



## A new species of *Ephesiopsis* (Polychaeta: Sphaerodoridae) from off southeastern Brazil

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### Abstract

Sphaerodorids belonging to the genus *Ephesiopsis* were collected on the outer continental shelf and slope off the coast of São Paulo State, during the REVIZEE/Score Sul/Benthos Program. *Ephesiopsis guayanae* Hartman and Fauchald 1971 from off Guyana is the only species previously known in this genus. *Ephesiopsis shivae* **sp. nov.**, differs from *E. guayanae* in having a longer body, macrotubercles with smaller terminal papillae, and simple chaetae not as pointed distally; eyes are absent in the new species. Four macrotubercles with terminal papillae were observed on the pygidium of *E. shivae* **sp. nov.** Such macrotubercles were not reported in *E. guayanae*, although the specimens are complete; the presence of these structures in the new species necessitating emendation of the genus diagnosis.

**Key words:** Sphaerodoridae, *Ephesiopsis shivae*, *Ephesiopsis guayanae*, new species, São Paulo (SE Brazil)

### Introduction

Sphaerodorids are small polychaetes, widely distributed in all oceans, and are found mainly in deep waters in low abundance (Kudenov 1997). They are more frequent in mud and sand, but can be found also on hard-bottoms (Fauchald 1974) and algal mats (Sardá-Borroy 1987). There are few studies on their behavior and biology (Ruderman 1911, Christie 1984, Kuper & Purschke 2001). Most species are free-living deposit-feeders (Fauchald & Jumars 1979); however, some may be associated with ophiuroids, starfish and gorgonians, or live on the tentacles of terebellid polychaetes (Rouse and Pleijel 2001). The sexes are separate, but hermaphroditism can occur in at least one species.

The shape and arrangement of these structures are taxonomically important. According to Fauchald (1974), the main characters to identify a sphaerodorid are: a) body shape, which can be either long and cylindrical, with more than 50 segments, or else short and compact, with 30 to 50 segments; b) shape and arrangement of the macrotubercles, which can be sessile, with or without papillae, or pedunculate; c) shape and arrangement of the microtubercles, which are present in species with two or four rows of macrotubercles with terminal papillae, and may be either partially fused to the macrotubercles or placed above them; d) shape and arrangement of the papillae, which, when present, may be simple, conical or cylindrical; e) cephalic appendages including a median antenna, in addition to one to three pairs of lateral antennae and one pair of peristomial cirri; f) one or two pairs of eyes, which, when present, have crescent-shaped pigmented areas, or else are totally pigmented; g) proboscis eversible, long and cylindrical in long-bodied species, or short in short-bodied ones; h) parapodia uniramous, with only one aciculum, and a digitiform or clavate ventral cirrus; prechaetal and postchaetal lamellae may be present; i) chaetae are usually of only one type in all chaetigers, except for the first, which has one or two pairs of hooks in long-bodied species, and may be simple or compound; the simple chaetae are slightly curved, subdistally protuberant and distally tapered, whereas the compound chaetae are falcigerous with article and shaft smooth, but denticles may be present distally on the