On the status of *Columbella lafresnayi* Fischer & Bernardi, 1856 and *Columbella translirata* Ravenel, 1861 (Gastropoda: Columbellidae)

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ABSTRACT. Based on the examination of the type material, the status of *Columbella lafresnayi* Fischer & Bernardi, 1856 is revised and it is put forward as a valid species of *Cotonopsis* Olsson, 1942. *Columbella saintpairiana* Caillet, 1864 is placed into synonymy with this species. The species now usually called *Anachis lafresnayi*, should bear the name *Columbella translirata* Ravenel, 1861 and its position within the genus *Anachis* H. & A. Adams, 1853 is confirmed.

INTRODUCTION

The genus *Cotonopsis* had usually been treated as a subgenus of *Strombina* Mörch, 1852, but Jung (1989) treated it as a separate genus. It can mainly be distinguished by the absence of the dorsal hump and because the outer lip is not thickened, as opposed to *Strombina*. For a further detailed description of the genus and differences with related genera, we refer to Jung (1989: p.158). *Cotonopsis* was described from the Eastern Pacific. Some 12 Recent and 2 fossil species are known from this region. Houbrick (1983) was the first to report a species of *Cotonopsis* from the Caribbean region. At present, only two Recent species from the Caribbean are recognized: *C.* (*C.*) *argentea* (Houbrick, 1983) and *C.* (*C.*) *lindae* (Petuch, 1988). However, recently obtained deep-water specimens from Mr. Lamy, Guadeloupe, turned out to represent a third *Cotonopsis* species. As Houbrick (1983: 349-354) and Petuch (1988: 161-162) state their species are the only ones occuring in the Caribbean, we thought we were dealing with a yet undescribed species. However, searching the library and type collection of the MNHN revealed that our specimens belong to *C. lafresnayi* of which *C. saintpairiana* is a synonym.
The name *lafresnayi* is currently wrongly used to refer to an eastern American species of *Costoanachis* Sacco, 1890 due to the unclear figures in Fischer & Bernardi.

Abbreviations

MNHN: Museum National d'Histoire Naturelle, Paris, France
BM(NH): The Natural History Museum, London, UK
USNM: United States National Museum, Washington D.C., USA

SYSTEMATICS

Family **COLUMBELLIDAE** Swainson, 1840
Subfamily ***Pyreninae*** Suter, 1913
Genus ***Cotonopsis*** Olsson, 1942
Subgenus ***Cotonopsis*** Olsson, 1942
Type species by original designation: *Strombina (Cotonopsis) panacostaricensis* Olsson, 1942. Fossil.

Cotonopsis* (*Cotonopsis*) *lafresnayi (Fischer & Bernardi, 1856) comb. nov.
Figs 1-16

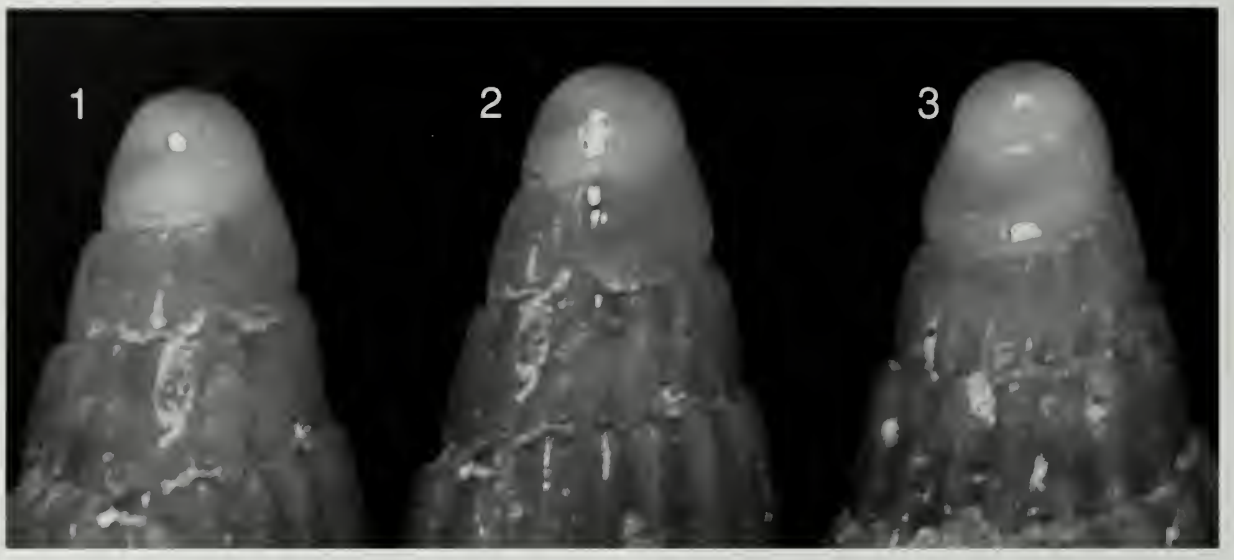
Columbella lafresnayi Fischer & Bernardi, 1856: 357, Pl. 12.
Columbella saint-pairiana Caillet, 1864: 279-282, Pl. 6 (syn. nov.).

