

A new species of *Pachyathron* from the Caribbean coast of Colombia

(Prosobranchia: Marginellidae).

By

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With 1 figure and 1 plate.

Abstract: A new species of the genus *Pachyathron* GASKOIN 1853 from shallow water in the Santa Marta area (Colombia), *P. tayrona* n. sp., is described. From the other living species of the genus, *P. cypraeoides* (C. B. ADAMS) and *P. cassidiforme* GASKOIN, it is distinguished by the more slender shell, the higher spire, fewer teeth on the pillar wall, and the color pattern (chiefly the 8–9 spiral rows of brown marks on the last whorl).

All three species occur sympatrically in the southern Caribbean. Contrary to *P. cypraeoides* and *cassidiforme*, the new species lives on seagrass and coral bottoms in shallow water.

Kurzfassung: Es wird eine neue Art der Gattung *Pachyathron* GASKOIN 1853, *P. tayrona* n. sp., von seichten Gewässern aus dem Gebiet von Santa Marta (Kolumbien) beschrieben. Sie unterscheidet sich von den bisher bekannten rezenten Arten, *P. cypraeoides* (C. B. ADAMS) und *P. cassidiforme* GASKOIN, durch Gehäuseform, höheres Gewinde, weniger Leisten an der Parietalwand und Farbe (insbesondere die 8–9 Spirallinien von braunen Flecken auf der Endwindung).

Alle drei Arten kommen sympatrisch in der südlichen Karibik vor. Im Gegensatz zu *P. cypraeoides* und *cassidiforme* bewohnt die neue Art Seegras- und Korallbiotop in seichtem Wasser.

Pachyathron GASKOIN 1853 is a marginellid genus with two currently recognized living species, each limited to deeper water and distributed principally in the southern Caribbean. Among the mollusk material recently collected near Santa Marta, Colombia (DIAZ 1985, VELÁSQUEZ 1987), there is an unknown species of this genus, which is herewith described:

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Pachy bathron tayrona n. sp.

Pl. 1 figs. 1-3.

Diagnosis: A species of the genus *Pachy bathron* with medium-sized, fairly slender, low spirated, glossy, light tan to cream shell with eight to nine spiral rows of brown marks on the last whorl, pure white aperture, and nine to thirteen linear folds on the pillar wall.

Description: Shell medium sized (up to 11.5 mm total length), obovated, thick shelled, glossy, with a rather blunt, low but unconcealed spire. Nucleus rather blunt, tan, apparently with two whorls, and covered by a translucent callus. Teleoconch with three whorls. Suture perceptible under magnification as a fine irregular line. Surface of the spire may present some enamelous bulges along the suture. Body whorl smooth and polished; some fresh specimens (over 5.0 mm long) bear four to six fine longitudinal scissulations on the body whorl, which can be better recognized on the dorsal side and near the outer lip. Aperture rather narrow, extending about 6/7 of total length. It becomes anteriorly somewhat wider, twists lightly to the left and forms a distinct anterior notch, visible from dorsal view. A callous formation along the parietal wall is poorly developed but visible; it extends above the end of the aperture towards the upper suture of the penultimate whorl and is minutely pitted. There are nine to thirteen linear folds on the pillar wall, the upper ones becoming near or completely obsolete. These pillar folds continue undiminished into the interior of the columella. Outer lip thickened, minutely pitted and bearing 18 to 20 denticulations.

Shell tan to dirty white, highly polished. Spire occasionally with light brown to chestnut streaks or mottlings at the suture. Body whorl shows numerous microscopical, wavy or interrupted longitudinal brown lines, which become widely spaced towards the outer lip. Some side by side running and uninterrupted lines from simultaneously a single arrow-pointed mark at regular intervals. Some other lines are weaker colored and interrupted at the same intervals where the darker ones from the arrow-like flexures, leaving thus whitened spaces between two arrow series. Macroscopically this color pattern is expressed as eight to nine spiral rows of white mottlings alternating with brown stains on a tan background. Some rows are usually more conspicuously coloured than others. In young and worn specimens the color pattern fades away, leaving a light tan or pure white shell.

