



*H. E. van Rijgersma*

Plate I. Photograph of Hendrik Elingsz van Rijgersma at the age of 38 years, October 1873, with his signature.

# LIFE AND MALACOLOGICAL WORK OF HENDRIK ELINGSZ VAN RIJGERSMA (1835-1877)

a Dutch physician and scientist on St. Martin, Netherlands Antilles

by

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## CONTENTS

Abstract . . . . .	116
Introduction . . . . .	116
Acknowledgements . . . . .	117
I. The life of H. E. van Rijgersma.	
Biography . . . . .	117
Genealogical register of the van Rijgersma family with short biographies of the relatives of H. E. van Rijgersma . . . . .	130
Van Rijgersma in the zoological literature . . . . .	133
Van Rijgersma in the historical literature . . . . .	135
Van Rijgersma's work on botany . . . . .	135
Van Rijgersma's shell collection . . . . .	141
History of the collection after his death . . . . .	142
Malacological literature in van Rijgersma's library . . . . .	146
The correspondence and contacts of van Rijgersma . . . . .	147
II. The malacological work of H. E. van Rijgersma.	
Introduction . . . . .	161
The mollusk fauna of St. Martin, known to van Rijgersma, and compared with our present knowledge . . . . .	162
Gastropoda . . . . .	162
Prosobranchia . . . . .	162
Opisthobranchia . . . . .	191
Pulmonata . . . . .	193
Pelecypoda . . . . .	197
Amphineura . . . . .	206
Scaphopoda . . . . .	207
Cephalopoda . . . . .	208
Discussion . . . . .	208
Summary . . . . .	210
Samenvatting . . . . .	211
Literature . . . . .	212



## ABSTRACT

A biography of H. E. van Rijgersma is given, with the genealogical register of his family. The zoological and historical literature, in which he was mentioned, is discussed. Van Rijgersma's illustrated manuscripts on botany (1868) and malacology (1875) of St. Martin, and his correspondence with malacologists, were discovered in the United States and studied. The recent mollusk fauna of St. Martin is summarized, consisting of 550 species, of which 136 are new to the fauna of that island.

## INTRODUCTION

Holthuis (1959, 1961) drew attention to H. E. van Rijgersma, a Dutch physician and amateur biologist, who practiced medicine and collected mollusks and other animals on St. Martin, Lesser Antilles, from 1863 to 1877. Van Rijgersma made important zoological collections, which he sent to the Academy of Natural Sciences in Philadelphia and the Rijksmuseum van Natuurlijke Historie in Leiden. A number of zoologists studied the material collected by van Rijgersma on St. Martin, Anguilla, St. Eustatius, Sombbrero, and Redonda. Holthuis (1959: 72-76) described the contributions made from van Rijgersma's collections in many fields of zoology and paleontology.

Holthuis did not know of any malacological publication in which van Rijgersma was mentioned, however, he knew of his malacological interests: — as a boy he had collected some shells in the Netherlands, and he bought East Indian shells from sailors;

— when on St. Martin van Rijgersma started to collect shells;

— he was in contact with E. R. Beadle, corresponding secretary of the Conchological Section in Philadelphia;

— he was elected Corresponding Member of the Conchological Section on 2 February 1871;

— he exchanged insects for shells with the Museum in Leiden.

In our previous studies on the marine mollusks of St. Martin van Rijgersma is mentioned (1963a: 84-85; 1963b: 115), and one article was discovered on the land and freshwater shells of St. Martin, mainly collected by van Rijgersma (Mazé, 1890).

In 1964 Holthuis informed us that the widow of van Rijgersma did not return to the Netherlands in 1893, as was guessed before (Holthuis, 1959: 69), in fact she went to New York with five of her children. The present author was living in New York since 1960, and we figured that if Mrs. van Rijgersma and her children had moved to New York City in 1893, it would be

possible that one or more male descendants with the same name would still be living in or around New York. In the telephone directory of Brooklyn N.Y. we found mentioned "Van Rijgersma, C. W., 651 59th Street". After calling the number we talked to Mr. H. Handte, and he informed us that Cornelis Washington van Rijgersma had died six months before, in December 1963. C. W. van Rijgersma was a son of Dr. H. E. van Rijgersma from St. Martin. Mr. Handte referred us to Mrs. Helen van Rijgersma-Lang, who lived in Norwalk, Connecticut. This lady was the widow of Sigefridus Gardengius van Rijgersma, another son of Dr. H. E. van Rijgersma, who also died in 1963. Although Mrs. van Rijgersma-Lang had never known her father-in-law, her late husband had often mentioned his father. At our first visit she offered us pictures of Dr. H. E. van Rijgersma (pl. I) and of his house on St. Martin, and she informed us about the other descendants. She told us that Dr. van Rijgersma had been an excellent painter, and that he had two notebooks full of coloured drawings of shells and plants. Several years before the death of her husband, these notebooks were given to their physician W. H. N. Johnson, M. D. in Norwalk. We visited this physician and he showed us the beautiful coloured drawings of shells and plants, together with some letters. Dr. Johnson was so kind as to let us reproduce these items for further study. Just before we returned to the Netherlands Mrs. Helen van Rijgersma gave us a large number of papers belonging to Dr. van Rijgersma, containing letters, notes, official documents, family papers, etc., accidentally found in the basement of her house.

In the United States we also met two grandchildren of Dr. van Rijgersma: Mrs. Ada S. M. Johnson-Waymouth (no relative of Dr. Johnson mentioned above), and Mrs. Henrietta E. Reed-Waymouth, who gave us additional information. However, they did not possess anything once having belonged to their grandfather, only a gold medal and an original photograph of van Rijgersma.

In November 1964 we returned to the Netherlands. Here we studied all the documents, from which we were able to compose a biography of H. E. van Rijgersma. From his malacological notes it was possible to compile a fauna list of the mollusks collected by him at St. Martin. Since the present author has lived in the Netherlands Antilles from 1957 to 1960, and studied the

mollusk fauna of St. Martin and the other islands, he could compare van Rijgersma's mollusk names with the mollusks collected by himself and some other recent collectors.

In Holland contact was made with Mr. H. van Rijgersma, a lawyer in Amsterdam. He and his wife were able to give more information on the genealogy of the van Rijgersma family.

In the present study often reference is made to the publications by Holthuis (1959, 1961) and Coomans (1958, 1963a, 1963b, 1967), on the life and work of van Rijgersma, and on the malacofauna of St. Martin, respectively.

All the documents, letters, family papers, etc. on which this study is partly based, were donated by the author to the Manuscript Collection of the Library of the University of Amsterdam in 1973.

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Mrs. Dr. W. S. S. van der Feen-van Benthem Jutting and Prof. Dr. H. Engel trained me in systematic and historical biology.

Prof. Dr. J. H. Stock is partly responsible for our stay in the United States. Prof. Dr. L. B. Holthuis revealed H. E. van Rijgersma from the darkness of history.

Dr. P. Wagenaar Hummelinck guided me to the Netherlands Antilles.

Members of the van Rijgersma family in the Old and in the New World are the source of many historical data concerning their famous relative: Mrs. Helen van Rijgersma-Lang, Mrs. A. S. M. Johnson-Waymouth, Mrs. H. E. Reed-Waymouth, Mr. and Mrs. H. van Rijgersma-Langenberg.

Dr. W. H. N. Johnson gave permission to copy the manuscripts of van Rijgersma.

For a number of historical aspects information was received from Mrs. Dr. Venia T. Phillips, Dr. R. T. Abbott, Prof. Dr. W. Adam, Dr. W. M. Fock van Coppenaal, Prof. Dr. P. N. U. Harting, Dr. I. Kristensen, and Dr. R. Pinchon.

