

Prevalence of helminths in *Sardinella aurita*, *Scomber colias* and *Trachurus picturatus* caught in the Canary Islands (Spain, NW Africa)



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The study of parasitosis in marine fish aims to determine the prevalence of zoonotic helminths mainly in species with economic and commercial interest. Fish analysed in this study were caught by the artisanal purse-seine fleet operating in the Canary Islands (FAO 34.1.2). The increase of Anisakidosis cases (disease associated to Anisakidae family) has been recognized as a food-borne disease, specially in Japan, Italy and Spain due to their culinary cultures (Fuentes, M.V. et al., 2022).

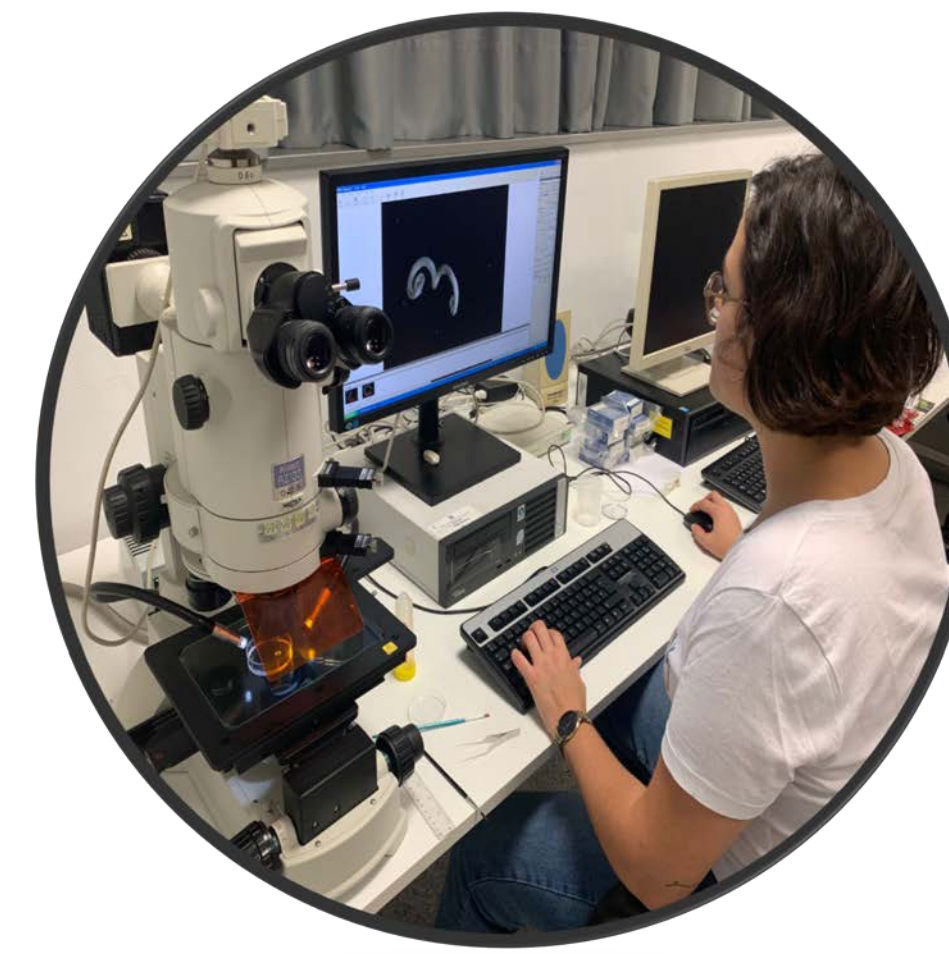


MATERIAL AND METHODS

- ✓ A total of 980 individuals were analysed monthly (when possible) from commercial landings in the Spanish Institute of Oceanography, from December 2021 to March 2022. The three most landed species were examined (fresh and defrost), including *Sardinella aurita* (SAA, n=201), *Scomber colias* (VMA, n =478) and *Trachurus picturatus* (JAA, n= 301).
- ✓ Abdominal cavity and viscera were examined macroscopically during biological sampling (i.e. total length (TL), total weight (TW), sex, maturity stage and gonads weight).
- ✓ Nematodes were preserved in 70% ethanol. To carry out the identification, anterior and posterior part of the individuals were cleared individually in lactophenol and observed with the aid of an optical microscope.
- ✓ Larvae identification was performed by morphological and morphometric characters.

