

# Four species of Digeneans (Trematoda, Opecoelidae) of the gilthead seabream *Sparus aurata* (teleostei, Sparidae) off the Algerian coast in the Mediterranean Sea.

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## INTRODUCTION & AIM

- The Sparidae family is a diverse and ecologically important group of marine fish, widely distributed in temperate and tropical waters. The gilthead seabream (*Sparus aurata* Linnaeus, 1758) is its most economically significant species, especially in the Mediterranean region.
- Along the Algerian coast, the only investigation on the digenean parasites of *Sparus aurata* was carried out by Rima et al. (2017).
  - We provided novel morphological data for four species belonging to the family Opecoelidae Ozaki, 1925 of Digenea : *Macvicaria obovata* (Molin, 1859) Bartoli, Bray & Gibson, 1989; *Macvicaria maillardi* Bartoli, Bray & Gibson, 1989; *Macvicaria maamouriae* Antar, Georgieva, Gargouri & Kostadinova, 2015 and *Allopodocotyle pedicellata* (Stossich, 1887) Pritchard, 1966 ex the type-host *Sparus aurata* from Algeria, based on newly collected specimens (figs 1-4).
- The aim of this study is to establish an inventory of the parasites of *Sparus aurata*, whose parasitic fauna remains poorly studied along the Algerian and Mediterranean coasts, in order to enhance our understanding of parasite biodiversity.

## METHOD

As part of a continuing effort to explore the diversity of Digenea flatworm parasites of fishes off Algeria, 30 specimens of *Sparus aurata* (Linnaeus, 1758) collected off Algeria, southwestern Mediterranean. The digestive tube was carefully examined for the presence of parasitic Digeneans.



*Sparus aurata* Linnaeus, 1758)

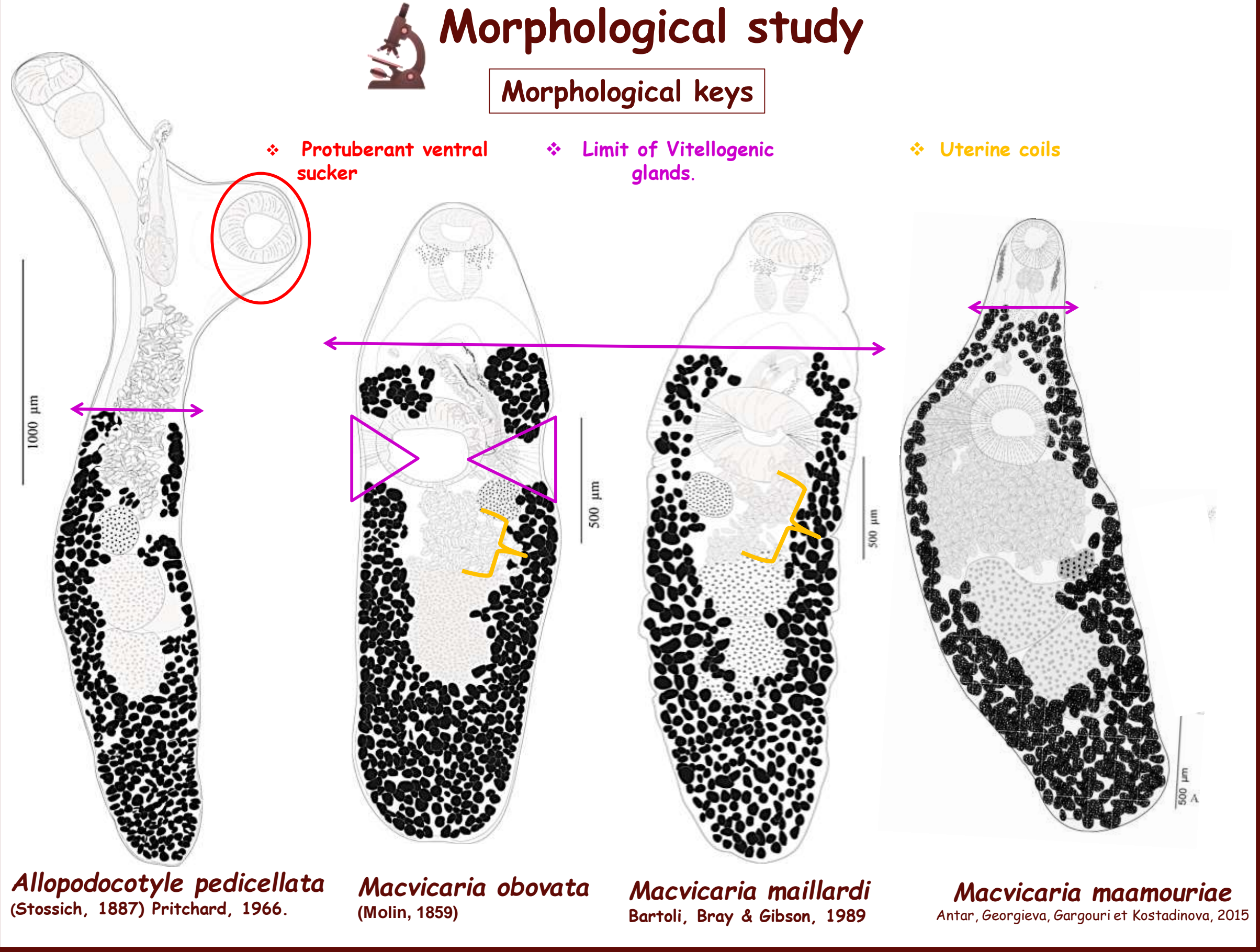
Phylum Platyhelminthes Gegenbaur, 1859  
Class Trematoda Rudolphi, 1808  
Subclass Digenea Carus, 1863  
Family Opecoelidae Ozaki, 1925

