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## Introduction

Jellyfish has been proposed as a source in drug development to treat diseases such as arthritis and hypertension [1].

*Catostylus tagi* (Fig.1), the sole European Catostylidae, is an edible Scyphozoa which occurs in summer at Tagus and Sado estuaries. Some aspects of its application in health sciences have already been studied [2].

➤ This assay aimed to investigate its sexual differentiation (female, F; male, M) by morphological characteristics.

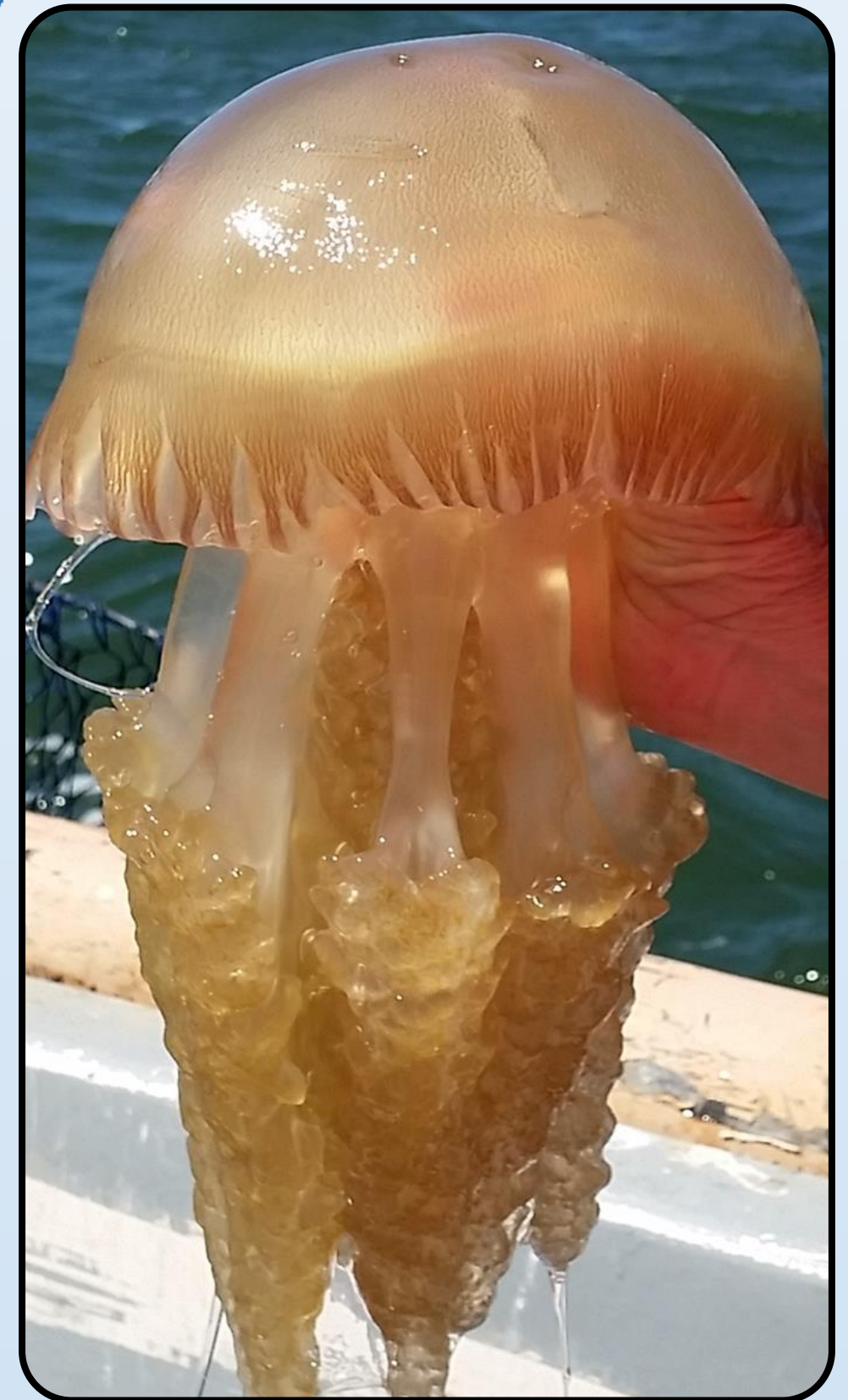


Fig. 1- *Catostylus tagi* (photo by R. Lisboa).

## Methods

Forty specimens were randomly collected at Tagus estuary in September 2016 and brought to Egas Moniz laboratory (Fig. 2)

The macroscopic aspects of the gonads were compared with microscopic observation of fresh preparations and histological slides, stained by hematoxylin-eosin (H&E).



Fig. 2- *C. tagi* gonads (photo by R. Lisboa).

## Results

Of the caught specimens, 28 were M and 12 F. An unequivocal relation between the colour of the gonad and the density of matter with the sex was not found.

F presented brown gonads more frequently than greenish (8/12) and lower density of matter more frequently than higher (9/12).

M were more frequently greenish (15/28) with higher density of matter (20/28).

## Discussion & Conclusion

The *C. tagi* has differentiated sexes, however it's not possible to identify them externally.