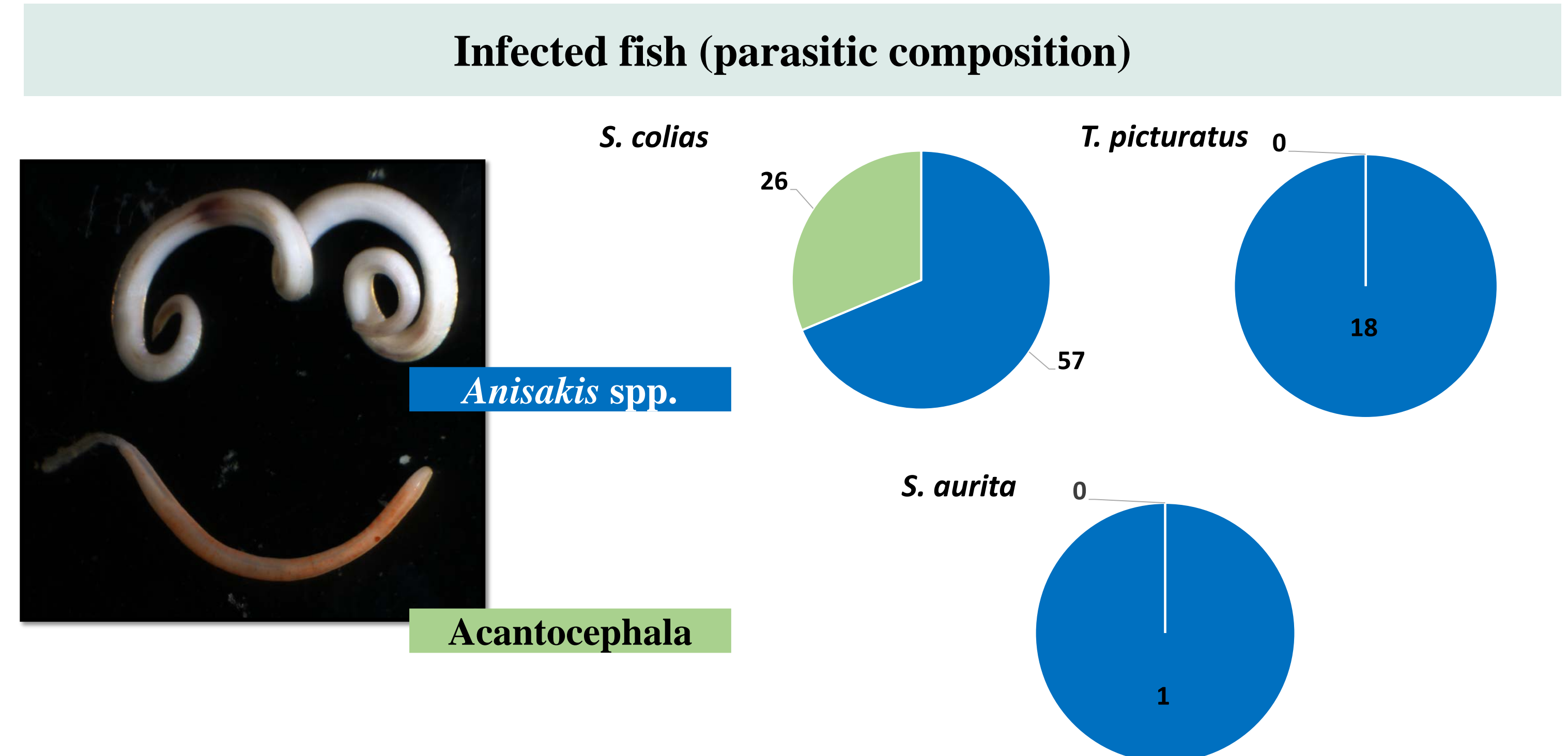
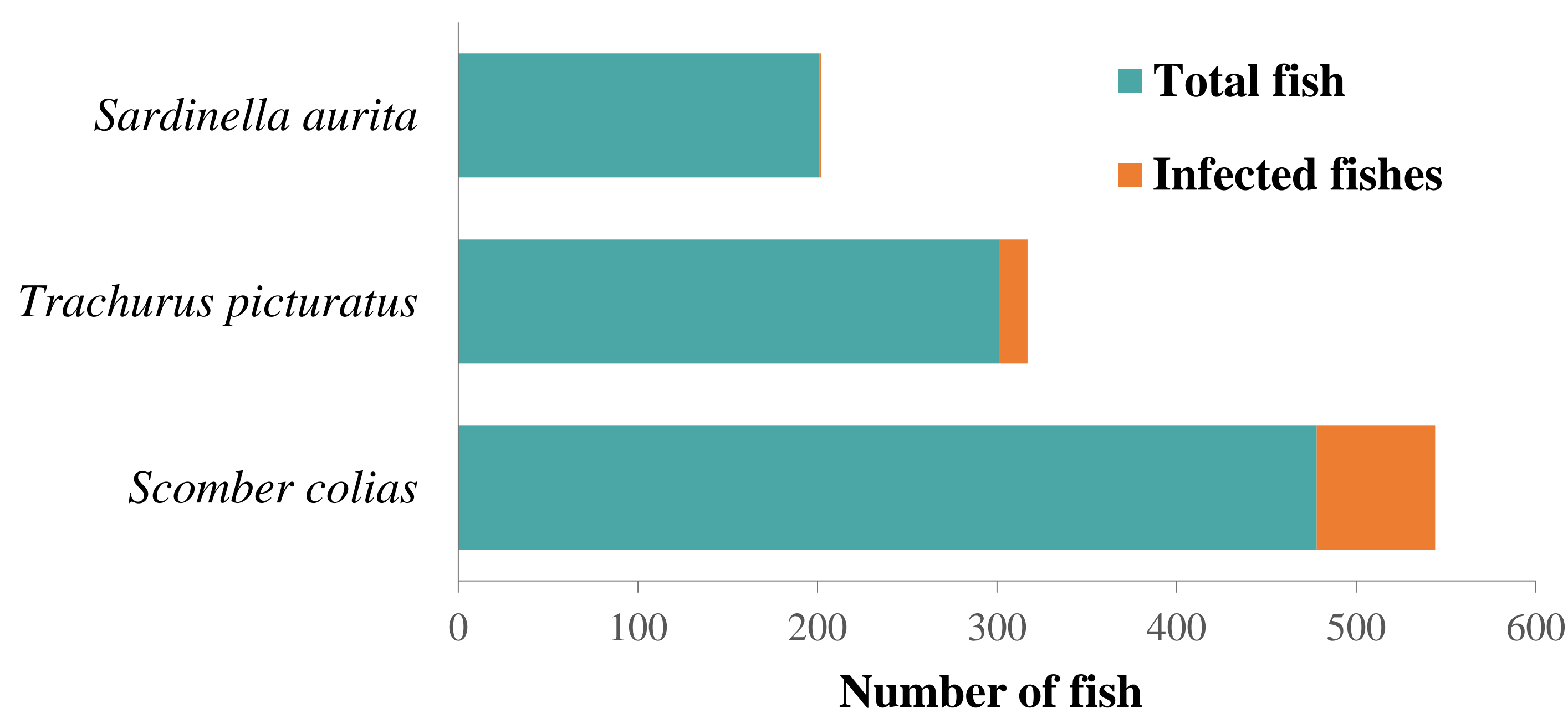
SPECIES	N	TL (cm)	TW (g)
<i>S. colias</i>	478	24.89±2.97	130.68±50.51
<i>T. picturatus</i>	301	18.61±1.05	51.67±8.29
<i>S. aurita</i>	201	19.70±2.22	60.06±20.45

Anisakis spp	SPECIES	N	LENGTH (cm)
	<i>S. colias</i>	56	1.48±0.42
	<i>T. picturatus</i>	18	1.26±0.49
	<i>S. aurita</i>	1	1.4



PRELIMINARY RESULTS

Most of helminths (n=102) were found attached within the stomach and intestine wall. The highest prevalence of parasites occurred in *Scomber colias* (13.81%), then in *Trachurus picturatus* (5.32%) and in *Sardinella aurita* (0.50%). We found from 1 to 7 nematodes per specimen, including different species of Acantocephala (n=24) and *Anisakis* spp. (n=77), in larvae stage L3.



CHALLENGES AND NEXT STEPS

- Studies of mean intensity and mean abundance of infection, will allow to determine the consumption risk of these species.
- Molecular analyses should be done to identify *Anisakis* spp to the specific level.
- Long-term sampling will be useful to determine seasonal and geographical distribution.

