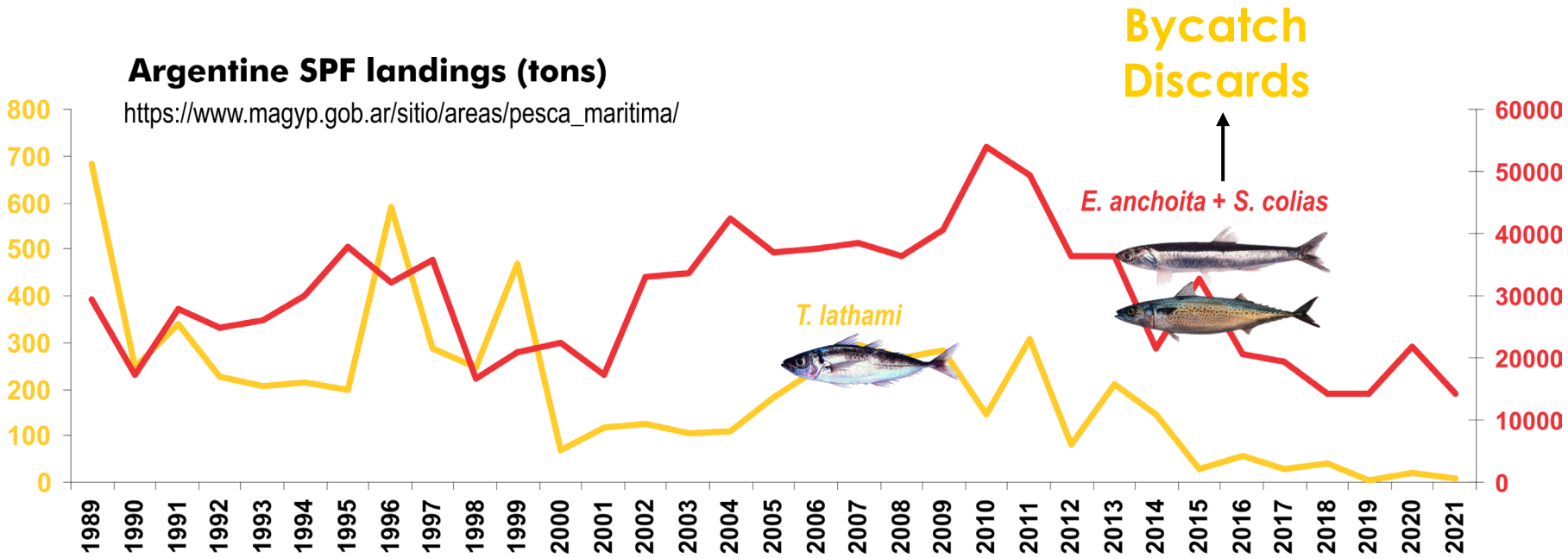


Increasing abundances in coastal and mid-shelf cruises since mid '90s



Main goal

Current knowledge

Argentinean Shelf (34°-45°S)