Thanks are due to malacological colleagues and friends in the U.S.A. and in the Netherlands: Mrs. J. Bogart and Mrs. T. H. Ervin, Dr. W. K. Emerson and Mr. W. E. Old; Mrs. Drs. E. M. A. de Looze, Mr. K. M. de Jong, Drs. E. X. Maier and Drs. J. C. van Raam. Prof. Dr. A. L. Stoffers solved the botanical problems.

Members of the Institute of Taxonomic Zoology in Amsterdam added in various ways to this study: Miss H. L. M. van Amsterdam, Mrs. J. Joesse-Roelofsen and Mrs. C. C. Lindenaar-Sparrius, Mr. J. Geerling, Mr. A. D. Ameling, Mr. L. A. van der Laan, and Mr. J. Zaagman.

Mrs. Drs. F. F. J. M. Peeters-Pieters of the Artis Library was active in the last stage of preparing the manuscript.

## I. THE LIFE OF H. E. VAN RIJGERSMA

### BIOGRAPHY

1835

Hendrik Elingsz van Rijgersma was born on 5 January in Lemmer, Province of Friesland, the Netherlands. He was the eldest son of Eling Hendriks van Rijgersma, apothecary in Lemmer, and Trijntje Gaukes de Tempe.

Nothing is known about his childhood, except that he collected shells since his youth, and bought a few tropical shells from sailors (Holthuis, 1959: 69-70).

1858

On 12 April van Rijgersma received a "Certificate of good behaviour" from the mayor of Oostzaan, Province of North Holland, which implies that he must have lived in this place for some time. Probably he worked there with a physician, because on 20 May van Rijgersma became "Heelmeester voor het platte land" (physician for the countryside) after an examination at the Provincial Medical School in Haarlem (fig. 1).

[In the 19th century there were two possibilities to get a medical degree in the Netherlands. The first was at one of the universities, and a lower degree could be obtained at the provincial medical schools (Coomans, 1973b: 13).]

1859

On 11 August van Rijgersma passed the test for "Vroedmeester voor het platte land" (obstetrician for the countryside) at the Medical School in Haarlem.

He became a physician in a small town, Jisp, province of North Holland, where he stayed for about one year.

1860

C. de Groot, mayor of the island of Marken, North Holland, in a letter dated 5 November invited van Rijgersma to become a physician at Marken. He was appointed there on 20 November, for a salary of 400 guilders per year and a free house.

1861

Van Rijgersma married at Marken on 14 April with Maria Henriette Gräfin.

1862

On 14 January the first child was born from this marriage, named Hendrik Eling.

Van Rijgersma was looking for another place to work; he could be appointed in Zuilichem, province of Gelderland, in February 1862, however,

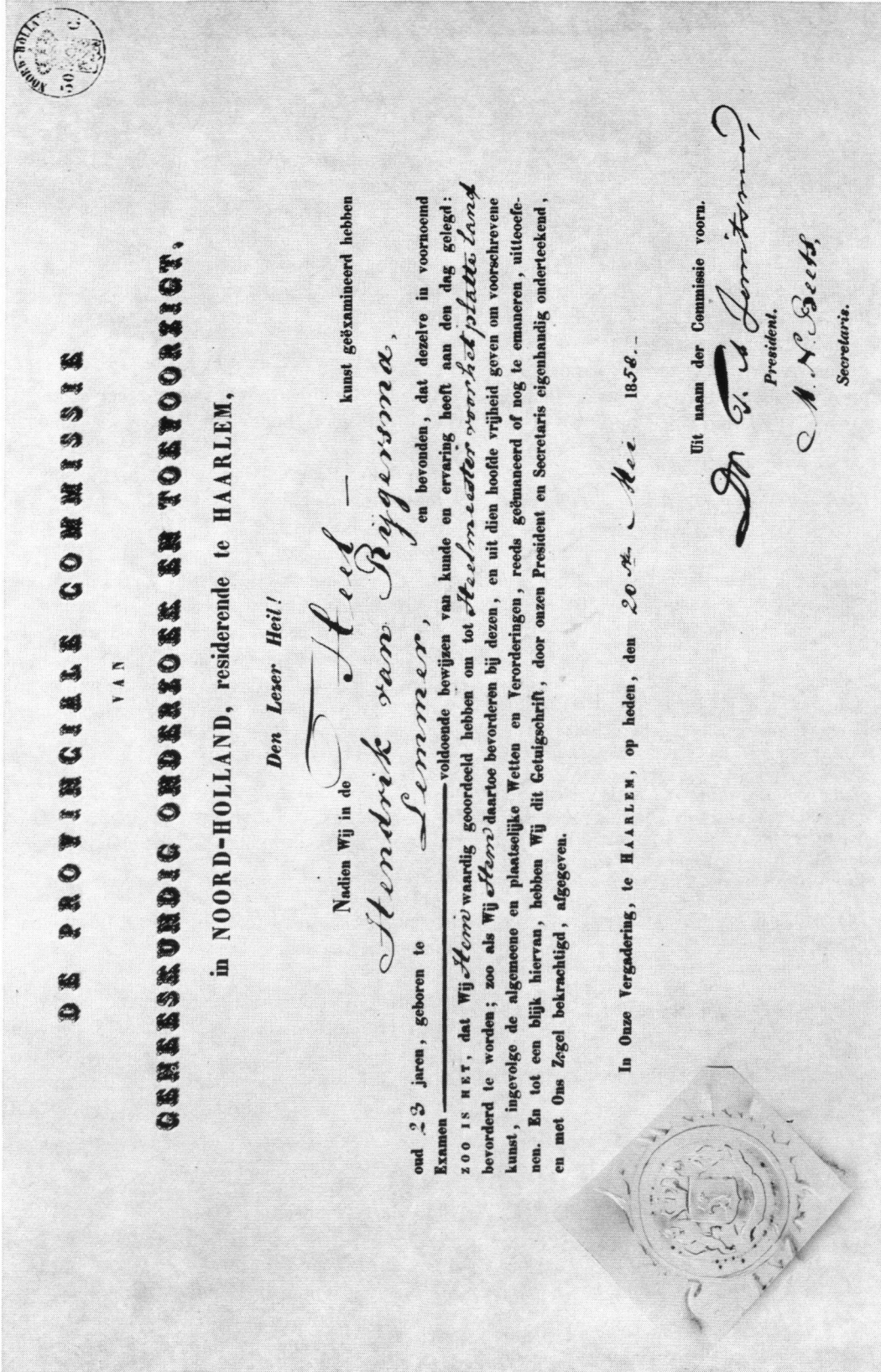


Fig. 1. Diploma conferred upon H. E. van Rijgersma, at the age of 23, after passing the test for "Heelmeester voor het platte land" (Physician for the countryside) at the Provincial Medical School, Haarlem, the Netherlands, 20 May 1858.

he remained at Marken. (Zuulichem is near Meteren, where his wife's parents were living.)

1863

In this year the Netherlands abolished slavery in the colonies. To secure medical attention for the former slaves, it was necessary that governmental physicians should be appointed on the islands of the Netherlands Antilles. Van Rijgersma applied for a position on one of the islands in the West Indies in a letter to the Secretary of Colonial Affairs, dated 24 April. His colleague Dr. C. G. van Reeken in Monnickendam recommended him for this position because he was a good physician, and for his love to study some natural sciences. Another letter of recommendation was received from Dr. D. Lubarts, President of the Medical Commission in Haarlem.