These results are in agreement with other authors who found no safe way to distinguish sex but by microscopy [3].

## References

- [1] Rocha J, Calado R, & Leal M. In: Springer Handbook of Marine Biotechnology. Berlin Heidelberg: Springer; 2015. p. 823-49.
- [2] Morais Z, Schiariti A & Morandini A. In: Jellyfish, Ecology, Distribution Patterns and Human Interactions. New York: Nova Science Publishers; 2017. p. 91-145.
- [3] Schiariti A. PhD Thesis. Universidad de Buenos Aires, Buenos Aires, Argentina. 2008.

## Acknowledgements

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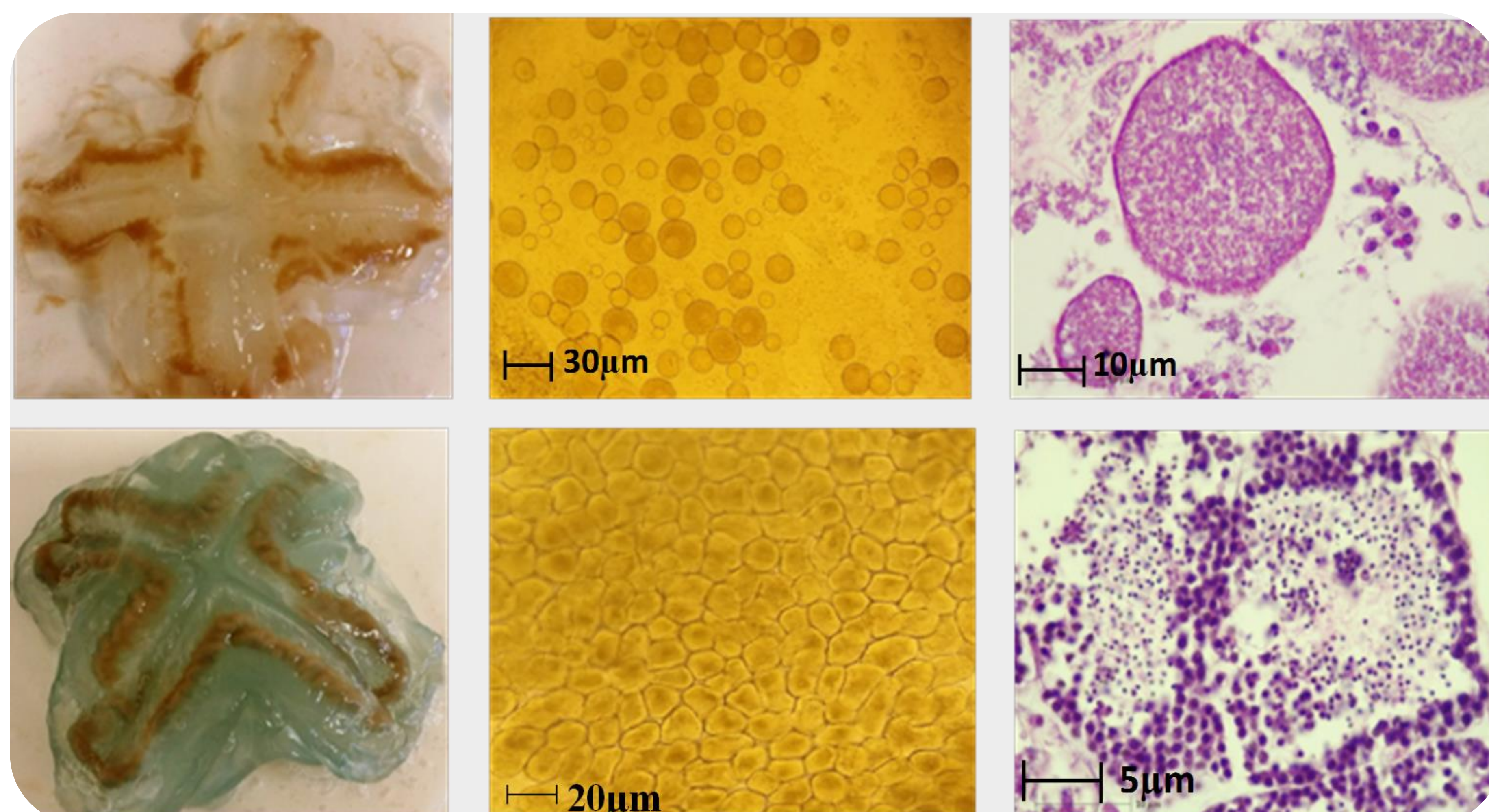


Figure 3. Representative specimens of F and M characteristics. **Up:** photograph of F gonad from a just captured live specimen; microphotograph of F gonad fresh sample (100x); microphotograph of F gonad after H&E staining (1000x). **Down:** M gonad, same procedures.

Ovocytes had a regular spherical shape with a well-defined cell wall, and a mean diameter of 31  $\mu\text{m}$  ( $n = 400$ ), in different development stages.

The spermatocytes were formed in a follicle with an irregular, smaller elongated shape (24  $\mu\text{m}$ ,  $n = 400$ ) (Fig.3).