Natural History Notes

HYDROMEDUSA TECTIFERA (snake-necked turtle): EPIZOIC AND ECTOPARISITIC FAUNA. *Hydromedusa tectifera* Cope, 1869 is a widely distributed chelid, occurring in Argentina, Uruguay, Brazil, Paraguay and Bolivia (Lema & Ferreira, 1990; Quintela & Loebmann, 2009). In Rio Grande do Sul State, southern Brazil, it is a common species, generally occurring in association with swampy habitats (Lema, 2002; Quintela & Loebmann, 2009). Herein we report the epizoic fauna associated with an individual of *H. tectifera* in southernmost Brazil.

On November 11, 2009 an adult male *Hydromedusa tectifera* (rectilinear carapace length 257 mm, rectilinear carapace width 170 mm, rectilinear plastron length 224 mm, rectilinear plastron width 164 mm, height 88 mm; body mass 2,275 g) was found around 21:18 h moving on a road between marsh areas in a locality known as "Capilha" (32º23'59"S, 52º33'27"W, 10 m a.s.l.), Rio Grande municipality, Rio Grande do Sul State, southern Brazil. The individual was collected and placed in a plastic box containing water treated by the local sanitation company, with a chlorine concentration of 0.2 mg/l. The individual remained submersed about three-quarters of its height for approximately 12 hours. Subsequently, the turtle was taken to the lab, where a careful examination of epizoic fauna was carried out. All the material attached to the body as well as living fauna found in the water where the individual stayed submerged, were collected and preserved in 70% ethanol solution.

Rhynchobdellida leeches (n > 200) were found on all dorsal and ventral surfaces of the carapace and plastron, epidermis of the neck, proximal parts of all limbs, anal region and base of the tail. *Temnocephala* sp. (Platyhelmintes, Temnocephalida) encapsulated eggs (n > 200) were found on the anterior dorsal surface of the plastron, anterior ventral surface of the carapace and bridges while adult worms (n > 200) were located clustered on the epidermis adjacent to the anterior ventral surface of the carapace and epidermis of the bases of neck and limbs (Fig. 1). Living fauna recovered from the water comprised Chironomidae larvae (n = 3), Planorbidae (n = 1), Hydrobiidae molluscs (n = 7) and Hyalellidae amphipod crustaceans (n = 2).

Figure 1. Location of *Temnocephala* sp. encapsulated eggs (arrows A) and clustered worms (arrows B) in a *Hydromedusa tectifera* individual from southern Brazil.

Among the organisms found occupying the body surface, leeches represent ectoparasites, since they were found attached to the skin obtaining nourishment directly from the blood of the turtle. With regard to Temnocephalids, authors point to the relationship between parasitism and commensalism (Ernst & Lovich, 1996) and symbiosis (Brusa & Damborenea, 2000). It is worth noting that the epidermal areas where adult Temnocephalids were attached peeled easily when the worms were removed, which implies that its presence may cause injuries to the turtle skin. Considering the large number of leeches and *Temnocephala* sp. worms and eggs, it is likely that the *H. tectifera* could have been diseased. Temnocephalids previously recorded on chelids are: *Acanthochelys radiolata* (Montcelli, 1899), *Acanthochelys spixii*, (Ferreira Yuki et al., 1993) and *Hydromedusa maximiliani* (Ernst & Lovich, 1996). On *H. tectifera*, Soares et al. (2007) cited the occurrence of *Temnocephala* sp. in central Rio Grande do Sul, while *Temnocephala brevicornis* is recorded in southeastern Brazil (Novelli et al., 2009) and eastern Argentina (Brusa & Damborenea, 2000). Recently, two species of Temnocephalids (*Temnocephala pereirai* and *T. cuocoloi*) were also described from a *H. tectifera* specimen from southern Uruguay (Volonterio, 2010). It is not clear what kind of interaction (if any) operates between

Chironomidae larvae, molluscs, amphipods and the *H. tectifera* individual. As these invertebrates were not found in the corporal visual search, they were probably occupying the shell cavities between the surfaces of the ventral carapace and dorsal plastron. Failing any indications of parasitic behaviour involving these invertebrates, it is probable that the relationships may be restricted to the utilization of the spatial resource provided by the *H.tectifera* body.

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Submitted by: SONIA HUCKEMBECK, *Laboratório de Ictiologia, Instituto de Oceanografia, Universidade Federal do Rio Grande, CEP 96203-900, Av. Itália 8Km, Rio Grande, Brasil.* sohuckembeck@yahoo.com.br

FERNANDO MARQUES QUINTELA, *Programa de Pós-graduação em Biologia Animal, Instituto de Biociências, Universidade Federal do Rio Grande, CEP 91501-970, Agronomia, Porto Alegre, Brasil.* fmquintela@yahoo.com.br