Distribution and abundance

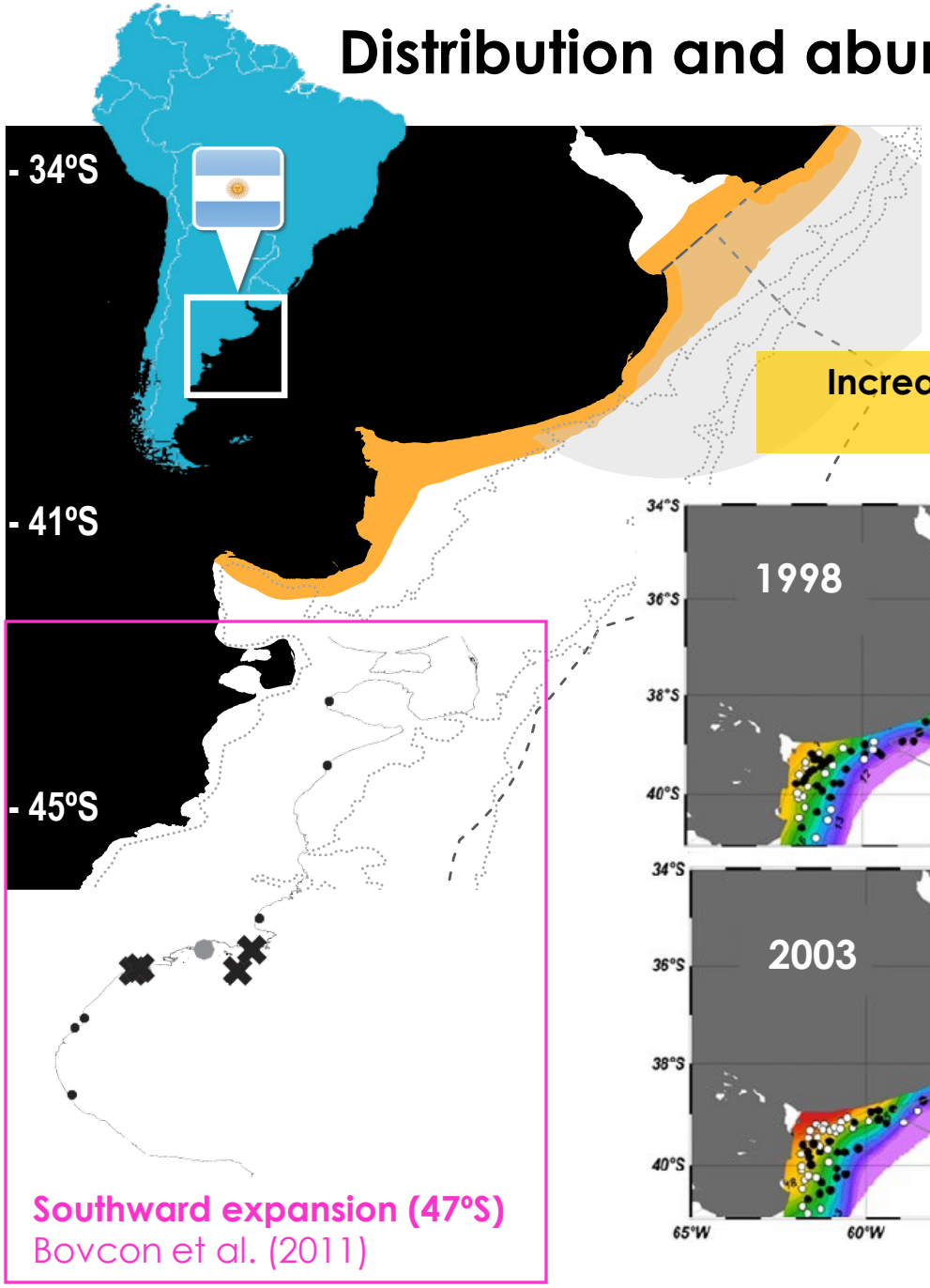
Trophic ecology

Technological aspects

Distribution and abundance