Material and measurements: Holotype: 10.2 × 5.8 mm (Senckenberg Museum-Frankfurt a.M. 305966), Bahía de Chengue, Colombia, *Thalassia* meadow, 0.5 m depth, collected alive; paratypes: 8.2 × 4.7 mm (SMF 305967), same locality, same habitat, collected dead; 9.4 × 5.2 mm (collection of the Instituto de Investigaciones Marinas de Punta de Betín, "INVEMAR", Santa Marta, MOL-895), same locality, same habitat, 1 m depth, collected alive; 11.5 × 6.3 mm (INVEMAR MOL-896), same locality, same habitat, 0.7 m depth, collected dead. Additional specimens in the personal collection of the authors, also from the Bahía de Nenguange (DÍAZ 1985: 169, pl. 26 fig. 11, as *Persicula* sp.) and the Santa Marta Bay.

Locus typicus: Bahía de Chengue, Parque Nacional Natural Tayrona, Caribbean coast of Colombia.

Derivatio nominis: The species is named after Tayrona National Natural Park, in which Bahía de Chengue is located and where the majority of specimens have been found. "Tayrona" is originally the name of the indian race, which inhabited this region.

Biotope: Live specimens were found only on turtle grass meadows (*Thalassia testudinum*) and under corals in shallow water to 3 m. Dead specimens are not uncommon from dredgings on coarse sand and dead coral bottoms in depths down to 17 m.

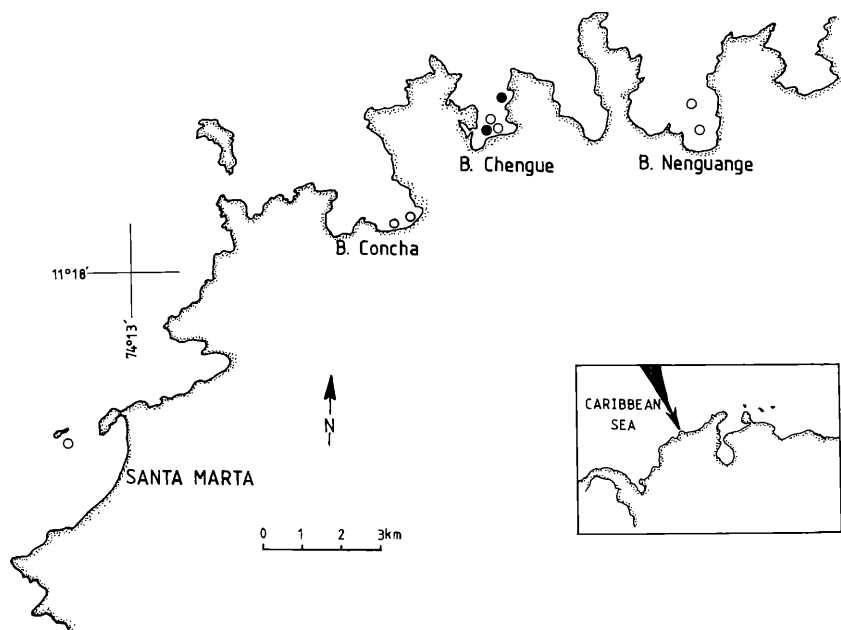


Fig. 1. Localities of *Pachybatrion tayrona* n. sp.; black dots: live collecting sites; white dots: dead specimens.

Distribution: Caribbean coast of Colombia, known only from the bays between Santa Marta and Bahía de Nenguange (fig. 1).

Discussion.

Besides the two previously known species, *Pachybatrion cypraeoides* (C. B. ADAMS 1845) (= *marginelloideum* GASKOIN 1853) and *P. cassidiforme* GASKOIN 1853 (both figured by GASKOIN 1853: pl. 12 figs. 1-6, and respectively by COOMANS 1972: figs. 1-4, and 1973: figs. 1-2), this is the third *Pachybatrion* species, and following the distributional trend, endemic to the lower Caribbean. Contrary to *cypraeoides* and *cassidiforme*, *P. tayrona* is an inhabitant of shallow water.

The new species differs from *P. cypraeoides* by its more slender shell, higher spire, fewer columellar folds (11 to 15 in *cypraeoides*) (see table 1), and color pattern. Contrary to *cypraeoides*, the outer lip of *tayrona* does not extend backward as far as the tip of the spire. There are eight to nine spiral rows of arrow-pointed marks over the last whorl of *tayrona*, whereas *cypraeoides* does not present more than four of these rows, but occasionally a system of wavy lines forming four spiral bands, which never occur in the new species.

