

## Conchylia

Inhalt von / Contents of 50 (1-4), June 2019

### Inhalt/Contents

1

MORRISON, H. M.: Description of a New Species of *Conus* (Gastropoda: Conidae) from the Montebello Islands of the North West of Western Australia

THACH, N. N.: *Amphidromus huynhanhi*, a New Species (Gastropoda: Camaenidae) from Laos

MORRISON, H. M., SCHNEIDER, B. & WHISSON, C. S.: A New Species of the Genus *Bothriembryon* (Gastropoda: Bothriembryontidae) from the Shire of Esperance, Western Australia

FEHSE, D.: *Gibberula prayensis* (DE ROCHEBRUNE, 1881) Finally Resurrected (Gastropoda: Cystiscidae)

FEHSE, D.: Contributions to the knowledge of the Triviidae, XXXVII  
A New Species in the Genus *Novatrivia* FEHSE, 2015 from the Philippines

FEHSE, D.: Contributions to the knowledge of the Ovulidae, XXVII:  
New Generic Assignment for *Primovula pirei* PETUCH, 1973 (Mollusca: Gastropoda)

LORENZ, F. & BARBIER, J. P.: A new species of Conidae from Taiwan (Gastropoda)

FEHSE, D.: Additional notes on the Genus *Transovula* DE GREGORIO, 1880  
(~~Mollusca~~: Gastropoda: Pediculariidae)

FEHSE, D.: Contributions to the knowledge of the Ovulidae, XXVIII: On the Identity of *Ovulum formosum* (G. B. Sowerby II, 1848) and Description of a New *Cuspidolva*

LORENZ, F. & STAHLSCHMIDT, P.: An Overlooked Second Species of *Thatcheria* from Western Australia (Gastropoda: Conoidea: Raphitomidae)

LORENZ, F.: A New Species of Conidae (Gastropoda) from the Egyptian Red Sea

LORENZ, F.: Two New Species of Conidae (Gastropoda) from Mauritius



# Two New Species of Conidae (Gastropoda) from Mauritius

By Felix Lorenz, D-Buseck

With 1 Text-Figure and 45 Figures on 3 Plates

## Keywords

Conidae, *Pionoconus marysae*, *Darioconus brandonensis*, new species, Mauritius, St. Brandon.

## Abstract

*Pionoconus marysae* n. sp. from Mauritius differs from the Pacific *P. aurisiacus* (LINNAEUS, 1758) by being a smaller, more ventricose, and less sharply shouldered shell with a cancellate dorsal surface sculpture. The sympatric *P. barthelemyi* (BERNARDI, 1861) is superficially similar in colour pattern but is smooth and has a flatter spire.

*Darioconus brandonensis* n. sp. differs from *D. episcopus* (HWASS in BRUGUIÈRE, 1792) by the distinctly narrower shell, a finer pattern with numerous white specks, and a conspicuous pink protoconch. It is also compared to *D. pennaceus* (BORN, 1778) and *D. omaria* (HWASS in BRUGUIÈRE, 1792).

## Zusammenfassung

*Pionoconus marysae* n. sp. von Mauritius unterscheidet sich von der Pazifischen *P. aurisiacus* (LINNAEUS, 1758) durch ein kleineres, bauchiges, weniger scharf geschultertes Gehäuse mit fensterartiger dorsaler Oberflächenstruktur. Die sympatrische *P. barthelemyi* (BERNARDI, 1861) hat eine ähnliche Musterung, hat aber ein glattes Gehäuse und eine flachere Spira.

*Darioconus brandonensis* n. sp. unterscheidet sich von *D. episcopus* (HWASS in BRUGUIÈRE, 1792) durch ein deutlich schlankeres Gehäuse, feineres Muster mit zahlreichen weißen Pünktchen und einem auffällig pinkfarbenen Protoconch. Sie wird auch mit *D. pennaceus* (BORN, 1778) und *D. omaria* (HWASS in BRUGUIÈRE, 1792) verglichen.

## Introduction

During recent trips to Mauritius and St. Brandon, a surprising number of new molluscan species have been discovered: *Taranteconus lecourtorum* (LORENZ, 2011), *Morum lorenzi* ~~KD~~. MONSECOUR, 2011, *Chicoreus janae* HOUART, 2013, *Bistolida nanostraca* LORENZ & CHIAPPONI, ~~2013~~2012, *Ficus dandrimonti* LORENZ, ~~2013~~2012, *Turbo lorenzi* ALF & KREIPL, 2015, *Tridacna lorenzi* K. MONSECOUR, 2016, *Dolicholatirus marysae* D. MONSECOUR & LORENZ 2018. In the following, two new species of Conidae from that area are described.