By Royal Assent no. 60, dated 26 June 1863 (fig. 2), and signed by his Majesty King Willem III, van Rijgersma was appointed physician at St. Martin (Dutch part). His salary would be 2000 guilders per year, starting the day of embarking, and a free first class trip to the West Indies for the whole family. He had the right to treat private patients at St. Martin, for 1000 guilders per year. In a letter from the Secretary of Colonial Affairs van Rijgersma was informed that he would receive a pension after staying on St. Martin for twenty years.

On his appointment on the island of St. Martin in the Netherlands Antilles, he received an act of honorable discharge from Marken, dated 26 July 1863.

On 17 August a second child was born at Marken, Marie Catharina, and only four weeks old the little baby went with her parents and brother to St. Martin. The family left Holland on 14 September with the ship "Columbus", it appears that the boat went first to Curaçao and later to St. Martin.

After his arrival on St. Martin van Rijgersma started to collect shells and other animals.

1864

[In this year Krebs' list of West Indian marine shells was published, mentioning many gastropods from St. Martin (Coomans, 1963a). Krebs must have visited St. Martin before van Rijgersma's arrival on the island, since his name is not mentioned in Krebs' publication. Later the two malacologists corresponded with each other.]

1865

Van Rijgersma wrote to prof. P. Harting in Utrecht for information about a microscope, and

he offered Harting natural history specimens from St. Martin. Harting replied in a letter dated 2 August 1865.

Van Rijgersma's third child was born on 13 October, and named Anna Eliza Martina Philipina. (The names Martina and Philipina probably were chosen after the island St. Martin and its capital Philipsburg.)

1866

In a letter to prof. Harting in Utrecht, dated 6 December, van Rijgersma wrote that he had received the microscope, and had sent fishes and birdskins. He wanted to exchange shells with Dutch collectors; his collection from St. Martin contained 300 species.

[On 26 December the Conchological Section of the Academy of Natural Sciences in Philadelphia was founded.]

1867

On 1 March van Rijgersma requested to contribute more to his pension fund to obtain a higher pension, since he earned more than 3000 guilders per year. At the end of May the fourth child was born, Ada Helena Hortensia. In this year a sister of Mrs. van Rijgersma, Anna Grä-fing, visited St. Martin, she returned to Holland in August.

Father J. Kohlmann, a Roman Catholic priest and formerly science teacher at the Seminary College on Guadeloupe, was appointed chaplain at Marigot, French St. Martin on 19 December. Kohlmann and van Rijgersma became friends, both had biological interests since Kohlmann was an entomologist.

1868

T. van Stolk from The Hague, director of a company to exploit the saltpans on St. Martin (Langemeyer, 1923: 261), visited St. Martin. After having seen van Rijgersma's natural history collections, van Stolk advised him to get in touch with S. C. Snellen van Vollenhoven, curator of insects at the Rijksmuseum van Natuurlijke Historie in Leiden. Van Rijgersma's first letter to Snellen van Vollenhoven was dated 8 August 1868. Snellen van Vollenhoven's answer was a request for Microlepidoptera. Another letter was sent to Leiden on 2 December.

In this year van Rijgersma exchanged half of his shell collection with Kohlmann for a collection of insects from Guadeloupe. Van Rijgersma made about sixty drawings, mostly in colour, from plants of St. Martin (cf. pls. II-V).

On 27 October he was elected correspondent

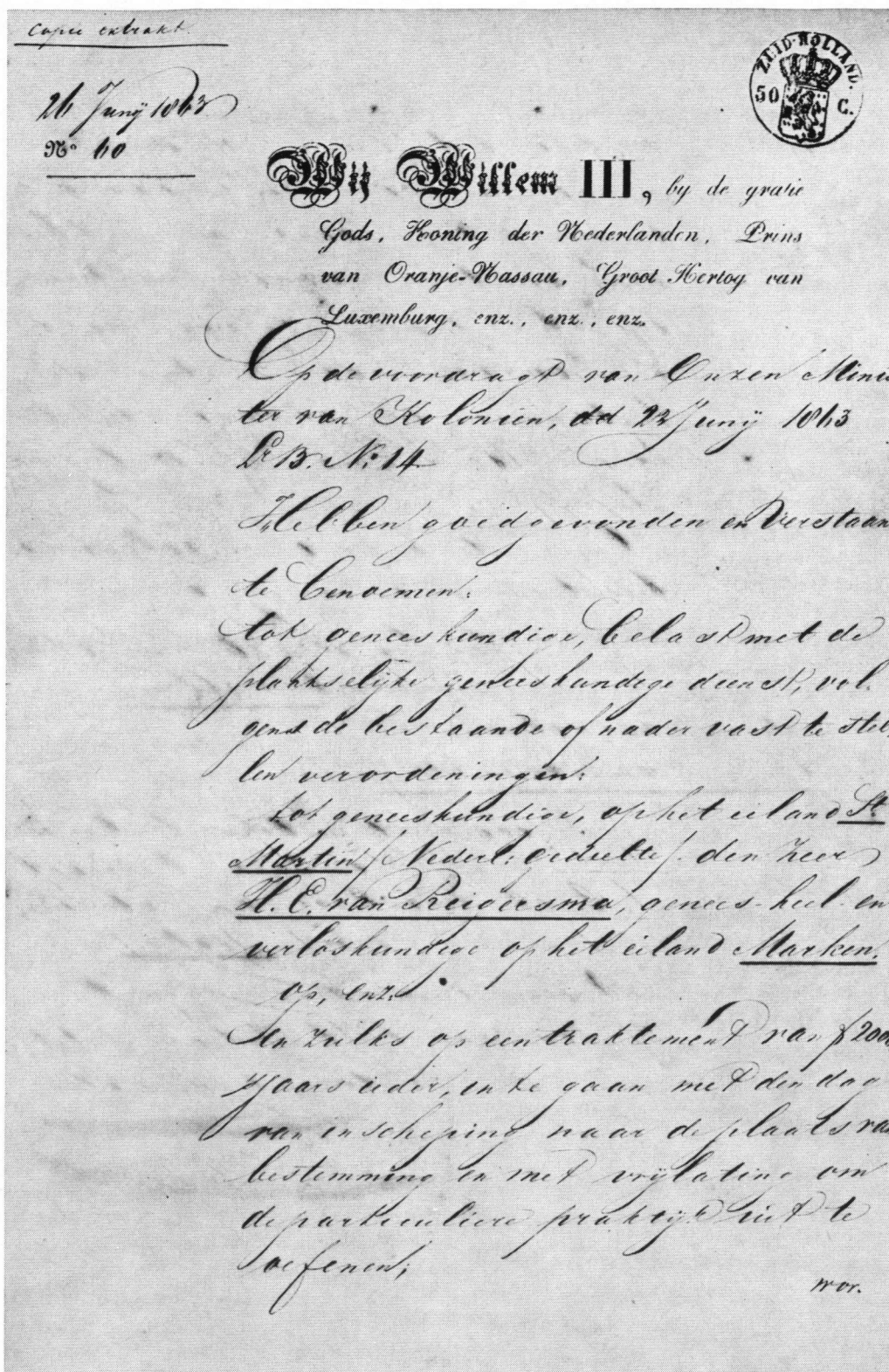


Fig. 2. Van Rijgersma's appointment as physician at the island of St. Martin (Netherlands Part), signed by King Willem III, Het Loo, 26 June 1863.



wordende ieder hunner wijders toe-  
gekend een gratificatie voor uit-  
ruising gelyk staande met het be-  
drag van twee maanden tractement,  
een gelyk bedrag als voorschot, en  
brye overvoer naar de plaats van  
bestemming als passagier der 1<sup>ste</sup>  
klasse, Teasw quo met welly ge-  
zin.

Onze Minister van Koloniën is  
belast met de uitvoering dizes.

