Prevalence of the parasite *Anguillicolla crassus* in the European eel (*Anguilla anguila*) in lagoons, rivers and lakes in Northern and Western Greece

Vaia Kantzoura, Argyris Sapounidis, Emmanuil Koutrakis

Fisheries Research Institute, Nea Peramos, Kavala, 64 007, Greece
Tel: 25940 22692, fax: 25940 22222, e-mail: kanrzourava@yahoo.gr

Anguillicola crassus is a parasitic swim bladder nematode of the European eel *Anguilla anguilla*. It is originated from SE Asia and reached Western Europe in the early eighties via consumption or restocking. It has spread quickly thought several countries, not only causing problems to eel farms but also infecting a rapidly increasing percentage of the natural eel population. A total of 1,343 yellow and silver stage eels were collected from River Evros (456) and Lake Vistonida (279) in Northern Greece and from Amvrakikos Gulf (53) and Messolonghi-Aitoliko lagoons (549) in Western Greece, from 2012 to 2015. The mean total length and the mean total weight were found 601 mm (SD ±6.9) and 672 g (SD ±23.0) for the silver eels and 576 mm (SD ±4.3) and 440 g (SD ±12.6) for the yellow eels, respectively. The prevalence of *A. crassus* was found in the 28% of examined eels. Furthermore the prevalence was found to be 20% in River Evros, 64% in Lake Vistonida, 25% in lagoons of the Amvrakikos Gulf and 17% in the Messolonghi-Aitoliko lagoons. According to the principal components analysis, two significant groups were found. The first group, which is characterized by high parasitic burden and high values for the Fulton index, includes the Vistonida and Evros eel population and the second group includes Messolonghi-Aitoliko lagoons population, which differentiates from the rest due to the Ocular and Fin index.