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A new *Euthria* from the deeper shelf of the Cape Verde Islands

(Prosobranchia: Buccinidae).

By

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With plate 14 and 2 maps.

Among the mollusk material collected by the "Calypso"-Expedition to the Cape Verde Islands in November 1959, which currently is under work by the authors, there are at least 2 euthriid species[1]), which cannot be identified with the known species of *Euthria*. One of these species is here described as new:

Euthria calypso n. sp.

Pl. 14 fig. 1-4.

Diagnosis: A species of the genus *Euthria* with medium-sized, fairly slender, spindle-shaped white shell with isolated brown streaks and mottlings and pure white aperture.

Description: Shell medium-sized, thick-shelled and heavy, spindle-shaped with straight to slightly convex-sided high spire. Protoconch with apparently 2 whorls (the protoconchs of all 4 type specimens are imperfect), teleoconch with 6-6½ whorls. Surface of the first 3 teleoconch whorls with strong axial waves, 10-11 per whorl, on the third and fourth whorl abruptly becoming obsolete. Surface besides this with some thin spiral threads which (in the least corroded holotype) are very prominent on the uppermost teleoconch whorl, on the following whorls weaker and in the last 2 or the body whorl are becoming nearly or completely obsolete. Between these threads very faint close-set spiral striae (which are visible under the lens only), towards the body whorl becoming obsolete or restricted to the subsutural area. Irregular growth lines covering the whole shell.

Aperture comparatively small, rounded-ovate, outer lip thick and strong with 9-18 parietal folds, which in one specimen are very faintly visible on the upper part of the aperture only. Columella strongly callous, ending in a weak tubercle. Directly behind or 8-10 mm behind the outer lip outer wall strongly

[1]) Of the other species there are only juveniles in the "Calypso" samples, so for the moment it must remain undescribed.

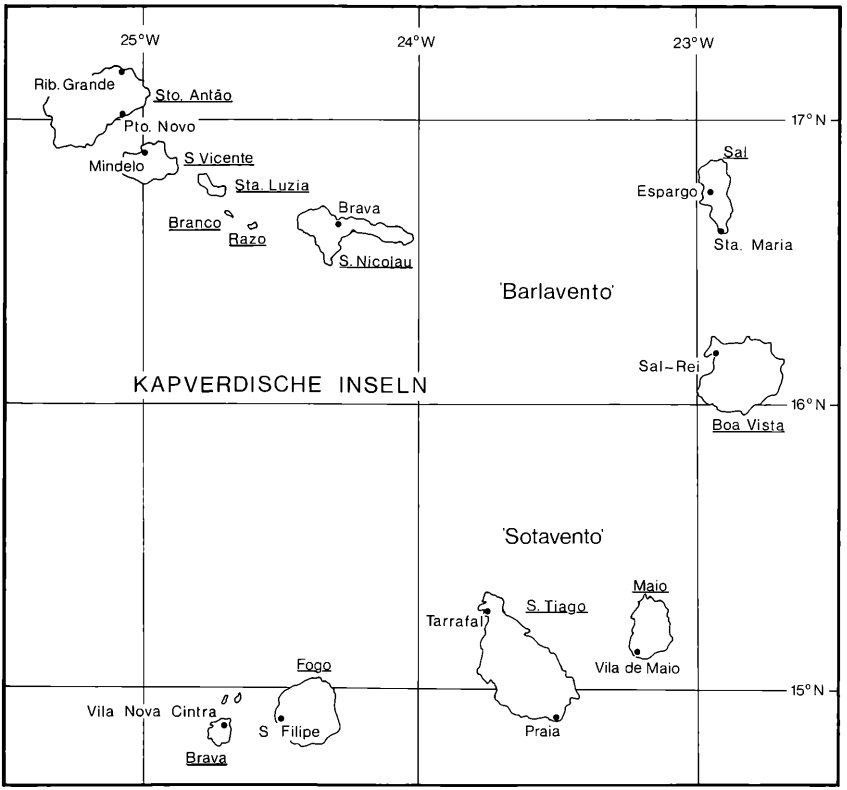

Fig. 1. Map of Cape Verde Islands.

thickened by a rounded varice typical for *Euthria,* in one specimen another weaker "varice" about 8 mm behind the first strong one. Siphonal canal short and tapering, turned backwards. Whorls in the upper, subsutural part slightly to moderately concave, in their lower half slightly convex. Suture well defined, but not very deep, only slightly irregular according the the growth lines. Fasciole not sharply separated from the body whorl. Suture raised on the last whorl above the outer lip.

