

Mediterranean Marine Science

Vol 24, No 3 (2023)

VOL 24, No 3 (2023)



First detection of the invasive protozoan *Haplosporidium pinnae* in the critically endangered bivalve *Pinna nobilis* in the Southern Mediterranean Sea (Bizerte Lagoon, Tunis) and update of its current status

SARRA LABIDI, MAITE VÁZQUEZ-LUIS, GAETANO CATANESE, AMALIA GRAU, MARWA KHAMMASSI, SOUMAYA BEN YOUSSEF, MOHAMED SGHAIER ACHOURI

doi: [10.12681/mms.31664](https://doi.org/10.12681/mms.31664)

To cite this article:

LABIDI, S., VÁZQUEZ-LUIS, M., CATANESE, G., GRAU, A., KHAMMASSI, M., BEN YOUSSEF, S., & ACHOURI, M. S. (2023). First detection of the invasive protozoan *Haplosporidium pinnae* in the critically endangered bivalve *Pinna nobilis* in the Southern Mediterranean Sea (Bizerte Lagoon, Tunis) and update of its current status. *Mediterranean Marine Science*, 24(3), 470–481. <https://doi.org/10.12681/mms.31664>

First detection of the invasive protozoan *Haplosporidium pinnae* in the Critically Endangered bivalve *Pinna nobilis* in south Mediterranean Sea (Bizerte Lagoon, Tunis) and update of its current status

Sarra LABIDI, Maite VAZQUEZ-LUIS, Gaetano CATANESE, Amalia GRAU, Marwa KHAMMASSI, Soumaya BEN YOUSSEF and Mohamed SGHAIER ACHOURI

Mediterranean Marine Science, 24 (3) 2023

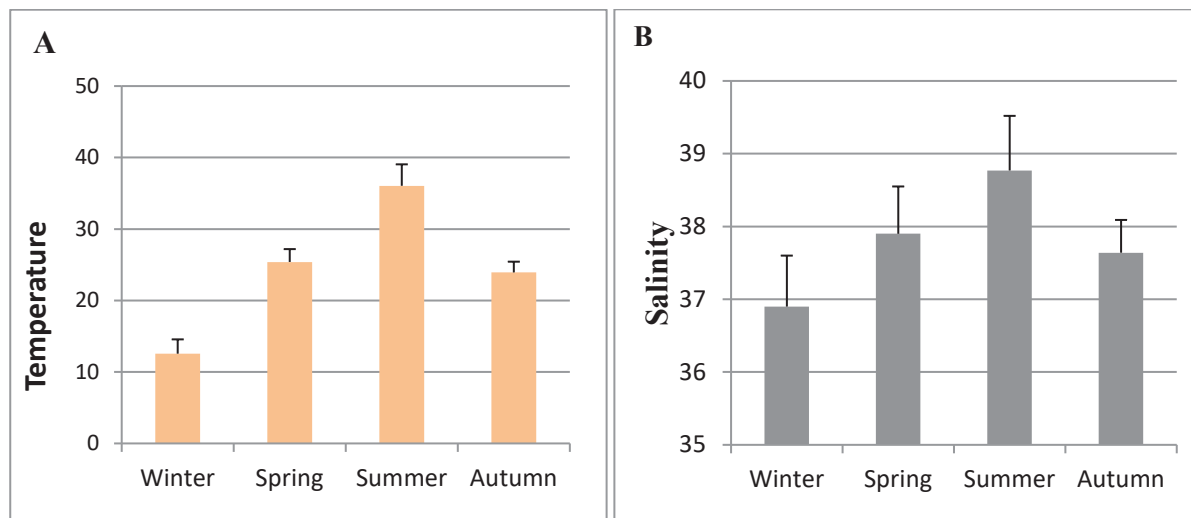


Fig. S1: Seasonal variations of the main physico-chemical parameters in the Bizerte lagoon. Data collected in 2016/2017: (A) Temperature; (B) Salinity.

Appendix

Table S1. Salinity, temperature and *P. nobilis* density in Bizerte Lagoon in 2016. - = absence of *Pinna nobilis*.

| Sites | Depth (m) | Salinity | Temperature | Density of <i>P. nobilis</i> (ind/100 m ²) |
|-------|-----------|------------|--------------|--|
| S1 | 10.6 | 38 | 25.5 | - |
| S2 | 3.2 | 38 | 25.5 | 9 |
| S3 | 3.5 | 37.4 | 23.8 | 10 |
| S4 | 1.5 | 36.8 | 22.9 | 30 |
| S5 | 1.8 | 36.8 | 22.8 | 19 |
| S6 | 2.8 | 35 | 22.8 | 9 |
| S7 | 5.5 | 35 | 23 | - |
| S8 | 2.5 | 34.9 | 23.2 | - |
| S9 | 4.5 | 37.2 | 25.1 | - |
| S10 | 1.5 | 37.5 | 24 | - |
| S11 | 2 | 37.6 | 25.2 | - |
| S12 | 1.5 | 37.7 | 25.4 | - |
| S13 | 9.2 | 37.8 | 24.9 | - |
| S14 | 10 | 38 | 24.5 | - |
| S15 | 9.4 | 38 | 24.3 | - |
| S16 | 10.7 | 37.7 | 24.2 | - |
| S17 | 1.5 | 37.7 | 24 | 14 |
| S18 | 5.1 | 37.7 | 24.5 | 12 |
| S19 | 2 | 37.9 | 23.1 | 3 |
| S20 | 1.5 | 37.3 | 23 | 2 |
| S21 | 10.4 | 37.3 | 22.9 | - |
| S22 | 10.4 | 37.6 | 22.5 | - |
| S23 | 10.3 | 37.7 | 22 | - |
| S24 | 10 | 38 | 21.1 | - |
| S25 | 9.3 | 37.3 | 21.7 | - |
| S26 | 3 | 37.3 | 21.9 | 5 |
| S27 | 1.5 | 37.2 | 22.7 | 7 |
| S28 | 4.5 | 37.4 | 22.7 | 3 |
| S29 | 7.6 | 37.4 | 22.5 | - |
| S30 | 8.5 | 37.2 | 22.4 | - |
| S31 | 7.7 | 37 | 22.6 | - |
| S32 | 8.5 | 36.7 | 22.4 | - |
| S33 | 5.7 | 36.7 | 22.1 | 22 |
| S34 | 2.2 | 37.2 | 23.1 | 17 |
| S35 | 1.5 | 36.9 | 23.3 | 3 |
| S36 | 2.1 | 37.7 | 22.5 | - |
| S37 | 6.1 | 37.6 | 22.4 | 10 |
| S38 | 1.5 | 37.4 | 22.6 | - |
| S39 | 2.1 | 37.4 | 23.2 | 5 |
| Mean | 5.21 | 37.9± 0.74 | 25.39 ± 1.03 | 4.61±7.32 |
| Min | 1.5 | 34.80 | 21.10 | 0.00 |
| Max | 10.7 | 38 | 25.5 | 30 |