

# **SPHAEROMA WALKERI STEBBING, 1905 (CRUSTACEA, ISOPODA, SPHAEROMATIDAE) INTRODUCED AND ESTABLISHED IN TUNISIA WATERS**

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## **Abstract**

During the last decades, 4 alien isopods have been reported from harbours and nearby lagoons in Tunisia. The intensification of shipping activities and the significant increase in the average water temperature has been enhanced the introduction and the establishment of non indigenous species. Since its occurrence *Sphaeroma walkeri* was studied. A brief description and some ecological main features are given and discussed.

**Keywords:** *Infralittoral, Lagoons*

Surveys conducted among benthic communities in Tunis Southern lagoon and nearby ports during last decades allowed us to observe 4 alien isopods, *Paracerceis sculpta* [1], *Paradella diana* [2], *Sphaeroma walkeri* [3] and *Sphaeroma venustissimum* [4]. Among this invasive fauna, *Sphaeroma walkeri* is the most acclimated isopod with *Paracerceis sculpta* in the Tunisian brackish waters. According to Zibrowius [5] it is one of the most widely ship-transported alien species in the world, and was first recorded in the Mediterranean during the earlier part of the last century. *Sphaeroma walkeri* is a thermophilic isopod native of the Indian Ocean. It is commonly found in intertidal fouling communities and has been widely reported from ports in warm and warm-temperate waters worldwide [6]. *Sphaeroma walkeri* was regularly sampled from 2003 until 2009 in the Tunis Southern lagoon and the specimens have been identified following the description and illustrations given by Jacobs [7]. *Sphaeroma walkeri* is an isopod that grows up to 10mm in length (Figure 1). Adult females are smaller than adult males. Maximum length observed in our samples is 16mm. The surface of pereonites is smooth but pereonites 3 & 4 each bear 2 irregular rows of low tubercles. Pereonites 5 & 6 and the pleon each bear one row of prominent round tubercles, with the posterior edge of the pleon having a second row of small round tubercles. The pleotelson is long and tapers to a rounded point that is slightly upturned with 4 rows of 3-6 tubercles running lengthways on the surface. The uropods are flattened and attached on the side of the pleotelson towards the front. The endopod is rigidly fused while the exopod is movable and greater than or equal to the length of endopod. *S. Walkeri* was permanently collected in Tunis Southern Lagoon, a euryhalin ecosystem, among sponges and ascidians in very shallow waters less than 3 metres depth. This isopod was the most abundant alien species found in Tunis Southern lagoon during hot season from April to August. Salinity, temperature and suspended solids were observed to influence the occurrence of this species. This specie is commonly associated with one or both of the isopods *Dynamenella diana* and *Paracerceis sculpta*. The evolution of densities of *Sphaeroma walkeri* according seasons is summarized in table1. This isopod is found in high densities. The average value observed was 15 specimens /m<sup>2</sup>. The highest values have been observed during the hottest season. Among fouling communities, *S. Walkeri* prefers sponges than ascidians. The specie reproduces in sponges. All stages, adult from the two sexes, ovigerous and non-ovigerous females and sub-adult males, are observed in sponges.

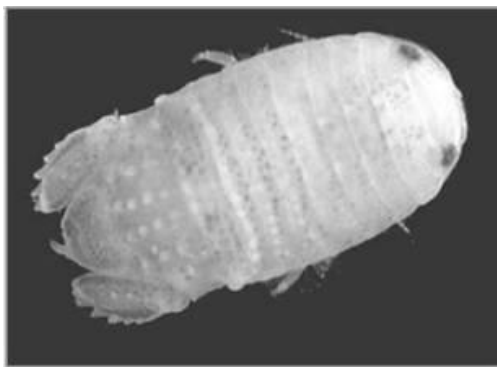


Fig. 1. Male of *Sphaeroma walkeri* Stebbing, 1905 collected from the Tunis Southern lagoon

Tab. 1. Seasonal evolution of densities of *S. walkeri* in Tunis Southern Lagoon

Seasons	Autumn	winter	spring	summer
Densities of <i>S. Walkeri</i> associated to sponges	12 ind/m <sup>2</sup>	7 ind/m <sup>2</sup>	18 ind/m <sup>2</sup>	23 ind/m <sup>2</sup>
Densities of <i>S. Walkeri</i> associated to ascidians	3 ind/m <sup>2</sup>	2 ind/m <sup>2</sup>	7 ind/m <sup>2</sup>	9 ind/m <sup>2</sup>

*S. walkeri* is one of the most abundant alien isopods observed in Tunisian shallow waters. According its establishment and acclimatisation in lagoons near ports, this thermophilic non indigenous species was probably introduced by vessels traffic.

## **References**

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