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Rediscovery of *Gastropterion chacmol* (Gastropoda: Gastropteridae) on the Brazilian coast

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Gastropterion Kosse, 1813 is a genus of small cephalaspidean gastropods of the family Gastropteridae, a group which comprises four genera and circa 40 species distributed worldwide. Only two species of *Gastropterion* are known from the Western Atlantic: *G. chacmol* Gosliner, 1989, previously identified as the Mediterranean *G. rubrum* (Rafinesque, 1814) by Abbott (1974), who reported it as “moderately common” from Texas, Florida and the West Indies to Brazil; and *G. vespertilium* Gosliner & Armes, 1984, endemic to Florida, USA. The report of *G. chacmol* by Marcus and Marcus (1960), at that time identified as *G. rubrum*, was the first reference to the species in Brazilian waters, more specifically from São Paulo state (they also reported it from Florida and Guade-

loupe). Later, Gosliner (1989) described *G. chacmol* from Quintana Roo, Mexico. This species closely resembles *G. rubrum* and *G. vespertilium*: all have an elongate flagellum on the right side of the body and radular inner lateral teeth with numerous small denticles. Both Western Atlantic species, *G. chacmol* and *G. vespertilium*, share the reddish ground color, but in *G. chacmol* the red is deeper and richer, and the parapodial margin is bright yellow; the siphon and flagellum are of the same ground color, without any additional pigment. Gosliner (1989) set the above-mentioned distribution of the species based on the report of Marcus and Marcus (1960), and by considering all Western Atlantic records of *G. rubrum* as being *G. chacmol*. Since then, there have been no further reports of the species from Brazil (besides a misidentification by Rios 2009), and no image of living specimens are known from this region.

The single specimen reported herein (length of living animal: 4.1 mm) was collected on a gravel bottom, at a depth of 6–7 m, on Itaçucê Island, São Sebastião, São Paulo state. The material was preserved in ethanol 70 % and deposited in the collection of the Museu de Zoologia da Universidade de São Paulo (MZSP 109683, A. Migotto coll. 15/xi/2011). When placed on a Petri dish, the animal alternated between crawling and swimming, the latter lasting only a few seconds (Fig. 1, Online Resource 1). Despite Brazil’s nearly 8,000-km coastline and the increase in the number and scope of collections in recent years, this is the first record of this

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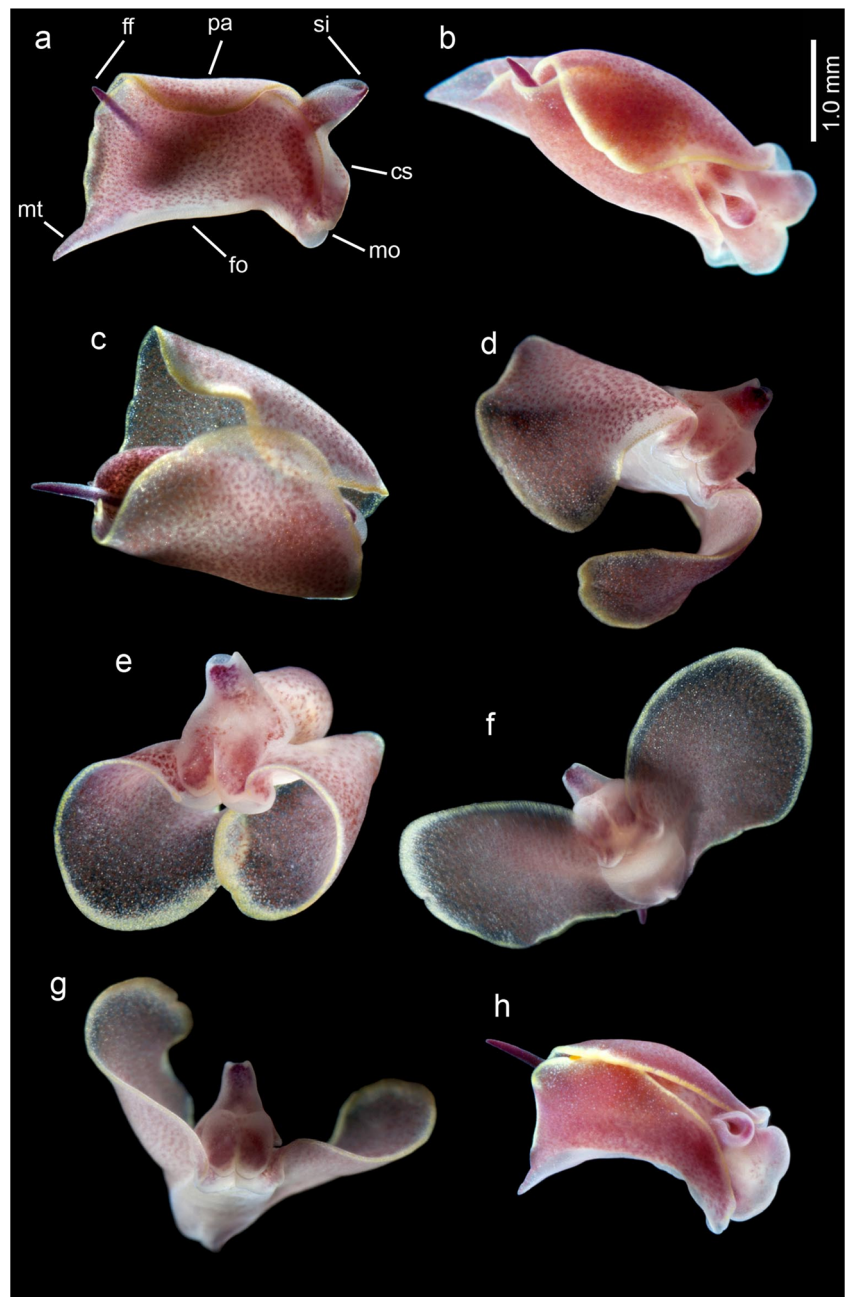
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Fig. 1 Photo sequence of *G. chacmol*. **a** right view, body covered by opened right parapodia; anterior siphon above the head. **b** dorsal view, body covered by overlapped parapodia, detailed siphonal opening at right portion. **c–g** swimming postures. **c** right dorsolateral view, anterior cephalic covered, parapodia opening to ventral region. **d** anterior view, parapodia extended to ventral portion of body. **e** anterior view, showing left side of body, parapodia folded at ventral portion of body, detail of cephalic shield. **f** anteroventral view, detail of cephalic region, parapodia fully opened. **g** anterior view, parapodia returning to starting position. **h** right dorsolateral view, parapodia totally overlapped. Legend: **cs** cephalic shield, **ff** filiform flagellum, **fo** foot, **mo** mouth, **mt** metapodium, **pa** parapodium, **si** simple tubular siphon in the posterior end of cephalic shield



species in more than 50 years. This scenario is very different from the Caribbean region, for instance, where *G. chacmol* is abundant and can be easily found.

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References

- Abbott RT (1974) American seashells, second edition. Van Nostrand Reinhold Company, New York, 663 pp. + 240pls
- Gosliner TM (1989) Revision of the Gastropteridae (Opisthobranchia: Cephalaspidea) with descriptions of a new genus and six new species. *Veliger* 32(4):333–381
- Marcus E, Marcus E (1960) Opisthobranchs from American Atlantic warm waters. *Bull Mar Sci Gulf Caribb* 10(2):129–203
- Rios E (2009) Compendium of Brazilian Sea Shells. Rio Grande, RS. Viii + 668p