Het Lo, den 26 Juny 1862.  
/get/ Willelm

De Minister van Koloniën.

/get/ J. D. Franssen van de Putte.

Accordeert met deszelfs Origineel  
De Secretaris-Generaal  
te het Ministerie van Koloniën,  
/get/ Tietz.

Voor een luidend afschrift,

Voor zooveel het oia-trakende betref  
De Secretaris-Generaal,

Tietz

Hall of the Academy of Natural Sciences of Philadelphia.

*Philada. 12-19-1868.*

*To Mr. Evan Rijgersma M.D.*

*Sir,*

*I have the honour to inform you, that at a meeting held  
10mo. 27th. 1868 you were elected a Correspondent of  
this Society*

*To this announcement of the confidence of the Academy, I  
beg leave to add that it is with sentiments of the highest respect,  
I subscribe myself*

*Your obedient servant,*

*Edward D. Cope*

*Corresponding Secretary*

*Of the Academy of Natural Sciences of Philadelphia.*

Fig. 3. Announcement of van Rijgersma's election as Correspondent of the Academy of Natural Sciences of Philadelphia, dated 19 December 1868, signed by E. D. Cope.

of the Academy of Natural Sciences in Philadelphia (Proc. Acad. nat. Sci. Philad., 1868: 229, 393). The official statement (fig. 3) was sent to him on 19 December 1868, it was found in van Rijgersma's correspondence.

The paleontologist Cope in Philadelphia sent a letter on 3 December, in which he asked for fossils from Anguilla. Van Rijgersma made several trips to that island in 1869 and 1870 and collected fossils in limestone caves.

In the winter of 1868-1869 prof. P. T. Cleve from the University of Uppsala in Sweden did geological fieldwork in the southern part of St. Martin (Coomans, 1967: 122). Nothing is known of any contact between Cleve and van Rijgersma.  
1869

In January van Rijgersma sent a letter to Cope in Philadelphia (fig. 4), to thank for the honour of being elected a correspondent of the Academy. He also must have sent material to Philadelphia, since Cope wrote a letter on 19 March, ac-

knowledging the arrival of very important material from van Rijgersma, with a number of new species. Cope and van Rijgersma had more correspondence in this year. Apart from the fossils for Cope, the Academy in Philadelphia received from van Rijgersma two species of cephalopods, some mammals, birds, reptiles, fishes, arthropods, and lower invertebrates, which were reported upon by Leidy (1869: 236-237).

On 21 May the corresponding secretary of the Conchological Section of the Academy in Philadelphia, E. R. Beadle, asked for mollusks (Beadle, 1869: 240; 1870: 229). Van Rijgersma did send shells, collected on St. Martin and Anguilla, to Beadle, who passed part of them over to the collection of the Academy (Nolan, 1870: 155; 1871: 329), where the shells are still kept.

During this year there was also contact with the Rijksmuseum van Natuurlijke Historie in Leiden: two letters were sent to Snellen van Vollen-

To Edward D. Cope Esq  
 Corresponding Secretary  
 of the Academy of Natural  
 Sciences Philadelphia.

Sir!  
 Philipsbouw St. Martin January  
 1869.

On the 3<sup>rd</sup> instant I had the satisfaction  
 to receive your letter of the 12<sup>th</sup> ultimo  
 in which you inform me that I have been  
 elected as Correspondent to the Academy  
 of Natural Science - of your City -

This communication was exceedingly  
 gratifying to me, and I sincerely hope  
 that the information which I shall furnish  
 in the future will prove usefull to Science.

With sentiments of the highest respect

I subscribe myself

Your Obedient servant

H. E. van Rijgersma

Fig. 4. Letter of H. E. van Rijgersma, in which he acknowledged his election as Correspondent of the Academy of Natural Sciences, dated January 1869. (By courtesy of the Academy of Natural Sciences.)



hoven. In the spring van Rijgersma sent 550 insects from Guadeloupe (which he had received in exchange from Kohlmann) to Leiden, and later in the year a second collection of insects was sent.

Sigefridus van Rijgersma, brother of doctor van Rijgersma, visited his relatives at St. Martin on his way to South America.

1870

On 15 January a collection of 523 mollusks (111 species) was sent to van Rijgersma by the Museum in Leiden, in exchange for the insects he had given to the Museum in 1869. A third collection of insects, 60 species, was sent to Leiden and received on 16 September. The Museum still has material sent by van Rijgersma, e.g. Microlepidoptera and Coleoptera.

A new contact started with a shell collector in Philadelphia, W. L. Mactier, who had sent a

parcel with North American Unionidae to St. Martin. The shells were delivered at P. P. Mailard, formerly physician on the island. Van Rijgersma wrote to Mactier on 4 February and promised him a complete collection of shells from St. Martin.

R. G. Haliburton, a merchant from Halifax in Canada, visited St. Martin in the spring. He established contacts between van Rijgersma and R. Swift at St. Thomas, and J. R. Willis in Halifax, both shell collectors. Swift wrote the first letter on 16 May, and they started to exchange shells. Van Rijgersma also visited Swift on St. Thomas at the end of that year or in the beginning of 1871.

1871

On 17 January the fifth child was born: Trijntje de Tempe.

Van Rijgersma was elected Corresponding

*Call of the Academy  
of Natural Sciences,  
Philadelphia, Feb. 3 1871.*

*Dr. H. C. van Rijgersma.  
St. Martins. W. I.*

*Dear Sir. It gives me great  
pleasure to inform you that at  
a regular meeting of the Conchological  
Section of the Academy  
of Natural Sciences, held last  
evening, you was unanimously  
elected a Correspondent.  
With sentiments of  
high regard,  
I remain, Most Truly Yours.  
E. R. Beadle.  
Cor. Sec.*

Fig. 5. Letter of E. R. Beadle, announcing to van Rijgersma his election as Correspondent of the Conchological Section of the Academy of Natural Sciences, dated 3 February 1871.

J. C. Martin (red part) 6<sup>th</sup> March 1871

E. R. Beadle Esq:  
 Corresp. Sec. to the Acad-  
 of Natural Sciences. etc.

Dear Sir!

The flattering and very pleasing information con-  
 veyed to me in your kind letter of the 3<sup>rd</sup> February,  
 that by unanimous consent, I was elected as a  
 Correspondent to the Conchological Section of the  
 Academy - of which you are Secretary has afforded  
 me much satisfaction and I hasten to acknowledge  
 the same & beg you to tender my thanks to the  
 Members of the Society.

With sentiments of high regard  
 I remain, most truly Yours

J. C. van Rijgersma

Fig. 6. Van Rijgersma's letter, dated 6 March 1871, thanking Beadle for the announcement of his election as Correspondent of the Conchological Section. (By courtesy of the Academy of Natural Sciences.)

Member of the Conchological Section of the Academy of Natural Sciences in Philadelphia (Roberts, 1871: 343; Am. J. Conch., vol. 7: 249). One day afterwards Beadle informed van Rijgersma about his election (fig. 5), who thanked for the honour in a letter dated 6 March (Beadle, 1871: 343) (fig. 6).

That year he came in contact with various malacologists: J. R. Willis in Halifax, Canada, who wanted to exchange marine shells, and the

French malacologists A. Schramm and A. Bavay, both on Guadeloupe. With Schramm there was probably only a brief contact, because he lost all his belongings in a fire later in that year. Van Rijgersma exchanged shells with Bavay.

In July and November more shells were exchanged with R. Swift. Bland & Binney (1871: 23) mentioned *Pineria schrammi* "collected at the east end of St. Martin, by Dr. van Rijgersma", received by them via Swift.