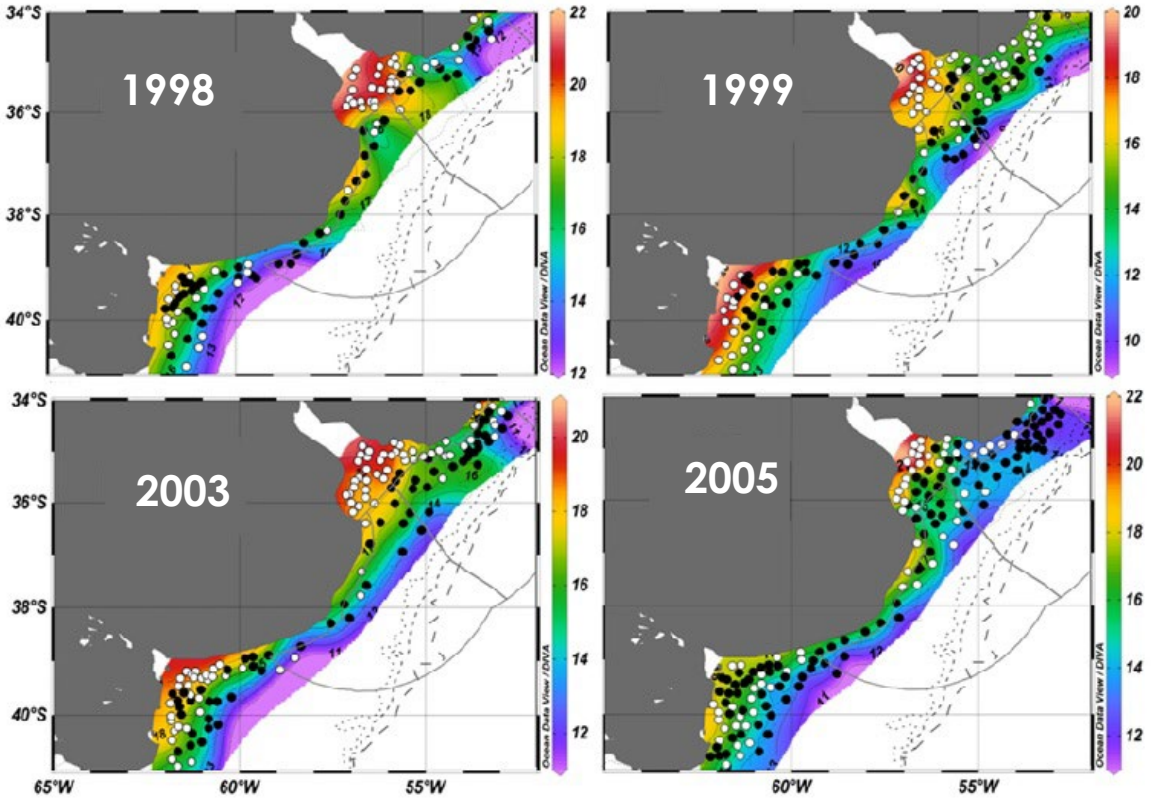
Paula Orlando

Claudio Buratti

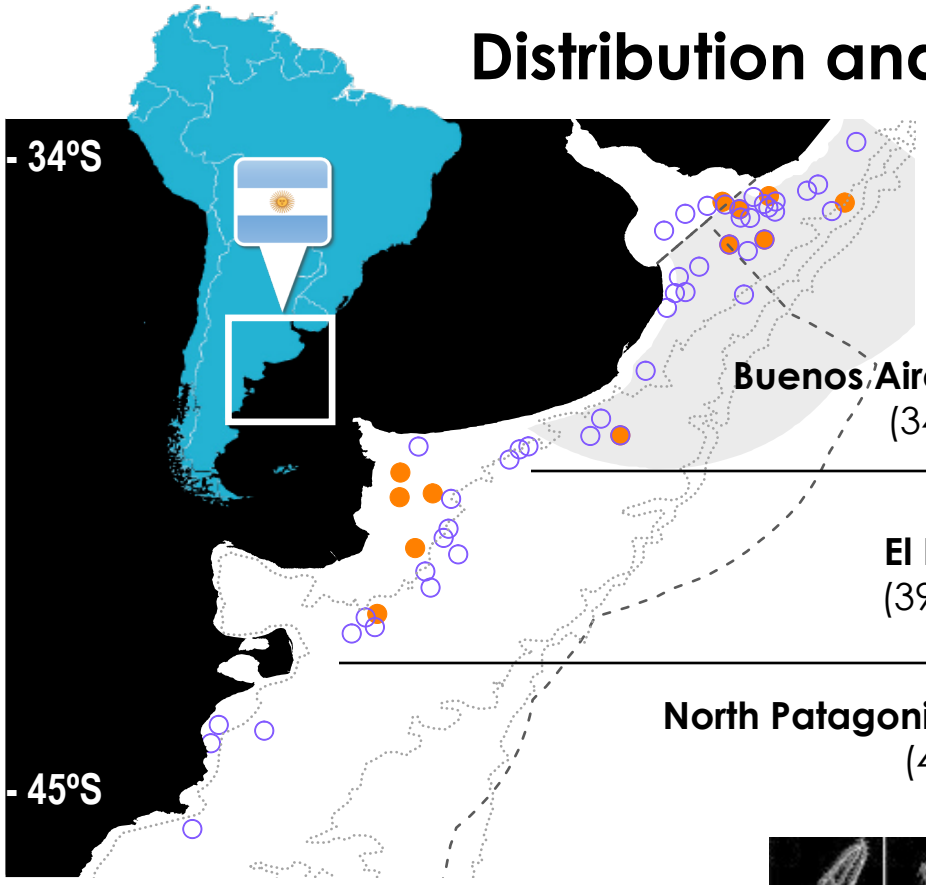


Southward expansion (47ºS)
Bovcon et al. (2011)