Type material. *C. lafresnayi*: syntype MNHN (type locality: Marie-Galante, Guadeloupe); *C. saintpairiana*: syntype MNHN (type locality: Marie-Galante, Guadeloupe)

Diagnosis. Shell small for the genus, up to 20mm, fusiform, consisting of 6-8 whorls, sculptured with strong axial and very fine spiral threads. Axial ribs always present in upper whorls, but in some specimens they disappear on the lower teleoconch whorls. Protoconch smooth, not bulbous, consisting of 2 - 2 1/2 whorls, yet decollate in most specimens. Body whorl always sculptured with very fine spiral threads, becoming stronger on the anterior canal. Axial ribs sometimes absent, sometimes well-pronounced. In the latter case, they only reach about 2/3 of the body whorl and disappear where the spiral threads become stronger. Body whorl about 60% of total shell length. Suture straight, slightly impressed on upper teleoconch whorls. Anterior siphonal canal

almost straight, short. Outer lip smooth, slightly thickened. Inner lip with 7 or 8 small denticles, not extending into the aperture. Columella smooth, concave, without thickened gloss, twisted at canal constriction. Parietal ridge sometimes clearly present, sometimes hardly noticeable.

Shell colour and colour of the aperture pinkish to yellowish brown. Some specimens show a pattern of brown blotches.
Periostracum thin, light brown.



Figures 1-3
Cotonopsis lafresnayi (Fischer & Bernardi, 1856), Coll. D. Lamy, protoconch and transition to teleoconch of a specimen; different angles (x 20).

