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**Santo Domingo Type Sections and Fossils**

BY

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PART I

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## Genus CONUS Linné

*Conus haytensis* Sowerby

## Plate 5, Figure 1

*Conus Haytensis* Sowerby, Quart. Jour. Geol. Soc. London, vol. 6, p. 44, 1849.

*Conus Haitensis* Gabb ( in part), Trans. Amer. Phil. Soc., vol. 15, p. 231, 1873.

*Conus Haitensis* Guppy, Quart. Jour. Geol. Soc. London, vol. 32, p. p. 528, 1876.

*Conus Haytensis* Brown and Pilsbry, Proc. Acad. Nat. Sci., Phila., p. 341, 1911.

Shell very large, heavy, spire slightly elevated, spirally striate, sub-coronate; last whorl with a sub-angulate shoulder and striate base; canal slightly reflexed. A large shell measures 110×58 mm. This species is akin to *C. molis*. It is found at Bowden and Gatun.

*Localities.* — (Exp'd '16) Bluff 1, Cercado de Mao; Zone E, Rio Gurabo at Los Quemados; Zone H, Rio Cano at Caimito.

*Conus haytensis* var. *gurabensis*, n. var.

## Plate 4, Figure 9

Shell large, solid; whorls about ten, the first three smooth, the two and a half following sculptured with many vertical, sub-equal riblets, interrupted by six small varices. The riblets and varices are crossed by close-set, fine revolving threads forming a somewhat cancellated ornamentation, quite different from the coronated spire of typical *haytensis*. The riblets then become obsolete, and the following three and a half whorls are ornamented only with the fine, delicate, sharply defined spirals. These decrease from fifteen or more and tend to become obsolete, so that the summit of the last whorl retains traces of only about five. Greatest diameter of shell 47 mm.

*Locality.* — (Exp'd '16) Zone B, Rio Gurabo at Los Quemados.

*Conus molis* Brown and Pilsbry

*Conus molis* Brown and Pilsbry, Proc. Acad. Nat. Sci. Phila. p. 343, pl. 23, fig. 1, 1911.

This large, Gatun species measures 124 × 71 mm. One of a number of our puzzling Dominican cones very kindly examined by Dr. Dall was pronounced by him to be the young of *C. molis*. This adds another species to those common to the Isthmus and Santo Domingo.

*Locality*. — (Exp'd '16) Bluff 3, Cercado de Mao.

*Conus Williamgabbi*, n. sp.

Plate 5, Figure 2

Shell large, solid, conic; whorls twelve, the first two nuclear, the following five forming the acute apex of the spire, remaining volutions of the spire very flat, each ornamented with four or more revolving spiral threads and with feebler growth-striæ. Body whorl roundly carinated at the shoulder; upper portion smooth except for almost obsolete revolving striations, lower third ornamented with rather irregular, wavy spirals. Columella slightly plicate. Length 65, width 45 mm.

This fine Cone was among a number of specimens of *C. haytensis* sent by Professor Gabb, but its extremely flat spire and difference of form show it to be distinct. It was collected by Professor Gabb in Santo Domingo and is named in his honor.

*Conus symmetricus* Sowerby

Plate 7, Figure 7

*Conus symmetricus* Sowerby, Quart. Jour. Geol. Soc. London, vol. 6, p. 44, pl. 9, fig. 1, 1849.

*Conus haitensis* Gabb (in part), Trans. Amer. Phil. Soc., vol. 15, p. 231, 1873.

Shell turbate, short and broad, spire short, spirally striate; body whorl sharply carinate at the shoulder, ornamented with granulose spiral threads alternating with one or two finer smooth

spirals; the canal is slightly produced and a trifle reflexed. Length of shell 29, greatest width 18 mm.

*Locality.* — (Exp'd '16) Zone E, Rio Gurabo at Los Quemados.

*Conus symmetricus* variety *domingensis* Sowerby

Plate 4, Figure 10

*Conus Domingensis* Sowerby, Quart. Jour. Geol. Soc. London, vol. 6, p. 45, 1849.