On 1 October van Rijgersma received a letter from B. Ulrich, governor of the island St. Barths, a Swedish colony at that time (the island was sold to France in 1877), with a request to come immediately to St. Barths to take care of the physician of that island, doctor Heinrici, who had become mentally ill. A similar request was received by the governor of St. Martin, to ask permission to let van Rijgersma go. A ship was sent to fetch him. Van Rijgersma left St. Martin in the evening of 1 October and landed on St. Barths the following morning. He took the patient to St. Kitts, returned to St. Martin and reported to governor Ulrich on 6 October. Ulrich thanked him for his help and he asked van Rijgersma to send the bill. However, van Rijgersma refused any payment for this treatment, and for other occasions when he took care of the patients at St. Barths. Therefore, by Royal solution of King Karel XV of Sweden and Norway on 21 December 1871, he was awarded a gold medal with the inscription "Illis quorum meruere labores" (for them who did meritorious work).

1872

On 8 January the last letter from Swift was written to van Rijgersma; Swift died on 5 May 1872. After his death Swift's papers and notes came into the hands of another malacologist, Thomas Bland in New York, and from these papers he learned of the malacological activities of van Rijgersma. Bland started the correspondence on 23 September, asking for shells from St. Martin and neighbouring islands, in exchange for landshells from the United States and the Greater Antilles. Van Rijgersma answered on 20 October and sent Bland a box with shells from St. Martin. The species were discussed by Bland in two letters (12 December and 22 January 1873); they are very important since from these letters we learn which species of landshells were collected by van Rijgersma on St. Martin. In exchange Bland sent 100 species of landshells, mostly from Cuba.

Another contact started that year, with the French malacologist H. P. Mazé on Guadeloupe. Van Rijgersma sent a box with landshells from St. Martin, and Mazé commented on these in a letter dated 9 August 1872.

On 22 April governor Ulrich asked van Rijgersma to come to St. Barths and accept the gold medal in person. As he was unable to go, the medal was sent to him via the governor of St. Martin. In a petition to King Willem III of the Netherlands van Rijgersma requested permission

to accept the gold medal from the King of Sweden and Norway. The permission was granted on 13 August 1872 (fig. 7), and van Rijgersma was asked by the governor of St. Martin (5 October) to pay the amount of 4 guilders and 29 cents for expenses referring to the petition!

In this year E. R. Beadle donated *Helix schrammi* from St. Martin to the Cabinet of the Conchological Section; the species was sent to him by van Rijgersma (Nolan, 1872: 290).

1873

Van Rijgersma kept sending material to the Academy in Philadelphia; that year they received a collection of small vertebrates and some invertebrates from the island of Redonda (Leidy, 1873: 432).

On 19 January van Rijgersma's sixth child was born: Sigefridus Gardengius.

After ten years at St. Martin van Rijgersma became ill, and by governmental decree of 30 January he was permitted a one year sick leave to the Netherlands for physical recovery. His salary would be two thirds of his regular salary ( $\frac{2}{3}$  of f 2000,- = f 1333,30, less f 233,30 for pension, leaves f 1100,-). During the ten years on St. Martin he had saved ten thousand guilders. The family left for Holland in April, they stayed mainly with Mrs. van Rijgersma's parents in Meteren, province of Gelderland. In October a photograph of van Rijgersma (pl. I) was taken by A. Greiner, a photographer at the Nieuwendijk in Amsterdam. Van Rijgersma must have ordered a number of prints, and these prints were later sent to various malacological relations and societies (exchange of pictures probably was customary in the early days of photography). Also in October doctor and Mrs. van Rijgersma celebrated their 12½ years wedding anniversary (14 October 1873). For this occasion a special poem was made, it was found in the correspondence of van Rijgersma.

When in Amsterdam van Rijgersma probably visited the Zoological Society "Natura Artis Magistra" and the "Artis Library". He had copied in a little notebook the names of West Indian Echinodermata, Crustacea, and corals from publications in the library. He mentioned also the name of K. N. Swierstra who was curator of insects and birds of the Zoological Society since 1869.

During his leave van Rijgersma started correspondence with the English malacologist and shell-dealer G. B. Sowerby (III), and ordered shells for his collection, which were received in December.

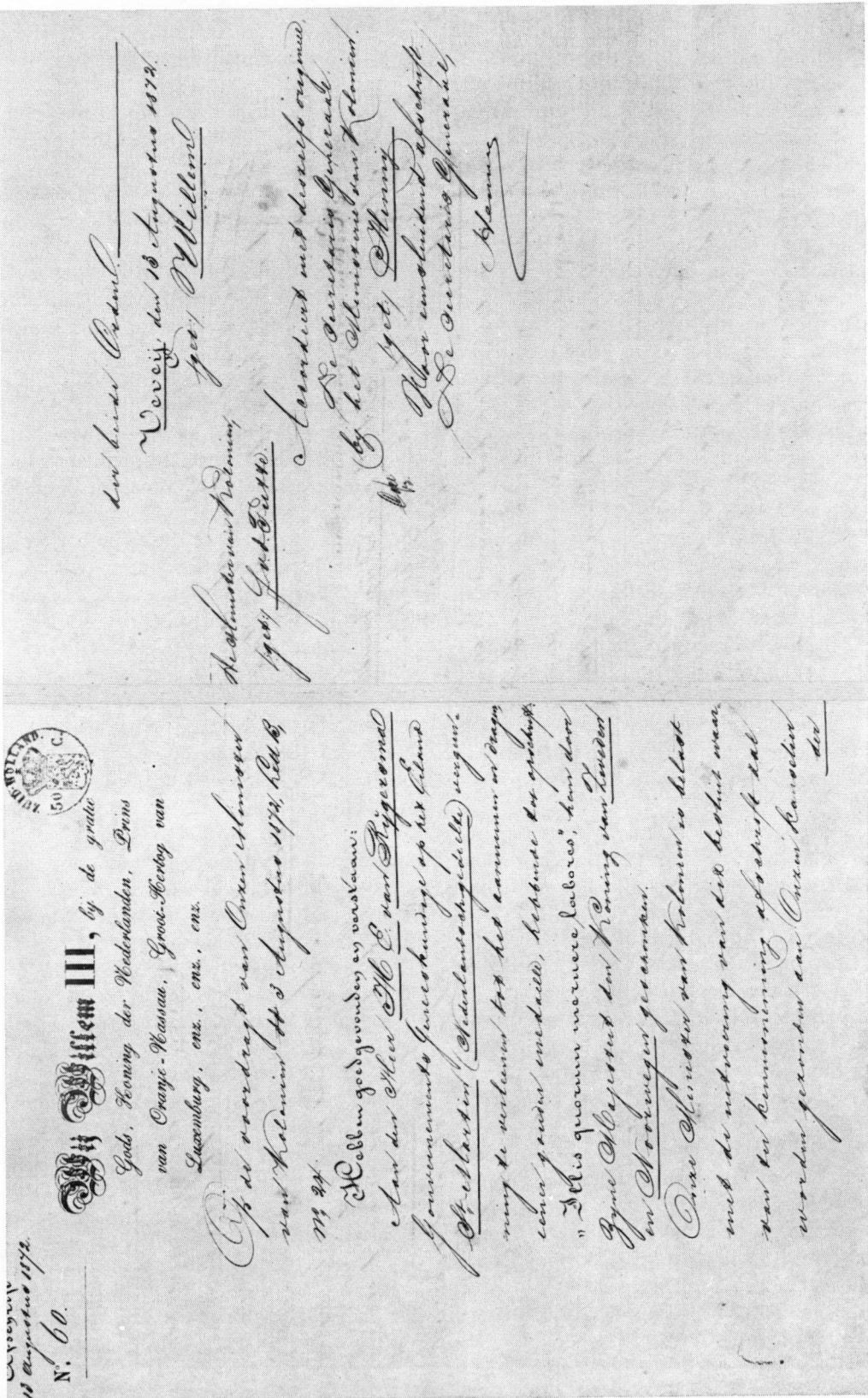


Fig. 7. Permission granted to van Rijgersma by King Willem III of the Netherlands, to accept a gold medal from the King of Sweden and Norway, dated 13 August 1872.