Increasing abundances from research cruises
Orlando et al. (2018)



Distribution and abundance



3 independent stocks in South Atlantic waters
Braicovich et al. (2012)

Otoliths

Parasites

Parasites as biological tags for stock discrimination

Trophic ecology

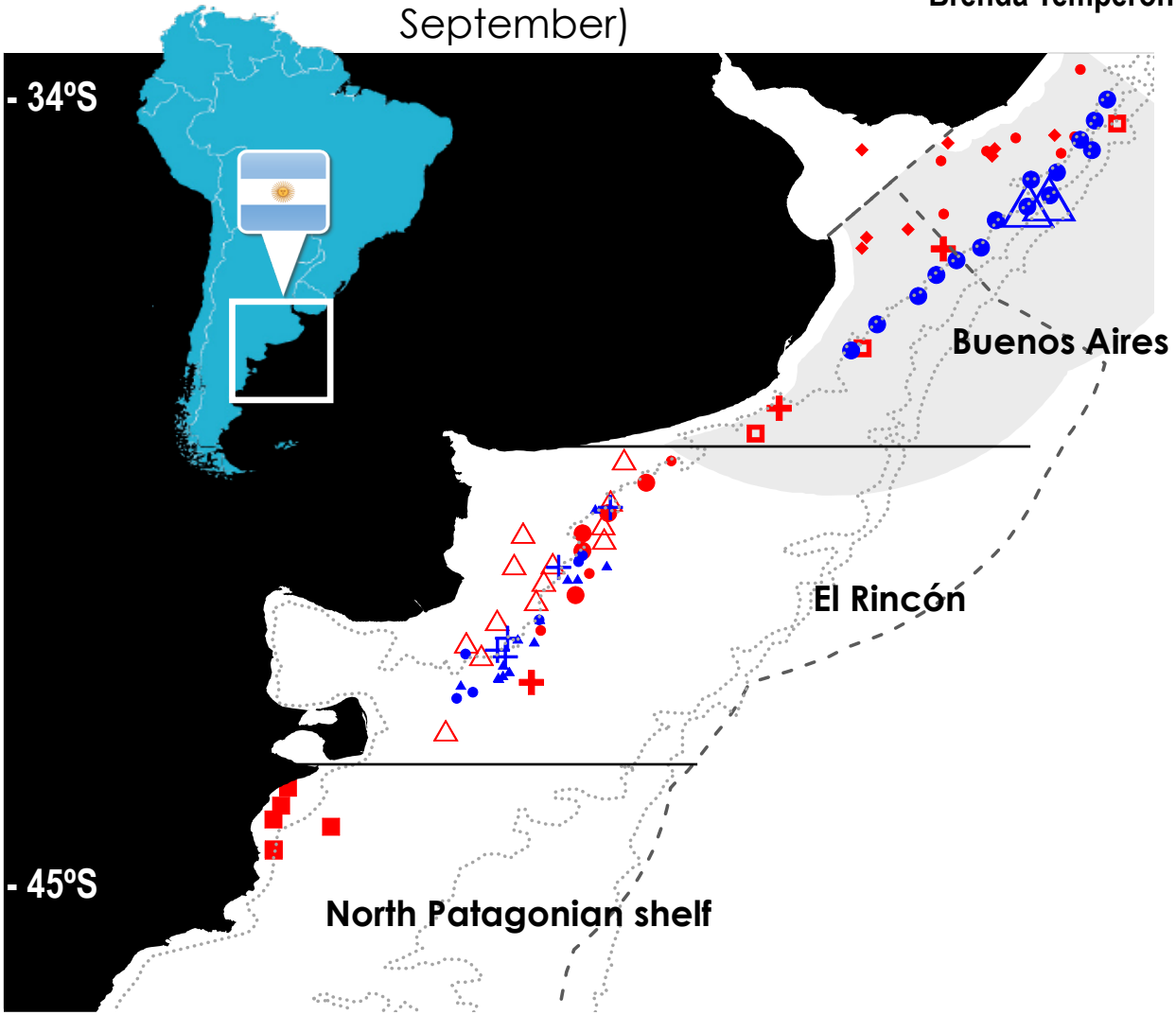

Brenda Temperoni


Luciano Padovani


Santiago Barbini

warm (October-April)