*Conus Haitensis* Gabb (in part), Trans. Amer. Phil. Soc., vol. 15, p. 231, 1873. Not. *C. haytensis* Sowerby.

*Conus Haitensis* Guppy (in part), Quart. Jour. Geol. Soc. London, vol. 32, p. 528, 1876.

*Conus domingensis* Dall, Trans. Wagner Inst. Sci., vol. 3. pt. 6, p. 1583, 1903.

*Conus domingensis* Brown and Pilsbry, Proc. Acad. Nat. Sci., Phila., p. 341, 1911.

Gabb and Guppy united Sowerby's *C. domingensis* with *C. symmetricus*. A specimen of the former species loaned by Dr. Dall from the National Museum shows it to be a flat-topped, broader shouldered mutation of *C. symmetricus*. This elegantly sculptured Cone is very common in Santo Domingo and is found at Bowden and Gatun.

*Localities.* — (Exp'd '16) Zones A, B, C, D, E, F, Rio Gurabo at Los Quemados; Bluff 1, Cercado de Mao.

*Conus symmetricus* variety *semiobsoletus*, n. var.

Plate 7, Figure 8

Shell resembling *C. symmetricus* in form but larger and with the granular spirals obsolete on the upper half of the body whorl. Length 39, greatest width 24 mm.

The specimens were collected by Professor Gabb in Santo Domingo.

*Conus Sewalli*, n. sp.

Plate 5, Figure 3; Plate 6, Figure 3

Shell rather large, sub-pyriform, spire short, acute; post-

nuclear whorls about eleven, the first eight being spirally striate and delicately coronate, the last three are slightly channeled and strongly striated spirally; body whorl roundly angulate at the shoulder whence the sides slope convexly to the base, the ornamentation is limited to the lower two-thirds of the whorl and consists of beautiful, granular, spiral threads, the granules resembling the beads of a necklace; margin of outer lip nearly straight; posterior sinus rather deep; canal nearly straight. Length of largest shell 59, greatest width 33 mm.

Dr. Dall most kindly examined this shell and noted that it had no representative in the collection of the National Museum. Apparently it is new.

I take the greatest pleasure in naming this, our most exquisite Cone, in honor of Mr. Arthur Sewall of Philadelphia as a token of regard and gratitude for his encouragement and valuable help in assisting the progress of the Expedition.

*Localities.* — (Exp'd '16) Bluff 1, Cercado de Mao; Zone E. Rio Gurabo at Los Quemados.

*Conus catenatus* Sowerby

Plate 5, Figure 4; Plate 6, Figures 1, 2

*Conus catenatus* Sowerby, Quart. Jour. Geol. Soc. London, vol. 6, p. 45, pl. 9, fig. 2, 1849. (Young shell).

*Conus interstinctus* Guppy, Quart. Jour. Geol. Soc., vol. 22, p. 288, pl. 16, fig. 3, 1866. (Adult shell).

*Conus catenatus* Gabb, Trans. Amer. Phil. Soc., vol. 15, p. 230, 1873.

*Conus catenatus* Guppy, Quart. Jour. Geol. Soc., vol. 32, p. 527, 1876.

Heneken's shell chanced to be very young and Sowerby founded on it the species *catenatus*. Later Guppy described an adult specimen from Jamaica as *C. interstinctus*. We have a series of the following sizes: 30×15; 40×20; 57×27; 85×40 mm. The smallest of these is very like the original type figured by Sowerby. The largest Dr. Dall kindly compared with the type of Guppy's *interstinctus* and found it to be identical.

*Localities.* — (Exp'd '16) Zone A, Rio Gurabo at Los Quemados; Guayubin to Mao road at the ford of Rio Cana.

*Conus stenostomus* Sowerby

Plate 6, Figure 4

*Conus stenostoma* Sowerby, Quart. Jour. Geol. Soc. London, vol. 6, p. 44, 1849.