Shell white to dirty white, with isolated small light brown to brown streaks or mottlings and interrupted spiral lines. Subsutural area with more or less regular brown spots. On the upper whorls interrupted spiral lines coinciding with the spiral threads. Fasciole dorsally with a brownish hue. Aperture pure white within, the very strong callous areas being light dirty greenish. In holotype margin of outer lip with brown spots inside, coinciding with the markings outside. Protoconch area not visibly different coloured, upper whorls in 3 of the 4 specimens considerably corroded and eroded. Periostracum thin and light brownish yellow, translucent.

Material and measurements Holotype: 44·6 × 20·3 mm (Muséum National d'Histoire naturelle Paris), "Calypso" Sta. 91 (15°34,5'N/23°11,5'W, 185 m, rocks and stones); paratypes: 33 × 15 mm (MNHN), same station; 43 × 19 mm (Zoologisches Institut und Museum Hamburg, ZIM 003), "Calypso" Sta. 64 (15°26,5'N/23°14'W, 100 m, coarse sand plus shells and shell grit); 34·8 × 16 mm (SMF 255839), "Calypso" Sta. 65 (15°37'N/23°09'W, 120-150 m, coarse sand with shells and calcareous algae), empty shell.

Locus typicus Cape Verde Islands, Maio, 15°34,5'N/23°11,5'W.

Derivatio nominis: The species is named after J. Y. COUSTEAU's research vessel "Calypso", from which it was dredged.

Biotope According to the "Calypso" dredgings on rocks and stones or on secundary hard substrate like shells etc. in depths between 100 and 200 m.

Distribution Cape Verde Islands, endemic. Known only from the southern part of the deeper shelf area between Boavista and Maio.

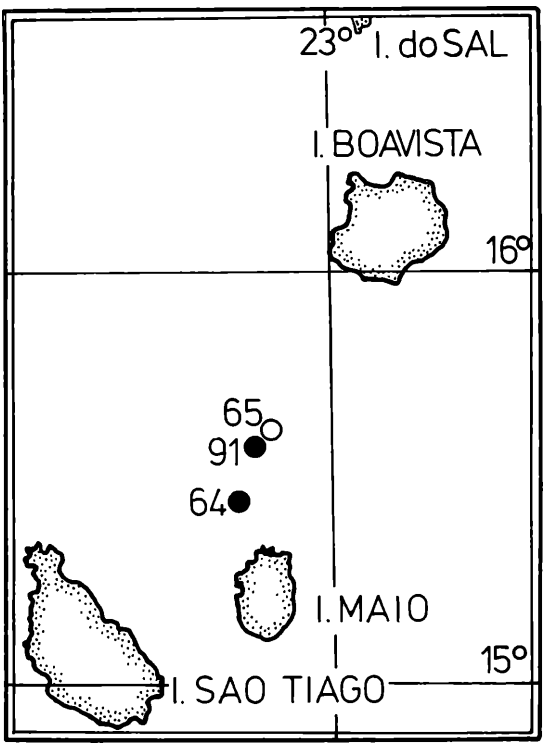

Fig. 2. Localities of *Euthria calypso* n. sp.

Discussion.

Besides the known species *Euthria adeles* DAUTZENBERG & FISCHER 1906, *E. boavistensis* COSEL 1982, *pulicaria* DAUTZENBERG & FISCHER 1906 and *rolani* COSEL 1982, this is the fifth endemic *Euthria* species described from the Cape

Verde Archipelago. Like *adeles* and *pulicaria* and in contradiction to *boavistensis* and *rolani*, *E. calypso* is an inhabitant of the deeper shelf.

