

Two monogenean species (Platyhelminthes) infecting *Gobius cobitis* Pallas, 1811 (Osteichthyes: Gobiidae) off Sardinia, western Mediterranean Sea

Merella P.¹, Dmitrieva E.², Piras M.C.¹, Huyse T.³, Gerasev P.⁴, Garippa G.¹

¹Sez Parassitol e Malattie Parass, Dip Biol Anim, Univ Sassari, via Vienna, 2, 07100 Sassari, Italy; ²Dep Ecol Parasitol, Inst Biology of the Southern Seas, 2, Nakhimov Ave, 99011 Sevastopol, Ukraine; ³Katholieke Univ Leuven, Lab of Aquatic Ecology, Ch Daberiotstraat 32, B-3000 Leuven, Belgium; ⁴Dep Parasitic Worms, Zoological Institute, Universitetskaya nab 1, 199034 St Petersburg, Russia.

AIM- In the present study the monogeneans of the giant goby *Gobius cobitis* Pallas, 1811 (Osteichthyes: Gobiidae) from the Mediterranean Sea are investigated.

MATERIALS AND METHODS- On October 2008, nine specimens of *G. cobitis* caught off North Sardinia (western Mediterranean Sea, 41°08.05'N, 9°06.05'E) were examined for parasites, and the monogeneans found were mounted in glycerine-jelly.

RESULTS- Two monogenean species (Platyhelminthes) were found on all fishes: one on the gills, with intensity of infection ranging 2-6; and the other on the skin, with intensity of infection 4-15.

CONCLUSIONS- Morphology and measurements of haptor structures, copulatory organ and vagina of the monogeneans found on gills were conform to those of *Ancyrocephalus cobitis* Ergens, 1963, described from the same host from the Adriatic Sea (Z f Parasitenkunde, 22: 287-291), as well as to those of *Haliotrema cupensis* Sasal, Pages et Euzet, 1998, also described from *G. cobitis* from the Mediterranean Sea (Syst Parasitol, 39: 107-112). Despite the fact that some measurements of haptor structures of *A. cobitis* are larger than those of *H. cupensis*, the descriptions of both species are identical in all taxonomic significant characters and these two species should be considered synonyms. Taking into account that the generic diagnosis of *Ancyrocephalus* Creplin, 1839 has been changed, and now it only includes parasites of Percidae (Bykhowskyi BE, Nagibina LF, 1970, Parasitologiya, 4: 193-200), this species can not belong to this genus. The description of *H. cupensis* reports that the vas deferens does not loop around the left caecal branch which distinguishes this species from all other representatives of the genus *Haliotrema*. On the other hand, the genus *Haliotrema* is now considered as a polyphyletic group, which includes more than 100 species exhibiting very different morphologies (Plaisance L et al, 2004, Parasitol Res, 93: 72-78). Thus, the best specific name for the monogenean found on the gills of *G. cobitis* is *Haliotrema cobitis* (Ergens, 1963) n. comb., with *Haliotrema cupensis* Sasal, Pages et Euzet, 1998 as junior synonym. However, the generic belonging of this species needs further revision.

The monogeneans found on the skin of *G. cobitis* belonged to the genus *Gyrodactylus* von Nordmann, 1832. Six species of *Gyrodactylus* are currently known on gobiids from the Mediterranean Sea, and all of them also occur in the northeastern Atlantic Ocean, North and Baltic Seas (Huyse T et al, 2006, 92: 682-690). This is the first report of a *Gyrodactylus* species on *G. cobitis* from the Mediterranean Sea. The haptor structures of the specimens found are similar in shape and size to those of *Gyrodactylus rugiensoides* Huyse et Volckaert, 2002, described from *Pomatoschistus minutus*, *P. pictus* and *P. lozanoi* from the North Sea (Int J Parasitol, 32: 907-919), and also recorded on *P. minutus* from the Mediterranean Sea. However, the present species differs from *G. rugiensoides* in the shape of the ventral bar and the marginal hooks, strongly suggesting it to be a new species. Molecular analysis will be performed to further elucidate the exact species relationship. The close affinity with *G. rugiensoides* suggests that ecological transfers between distantly related host species can be important in this parasite species complex.

Acknowledgements: Merella, Piras and Garippa have been supported by Assessorato Difesa Ambiente RAS N° 32688-49-30.12.08 and Fond Banco Sardegna 08; Dmitrieva and Gerasev by RFBI N° 10-04-90403-Ukr_a.