*Conus stenostoma* Guppy, *Id.* vol. 22, p. 287, pl. 16, fig. 2, 1866.

*Conus stenostoma* Gabb, Trans. Amer. Phil. Soc., vol. 15, p. 230, 1873.

*Conus catenatus* Guppy (in part), Quart. Jour. Geol. Soc. London, vol. 32, p. 527, 1876. Not *C. catenatus* Sowerby.

*Conus stenostomus* Dall, Trans. Wagner Inst., vol. 3, p. 6, p. 1583, 1903.

Shell characterized by a sharply angulated shoulder, narrow aperture, and profoundly sulcate posterior sinus. Our largest shell measures 62 × 34 mm.

This species has also been found at Bowden.

*Localities.* — (Exp'd '16) Bluff 1, Cercado de Mao; Zone B, Rio Gurabo at Los Quemados.

*Conus consobrinus* Sowerby

Plate 6, Figures 5, 6

*Conus consobrinus* Sowerby, Quart. Jour. Geol. Soc. London, vol. 6, p. 45, 1849.

*Conus consobrinus* Gabb (in part), Trans. Am. Phil. Soc., vol. 15, p. 229, 1873.

*Conus consobrinus* Guppy, Geological Magazine, London, New Series, Decade 2, vol. 1, pl. 17, fig. 3, 1874.

*Conus consobrinus* Guppy, Quart. Jour. Geol. Soc., vol. 32, p. 527, 1876.

*Conus consobrinus* Brown and Pilsbry, Proc. Acad. Nat. Sci. Phila., p. 341, 1911.

*Conus (Chelyconus) consobrinus* Cossmann, Journ. de Conchyliologie, vol. 61, p. 46, pl. 3, figs. 17, 18, 1913.

This was one of the nine new Cones collected by Heneken in 1849. It has also been found at Bowden and Gatun.

*Localities.* — (Exp'd '16) Zones E and G, Rio Gurabo at Los Quemados.

*Conus granozonatoides*, n. sp.

Plate 6, Figure 7

Shell biconic, elongated, spire prominent, its earlier whorls

coronate; whorls about thirteen, the nuclear smooth; the first eight post-nuclear ornamented by a row of many close-set tubercles near the base of each volution and, posterior to the tubercles, by several incised spiral lines, the tubercles become obsolete rather suddenly on the third volution from the last, but the spirals continue, becoming fainter until they fade out completely on the last whorl; body whorl with a roundly angulated shoulder whence it tapers to the base, marked by fine arcuate growth lines with occasional coarser resting stages; spiral sculpture of coarse, slightly granular threads strongest anteriorly, obsolete posteriorly; aperture narrow, outer lip when complete notched at the summit, then swinging forward in a broad curve, retracted at the base. Length of shell, 55, greatest width 24 mm.

Dr. Dall has very kindly examined this cone and pronounced it near Guppy's *C. granozonatus*.

*Localities.* — (Exp'd '16) Bluff 1, Cercado de Mao; Zones A and G, Rio Gurabo, near Los Quemados.

*Conus gracilissimus* Guppy

Plate 6, Figure 8

*Conus gracilissimus* Guppy, Quart. Jour. Geol. Soc. London, vol. 22, p. 288, pl. 16, fig. 4, 1866.

*Conus Orbigny* Gabb, Trans. Amer. Phil. Soc., vol. 15, p. 230, 1873.  
Not *C. Orbigny* Audouin 1830.

*Conus gracilissimus* Guppy, Quart. Jour. Geol. Soc. London, vol. 32, p. 527, 1876.

*Conus gracilissimus* Dall, Trans. Wagner Inst. vol. 3, pt. 6, p. 1583.

*Conus gracilissimus* Cossmann, Journ. de Conchyliologie, vol. 61, pl. 4, fig. 13, 1913.