From *E. pulicaria* the new species differs by its more slender shell, the lack of axial waves on the lower whorls and the body whorl, the smaller aperture, the longer siphonal canal and the suture, which in the body whorl is raised above the outer lip. In certain aspects the colour is resembling that of *pulicaria*, differences are seen in the fasciole, which in *pulicaria* lacks the dark spot, and the uppermost whorls, where in *pulicaria* the brownish pattern is more dense, whereas in *calypso* it is dissolved to scattered isolated mottlings.

E. adeles has a much smaller shell, other differences to *calypso* are the axial waves on all whorls, the shell shape and the colour.

In contradiction to the shallow water living *boavistensis* and *rolani* with their deep violet apertures, all 3 deep shelf species have in common the white aperture. Besides the colour, *boavistensis* and *rolani* are sufficiently distinguished from *calypso* by their shorter and stouter shells.

E. calypso bears a superficial resemblance to the mediterranean *cornea* (LINNÉ 1758), especially in shell shape, but the new species is distinguished by the larger protoconch (although it is smaller than *rolani*, see COSEL 1982), the subsutural area (which in *cornea* is depressed and in *calypso* not), the more rounded aperture and the colour of both outside and aperture.

Whereas *E. adeles* has been found yet on the shelf of Sta. Luzia only, *pulicaria* and *calypso* have both been dredged on the vast shelf area connecting the islands of Boavista and Maio. It is not yet known whether the latter 2 species might occur sympatrically; the smallest distance between localities of live *pulicaria* (SSW of Boavista) and live *calypso* (N of Maio) is about 45 km. It is assumable that, from their large protoconch, both species do not have a free swimming veliger stage. Theoretically, because of lack of deep water (in contrary to the situation between *calypso* and *adeles*) they could overlap or form intergrades on that shelf area, and, in spite of the differences, among the other capeverde-endemic *Euthria* the most closely related one to *calypso* is *pulicaria*. Further declarations cannot be made before more material of both species becomes available. — This fifth species of *Euthria* from Cape Verde Islands shows clearly that this archipelago is the distribution centre of the genus *Euthria*.

Summary A new species of the genus *Euthria* from the deeper shelf of the Cape Verde Islands, *E. calypso* n. sp., is described. From the other shelf living species, *E. adeles* DAUTZENBERG & FISCHER 1906 and *pulicaria* DAUTZENBERG & FISCHER 1906, it is distinguished by colour, shell shape and size (especially *E. adeles*), from the shallow water species *boavistensis* COSEL 1982 and *rolani* COSEL 1982 by the longer and more slender shell and the colour, among others the white aperture.

E. calypso and *pulicaria* both occur on the vast shelf area between Boavista and Maio, whereas *adeles* yet has been found only on the shelf of Sta. Luzia, which is separated from Boavista by great depths. These cannot be crossed by the capeverdian species of *Euthria*, which lack a free swimming veliger stage.

Zusammenfassung Eine neue *Euthria*-Art, *E. calypso* n. sp., vom tieferen Schelf der Kapverdischen Inseln wird beschrieben. Sie unterscheidet sich von den bisher bekannten Schelf-Arten *adeles* DAUTZENBERG & FISCHER 1906 und *pulicaria* DAUTZEN-

BERG & FISCHER 1906 durch Gehäuseform, Skulptur, Farbe und (besonders bei *E. adeles*) Größe, von den Flachwasser-Arten *boavistensis* COSEL 1982 und *rolani* COSEL 1982 durch Gehäuseform, Farbe (insbesondere die weiße Mündung) und Größe.

E. calypso kommt ebenso wie *pulicaria* auf dem weitläufigen Schelfareal zwischen Boavista und Maio vor (sympatrisches Vorkommen ist bisher nicht nachgewiesen), während *adeles* bisher nur vor Sta. Luzia gefunden wurde, einem Schelf, der von Boavista durch große Meerestiefen getrennt ist. Diese verhindern das Überqueren durch die kapverdischen *Euthria*-Arten, die aller Wahrscheinlichkeit nach kein freischwimmendes Veliger-Stadium haben.

