Notas breves

Reassessment of the taxonomical status of *Calliotropis pataxo* Absalão, 2009 (Gastropoda: Seguenzioidea)

Reevaluación de la situación taxonómica de *Calliotropis pataxo* Absalão, 2009 (Gastropoda: Seguenzioidea)

Daniel C. CAVALLARI*,[1] & Rodrigo B. SALVADOR**, ***

Recibido el 27-XI-2015. Aceptado el 5-II-2016

The family Seguenziidae of marine snails is distributed worldwide, usually living in bathyal depths (between 200–1000 m) on fine sedimentary substrates. They are commonly found in collections of deep-water mollusks in small numbers and as empty shells only. As such, their classification is almost exclusively based on shell characters (Quinn 1983a). The family's fossil record is similarly worldwide distributed, but scarce, dating back to the middle Paleocene of Greenland (Kollmann & Peel 1983; but see Fischer 1992, for a dubious record from the Late Cretaceous of Germany). Seguenziids have been alternately deemed to be vetigastropods or intermediates between vetigastropods and caenogastropods since they present a "mixture" of plesiomorphic and apomorphic characters (Haszprunar 1988; Hickman 1998).

Recently, Salvador *et al*. (2014) published a work dealing with this family in southeastern Brazil, which brought to our attention one apparently unrelated species: *Calliotropis pataxo* Absalão, 2009 (p. 135, figs. 1C–D). This species had been therefore allocated by Absalão (2009) in the family Trochidae, but as we will argue here, it is a synonym of the seguenziid species *Carenzia trispinosa* (Watson, 1879).

The following abbreviations are used throughout the text: Shell measurements: H = shell height; D = shell greatest width; Institutional: IBUFRJ = Instituto de Biologia da Universidade Federal do Rio de Janeiro (Rio de Janeiro, Brazil); MNHN = Muséum National d'Histoire Naturelle (Paris, France); MNRJ = Museu Nacional do Rio de Janeiro (Rio de Janeiro, Brazil); NHMUK = Natural History Museum (London, UK).

All type material of *Carenzia trispinosa* was examied for the present study: lectotype NHMUK 1887.2.9.381 (designated by Quinn, 1983b); paralectotypes NHMUK 1887.2.9.382-4 (3 shells; from type locality). The type material of *Calliotropis pataxo* was never deposited in any of the institutions mentioned in Absalão (2009) and is considered lost (see also Pimenta *et al*. 2014): holotype: IBUFRJ 18035 (Campos Basin, BC Sul I

* Museu de Zoologia da Universidade de São Paulo. São Paulo, SP, Brazil.
** Staatliches Museum für Naturkunde Stuttgart. Stuttgart, Baden-Württemberg, Germany.
*** Eberhard Karls Universität Tübingen. Tübingen, Baden-Württemberg, Germany.
[1] Corresponding author: dccavallari@gmail.com

#73; 22°41′35″S 40°00′45″W; 1950 m; 22/Nov/2002); paratypes: IBUFRJ 18036 (Campos Basin, BC Sul II #83; 22°30′34″S 39°51′44″W; 1970 m; 16/Jun/2003), IBUFRJ 18037 (Campos Basin, BC Norte I #62; 21°52′41″S 39°46′17″W; 1650 m; 11/December/2002), MNHN unnumbered (Campos Basin, BC Norte I #46; 22°10′55″S 39°49′00″W; 1350 m; 10/December/2002), MNRJ 12848 (Campos Basin, BC Sul II #77; 22°36′12″S 39°58′22″W; 1670 m; 13/Jun/2003).

Originally described as *Seguenzia trispinosa* by WATSON (1879), the species was revised by QUINN (1983b) and allocated in his new genus *Carenzia* Quinn, 1983 (type species *Seguenzia carinata* Jeffreys, 1877, by original designation; Recent, Atlantic Ocean). The genus is diagnosed by its conical carinated shell (with a peripheral and a mid-whorl carina), with a convex base (usually with spiral threads), wide umbilicus and a quadrangular aperture with a V-shaped sinus at the suture (QUINN 1983b).

Carenzia trispinosa is known from the Western Atlantic Ocean, from North Carolina, USA, to off Río de la Plata, Argentina, living in depths of 684–2360 m (QUINN 1983a; RIOS 2009; SALVADOR ET AL. 2014). QUINN (1983b) argues that the Argentinian record might be a mistake, which would make the records from southern Brazil (SALVADOR ET AL. 2014) the species' southernmost range. Its type locality is at Challenger station 120 (8°37′S, 34°28′W), at a depth of 1115 m (WATSON 1979; QUINN 1983b).

The species is easily diagnosable from its congeners by being the most sculptured one, with two spiked spiral threads (Figs. 1–12). There is a good amount of morphological variation in the species regarding the strength and spacing of the spikes and the strength and even presence of the spiral threads on the base of the whorl (QUINN 1983b; SALVADOR ET AL. 2014). The tooth-like projection on the columellar region of the aperture is also a good diagnostic character (Fig. 9).