1874

When in Holland van Rijgersma contacted the Belgian Malacological Society (there was no malacological society in the Netherlands during the 19th century). On 1 February he was elected member of the "Société Malacologique de Belgique", on the advice of the Belgian malacologists J. C. Purves and E. van den Broeck (Annls. Soc. malac. Belg., vol. 9: XXVII). Jules Colbeau, Secretary of the Society, informed van Rijgersma about his election in a letter dated 2 February 1874.

In January van Rijgersma had a physical checkup, and must have been found in good health, because in March the family returned to St. Martin with the brig "Santa Rosa". The eldest son Hendrik, who was partly deaf, remained in Holland with his relatives. For his education van Rijgersma sent 300 guilders per year to the Netherlands.

Henry Krebs from Denmark, a malacologist who had been in the West Indies, wrote a letter on 9 February, asking for shells.

The seventh and last child was born on St. Martin on 4 July, Cornelis Washington.

Van Rijgersma renewed the correspondence with Th. Bland in New York, and sent his portrait (8 July). Bland answered on 23 September, he also included a portrait, some of his publications, and shells.

1875

The correspondence with Bland went on, van Rijgersma sent shells to him (25 January), and in return received mollusks from the U.S.A., Jamaica and Guatemala.

Van Rijgersma ordered more shells from Sowerby in London, of the genera *Cassis*, *Cymatium*, and *Pholas*, for the amount of five pounds.

In that year van Rijgersma wrote a manuscript on the marine mollusks of St. Martin, which he illustrated himself with beautiful drawings in colour. A number of families have completely been covered.

On 15 July van Rijgersma's entomological friend from French St. Martin, father Kohlmann, left the island for Guadeloupe.

In that year the correspondence with the French malacologist E. A. Marie started. Several letters were written and they exchanged shells.

In a little notebook van Rijgersma made some remarks concerning his correspondence in 1875. In that year he had written six letters to relatives and friends in Holland, and one letter to each

of his shell contacts in England (Sowerby, Damon), Belgium (Colbeau), and the U.S.A. (Beadle and J. W. Kline in Philadelphia, Bland in New York).  
1876

On 15 February van Rijgersma bought the plantation "Little Bay" for the price of 2000 guilders.

No other activities are known in that year, and no correspondence was found.

1877

Van Rijgersma died at St. Martin on 4 March (fig. 8), at the age of 42 years and 2 months, leaving behind his wife and seven children. He was buried at the Dutch Reformed Cemetery, at the moment called the Little Bay Churchyard, near Philipsburg (Holthuis, 1961: 167).

The story goes that van Rijgersma was poisoned. He was supposed to have amputated the leg of a negro boy, who died after the operation. Out of revenge the boy's mother put poison in the doctor's drinking water. The mother was said to have confessed her crime later, when she was dying. There is no proof to this story, and it is very well possible that the story of the poisoning of van Rijgersma was taken from an other, similar case on St. Martin. In 1860 namely, a slave girl tried to poison Dr. P. P. Maillard and his family. Maillard was physician on St. Martin before van Rijgersma (Hartog, 1964: 682). Anyhow, van Rijgersma had been ill before his death, as is known from a letter dated 29 November 1877 to his wife, written by Dr. G. M. D. Fock van Coppelaar, physician on the island of Bonaire, who was a friend of van Rijgersma. We also have noticed the fact that in the year before his death no biological activities were reported.

Several months after his death, on 7 August 1877, an inventory was made of the valuables of H. E. van Rijgersma and his wife. The list also contained the full names of their children. The value of their possessions is given in dollars (in those days one dollar equalled 2½ guilders). From this list is taken:

"4 W[ooden] pine cases with shells (not valued). The four empty cases valued for \$ 8.-.

1 Glass Case containing stuffed birds \$ 10.-.

1 Glass Case containing medical and other books, about 80 vols. \$ 50.-.

The empty glass case valued for \$ 6.-."

For the complete list of his medical instruments and supplies, see Coomans, 1973b: 15.

So at the time of his death, van Rijgersma

## KOLONIE CURACAO.



BURGERLYKE STAND,  
EILAND ST. MARTIN, NED. GED.

## E X T R A C T .

Uit het Register van *Overlijden* van het eiland St. Martin, N. G.  
is geextraheerd: dat aldaar op den *derden Maart*  
des Jaars Een duizend acht honderd en *zeven en zeventig, overleden*  
*is: Hendrik Pieter van Rijgersma*  
*gehuwd met Maria Elisabeth Grijning, van*  
*hree en twintig jaer, en twee maanden, zoon*  
*van Pieter van Rijgersma en Frijnke van*  
*Lee de Tempel, geboren te Amsterdam*  
*tenne Provincie Friesland.*

De ondergeteekende Landraad, belast met den Burger-  
lyken Stand op dit Eiland, verklaart dat bovenstaand Extract is  
overeenkomstig met gemeld Register.

Philipsburg, St. Martin, den *28 Mei 1877.*

*P. van Rossum*

Gezien voor legalisatie der handteekening van den Heer *Robert van*

*Rossum* Landraad belast met den Burgerlyken

Stand op St. Martin N. G. door ons Kantouregter aldaar.

Philipsburg, St. Martin, den *28 Mei 1877.*

*P. van Rossum*

Fig. 8. Extract from St. Martin's Death Register naming van Rijgersma, dated 28 May 1877.

had no other natural history specimens than a large collection of shells (without any value !) and stuffed birds. His rather small library, only 80 volumes, contained for the main part medical books since these were mentioned. Next to the medical instruments, including a microscope, he

also owned a telescope and a barometer. He was probably interested in astronomy.

He had some cattle: two cows, a calf, a horse, a donkey, goats, and poultry. The list mentioned the usual furniture, and no special valuable items, therefore van Rijgersma lived simple and thrifty.



Mrs. van Rijgersma informed the Academy in Philadelphia about the death of her husband, for in the margin of one of the letters from Beadle (dated 3 February 1871) we found the words "written to 24 April 1877". The death of van Rijgersma, being a Correspondent of the Academy of Natural Sciences, was reported by the Academy (Proc. Acad. nat. Sci. Philad., 1877: 285, 403), however, not in the reports of the Conchological Section.

GENEALOGICAL REGISTER OF THE VAN RIJGERSMA FAMILY WITH SHORT BIOGRAPHIES OF THE RELATIVES OF H. E. VAN RIJGERSMA

For our study we had to find the descendants of doctor H. E. van Rijgersma, mainly to: (a) receive information about his life and work; (b) discover his shell collection; (c) look for manuscripts, letters, and other written documents; (d) discover any other material which could be useful for our research.

The van Rijgersma family belongs to the old Frisian nobility, with a long history and their own coat of arms. The following register comprises all the descendants of doctor H. E. van Rijgersma, it starts with his grandfather from father's side (follow I).

I. *Henricus Eling van Rijgersma*

Born 1780 in Leeuwarden, province of Friesland. Admitted to the University of Groningen on 3 August 1798 (Album Studiosorum Academiae Groninganae, Groningen 1915: 250). Minister of the Dutch Reformed Church in Boornbergum, Friesland, 1803-1806, idem in Cubaard, 1806-1826. He died in Cubaard, 2 October 1826. Married to Anna Gardingius.

