



## SHARK SPECIES INVENTORY IN CABO SAN LUCAS, MEXICO, USING A TOURISTIC PLATFORM AS METHODOLOGY

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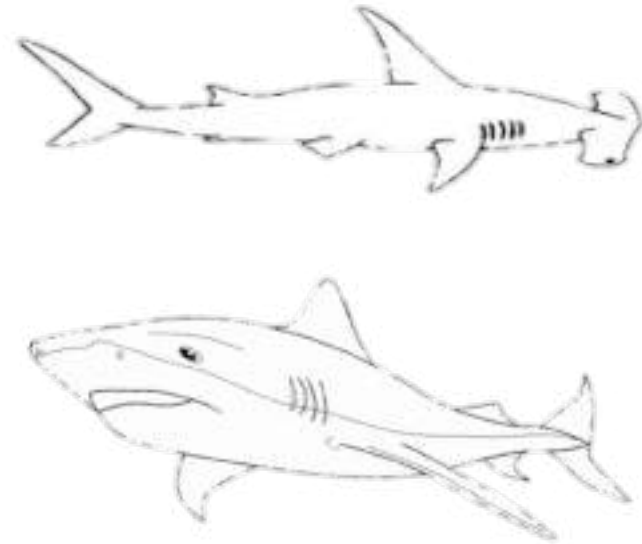
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## PELAGIC SHARKS

- Oceanic and semi-oceanic species
- 6% of elasmobranchs
- Low variation of body plans

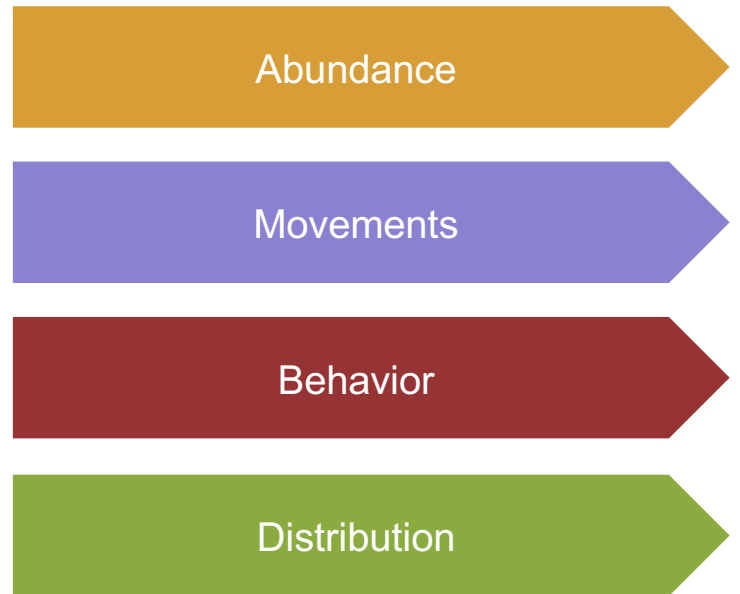


(Camhi 2009; Meyer *et al.* 2009)



## TOURIST PLATFORMS

- Complex life cycle
- Research difficult



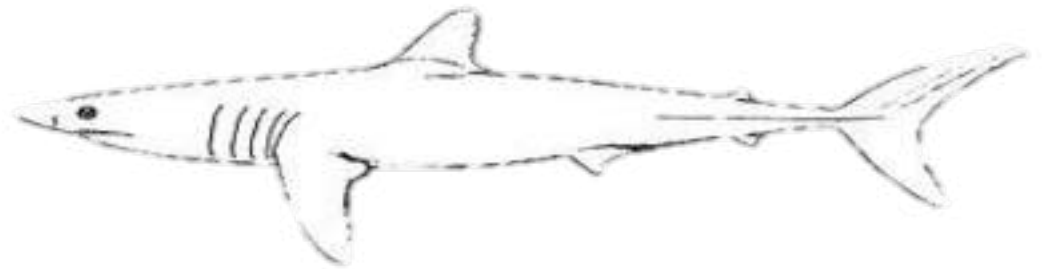
(Clua *et al.* 2010; Gallagher & Hammerschlag 2011; Brunnschweiler *et al.* 2014)



