

# Cephalopods caught in the outer Patagonian shelf and its upper and medium slope in relation to the main oceanographic features

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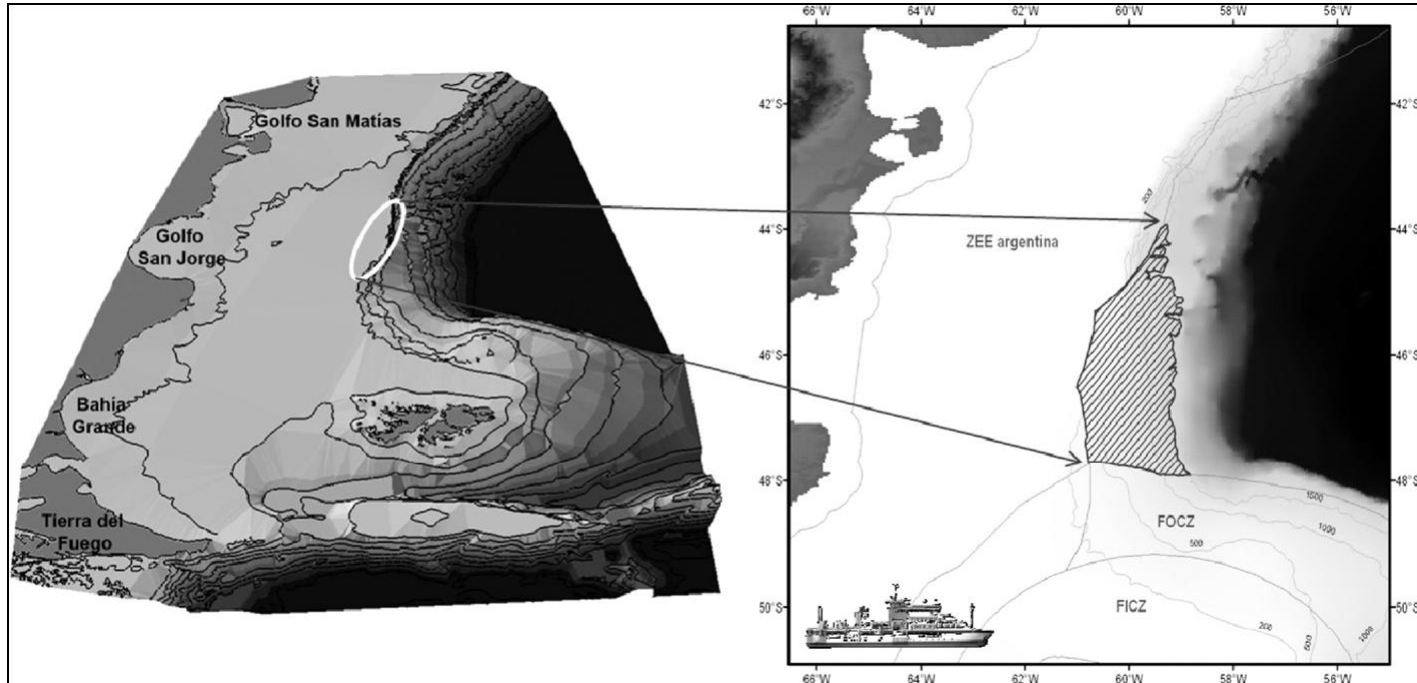
# Abstract

- Ninety cephalopod specimens were collected during the bottom trawl survey ATLANTIS 2009 undertaken between 24 February and 1 April 2009
- The surveyed area was the zone between parallels 44° and 48° S, east of the Argentinean EEZ down to the 1500m depth on the HS of the SW Atlantic
- The collection was composed of 16 species of squids and 5 of octopods. The best represented groups were Histioteuthidae (5 species) and Octopodidae (5). The most abundant species were *Gonatus antarcticus* (25.5%), *Histioteuthis atlantica* (11.1%), and *Muusoctopus eureka* (8.9%)
- The geographic and/or bathymetric distribution ranges of 9 species are extended, and this is the first record of *Galiteuthis glacialis* outside circumpolar Antarctic waters

# Background

- Although there is considerable information on commercial species along the continental shelf within coastal EEZs and around the Falkland Islands, very little research has been carried out on the HS of the SW Atlantic
- Many papers have been devoted to discovering knowledge of the teuthofauna from the Antarctic waters, however, very little attention has been paid to the biodiversity present in the Patagonian upper and medium slope
- This paper examines the cephalopods collected during the cruise ATLANTIS 2009 carried out in the HS of the SWA, in relation to the main oceanographic features. It also aims to contribute to the knowledge of the teuthofauna in the region, the taxonomy of the material collected, as well as its geographical and bathymetric distribution