Children: 1. Sigefridus Gardingius, follow A-II.  
2. Eling Hendriks, follow B-II.

A

II. *Sigefridus Gardingius van Rijgersma*

Born 24 July 1805 in Boornbergum, Friesland. Admitted to the University of Utrecht on 22 September 1823 (Album Studiosorum Academiae Rheno-Traiectinae, Utrecht 1886: 246). Dutch Reformed minister in Hauwert, province of North Holland, 1829-1880. Moved to Sneek, Friesland, in 1880, where he died on 10 September 1881.

Married to Dieuwertje Baukes Feenstra (1810-1875).

Children: 1. Hendrik, follow III.  
2-8. Seven more children.

III. *Hendrik van Rijgersma*

Born 28 May 1829 in Sneek, Friesland. Moved to Batavia (now Djakarta), Indonesia. Died 19 September 1895 in Batavia. Married to Anna Louise Wasch (1838-1911).

Children: 1. Frederik Hendrik, follow IV.  
2-6. Five more children (all born and died in Indonesia).

IV. *Frederik Hendrik van Rijgersma*

Born 7 February 1857 in Batavia, Indonesia. Died 8 February 1928 in Batavia. Married to Hendrika Pos (1868-1959).

Children: 1. Hendrik, follow V.  
2-4. Three more children, they remained single.

V. *Hendrik van Rijgersma*

Born 9 March 1904 in Batavia. At present lawyer in Amsterdam. Married to Bertina Johanna Langenberg. No children.

Many family papers, photographs and portraits of ancestors are in the possession of this couple. They supplied us with important data for this family register.

B

II. *Eling Hendriks van Rijgersma*

Born 1808 in Cubaard, province of Friesland. Moved to Lemmer in Friesland, where he became an apothecary. Married to Trijntje Gaukes de Tempe (born 1813).

Children: 1. Hendrik Elingsz, follow IIIa.  
2. Trijntje Elings (1836-1838).  
3. Sigefridus Gardingius, follow IIIb.  
4. Anna Elings (1846-1846).

IIIa. *Hendrik Elingsz van Rijgersma*

Born 5 January 1835 in Lemmer, Friesland. Died on St. Martin, Netherlands Antilles, 4 March 1877. (For complete biography see p. 117-130.) Married to Maria Henriette Gräving on 14 April 1861 at Marken, Netherlands.

M. H. Gräfung was born in May 1836 in Amsterdam. She was a daughter of Hendrik Gräfung (born 1 November 1801), who was a sailor, and married 11 June 1834 with Maria R. Stroek (born 15 February 1807, in Doesburg). There were three more children from this marriage: Anna Gräfung; Betsy Gräfung who married with C. A. van de Water in 1868, they lived in Bladel, North Brabant; and Hendrik Gräfung who was married and lived in Amsterdam. Maria R. Stroek before 1862 married for a second time with a schoolteacher, named Krouwel. They lived in Meteren, province of Gelderland. — Maria H. Gräfung moved with her husband doctor van Rijgersma and two children to St. Martin in September 1863. In the West Indies five more children were born to them. After her husband died in 1877 Mrs. van Rijgersma continued to live on the plantation "Little Bay" at St. Martin. She received a pension of 750 guilders. In 1892 she requested permission to move to New York with her children, instead of returning to Holland. This request was refused in the first instance; however, the family was allowed to leave for America the next year. They lived in Brooklyn, N.Y., at the address 611 Kosciusko Street. Mrs. van Rijgersma died in Brooklyn on 12 April 1906 and was buried at the Van Rijgersma plot on the Evergreen Cemetery in Brooklyn, Tulip Grove, plot no. 820. Her name is engraved on the tomb stone.

- Children: 1. Hendrik Eling, follow IVa.  
 2. Marie Catharina, follow IVb.  
 3. Anna Eliza Martina Philipina, follow IVc.  
 4. Ada Helena Hortensia, follow IVd.  
 5. Trijntje de Tempe, follow IVe.  
 6. Sigefridus Gardengius, follow IVf.  
 7. Cornelis Washington, follow IVg.

### IIIb. *Sigefridus Gardingius van Rijgersma*

Born after 1836 in Lemmer, Friesland. He emigrated to Paraná, Argentina, where he became a farmer. During this voyage (1869) he visited his brother Hendrik at St. Martin, and collected shells for him on the island of St. Thomas. He married in Argentina with an American lady, they had three children, two daughters and one son.

### IVa. *Hendrik Eling van Rijgersma*

Born 14 January 1862 on the island of Marken, Holland. He went with his parents to St. Martin in September 1863, and returned to the Netherlands in 1873 when the family was on leave. Since he was partly deaf he remained with relatives in Holland when the other members of the family returned to St. Martin. He learned to become a house painter. At the end of 1884 he returned to St. Martin, and left the island again

with his youngest brother in August 1887. They emigrated to the U.S.A., there they lived first in New York City and later in Brooklyn. Hendrik became a United States citizen in 1898. His painting profession caused his early death on 29 April 1907; he died of a chronic lead poisoning. He was buried on the Evergreen Cemetery in Brooklyn in the Van Rijgersma plot, his name is on the tomb stone.

### IVb. *Marie Catharina van Rijgersma*

Born 17 August 1863 on the island of Marken. At the age of one month she went with her parents to St. Martin where she remained until 1893 (except for the one year leave to the Netherlands in 1873-1874). She did not marry. In 1893 she went with her mother, sisters and one brother to the United States, where she lived in Brooklyn N.Y. After 1927 Marie went to live with her brother Sigefridus in Norwalk, Connecticut, where she died on 13 May 1948. She is buried in the Van Rijgersma plot in Brooklyn, N.Y., her name is not on the tomb stone.

### IVc. *Anna Eliza Martina Philipina van Rijgersma*

Born 13 October 1865 at St. Martin. Being the first van Rijgersma child born on St. Martin at Philipsburg, she received the middle names Martina Philipina. The name Anna was chosen after her aunt Anna Gräfung. She went on leave to Holland in 1873-1874, and left St. Martin in 1893. Anna lived in Brooklyn, N.Y. where she married. After her husband died (1939) she moved in with her brother Sigefridus in Norwalk, Conn. Here she died on 9 January 1944, and was buried in the family plot at Evergreen Cemetery, Brooklyn. Her name is not on the tomb stone. She left no children.

Anna was married with Frederick A. Beals, 1873-1939, who was an engineer. He is buried in the Van Rijgersma plot at Evergreen Cemetery. His name is not on the tomb stone.

### IVd. *Ada Helena Hortensia van Rijgersma*

Born 30 (?31) May 1867 at St. Martin. On leave to Holland in 1873-1874. She left St. Martin with her mother, sisters and brothers in 1893 to go to the U.S.A. However, as she was engaged to J. C. Waymouth of St. Martin, she returned



to St. Martin and married on 18 October 1899. Ada lived in Brooklyn, N.Y. from 1907 to 1912. She died on the island of Antigua in 1940. (Probably she had left St. Martin after her husband had died there in 1935.)

Children: 1. Ada Susanna Maria, follow Va.  
2. Henrietta Eloise, follow Vb.  
3. Anna Louise, follow Vc.  
4. Charles Cornelis (St. Martin, 1906-1911).