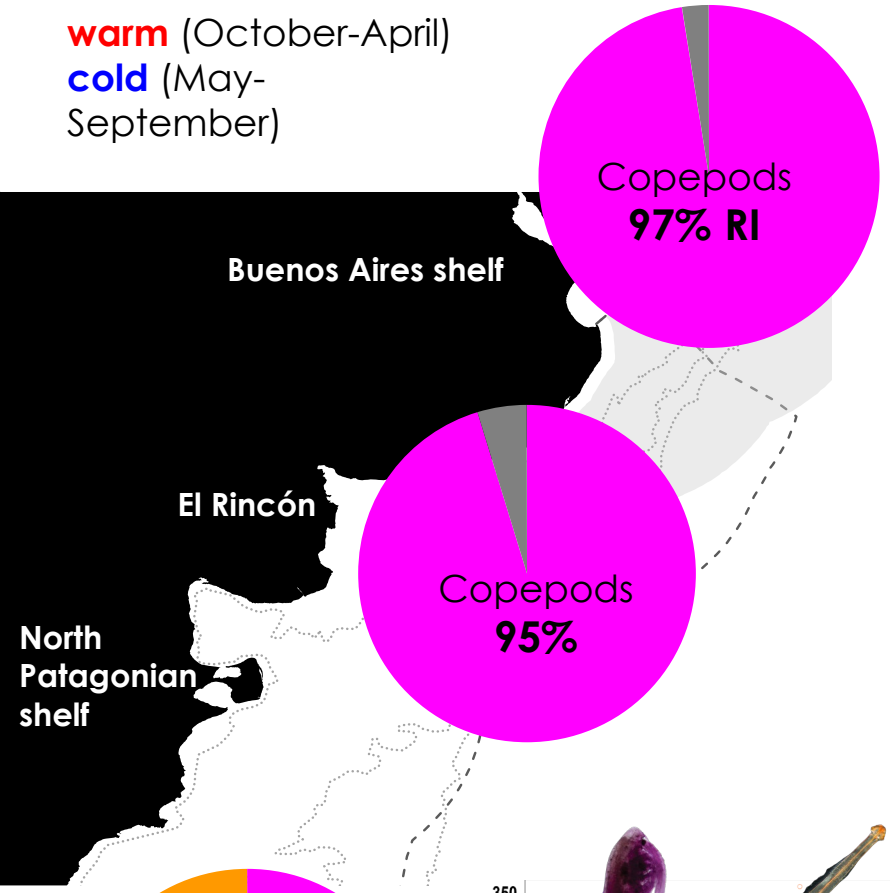
cold (May-September)