# Study area

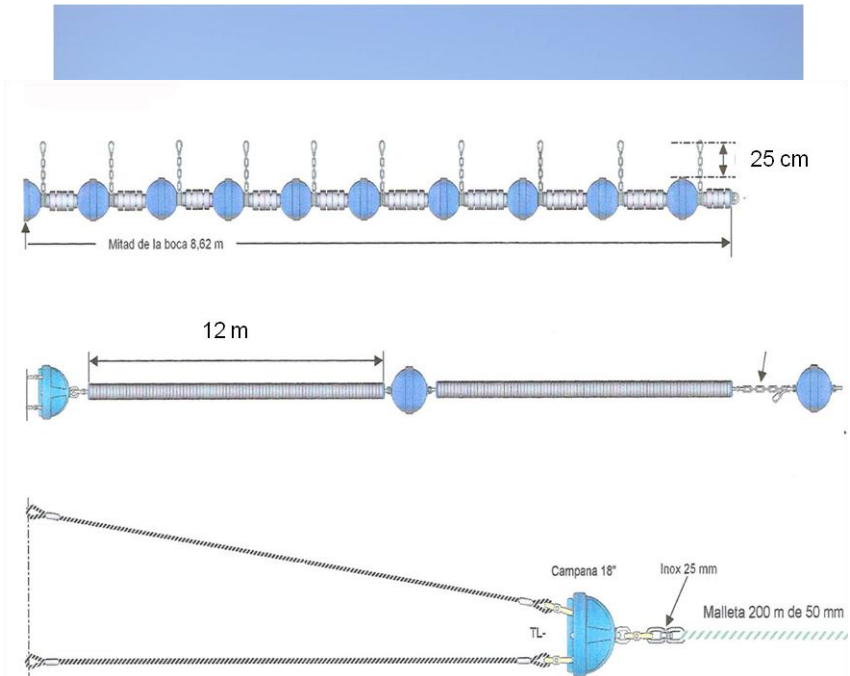


Study area comprised between 44° and 48° S and to the east of the Argentinean EEZ.  
FOCZ: Falkland Islands Outer Conservation Zone; FICZ: Falkland Islands Conservation Zone

# Materials & Methods

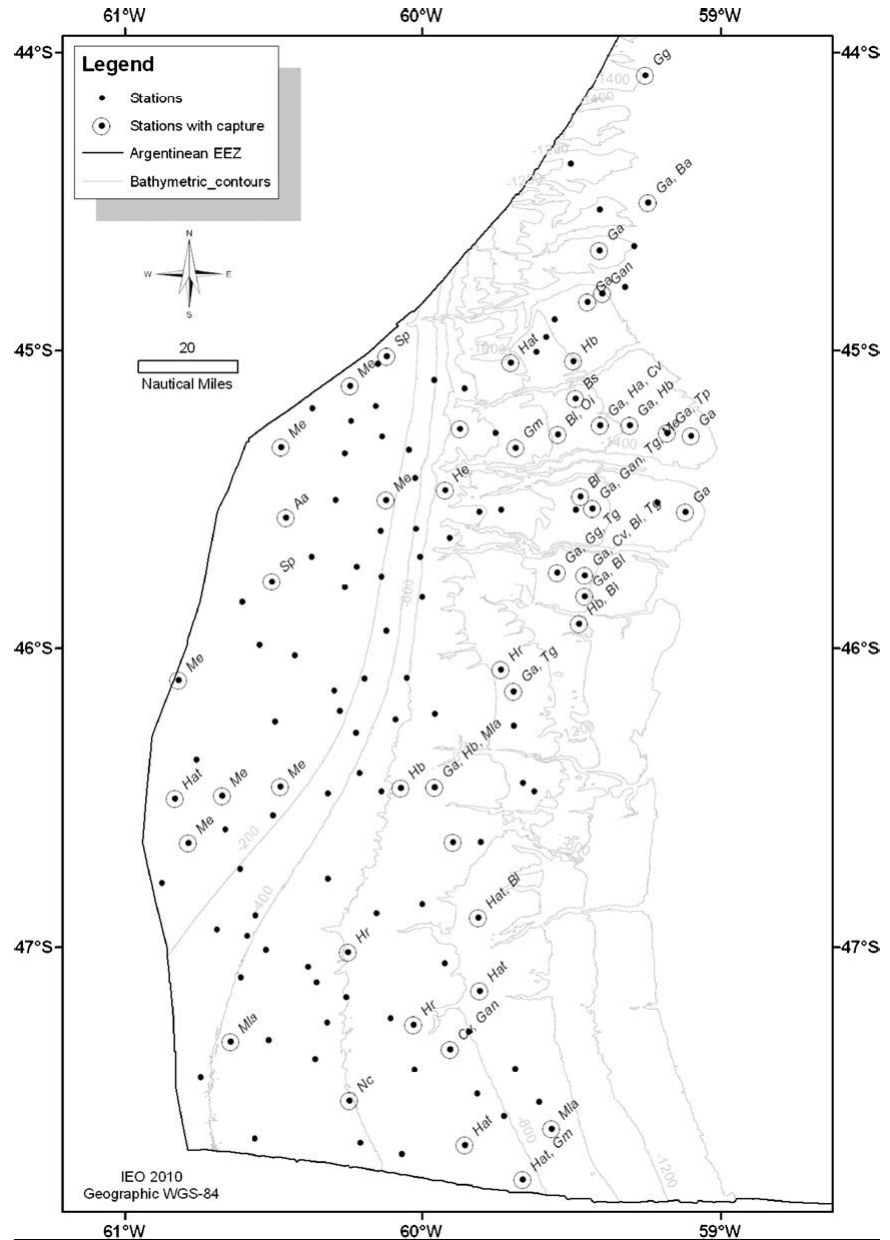
A multidisciplinary research cruise was conducted by the IEO to assess the biomass of the main commercial fish stocks on the HS of the SWA and to identify Vulnerable Marine Ecosystems (VMEs)