## Systematics

Family Conidae J. FLEMING, 1822

*Pionoconus marysae* n. sp.

Pl. 1, figs. 1-5, 11

## Material

Two characteristic specimens were available as ~~paratypes~~ specimens, a third one in a private collection could be briefly studied and agrees with the two types.

**Holotype:** 30.5 mm × 15.5 mm. Museum National d'Histoire Naturelle, Paris, France MNHN-IM-2000-25147; Paratype 1: 24.8 mm (broken anterior)

## Description

The shell is ventricosely conical, moderately heavy, and solid. The spire is convex and dome-shaped, with a pointed protoconch of three whorls. The first three postnuclear whorls are slightly coronate, with all other whorls being smooth. There are three deeply-incised striae on the sutural ramps of the last two whorls. The body whorl has a slight angle at the shoulder. It shows numerous widely spaced and deeply incised striae in between thick and flattened spiral ribs, which become slightly stronger towards the anterior. These are crossed by longitudinal ridges of similar width, which give the shell surface a glossy, cancellate sculpture.

The ground color of the body whorl is white, as is the aperture inside. There is a narrow white band directly below the shoulder and above the anterior canal. It is followed by a pink zone and two broad brownish bands across the mid-section of the body whorl, with a paler intermediate zone. The spire is white, with irregular brown blotches which are tapering onto the sutural ramp of the last whorl to form elongate spots just above and directly upon the shoulder. The spiral ribs on the mid-section of the body whorl are decorated with elongated dark brown spots. Those ribs that are spotted have a paler background color than the unspotted ribs.

## Habitat and Distribution

The two fresh dead types were collected at 20 meters on sand, near Flic en Flac on the west coast of Mauritius. There are no other reports of this taxon from anywhere in the Indian Ocean.

## Ethymolog

Named in honor of MARYSE LE COURT DE BILLOT, wife of the finder ERIC, and dear friend of the author.

## Discussion

*Pionoconus aurisiacus* (LINNAEUS, 1758), is found at depths of 10 to at least 150 meters along the coast of Sulawesi, in the Moluccas and in the southern Philippines. It has not been recorded from areas west of the Wallace line. The new subspecies is the first evidence of a relative from the Indian Ocean. It differs from the Pacific population by being ~~aits~~ smaller shell, which is less sharply shouldered, with a shorter and more ventricose body whorl, and which is straight and more elongated than typical *Pionoconus aurisiacus* (LINNAEUS, 1758). In the ~~nominate form, latter~~ the shell's surface shows transverse ribs with wide smooth interstices, but never a cancellate sculpture as observed in *Pionoconus marysae* n. sp. Despite the considerable variability in color pattern, the ~~Pacific~~ subspecies is always ~~is~~ red to purple on the postnuclear sutural ramps, bordered by a white zone with distinct, evenly spaced black spots directly above the suture and along the margin of the shoulder. In the new subspecies, the irregular darker pattern of the spire includes the sutural ramps and the shoulder.

The new species constitutes the fourth member of *Pionoconus* from Mauritius, which is famous for the large and attractive *P. barthelemyi* (BERNARDI 1861), and is also home of an un-named relative of *P. gubernator* (HWASS in BRUGURIÈRE, 1792) and *P. striatus* (LINNAEUS, 1758), all of which occur in the same place and habitat where *P. marysae* n. sp. has been discovered.

The second species described herein has been known for a long time, but its scarcity has delayed its description till now. It is endemic to St. Brandon Shoal (Cargados Carajus) in the northeast of Mauritius.

### *Darioconus brandonensis* n. sp.

Pl. 2, figs. 1-13; Pl. 3, figs. 19-21

*Darioconus* aff. *pennaceus* sp. 2 – MONNIER et al. (2018, Vol. 2: 944).

## Material

Fifteen live collected and five freshly dead specimens collected by the author.