The three Cones, *C. gracilissimus*, *granozonatus* and *conso-brinus*, are very closely related; and various authors have placed one or the other in synonymy. This is but one case of the intergradation of forms which is highly characteristic of the Dominican shells. One must either run very dissimilar forms together, as did Gabb, or to some extent ignore connecting links.

*C. gracilissimus* is widely distributed. Guppy found it at

Cumana, in the Manzanilla beds of Trinidad and at Bowden. Our shell measures  $40 \times 16$  mm. It was collected by Gabb in Santo Domingo.

*Conus tortuosostriatus* Toula

Plate 6, Figure 9

*Conus (Chelyconus) tortuosostriatus* Toula, Jahrb. der K—K. Geol. Reichsanstalt Wien, vol. 61, p. 508, pl. 31, fig. 22, 1911.

*Conus (Hemiconus) tortuosostriatus* Cossmann, Journ. de Conchyliologie, vol. 61, p. 40, pl. 3, figs. 28, 29, 1913.

Shell slender, graceful; spire elevated; whorls about ten, the first two smooth, nuclear; post-nuclear whorls sharply carinate, denticulate, marked by strong arcuate growth-lines and several incised spiral lines. Body whorl ornamented with about twenty, narrow, flat spiral bands with narrower interspaces. Length 22, width 8 mm.

This pretty Cone is very near to *C. gracilissimus*, differing chiefly in the proportion of length to breadth, the ratio being approximately 3 to 1 against 2 to 1.

Localities. — (Exp'd '16) Zones G and E, Rio Gurabo at Los Quemados.

*Conus ornatus* (Gabb's name), n. sp.

Plate 6, Figure 10

*Conus ornatus* Gabb, MS. Specimen No. 7671 Cornell University Museum. No description found.

Shell of medium size, solid, spire very low, each of its volutions marked with four strong spiral threads and faint arcuate growth lines; body whorl sharply carinate, beneath the carina the sides slope slightly convexly and steeply to the base; ornamentation of about twenty-one very sharply incised spiral lines, obsolete on the upper fourth of the whorl. Length of shell 45, greatest width 27 mm.

Our specimen was collected by Gabb in Santo Domingo and



labelled *C. ornatus*. I fail, however, to find any published description of this species.

*Conus proteus* Hwass

Plate 6, Figure 11

*Conus proteus* Hwass, Enc. Meth. vers, 1 pt. 2, p. 682, 1789.

*Conus proteus* ? Gabb, Trans. Amer. Phil. Soc., vol. 15, p. 232, 1873.

? *Conus Berghausii* ? Gabb, *Id.* p. 232. Not of Hoernes, Foss. Wiener Beck. pl. 1, fig. 3.

*Conus proteus* Dall, Trans. Wagner Inst., vol. 3, pt. 1, p. 26, 1890.

Like the recent *C. proteus*, our fossils have four or five revolving rows of orange colored dashes, including less conspicuous, fainter, intervening rows. The proportions of one of our shells are like the recent, measuring 42 × 23 mm. But that figured is longer, measuring 51 × 27.

This species has lived on almost without change since the blue clays were accumulating on the sea floor. It is also found in the Florida Pliocene.

*Localities.* — (Exp'd '16) Zone H, Rio Cana at Caimito; Zone D, Rio Gurabo at Los Quemados.

*Conus Vanattai*, n. sp.

Plate 6, Figure 12

Shell solid, turbate, the length twice the width; remaining whorls seven, their summits marked by arcuate growth-lines, not striate, slightly, broadly channeled; body whorl sharply carinate at the shoulder whence the sides taper evenly to the base, body sculptured with twelve raised, revolving threads 3 mm. apart at the center, closer at the base. Length of shell 40, greatest width 20 mm.

This shell was collected by Professor Gabb in Santo Domingo and thought by him to be a mutation of *C. planiliratus*, but it is evidently distinct. It is named in honor of Dr. E. G. Vanatta of the Philadelphia Academy.