The new species can be easily differentiated from *P. cassidiforme* by its slender shell, lack of many transverse ribs on the body whorl, fewer columellar teeth (12 to 14 in *cassidiforme*), outer lip not extended backward as far as the tip of the spire, and

Table 1. Differences in shell morphology between *P. tayrona* n. sp. (n = 12) and *P. cypraeoides* (C. B. ADAMS) (n = 17).

character	<i>tayrona</i>		<i>cypraeoides</i> *	
	range	mean	range	mean
Teeth on pillar wall	9-13	10.5	11-15	12.8
Shell length/width	1.69-1.82	1.72	1.51-1.79	1.59

*-After COOMANS (1972)

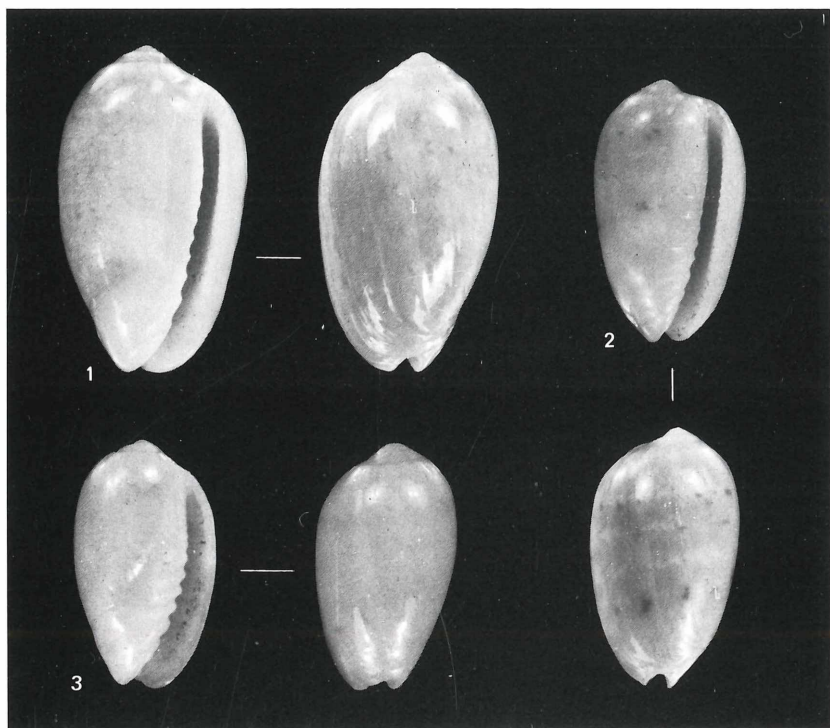
color pattern. *P. cassidiforme* is opaque white with three pale grey spiral bands over the last whorl.

Adult specimens of *P. tayrona* n. sp. seem to be significantly larger (over 9 mm total length) than *P. cypraeoides* and *cassidiforme*, each measuring about 7.4 and 6.5 mm respectively (COOMANS 1972).

P. cassidiforme is yet only known from the southernmost Lesser Antilles (St. Vincent, Grenadines), whereas *P. cypraeoides* occurs in Jamaica (type locality), the Netherland Antilles (Aruba, Bonaire, Curaçao) (COOMANS 1973), and possibly in the Gulf of Venezuela (TALAVERA & PRINCZ 1984). It is not yet known whether these two species might occur sympatrically. No records of both species exist from the Colombian Caribbean, where *P. tayrona* occurs, not even from the offshore Venezuelan islands (see PRINCZ 1982), which are near located to the Netherland Antilles, the region where *P. cypraeoides* seems not to be uncommon (see COOMANS 1972). It is assumable, according to the known limited distribution of the three species, that they do not have a free swimming veliger stage. Further declarations cannot be made before more records and studies on the life cycles of these species become available. This third species of *Pachy bathron* from the southern Caribbean indicates that this region is the distribution center of this genus.

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Explanations to plate 1.

Phot. Senckenberg-Museum (R. ALBERT).

- Figs. 1-3. *Pachy bathron tayrona* n. sp., 5/1.
Bahía de Chengue, Colombia.
1) holotype [SMF 305966];
2) paratype [SMF 305967];
3) young specimen [paratype SMF 305968].

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