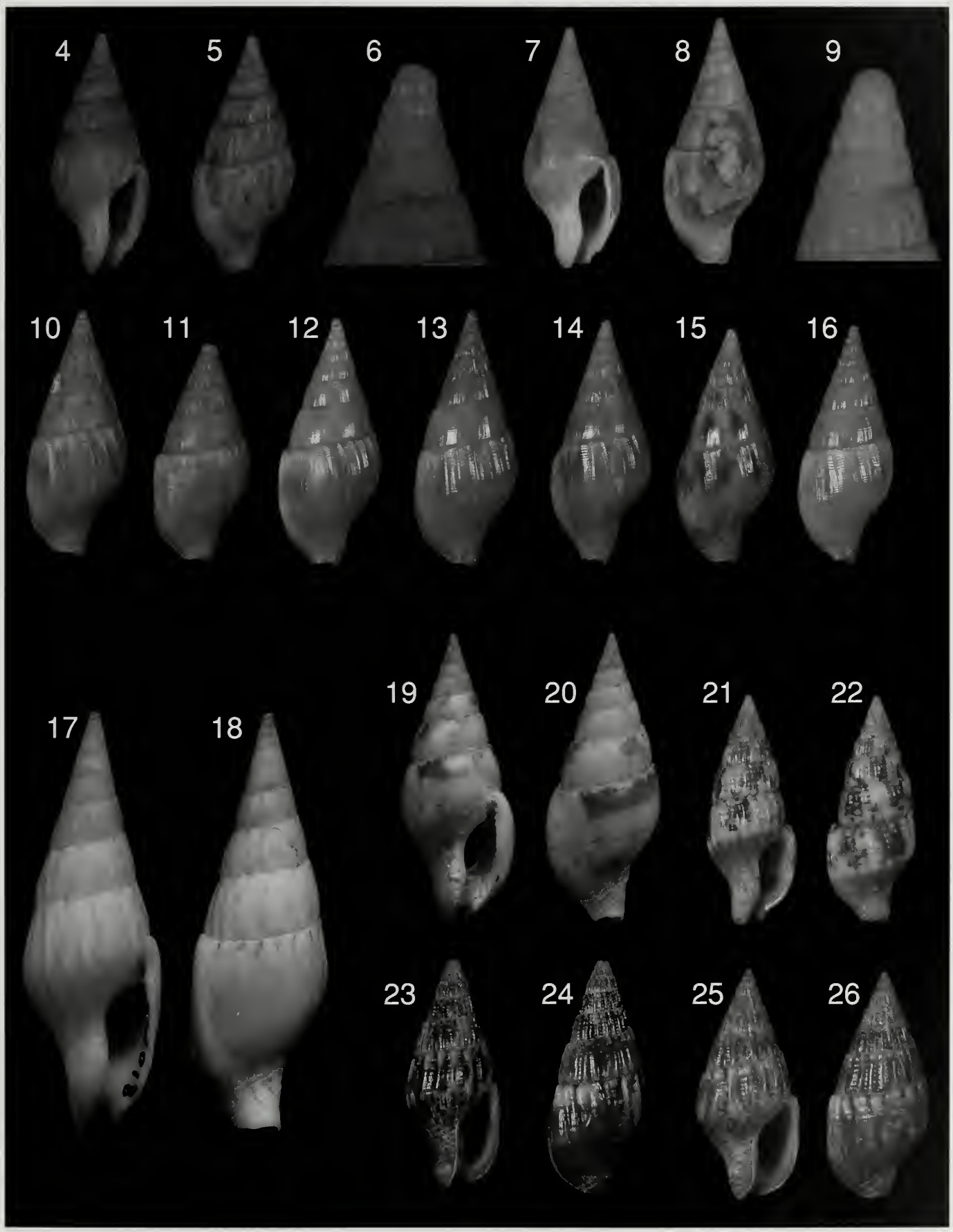
Range and Habitat. Only known from Guadeloupe. On fine, muddy sand at a depth of about 350m.

Comparison. *C.* (*C.*) *lafresnayi* is closest to *C.* (*C.*) *argentea*. However, the latter is much bigger (about twice the size of *C. lafresnayi)* and much more elongate. Moreover, the protoconch of *C. argentea* is bulbous and only consists of 1 1/2 whorls, as opposed to 2 – 2 1/2 in C. *lafresnayi*. *C. argentea* also shows a much longer anterior siphonal canal and a narrower aperture. An additional difference can be found in the shell colour as *C. argentea* is white with two bands of faded yellowish zig-zag marks. However, it is striking that entirely axially ribbed shells and shells with smooth lower teleoconch whorls occur in both species. Both species occur in deep water (down to 400 metres).

A second species occurring in the Caribbean region and of about the same size is *C. lindae*, yet it is slightly bigger and has got a smaller protoconch. Moreover, its suture is more impressed and it is much smoother: it has smooth whorls with only small faint axial ribs on the early spire whorls. Moreover, its inner lip shows numerous lirae extending into the aperture, whereas *C. lafresnayi* has small denticles not extending into the aperture. The shell colour of *C. lindae* is whitish cream with brown markings and a white aperture whereas *C. lafresnayi*'s aperture is in the base colour. *C. lindae* is only found at a depth of 70 metres, whereas *C. lafresnayi* lives much deeper at a depth of about 350 metres.