*Conus furvoides* Gabb

Plate 7, Figures 1, 2

*Conus furvoides* Gabb, Trans. Amer. Phil. Soc., vol. 15, p. 232, 1873.

Shell elongate, nearly or quite smooth, sometimes with a few wavy spirals anteriorly, spire acute, rather low, with the later whorls deeply channeled. Length 41, width 20 mm. Apparently this is Gabb's unfigured species.

One of our specimens from Cercado retains its delicate linear, revolving color pattern, of gray lines on a white background. The color scheme is of the general style of *C. lignarius* Reeve.

*Localities.* — (Exp'd '16) Bluff 2, Cercado de Mao; Zones H and I, Rio Cana at Caimito.

*Conus Olssoni*, n. sp.

Plate 7, Figure 3

Shell of medium size, very elongate, the length considerably more than twice the width; spire one-twelfth of the total length. Whorls eleven, the first two forming the protoconch rise abruptly above the following whorls, on which they rest like a minute but striking pinnacle visible to the unaided eye. The three whorls following the protoconch are flattened and discoidal, the subsequent six slope more rapidly towards the shoulder angle of the body whorl, they are convexly rounded between the deeply impressed suture lines, and marked with slightly arcuate, oblique growth-lines. The specimen described shows only very faint, nearly obsolete striæ on the spire. Body whorl roundly angulated at the shoulder, thence tapering evenly and gradually to the base, smooth except for a few irregular, more or less obsolete basal striæ. Length 38, width 16 mm.

This species is named in honor of Mr. Axel Olsson, by whom it was collected.

*Locality.* — (Exp'd '16) Zone D, Rio Gurabo at Los Quemados.

*Conus cercadensis*, n. sp.

Plate 7, Figure 4

Shell short, broad, solid, ficiform; nuclear whorls two; first four post-nuclear whorls with a well-defined, slightly overhang-

ing carina; subsequent four or five whorls broadly channeled, the channeling being most apparent on the summit of the last whorl; spire with no trace of spiral striæ, but sharply marked by arcuate growth-lines; body whorl markedly convex below the shoulder carina, giving the shell its characteristic fig-shaped form; the sculpture of the last whorl consists of a varying number of spiral ridges, strongest anteriorly, fading out more or less posteriorly; some adult shells have the upper half of the body whorl nearly or quite smooth, while in others it is striate to the shoulder; aperture rather wide, posterior sinus deep. The relative proportion of breadth to height varies as follows:  $27 \times 16$ ,  $28 \times 18$ ,  $29 \times 20$ ,  $35 \times 23$  mm.

Our specimens are identical with some labelled by Gabb *C. cedo-nulli*? But they are not the true *C. cedo-nulli* of Hwass.

*Locality.* — (Exp'd '16) Bluff 3, Cercado de Mao. (Abundant and characteristic.

*Conus Kitteredgei*, n. sp.

Plate 7, Figures 5, 6

Shell with a short, acute, very concave spire, one-seventh the length of the shell, which is less than twice the width; earliest two post-nuclear whorls faintly crenulate, the following three slightly carinate; a channel appears on the penultimate volution of the spire and on the last becomes well marked; spiral striæ absent, the spire being smooth except for arcuate growth-lines; body whorl roundly angulated at the shoulder, the sides sloping convexly to a rather broad base; upper two-fifths of the last whorl typically nearly smooth, showing only faint, obsolete spiral striations; lower three-fifths with well-spaced, narrow ridges; aperture wide; outer lip sharp; posterior notch deep. Length of shell 31, greatest width 17 mm.

We have specimens with the ridges extending almost or quite to the shoulder of the body whorl (fig. 6). These appear to be a variety. They were found in the same zones as the typical shells.

This species is closest to *C. cercadensis*, from which it can be distinguished by the concave spire and the much less convexity of the body whorl below the shoulder. They were analogous species, — *C. cercadensis* being characteristic of the Mao and *C. Kitteredgei* of the Cana Rio.

I take great pleasure in naming this species in honor of Mr. and Mrs. Kitteredge of Hastings-on-the-Hudson.