**Holotype:** 38.2 × 16.9 × 15.4 [6.34 g, mR = 21.8], coll. MNHN-IM-2000-34368.

Paratype 1: 47.4 × 22.2 × 20.3 [13.16 g, mR = 21];  
Paratype 2: 44.8 × 20.1 × 18.3 [7.00 g, mR = 14.5];  
Paratype 3: 36.4 × 18.2 × 16.5 [7.71 g, mR = 24.1];  
Paratype 4: 45.7 × 21.3 × 19.4 [12.07 g, mR = 21.8];  
Paratype 5: 29.5 × 14.3 × 13.0 [3.9 g, mR = 24.3];  
Paratype 6: 36.8 × 17.1 × 15.4 [5.69 g, mR = 20];  
Paratype 7: 35.7 × 17.2 × 15.4 [6.52 g, mR = 23.5];  
Paratype 8: 41.4 × 18.6 × 16.8 [5.02 g, mR = 13.2];  
Paratype 9: 30.4 × 14.8 × 13.6 [4.78 g, mR = 26.7];  
Paratype 10: 41.5 × 17.7 × 16.0 [7.08 g, mR = 20.6];  
Paratype 11: 24.0 × 11.6 × 10.6 [1.89 g, mR = 21.9];  
Paratype 12: 32.3 × 15.6 × 14.1 [5.05 g, mR = 24.3];  
Paratype 13: 38.1 × 17.0 × 15.4 [6.03 g, mR = 20.6];  
Paratype 14: 41.1 × 19.2 × 17.7 [7.73 g, mR = 18.9];  
Paratype 15: 33.7 × 13.9 × 12.6 [3.94 g, mR = 22.8];  
Paratype 16: 29.0 × 13.8 × 12.7 [3.83 g, mR = 25.7];  
Paratype 17: 32.1 × 15.3 × 13.9 [3.54 g, mR = 17.7];  
Paratype 18: 26.4 × 13.5 × 12.1 [2.82 g, mR = 22.3];  
Paratype 19: 27.4 × 13.5 × 12.2 [2.50 g, mR = 18.9];  
All from St. Brandon. Numerous further specimens were studied, now deposited in the collections of ERIC LE COURT DE BILLOT, THIERRY DANDRIMONT, JEAN-PIERRE VAULBERT DE CHANTILLY and the Molluscan Science Foundation, Owings Mills, MD, USA.

## Description

The shell is medium sized, solid and moderately heavy. The body whorl is narrowly conoid, cylindrical, slightly convex in the posterior third. The outline of the spire is sigmoid: the early teleoconch whorls are domed, the sutural ramp of the body whorl is flattened, the shoulder sub-angulate. The sutural ramps are smooth and slightly glossy, convex, with a shallow and narrow suture. The plurispiral protoconch is pointed, 0.4 mm tall and 0.6 mm wide, with three smooth whorls. The body whorl is smooth and slightly glossy. There are no spiral grooves even at the anterior, but microscopic growth lines and slightly irregular spiral threads. The aperture is narrow, only slightly widening towards the anterior. The anal notch is shallow. The ground color of the shell is plain white, with a discernible pink protoconch. The pink color extends onto the first three teleoconch whorls and fades on the fourth one. The spire and the body whorl show fine triangular tentmark pattern of dark brown

color. The tentmarks form two transverse zones on the body whorl where the tentmarks are smaller and more condensed. There are no other color or pattern elements on the shell. Also the aperture is plain white.

The paratypes show little variation in shape. The dome of the spire varies only slightly in height and width. In all shells the pink blotch at the tip of the spire formed by the protoconch and early whorls is conspicuous, even in eroded specimens. The color of the net pattern varies from black to orange. In some shells the darker pattern is extremely fine, and the netting is often interrupted along a growth line. One specimen (Paratype 8) has broader, coarse brown lines forming a dissolved net pattern. The large tents often overlap, the darker areas between them bear numerous very small triangular white dots.

The periostracum is smooth and yellow brown. In their habitat, the shells are clean and never show encrustation by algae.

The animal has a white foot with black stripes and dashes, and an orange margin along the anterior, typical for members of the genera *Darioconus* and *Cylinder* (see RÖCKEL et al. 1995 Pl. 76 Fig. 65-67). The siphon has a bright red tip (See Text-Fig. 1).

### Distribution and Habitat

*Darioconus brandonensis* n. sp. is only found on the remote atoll of St. Brandon (Cargados Carajus) approximately 450 km northeast of Mauritius, part of the Mauritius Overseas Territories (locus typicus). The atoll is situated at the most southern tip of the Nazareth Bank, as part of the Mascarene Ridge. The type material was collected mainly in the north of the atoll, on four St. Brandon expeditions between 2011 and 2015. The new species lives in shallow water, below the high tide line to 2 m, under isolated coral slabs in well-aerated, sandy areas. It was observed feeding on *Turbo lorenzi* Alf & Kreipl, 2015, which shares its habitat.