Figures 4-26

4-16. *Cotonopsis lafresnayi* (Fischer & Bernardi, 1856)
4-6. Syntype, MNHN, 16.2 mm; 7-9. Syntype of *C. saintpairiana* (Caillet, 1864), MNHN, 21.4 mm.
10-16. Guadeloupe. Variation within the species, Coll. D. Lamy (10. 18.2 mm, 11. 15.7 mm, 12. 18.3 mm, 13. 19.8 mm, 14. 18.2 mm, 15. 16.4 mm, 16. 17.4 mm.
17-18. *Cotonopsis argentea* (Houbrick, 1983). Holotype, USNM 810345, 39 mm; 19-20. *Cotonopsis lindae* (Petuch, 1988). Holotype, USNM 859942, 23 mm.
21-26. *Anachis translirata* (Ravenel, 1861)
21-22. Florida, USA, coll. K. Monsecour, 13.3 mm; 23-26. New York, USA, Coll. K. Monsecour (23-24: 14.2 mm, 25-26: 14.3 mm).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Discussion. While studying the type collection of the MNHN, we discovered a second neglected nominal species: *Columbella saintpairiana* Caillet, 1864. Although the type specimen of this species is much smoother than the type of *Cotonopsis lafresnayi*, it clearly belongs to the same species, showing all above-mentioned features. The only difference between both is that the lower teleoconch whorls stay axially ribbed in the type of *C. lafresnayi*, whereas they become smooth in the type of *C. saintpairiana*. *C. saintpairiana* is therefore placed in synonymy with *C. lafresnayi*, the more because the material obtained from Mr. Lamy contains perfect intermediates, with different strength of axial ribbing.

Remarks. The three *Cotonopsis* species from the Caribbean are only known from a limited range: *C. argentea* is only known from the Silver Bank Passage, North of the Dominican Republic (type locality); *C. lindae* is only known from off St. James, Barbados (type locality) and *C. lafresnayi* is only known from Guadeloupe. Due to these limited ranges combined with the depth they live at, it remains possible that more yet unknown species will be discovered.

Genus ***Anachis*** H. & A. Adams, 1853
Subgenus ***Costoanachis*** Sacco, 1890
Type species by secondary designation (Pace, 1902: 43): *Columbella (Anachis) turrita* Sacco, 1890.

Anachis* (*Costoanachis*) *translirata (Ravenel, 1861)
Figs 21-26

Columbella ocellata Reeve, 1859: Pl. 37, fig. 237 (non Gmelin, 1791).
Columbella translirata Ravenel, 1861: 42 (not figured).

Type material. *C. ocellata*: syntype BM(NH) (no type locality data); *C. translirata*: The type material, originally in Atlanta (Georgia, U.S.A.), was destroyed during the U.S. civil war. (type locality: off Charleston, South Carolina).

Diagnosis. Shell 10 up to 16mm, consisting of about 7 teleoconch whorls sculptured with numerous axial ribs and fine spiral grooves. Axial ribs on body whorl fade near the outer lip. Body whorl about 40 to 45% of shell length. Suture slightly impressed. Protoconch smooth, consisting of 3 1/2 to 4 whorls. Anterior siphonal canal short. Outer lip weakly thickened. Inner lip with a number of very small denticles, the number of which varies from specimen to specimen. Columella straight, with a slightly thickened gloss and many tiny denticles near the outer edge. Parietal ridge absent.
The shell colour is brown with a white subsutural band and a second white band at midwhorl. Aperture off-white, sometimes with a purplish overcast. Denticle row on columella brown. Specimens from southern localities are usually brighter.

Comparison. *A.* (*C.*) *translirata* can easily be distinguished from all other *Costoanachis* by its size (the largest of the subgenus), the number of axial ribs (highest of all *Costoanachis*) and the spiral grooves that are clearly visible all over the shell. For a more detailed comparison, we refer to Radwin (1977).

Range and habitat. From Grand Manan Island, New Brunswick, Canada to Key West, Florida. Reports from the Gulf of Mexico, as far as Yucatan are in need of confirmation.

Discussion. This species is generally known as *Anachis lafresnayi*, following Radwin's (1977) revision of the western Atlantic Columbellidae, in which he placed *A. translirata* in synonymy. However, as the name *lafresnayi* belongs to another species in the genus *Cotonopsis* (see above), we follow Emerson & Jacobson (1976) and consider *translirata* the valid name for this species. The other synonyms listed by Radwin (1977) are synonyms of *A.* (*C.*) *translirata*.

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