

ABSTRACT

The fish parasite diversity in the Algerian coast still incompletely explored. During a survey on gills parasites of two Scombrid fishes: *Euthynnus alletteratus* (Rafinesque, 1810) and *Sarda sarda* (Bloch, 1793) off Algerian waters we have collected 3 species of monogenea belonging to the sub-class Monopisthocotylea Odhner, 1912 and Polyopisthocotylea Odhner, 1912. Among Monopisthocotylea, we have identified one species of the family Capsalidae Baird, 1853: *Capsala manteri* Price, 1951 from *Euthynnus alletteratus*. This monogenean is characterized by a septate haptor provided of 7 septa and two pairs of anchors. The sub-class Polyopisthocotylea is represented by 2 species belonging to the family Hexostomatidae Price, 1936: *Hexostoma lintoni* Price, 1936 and *Neohexostoma euthynni* (Meserve, 1938) Price, 1961 collected from *Sarda sarda* and *Euthynnus alletteratus* respectively. The most distinctive features between the two genera are the disposition of clamps and the presence of waist-like constriction between the testicular region and the haptor. In the genus *Hexostoma*, the clamps are disposed in a more or less straight transverse row (Rohde, 1978) and there is no waist-like constriction in the testicular region, whereas in *Neohexostoma*, the clamps are disposed in a more or less vertical row with waist-like constriction in the testicular region.

The present study is the first record of *Capsala manteri*, *Hexostoma lintoni* and *Neohexostoma euthynni* from Scombrid fishes of Algerian waters. In addition, we report for the first time *Hexostoma lintoni* from *Sarda sarda* off Mediterranean.

INTRODUCTION

❖The monogenean parasite fauna on the gills of Scombrid fishes has been extensively studied all over the world. However the taxonomic position of some species still ambiguous and little is known about monogenean parasites of Scombridae in the Mediterranean and especially in Algeria.

❖In this study we report the presence of 3 species of monogenean from two scombrid fishes *Euthynnus alletteratus* (Rafinesque, 1810) and *Sarda sarda* Bloch, 1793 off the Algerian Coast.

MATERIAL AND METHODS

Forty-five little tunny, *Euthynnus alletteratus* (fig. 1) and thirty-five Atlantic bonito, *Sarda sarda*, (fig. 2) caught off three localities (Bouharoune, Algiers and Cap Djinet) of the Algerian coast (fig. 3) were examined for parasites.



Figure 1: *Euthynnus alletteratus*



Figure 2: *Sarda sarda*



Figure 3: sampling area for the studied fishes

After the examination of the gills, Monogeneans were removed and stored in 70% ethanol. All specimens were stained for a morphological study.

RESULTS & DISCUSSION

Morphological study

The morphological study of monogeneans collected from *Euthynnus alletteratus* and *Sarda sarda* reveals the presence of 3 species belonging to 2 sub-classes: Monopisthocotylea Odhner, 1912 and Polyopisthocotylea Odhner, 1912.

➤The sub-class Monopisthocotylea is represented with one family Capsalidae Baird, 1853 and one species *Capsala manteri* Price, 1951 (fig. 4) collected from *Euthynnus alletteratus*. This parasite is distinguished by its circular haptor provided with 7 septa and two pairs of anchors.

➤Among Polyopisthocotylean we have found two species belonging to the family of Hexostomatidae Price, 1936, its about *Hexostoma lintoni* Price, 1936 (fig. 5) and *Neohexostoma euthynni* (Meserve, 1938) Price, 1961 (fig. 6) collected from *Sarda sarda* and *E. alletteratus* respectively.

➤The distinction between the two genus *Hexostoma* Rafinesque, 1815 and *Neohexostoma* Price, 1961 is based on the disposition of clamps in the haptor and the presence or not of a waist-like constriction between the testicular region and the haptor.