### Discussion

The first illustration of *Darioconus brandonensis* n. sp. is found in MONNIER et al. (2018, Vol. 2: 944 as "aff. *pennaceus* sp. 2"). The authors discussed it as undescribed species, but place it in the proximity of *D. pennaceus* (BORN, 1778) and *D. episcopus* (HWASS in BRUGUIÈRE, 1792). It differs from *D. pennaceus* by its more slender shape, and its smooth shell lacking any spiral

grooves above the anterior. All taxa associated with *D. pennaceus* have distinct spiral grooves in the anterior third of the shell. In *D. episcopus*, spiral grooves are present, but less prominent than in *D. pennaceus*. That extremely variable species, however, has a pale grey to cream protoconch and faint subsutural grooves on the spire. It is found in the islands closest to St. Brandon: on Mauritius, where it has numerous distinct local variations, and on Rodrigues Is., where it is more inflated, with a finer pattern. All these populations cannot be confused with *D. brandonensis* n. sp.

On direct comparison, *D. brandonensis* n. sp. shows resemblance to *D. omaria* (HWASS in BRUGUIÈRE, 1792), which also has a bright pink protoconch and may have comparably fine pattern. In *D. omaria* from the Western Indian Ocean, the shoulder is more angular, the body whorl shows a characteristic narrowly ovate shape with a less projecting spire than in *D. brandonensis* n. sp. *D. omaria* is also a much larger species in which the ground color is often orange to pale pink instead of plain white.

While *Cylinder vaulberti* (LORENZ, 2012) replaces *Cylinder textile* (LINNAEUS, 1758) and related taxa on St. Brandon, *Darioconus brandonensis* n. sp. seems to take the niche of *D. omaria* and *D. episcopus*, both of which are also absent from that isolated Atoll.

### Acknowledgements

Many thanks to ERIC and MARYSE LE COURT DE BILLOT, THIERRY DANDRIMONT, Dr. MICHAEL A. MONT, KLAUS GROH, Dr. CASTEN RENKER, and JANA KRATZSCH.

### References

- MONNIER, E., LIMPALAER, L., ROBIN, A. & ROUX, C. (2018): A Taxonomic Iconography of Living Conidae. Vol. 1. – 601 pp. Paris, France (AFC) & Harxheim, Germany (ConchBooks).
- RÖCKEL, D., KORN, W. & KOHN, A. (1995): Manual of the living Conidae. Vol. 1 – Indopacific. – 518 pp. Wiesbaden, Germany (CHRISTA HEMMEN Verlag).