*Allopodocotyle* Pritchard, 1966    *Macvicaria* Gibson et Bray, 1982

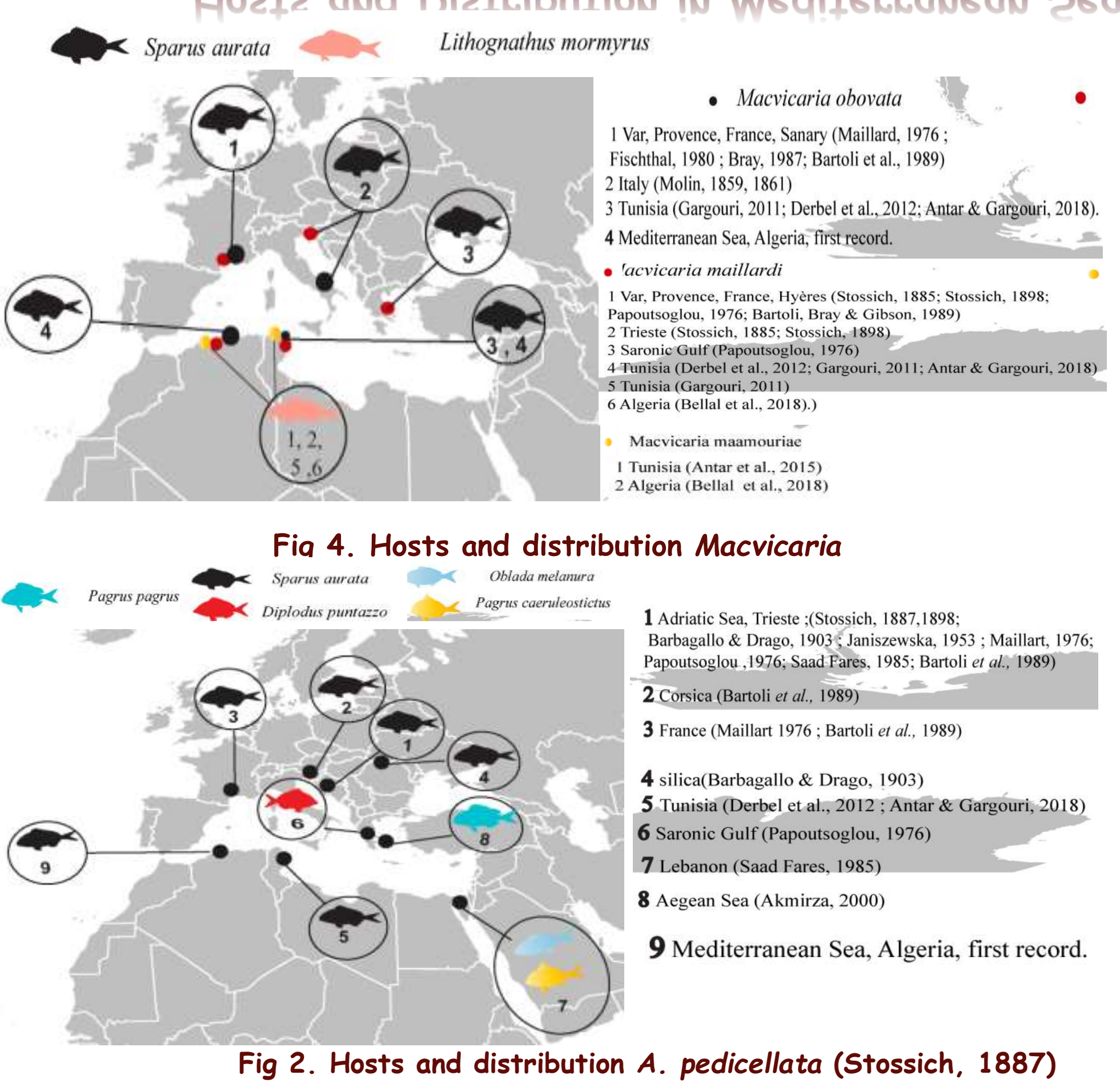
## RESULTS & DISCUSSION

### Morphological study

#### Morphological keys



### Hosts and Distribution in Mediterranean Sea



## CONCLUSION

- Algeria is a new geographical record for *M. obovata* and *A. pedicellata*, whereas *M. maillardi* has already been reported on the Algerian coast, but not from its type host *S. aurata*
- We provide a redescription of these species based on newly collected specimens which were identified using only morphological keys
- Firstly, the distribution of vitelline follicles (*M. obovata*, the vitelline follicles not fusing in the preacetabular region; *M. maillardi*, the vitelline follicles confluent widely in the pre-acetabular space; *M. maamouriae*, the vitelline follicles contain follicles almost reaching a pharynx)
- Secondly, the uterus (*M. obovata* has uterine loops present between the ovary and the anterior testis; *M. maillardi*, the uterus does not engage between the ovary and anterior testis, and for *M. maamouriae*, the ovary and anterior testis are contiguous and not separated by uterine coils)
  - Finally, the metraterm is present in *M. obovata* but in the two other species *M. maillardi* and *M. maamouriae* the metraterm is absent.
- The three species of *Macvicaria* infest the same microhabitat (intestine), parasitize the same host (*Sparus aurata*) and, sharing the same locality (Mediterranean).