*Localities.* — (Exp'd '19) Zones H and I, Rio Cana at Caimito.

### *Conus recognitus* Guppy

Plate 7, Figure 9

*Conus solidus* Sowerby, Quart. Jour. Geol. Soc. London, vol. 6, p. 45, 1849. Not *C. solidus* Sowerby, Zool. Proc. 1841: Conch. Illust. *Conus* No. 76, pl. 56, fig. 56.

*Conus solidus* Guppy, Quart. Jour. Geol. Soc., vol. 22, p. 287, pl. 16, fig. 1, 1866.

*Conus recognitus* Guppy, Proc. Sci. Assoc. Trinidad, p. 171, 1867.

*Conus pyriformis* Gabb, Trans. Amer. Phil. Soc., vol. 15, p. 229, 1873. Not *C. pyriformis* Reeve, Conch. Icon., vol. 1, pl. 13, fig. 70, 1843.

*Conus recognitus* Guppy, Quart. Jour. Geol. Soc. London, vol. 32, p. 527, 1876.

*Conus recognitus* Dall, Trans. Wagner Inst. Sci., vol. 3, pt. 6, p. 1583, 1903.

The recent *C. pyriformis* is the descendant of migrants through the Isthmus to the West Coast.

*Conus recognitus* also occurs at Bowden.

*Localities.* — (Exp'd '16) Bluff 3, Cercado de Mao; Zone D, Rio Gurabo at Los Quemados; Zones H and I, Rio Cano at Caimito.

### *Conus planiliratus* Sowerby

Plate 7, Figure 10

*Conus planiliratus* Sowerby, Quart. Jour. Geol. Soc. London, vol. 6, p. 44, 1849.

*Conus planiliratus* Guppy, *Idem*, vol. 22, p. 287, pl. 16, fig. 7, 1866.

*Conus planiliratus* Gabb (in part), Trans. Amer. Phil. Soc., vol. 15, p.

230, 1873.

*Conus planiliratus* Guppy, Quart. Jour. Geol. Soc. London, vol. 32, p. 528, 1876.

*Conus planiliratus* Dall, Trans. Wagner Inst. Sci., vol. 3, pt. 6, p. 1583, 1903.

Cf. *Conus planiliratus* Cossmann, Journ. de Conchyliologie, vol. 61, p. 48, pl. 3, figs. 25, 26, 27, 1913.

Shell characterized by its concave spire and last whorl sculptured with twenty prominent bands, alternating with sulcate interspaces lightly striated longitudinally. Length 34, width 15 mm.

Sowerby's recent *C. planiliratus* (Proc. Zool. Soc., p. 255, pl. 22, fig. 1) is altogether different. The fossil species occurs in the Caroni Series, Trinidad, and at Bowden. The type locality is Santo Domingo. The recent *C. Stearnsii* Conrad may be a descendant.

#### *Conus marginatus* Sowerby

Plate 7, Figure 11

*Conus marginatus* Sowerby, Quart. Jour. Geol. Soc. London, vol. 6, p. 44, 1849.

*Conus marginatus* Gabb, Trans. Amer. Phil. Soc., vol. 15, p. 230, 1873.

*Conus marginatus* Guppy, Quart. Jour. Geol. Soc. London, vol. 32, p. 528, pl. 29, fig. 5, 1876.

Cf. *Conus (Chelyconus) marginatus* Cossmann, Journ. de Conchyliologie, vol. 61, pp. 44-46, pl. 3, figs. 14, 15, 1913.

Shell small, broad and short, spire high, carinate, not coronate; last whorl deeply sculptured with about sixteen alternating, narrow bands and grooves, the latter marked with longitudinal striæ. Length 19, width 11 mm.

The nearest ally is *C. gaza*. Guppy reported *C. marginatus* from the Manzanilla beds, Trinidad.

*Localities.* — (Exp'd '16) Zones D and G, Rio Gurabo at Los Quemados.

