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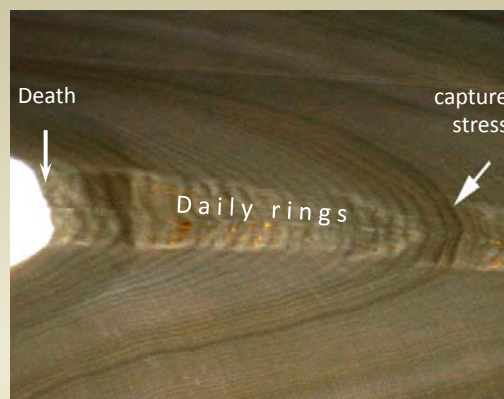
## STRESS MARKS OF TWO FISHING METHODS IN OCTOPUS BEAKS



### *Stress of capture*

The stress of capture in octopuses is coded as a darker and deeper mark in the **beak sections**

Comparison of growth rates after different events and treatments suggests that capture is one of the most stressful events for the animal



Is the stress of capture affected by the fishing method?

Perales-Raya *et al.* 2014b

### MATERIAL AND METHODS: *the sample*

Animals caught in Bay of Napoli (Italy)

- 33 octopuses by **traps**
- 32 octopuses by **jigging**



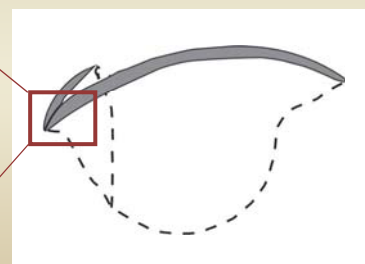
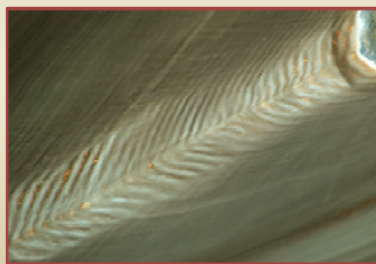
They were moved to the culture facilities at SZN, where they lived for 2-55 days



After death in lab, the beaks were sent to the IEO for their analysis

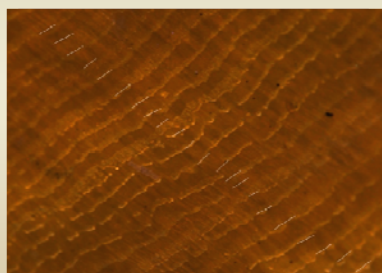
### BEAKS - *Rostrum Sagittal Sections for stress analysis*

How to prepare  
Rostrum Sagittal Sections  
(RSS)



*BEAKS - Lateral Wall Surfaces for age estimation*

How to prepare  
Lateral Wall Surfaces  
(LWS)



Perales-Raya et al. 2010

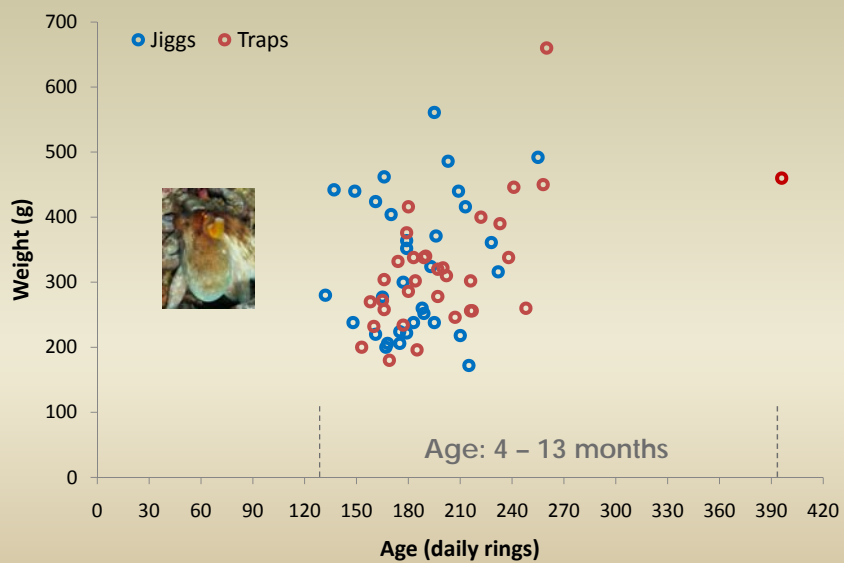
*JIGGING: stress mark around capture in 100% of beaks*

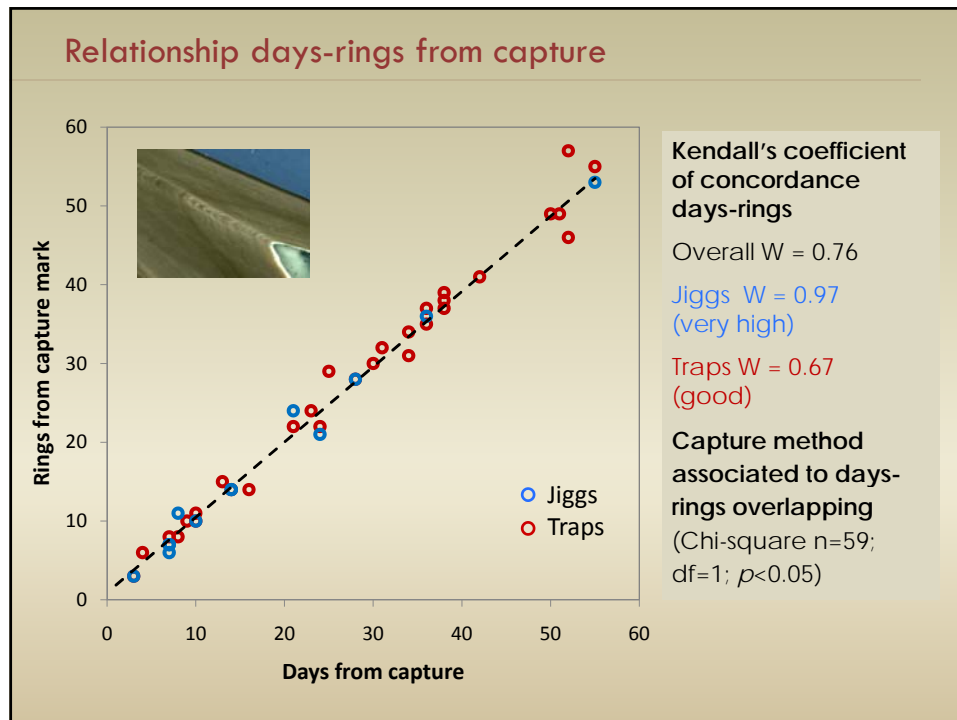


*TRAPS: stress mark around capture in 68% of beaks*



**AGE**





## CONCLUSIONS

- Significant overlapping between **days elapsed and rings deposited** from capture
- The capture method is **significantly associated** to the overlapping days-rings from capture
- **Jigging** faster but more stressing for capturing octopuses (radical confinement)
- **Traps** take more time for fishing octopuses (gradual confinement) and seems to be a less stressing capture method

### Next steps

- To assess possible accumulated after-capture stress (during acclimatization to lab)
- To analyze stress caused by specific experiments in lab



Thanks for your attention