## HYPOTHESIS

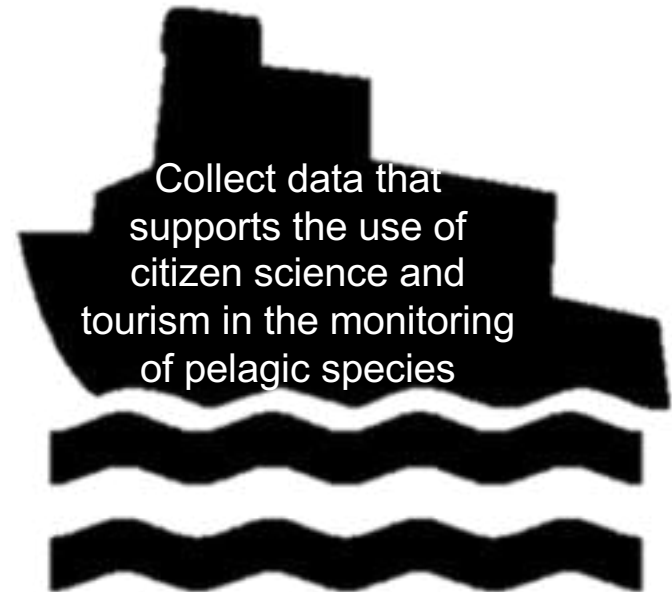
Characteristics of study area

- High species richness
- Seasonal patterns of relative abundance





## OBJECTIVES



# CABO SAN LUCAS

*Study area*

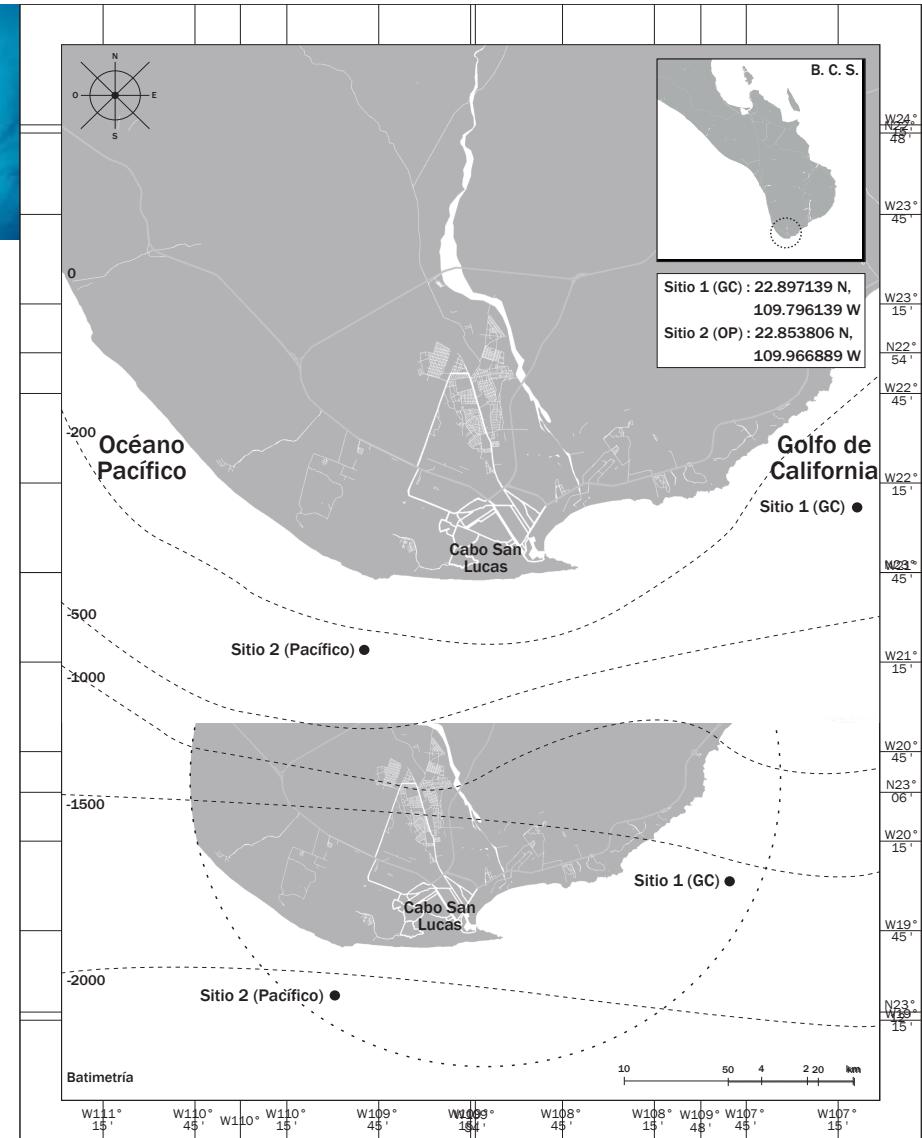




## CABO SAN LUCAS

- Pacific Ocean- Gulf of California
- Narrow continental platform
- Seasonal changes in water temperature

(Aguilar-Palomino *et al.* 1998; Zúñiga-Flores 2004)





## MATERIAL AND METHODS

- Submarine census (476 tours, 1428 h)
- Chumming
- Environmental variables
- Biological variables:
  - Species
  - Sex
  - Size estimation
- Monthly relative abundance and SPUE





Mako shark  
*Isurus oxyrinchus*  
(González-Armas *et al.* 2013)



Silky shark  
*Carcharhinus falciformis*  
(CONAPESCA 2018)



Blue shark  
*Prionace glauca*  
(CONAPESCA 2018)