#### *Conus gaza* Johnson and Pilsbry

Plate 7, Figure 12

*Conus gaza* Johnson and Pilsbry, Proc. Acad. Nat. Sci. Phila., p. 342, pl. 23, figs. 2, 3, 1911.

Shell biconic, spire about one-third of the total length, diameter one-half the length; post-nuclear whorls about nine, lower edge of each carinate, last whorl sharply angulate at the shoulder, sculptured with twenty to twenty-two flattened ridges alternating with grooves striated by lines of growth. Length 25, width 14 mm.

Our specimens show but one tuberculated post-nuclear whorl. This is said to be characteristic of the Dominican representation of the species, while the Isthmian have two tuberculate whorls immediately following the nuclear.

*Locality.* — (Exp'd '16) Bluff 1, Cercado de Mao.

*Conus Bonaczyi* Gabb

Plate 7, Figure 13

Shell small, its sides curved, tapering gradually to the base; shoulder angle rounded, spire low, acute, its sides concave; body whorl ornamented by alternating grooves and flat or slightly rounded ridges, the grooves are marked by longitudinal growth-striæ but the ridges are smooth. Length of shell 25, greatest width 11 mm.

This species has never before been figured and we have no metatype, but our shells answer to the description of *C. Bonaczyi*.

*Locality.* — (Exp'd '16) Zone G, Rio Gurabo at Los Quemados.

*Conus Karlschmidti*, n. sp.

Plate 7, Figure 14

Shell of moderate size, length just twice the width; spire prominent, acute, one-fourth the total length in younger shells, less prominent in adult specimens; post-nuclear whorls about nine, of these the first two and a half are very finely coronate

and the first four carinate, the subsequent spiral volutions are marked by spiral threads and by arcuate growth-lines; body whorl sharply angulate at the shoulder, from which the sides slope slightly convexly to the base, ornamented from shoulder to base by close-set spiral threads, sub-equal and numbering about thirty-five. Length of largest shell 32, greatest width 16 mm.

The young and relatively higher spired shells approach *C. imitator* Brown and Pilsbry, but differ in sculpture. This species is dedicated to Mr. Karl Schmidt, by whom it was found.

*Localities.* — (Exp'd '16) Bluff 1. Cercado de Mao; Zone E, Rio Gurabo at Los Quemados.

#### *Conus Dalli* Toula

Plate 7, Figure 15

Cf. *Conus spec.* Toula, Jahrb. der K—K. Geol. Reichsanstalt, Wien, vol. 58, p. 710, pl. 25, fig. 18, 1908. (Fragment).

*Conus Dalli* Toula, *Idem*, vol. 61, p. 508, pl. 31, fig. 23 a-d, 1911.

*Conus (Lithoconus) Dalli* Cossmann, Journ. de Conchyliologie. vol. 61, p. 41, pl. 3, figs. 30, 31, pl. 4, figs. 7, 8, 1913.

Shell conic, whorls about nine, the nuclear smooth; subsequent volutions of the spire marked by three or four impressed spiral lines and arcuate growth-lines. Shoulder of body whorl very sharply carinate; upper portion nearly smooth, lower portion ornamented with a varying number of narrow, flat bands tending to alternate with fine spiral threads. Length 23, width 11 mm. Collected by Gabb in Santo Domingo.

#### Genus SURCULA H. and A. Adams

##### *Surcula jaquensis* Sowerby

Plate 8, Figure 1

*Pleurotoma Jaquensis* Sowerby, Quart. Jour. Geol. Soc. London, vol. 6, p. 51, 1849.

*Turris (Surcula) Henekeni* Gabb (in part), Trans. Amer. Phil. Soc., vol. 15, p. 207, 1873. Not *T. Henekeni* Sowerby.

*Pleurotoma Henekeni* Guppy (in part), Quart. Jour. Geol. Soc., vol. 32, p. 526, 1876.

Shell with about eight whorls, marked posteriorly by a broad