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Received: 10. 02. 2019

Accepted: 18. 02. 2019



**Text-Fig. 1:** *Darioconus brandonensis* n. sp., living animal. Photo THIERRY DANDRIMONT.

## Plate 1 (on p. ##)

**Figs 1+2:** *P. marysae* n. sp. (31 mm), Holotype, Mauritius, MNHN-IM-2000-25147.

**Figs 3-5:** *P. marysae* n. sp. (25 mm), Paratype 1, Mauritius.

**Fig. 6:** *P. aurisiacus* (46 mm), Manado, N Sulawesi.

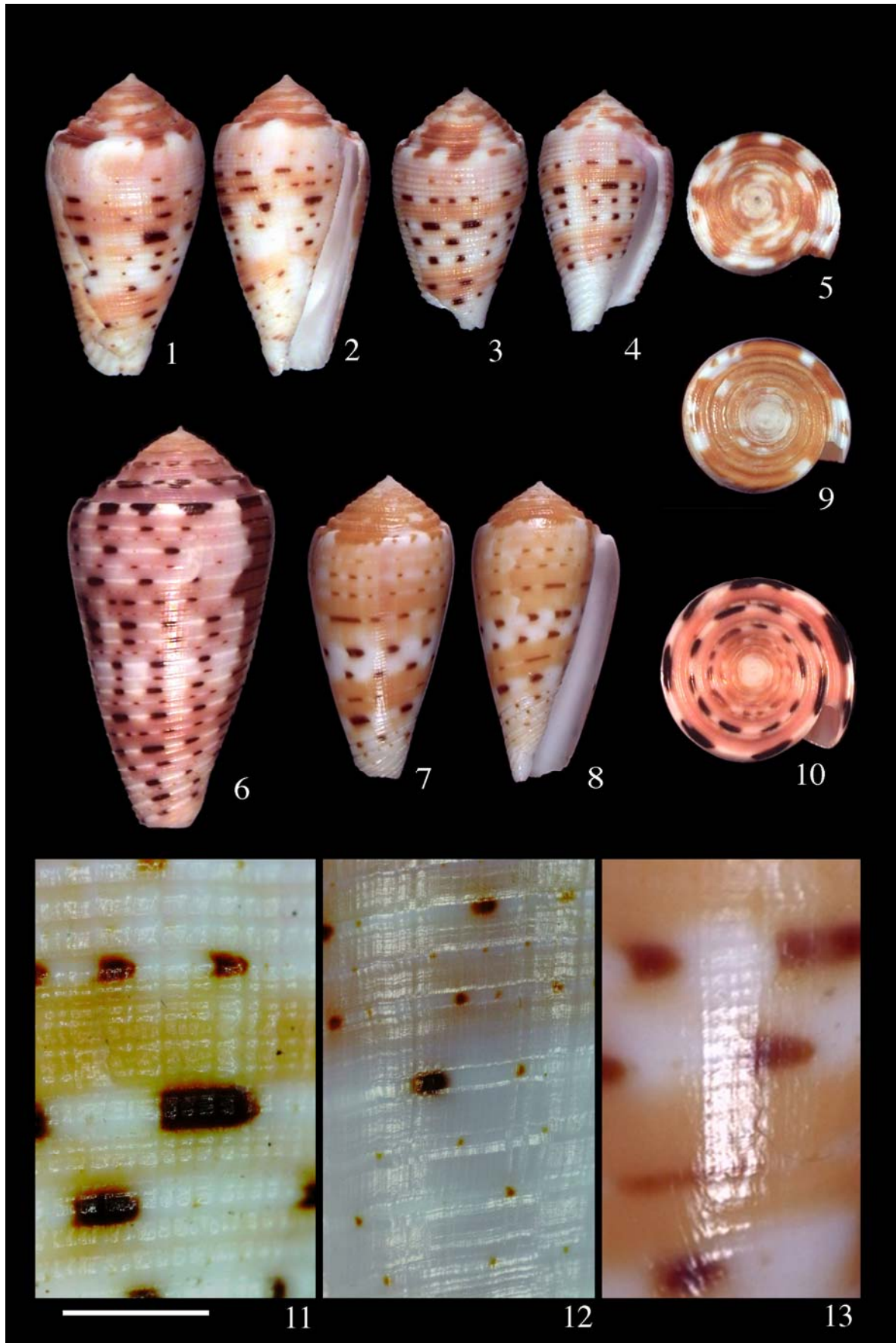
**Figs 7-9:** *P. barthelemyi* (30 mm), Mauritius, subadult.

**Fig. 10:** *P. aurisiacus* (46 mm), Manado, N Sulawesi.

**Figs 11-13:** Dorsal sculpture. Scale = 2 mm.

**Fig. 11:** *P. marysae* n. sp., **Fig. 12:** *P. aurisiacus*, **Fig. 13:** *P. bathelemyi*.

## Plate 1



Explanation on [p. ##](#)

## Plate 2 (on opposite page)

**Figs 1+2:** *D. brandonensis* n. sp. (38 mm), Holotype, MNHN-IM-2000-34368.

**Figs 3+4:** *D. brandonensis* n. sp. (47 mm), Paratype 1.

**Figs 5+6:** *D. brandonensis* n. sp. (46 mm), Paratype 4.

**Fig. 7:** *D. brandonensis* n. sp. (38 mm), Paratype 13.

**Figs 8-11:** *D. brandonensis* n. sp. (29-36 mm), Paratypes 3, 5, 12, 9.

**Figs 12+13:** *D. brandonensis* n. sp. (41 mm), Paratype 8, exceptional pattern.

All from St. Brandon, Mauritius Outlying Territories

## Plate 3 (on p. ##)

**Fig. 1:** *D. omaria* (55-68 mm), Dar-es-Salaam, Tanzania.

**Figs 2+3:** *D. omaria* (55 mm), Bagamoyo, Tanzania.

**Figs 4+5:** *D. pennaceus* (62 mm), Mbudya Is., Tanzania.

**Figs 6+7:** *D. episcopus* (50 mm), Le Mourne, SW Mauritius.

**Figs 8-10:** *D. episcopus* (49-51 mm), NW Mauritius.

**Figs 11-13:** *D. episcopus* (46-56 mm), Port Louis, NW Mauritius, subfossil form.

**Figs 14+15:** *D. episcopus* (54 mm), Graviers, Rodrigues Is.

**Figs 16-18:** *D. episcopus* (37-29 mm), Port Louis, NW Mauritius, subfossil variations.

**Figs 19-21:** *D. brandonensis* n. sp. (36-47 mm), St Brandon.

## Plate 2



Explanation on opposite page

### Plate 3



Explanation on p. ##