Smooth hammerhead shark  
*Sphyrna zygaena*



Dusky shark  
*Carcharhinus obscurus*



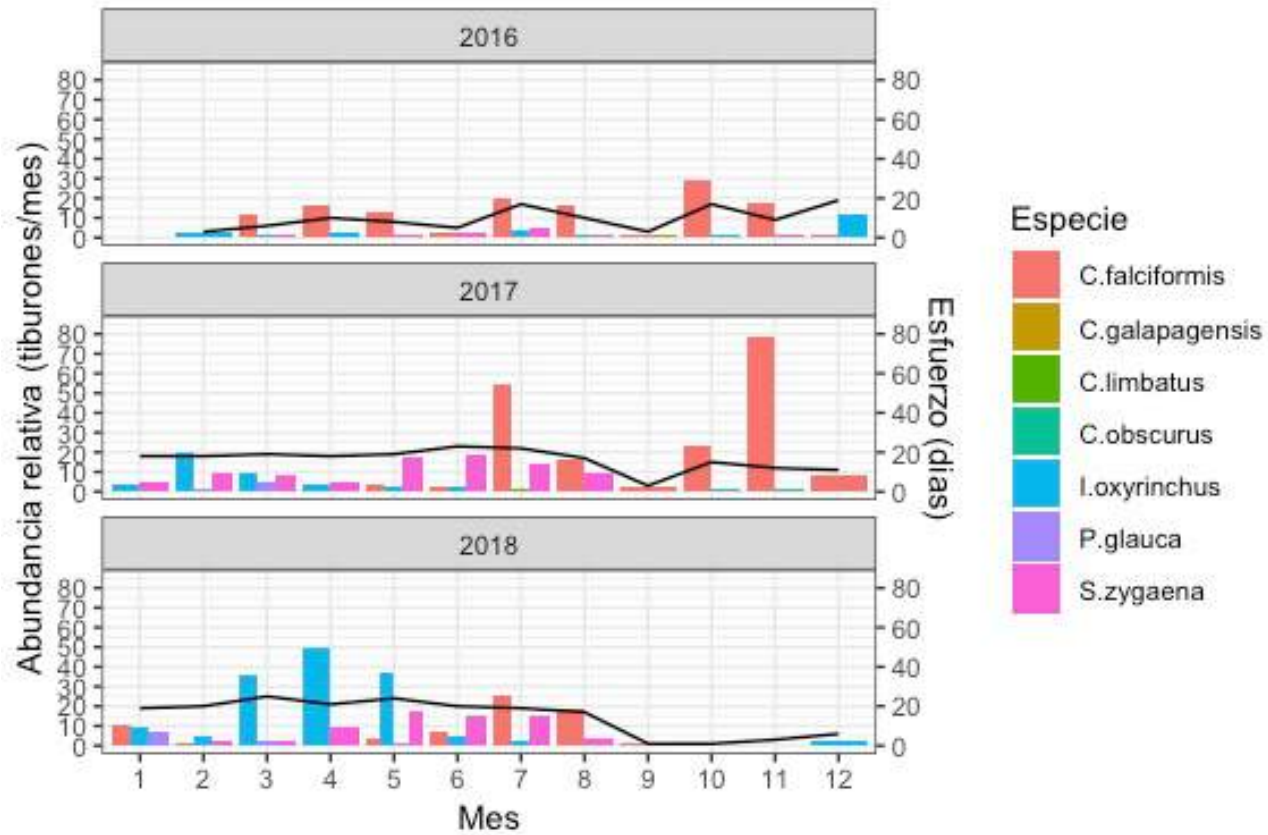
Galapagos shark  
*Carcharhinus galapagensis*



Blacktip shark  
*Carcharhinus limbatus*



Scalloped hammerhead shark  
*Sphyrna lewini*





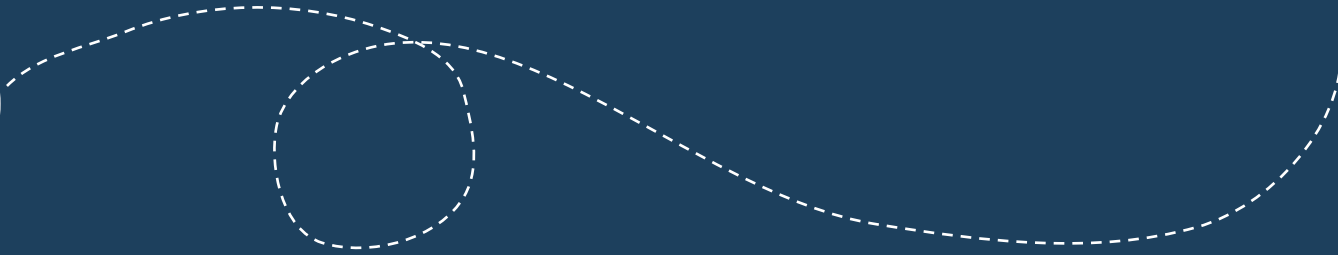


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# CONCLUSIONS



We've observed 8 species of pelagic sharks so far

We suggest a seasonal replacement of the most abundant species throughout the year

Using tourism and citizen science as a first approach to these populations is quite effective





# ¡THANKS!

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