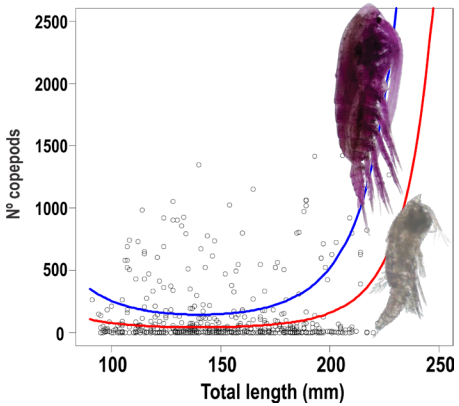


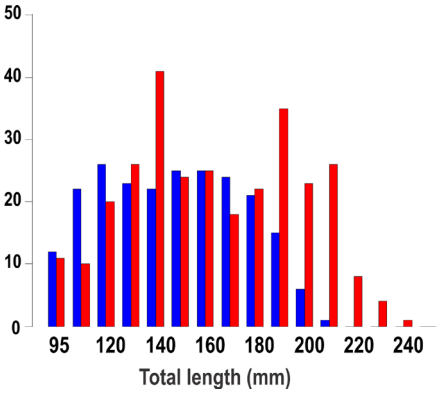
Maximum size
24 cm total length

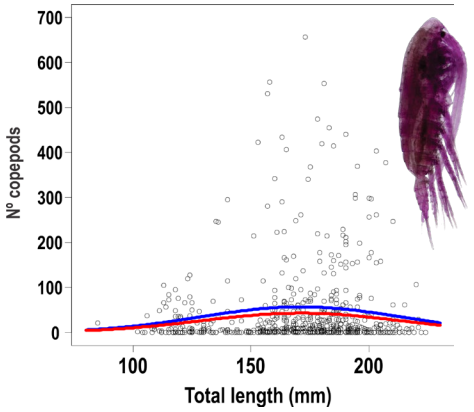
Trophic ecology

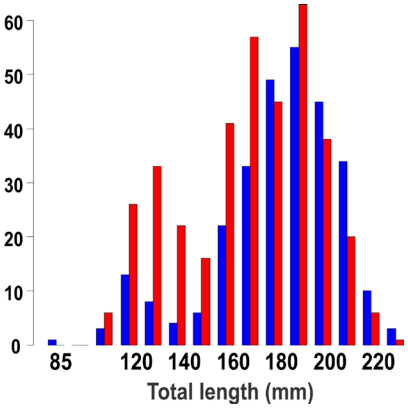
warm (October-April)
cold (May-September)