- The survey used a stratified random design with strata boundaries defined by latitude and depth ranges
- Scheduled fishing stations (hauls of 30 min) were performed using a LOFOTEN type net fitted with a “Rockhopper” mix train with bobbins and rubber separators, suitable for deepwater fishing over irregular bottoms
- 35 mm mesh size in the codend



# Location of samples

*Semirossia patagonica* (Sp)  
*Austrorossia mastigophora* (Am)  
*Neorossia caroli* (Nc)  
*Gonatus antracticus* (Ga)  
*Histioteuthis arcturi* (Ha)  
*H. atlantica* (Hat)  
*H. bonnellii* (Hb)  
*H. eltaninae* (He)  
*H. reversa* (Hr)  
*Chiroteuthis veranyii* (Cv)  
*Slosarczykovia circumantarctica* (Sc)  
*Onykia ingens* (Oi)  
*Bathytheuthis abyssicola* (Ba)  
*Batoteuthis skolops* (Bs)  
***Galiteuthis glacialis*** (Gg)  
*Taonius pavo* (Tp)  
*Graneledona antractica* (Gan)  
*Graneledone macrotyla* (Gm)  
*Taumeledone gunteri* (Tg)  
*Muusoctopus eureka* (Me)  
*Muusoctopus longibrachus akambeii* (Mla)



# Results



- During the cruise, 90 cephalopod specimens, comprising 16 squids and 5 octopods, were collected.
- The family of squids best represented was Histioteuthidae with 5 species. The most abundant squids were *Gonatus antarcticus* (25.5%), followed by *Histioteuthis atlantica* (11.1%).
- The family of octopods was represented with 5 species too, being *Muusoctopus eureka* the most abundant (8.9%). *G. antarcticus* also appears to be the most diverse spatially and was captured at 14 stations.
- *Histioteuthis atlantica* and *Muusoctopus eureka*, which appear in 8 stations, respectively, also have a wide geographical area of distribution within the limits of the total area explored.

# Discussion

- To date, the known distribution of the squid *Slosarczykonja circumantarctica* was off Wilkes Land. Our findings extend the geographical distribution area of the species towards the north and east of the SWA.



- Until now, very few specimens of *Batoteuthis skolops* have been collected. This species is found only in Antarctic and sub-Antarctic waters, but 1 specimen appeared in the survey our record is the most northern for this species.
- *Galiteuthis glacialis* is found throughout the circumpolar Antarctic waters, our records are the first outside this area.
- This is the first time that *Austrorossia mastigophora* is caught in the western part of the South Atlantic Ocean.