Monopisthocotylean

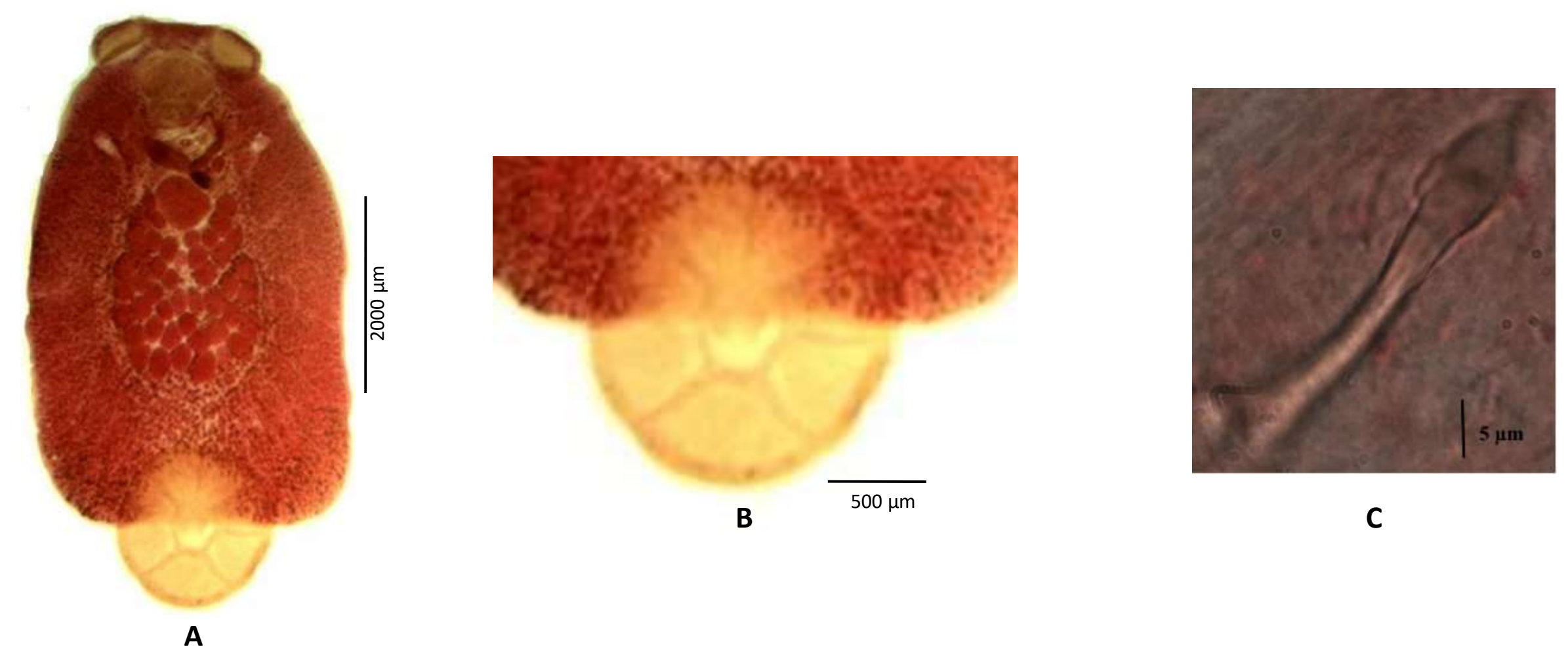


Figure 4: *Capsala manteri*; A: whole body; B: haptor; C: anchor

Polyopisthocotylean

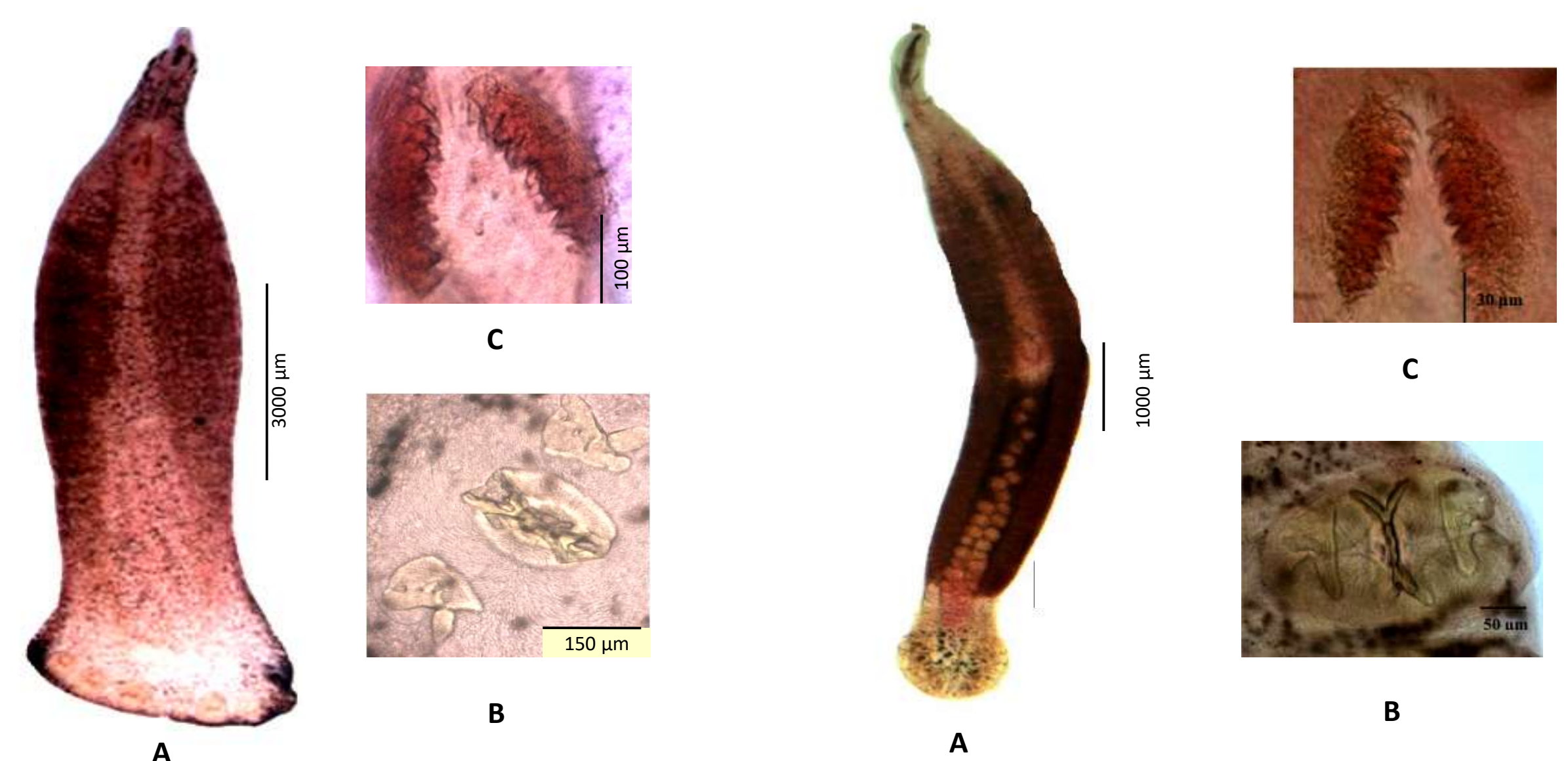


Figure 5: *Hexostoma lintoni*; A: whole body; B: clamps; C: vagina

Figure 6: *Neohexostoma euthynni*; A: whole body; B: clamps; C: vagina

➤*Hexostoma lintoni* is characterized by an haptor formed of 4 pairs of clamps in a more or less straight transverse row among which the innermost ones are smaller than the others.

➤This species was initially described from *S. sarda* off USA (Price, 1961) and it was also reported from the Atlantic (Hendrix, 1994). We noted the presence of *H. lintoni* for the first time in the Mediterranean Sea.

➤*Neohexostoma euthynni* is distinguished by an haptor provided with 4 pairs of clamps of sub-equal size, in more or less vertical row and a vagina armed with 2 dorsal hemispherical bodies.

➤*N. euthynni* was reported from *Euthynnus alletteratus* and *E. affinis* (Cantor, 1849) off the Atlantic and Australia (Hendrix, 1994; Williams & Bunkley-Williams, 1996). This monogenean was also found on the type host off the Mediterranean Sea. We report the presence of *N. euthynni* on the gills of *Euthynnus alletteratus* for the first time in Algerian waters.

CONCLUSION

✓The present study is a contribution to the knowledge of monogeneans parasites of some scombrid fishes off Algeria.

✓All the collected monogeneans are found for the first time in the Algerian coast. We report the Mediterranean Sea as a new geographical record for *Capsala manteri* from *Sarda sarda*.

✓The results obtained in the present study motivate us to continue our research and spread our sampling over the entire Algerian coast in order to better understand the biodiversity of monogeneans parasites of the scombrid fishes.

References

- Hendrix S.S., 1994. Marine Flora and Fauna of the Eastern United States Platyhelminthes: Monogenea. NOAA Technical Report NMFS 121, *A Technical Report of the Fishery Bulletin*, 107p.
Price E. W., 1961. North American Monogenetic Trematodes. VIII. The Family Hexostomatidae. *Helminthological Society*, 28 (1): 4-9.
Williams E. H. Jr. & Bunkley-Williams L., 1996. Parasites of offshore big game fishes of Puerto Rico and the western Atlantic. *Puerto Rico Department of Natural and Environmental Resources, San Juan, PR, and the University of Puerto Rico, Mayaguez, PR*, 382 p.