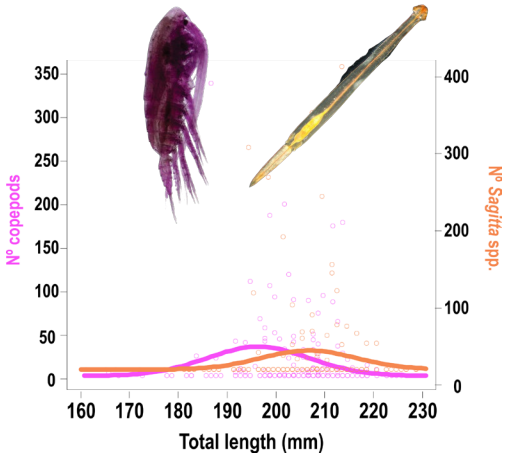


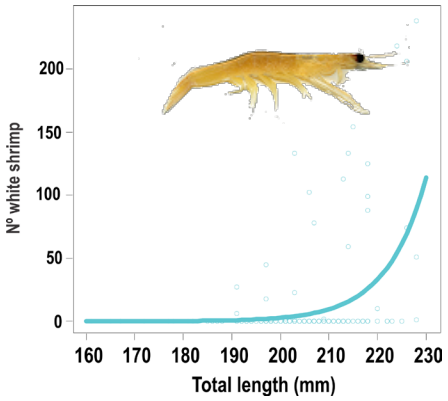


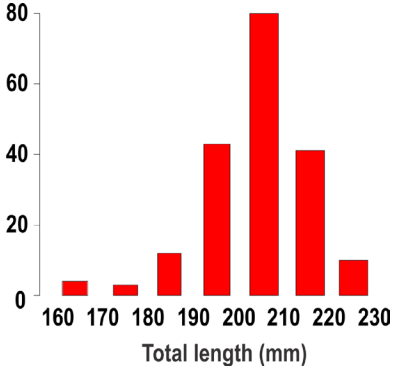








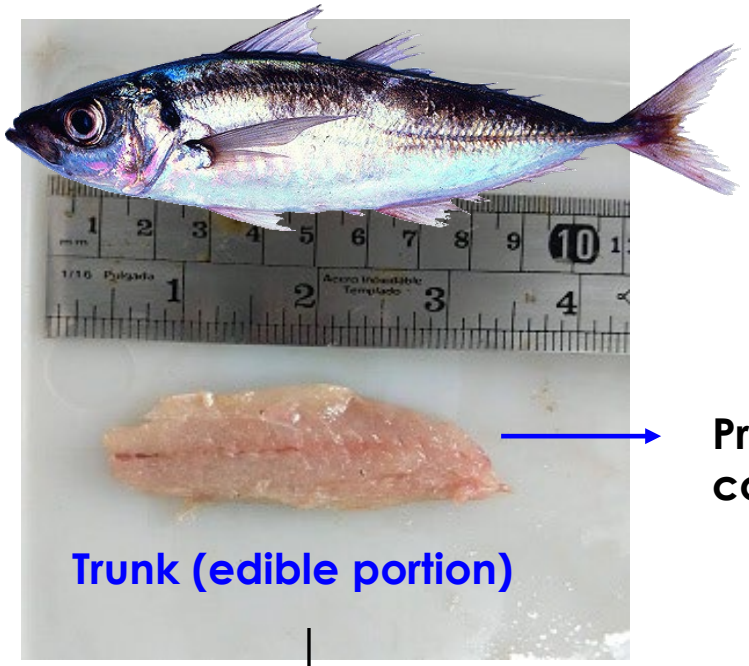




Temperoni et al. 2021

Technological aspects

Bycatch
Discards



Fish quality indicators


Agueda Massa


Francesca Mitton

Yield **68%** acceptable 60-63% (Oliviera et al. 2015)

Proximate composition

Humidity 73%
Ash 1.3%
Proteins **20%**
Minerals **Ca** 380 mg/100g
Na 53 mg/100 g
Lipids **9%** (semi-fat)
PUFA 29% DHA 17% EPA 6%

Total Volatile Basic Nitrogen (TVB-N)
indicator of fish protein degradation **28%**

Malondialdehyde (MDA)
indicator of oxidative damage **1.1 mg/kg fish**

Suitable to develop products for human consumption

Technological aspects

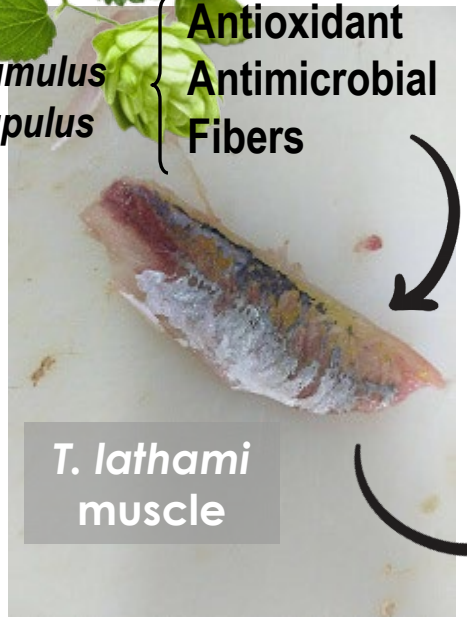
Restructured product

Increase current commercial offers
Boost growth of the Argentine fishing sector

Beer industry
Hop leaves discard

Humulus lupulus

Antioxidant
Antimicrobial
Fibers

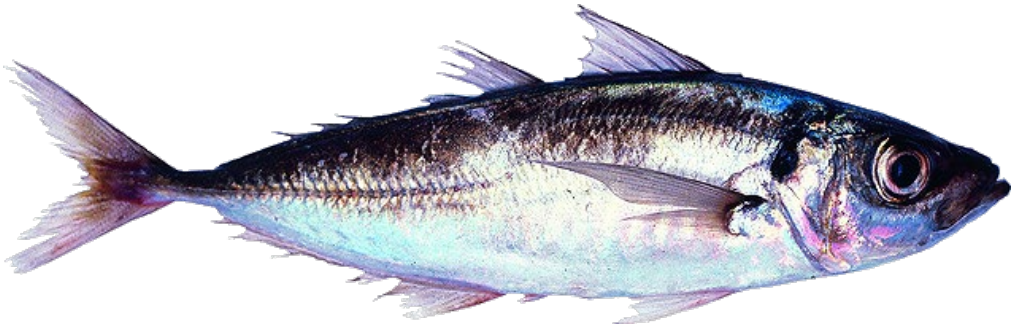


T. lathami muscle

Burgers

Proximate composition
Sensory panel with consumers

↑ lipid content
↑ fiber content
↓ Na and ↑ Ca



¿Questions?

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