Resumo: Descreve-se uma nova espécie pertencente ao género *Euthria*, *E. calypso* n. sp. recolhida numa zona profunda (180 m) entre as Ilhas do Maio e da Boavista no Arquipélago de Cabo Verde.

Distingue-se das outras espécies do mesmo género de profundidade existentes naquele arquipélago *E. adeles* DAUTZENBERG & FISCHER 1906 e *E. pulicaria* DAUTZENBERG & FISCHER 1906, pela forma da concha, tamanho, escultura e coloração. Das espécies do mesmo género mas de pouca profundidade também existentes naquelas ilhas, *E. rolani* COSEL 1982 e *E. boavistensis* COSEL 1982, distingue-se pelas maiores dimensões e forma mais esguia, pela coloração geral e pela cor branca da abertura.

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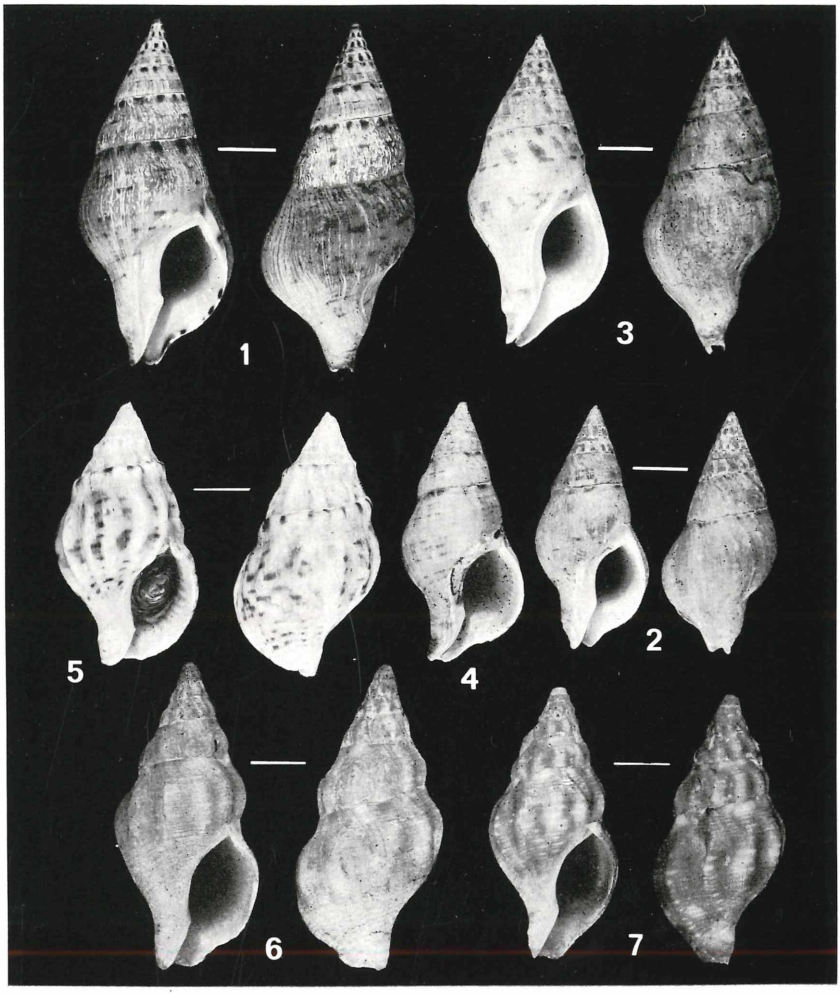
Explanation of plate 14.

Phot. Senckenberg-Museum (R. ALBERT).

Fig. 1-4. *Euthria calypso* n. sp., × 1/1.
1) holotype [MNHN Paris]; 2) paratype [MNHN Paris]; 3) paratype [ZIM 003]; 4) paratype [SMF 255839].

Fig. 5. *Euthria pulicaria* DAUTZENBERG & FISCHER, × 1/1.
Syntype [Musée Océanographique Monaco].

Fig. 6-7. *Euthria adeles* DAUTZENBERG & FISCHER, × 2/1.
Syntypes [Musée Océanographique Monaco].



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