The specimens of "*Calliotropis*" *pataxo* (Fig. 13) are clearly juveniles of *Carenzia trispinosa*, in which the spiked spiral threads are starting to take shape. The paralectotypes (Figs. 7–8) and a growth series of *Carenzia trispinosa* (Figs. 9–12, but especially Figs. 11–12) are specimens on a similar growth stage as the holotype of "*Calliotropis*" *pataxo*. The tooth-like projection, a diagnostic feature as explained above, can also be seen in the holotype of "*Calliotropis*" *pataxo* (Fig. 13). Finally, the bulbous and glassy protoconch is of the same size and shape in "*Calliotropis*" *pataxo* (Figs. 13–14) and *Carenzia trispinosa* (Fig. 9; see also QUINN 1983b; SALVADOR ET AL. 2014). As such, *Calliotropis pataxo* Absalão, 2009 should be henceforth treated as a synonym of *Carenzia trispinosa* (Watson, 1879), family Seguenziidae.

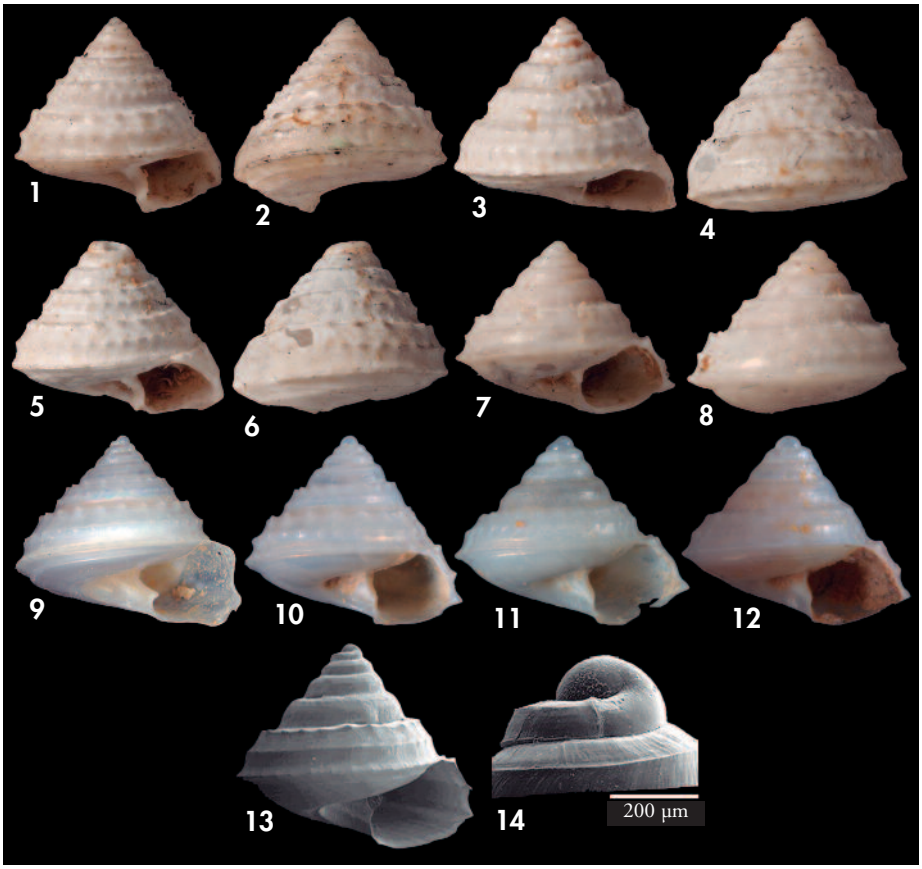
ACKNOWLEDGEMENTS

We are very grateful to Andreia Salvador (NHMUK) for providing the photos of the type specimens of *C. trispinosa*; to Cléo Oliveira (UFRJ) and Alexandre D. Pimenta (MNRJ) for trying to locate the type specimens of *C. pataxo*; and to Serge Gofas (Universidad de Málaga) for the review and comments. This work was partly supported by a doctoral grant from CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico, Brazil) to R.B.S. (process #245575/2012-0).

BIBLIOGRAPHY

ABSALÃO R.S. 2009. New small deep-sea species of Gastropoda from the Campos Basin off Brazil. *American Malacological Bulletin*, 27 (1/2): 133–140.

FISCHER R. 1992. Fossilien aus der Tongrube Sachsenhagen. *Arbeitskereis Paläontologie Hannover*, 20 (2): 33–53.



Figures 1, 2. *Carenzia trispinosa*, lectotype (NHMUK 1887.2.9.381; H= 3.7 mm, D= 3.9 mm). Figures 3, 4. *Carenzia trispinosa*, paralectotype #1 (NHMUK 1887.2.9.382-4; H= 3.3 mm, D= 3.6 mm). Figures 5, 6. *Carenzia trispinosa*, paralectotype #2 (NHMUK 1887.2.9.382-4; H= 3.1 mm, D= 3.6 mm). Figures 7, 8. *Carenzia trispinosa*, paralectotype #3 (NHMUK 1887.2.9.382-4; H= 2.1 mm, D= 2.7 mm). Figure 9. *Carenzia trispinosa*, adult specimen (off Espírito Santo, Brazil; MNHN unnumbered; H= 3.6 mm). Figure 10. *Carenzia trispinosa* (off Espírito Santo, Brazil; MZSP 116291; H= 3.1 mm). Figure 11. *Carenzia trispinosa* (off Espírito Santo, Brazil; MZSP 116290 spc#1; H= 2.3 mm). Figure 12. *Carenzia trispinosa* (off Espírito Santo, Brazil; MZSP 116290 spc#2; H= 2.0 mm). Figure 13. "*Calliotropis*" *pataxo*, holotype under SEM (IBUFRJ 18035; H= 1.3 mm, D= 1.4 mm). Figure 14. Same, protoconch detail under SEM. Figures 1-8, photo courtesy of the NHMUK. Figures 13, 14 reproduced from ABSALÃO (2009).

Figuras 1, 2. Carenzia trispinosa*, lectotipo (NHMUK 1887.2.9.381; H= 3,7 mm, D= 3,9 mm). Figuras 3, 4.* Carenzia trispinosa*, paralectotipo nº 1 (NHMUK 1887.2.9.382-4; H= 3,3 mm, D= 3,6 mm). Figuras 5, 6.* Carenzia trispinosa*, paralectotipo nº 2 (NHMUK 1887.2.9.382-4; H= 3,1 mm, D= 3,6 mm). Figuras 7, 8.* Carenzia trispinosa*, paralectotipo nº 3 (NHMUK 1887.2.9.382-4; H= 2,1 mm, D= 2,7 mm). Figura 9.* Carenzia trispinosa*, especimen adulto (frente a Espírito Santo, Brasil; MNHN sin númeración; H= 3,6 mm). Figura 10.* Carenzia trispinosa *(frente a Espírito Santo, Brasil; MZSP 116291; H= 3,1 mm). Figura 11.* Carenzia trispinosa *(frente a Espírito Santo, Brasil; MZSP 116290 especimen nº 1; H= 2,3 mm). Figura 12.* Carenzia trispinosa *(frente a Espírito Santo, Brasil; MZSP 116290 especimen nº 2; H= 2,0 mm). Figura 13.* "Calliotropis" pataxo*, holotipo al MEB (IBUFRJ 18035; H= 1,3 mm, D= 1,4 mm). Figura 14. Mismo ejemplar, detalle de la protoconcha al MBEB. Figuras 1-8, fotografías cortesía del NHMUK. Figuras 13, 14 tomadas de ABSALÃO (2009).*

HASZPRUNAR G. 1988. On the origin and evolution of major gastropod groups, with special reference to the Streptoneura. *Journal of Molluscan Studies*, 54: 367–441.

HICKMAN C.S. 1998. Superfamily Seguenzioidea. In Beesley, L.P., Ross, G.J.B. & Wells, A. (Eds): *Mollusca: the Southern Synthesis, Part B*. CSIRO Publishing, Melbourne, pp. 692–693.

JEFFREYS J.G. 1877. New and peculiar Mollusca of the Eulimidae and other families of Gastropoda, as well as of the Pteropoda, procured in the 'Valorous' Expedition. *Annals and Magazine of Natural History*, 4 (19): 317–339.

KOLLMANN H.A. & PEEL J.S. 1983. Paleocene gastropods from Nûgssuaq, West Greenland. *Grønlands Geologiske Undersøgelse, Bulletin*, 146: 1–115.

PIMENTA A.D., MONTEIRO J.C., BARBOSA A.F., SALGADO N.C. & COELHO A.C.S. 2014. Catalogue of the type specimens deposited in the Mollusca Collection of the Museu Nacional / UFRJ, Rio de Janeiro, Brazil. *Zootaxa*, 3780 (1): 51–107.

QUINN J.F. JR. 1983a. A revision of the Seguenziacea Verrill, 1884 (Gastropoda: Prosobranchia). I. Summary and evaluation of the Superfamily. *Proceedings of the Biological Society of Washington*, 96 (4): 725–757.

QUINN J.F. JR. 1983b. *Carenzia*, a new genus of Seguenziacea (Gastropoda: Prosobranchia) with the description of a new species. *Proceedings of the Biological Society of Washington*, 96 (3): 355–364.

RIOS E.C. 2009. *Compendium of Brazilian Sea Shells*. Evangraf, Rio Grande, 668 pp.

SALVADOR R.B., CAVALLARI D.C. & SIMONE L.R.L. 2014. Seguenziidae (Gastropoda: Vetigastropoda) from SE Brazil collected by the Marion Dufresne (MD55) expedition. *Zootaxa*, 3878 (6): 536–550.

WATSON R.B. 1879. Mollusca of H.M.S. 'Challenger' Expedition. III Trochidae, viz. the genera *Seguenzia*, *Basilissa*, *Gaza* and *Bombix*. *Journal of the Linnaean Society of London, Zoology*, 14: 586–605.