Ada was married to Josiah Charles Waymouth, born at St. Martin, 6 August 1852. He was the first son of the reverend William T. Waymouth, who arrived at St. Martin from England in 1850. The reverend Waymouth married in 1851 his second wife Susanna Illidge of St. Martin. J. C. Waymouth went to England from 1862 to 1868 for his education, and to the U.S.A. from 1869 to 1873. Back on St. Martin he married Ada H. H. van Rijgersma in 1899. He had many occupations on the island: merchant, notary, attorney, editor, author, etc. From 1907 to 1911 he was in Brooklyn, N.Y. On St. Martin he started the journal "St. Martin, day by day", it was published from 1911 to 1920. Later he published "New Life" (1924-1925), and he wrote a book on the history of St. Martin "Memories of Saint Martin (Netherlands Part), 1852-1926", printed in Barbados, 1926. He died at St. Martin on 29 April 1935. See also Hartog, 1964: 693, note 340, for a short biography.

#### IVe. *Trijntje de Tempe van Rijgersma*

Born 17 January 1871 at St. Martin. She was called Nina, and named after her grandmother of father's side, Trijntje Gaukes de Tempe. On leave in Holland, 1873-1874, moved to Brooklyn, N.Y. in 1893. Not married. She died on 2 April 1940 and was buried at the Van Rijgersma plot at the Evergreen Cemetery in Brooklyn. Her name is not on the tomb stone.

#### IVf. *Sigefridus Gardengius van Rijgersma*

Born 19 January 1873 at St. Martin. Called Frits, and named after his father's brother. On leave to the Netherlands, 1873-1874. From 1874 to 1893 on St. Martin. In 1893 he went with his mother and sisters to Brooklyn, N.Y., where he became a milkman. Sigefridus retired in 1927 and moved to Norwalk, Connecticut. He died in Norwalk on 28 December 1963 and was buried in the Van Rijgersma plot at the Evergreen Cemetery in Brooklyn. His name is on the tomb stone.

Sigefridus married in 1901 with Ida Elizabeth Ring, she died in Norwalk on 11 April 1932. One son was born, named George, who died at the age of 6. Sigefridus

remarried after 1945 with the widow Helen Lang, born 1894 in Berlin, Germany. Mrs. van Rijgersma-Lang now lives at 147 Chestnut Hill Ave., Norwalk, Connecticut, in the house her husband owned since 1927. Our contact with this lady was of great importance for this study.

Sigefridus kept the documents, letters, and manuscripts of his father, doctor H. E. van Rijgersma, which formed the main base of this study.

#### IVg. *Cornelis Washington van Rijgersma*

Born 4 July 1874 at St. Martin. Named after his uncle Cornelis A. van de Water. The middle name "Washington" was given to this child as he was born on U.S. Independence Day. He was born after his parents returned from leave to the Netherlands, 1873-1874, therefore he has never been in that country. Cornelis went with his older brother Hendrik to the United States in 1887, and became a milk driver at Bordens Milk Company in Brooklyn, N.Y., where he lived the rest of his life. His last address was at 651 59th Street in Brooklyn, where he died on 31 October 1963. He was buried in the Van Rijgersma plot at Evergreen Cemetery, his name is on the tomb stone.

Cornelis married around 1910 with Carolina Greiner, born in Brooklyn on 25 November 1884, daughter of Godfried Greiner and Mary Louise Bosch. Carolina died in Brooklyn on 30 May 1964, she is buried in the Van Rijgersma plot, her name is on the tomb stone. They had no children.

#### Va. *Ada Susanna Maria Waymouth*

Born 8 January 1901 at St. Martin. She studied for schoolteacher in Curaçao (1918-1920) and Holland (after 1926). She was a teacher at St. Martin and at Aruba. Ada married Rene Lewis Johnson from Saba, who worked for an oil company in various parts of the world. After his retirement in 1967 the Johnsons went to live in Florida. They have no children.

Mrs. Ada Johnson-Waymouth is a grandchild of doctor H. E. van Rijgersma. We met her in the U.S.A. in 1964. At that occasion she provided us with interesting information about her grandfather.

#### Vb. *Henrietta Eloise Waymouth*

Born 20 May 1902 at St. Martin. Married to the reverend A. Stanley Reed of England. They live in the U.S.A.

Children: 1. Florence Annie, follow VIa.

2. Margaret Alison, follow VIb.
3. Yolanda Aimee.

Mrs. H. E. Reed-Waymouth is another grandchild of doctor van Rijgersma. We met her in Brooklyn, N.Y. in 1964.

She is in the possession of the gold medal which doctor van Rijgersma received from the King of Norway and Sweden in 1872, and she has the original photograph made of H. E. van Rijgersma in October 1873 during his leave in the Netherlands.

#### Vc. *Anna Louise Waymouth*

Born 20 December 1904 at St. Martin. She married Charles Stuart Dickson from St. Kitts in 1926. The Dicksons live in the West Indies, and they have one child: Charles William.

#### VIa. *Florence Annie Reed*

Married to Wilbur Peck.

Children: 1. Michael.  
2. Gary.

#### VIb. *Margaret Alison Reed*

Married to Walter Evans.

Children: 1. Richard.  
2. William.

This family register shows that at this moment there are no living descendants of doctor van Rijgersma who bear his name. Although he had seven children, there are only three granddaughters; two grandsons died at a very young age.

Doctor H. E. van Rijgersma died at the age of 42 years. His eldest son died at 45; however, the other six children became old, respectively 84, 78, 73, 69, 90, and 89 years. Nine members of the family lie buried together in the Van Rijgersma plot at Evergreen Cemetery in Brooklyn, N.Y.

#### VAN RIJGERSMA IN THE ZOOLOGICAL LITERATURE

Van Rijgersma's work on paleozoology, ornithology, herpetology, ichthyology and Crustacea has already been discussed by Holthuis (1959: 72-76). His part in those studies was collecting animals and fossils, whereas a number of American zoologists published on the material. Two species were named after him: the snake *Alsophis rijgersmaei* Cope, and the fish *Ocyurus rijgersmaei* Cope. He discovered many more new species.

Unfortunately the insect collections of van Rijgersma, which were sent to the Rijksmuseum van Natuurlijke Historie in Leiden, were never studied, although Snellen van Vollenhoven had informed him that the collections contained a number of new species.

The publications referring to van Rijgersma, which were unknown to Holthuis (1959), and those being published after 1959, have been compiled here.

The name of H. E. van Rijgersma, although misspelled, was mentioned in the thesis (University of Amsterdam) of Jan Metzelaar (1891-1929) on fishes of the tropical Atlantic. In the introduction Metzelaar (1919: 3) stated: "A little more was known of St. Martin, Dr. R. E. van Rygersma having collected there the material on which is chiefly based the paper of Cope".

— Cope (1871b) described 88 species, collected by van Rijgersma at St. Martin, of which 12 were considered new species, and two new genera. — Metzelaar (1919: 174) mentioned 17 fish species recorded by Cope from St. Martin, which were not known to him from the West Indies.

In a recent paper by Voous & Koelers (1967) on the birds of St. Martin, Saba, and St. Eustatius, van Rijgersma's collecting of birds is mentioned several times (: 116, 119, 122, 123, 129, 130).

There is an article on van Rijgersma in the "Encyclopedie van de Nederlandse Antillen" (1969: 485) by I. Kristensen.

Of the malacological publications in which van Rijgersma is mentioned, only one was published during his lifetime, the others appeared after his death (1877).

1. The American malacologists Bland & Binney (1871) published an article on the pulmonate genus *Pineria*. They compared (: 23) *Pineria viequensis* from Barbados with *P. schrammi* from Anguilla, St. Martin and St. Barths, and they concluded that these two names apply to a single species. The authors continued:

"We obtained the jaw and odontophore from a dead specimen of this species, collected at the east end of St. Martin, by Dr. van Rijgersma, for which we are indebted to Mr. Robert Swift."

Bland also received fossil shells from E. D. Cope, collected by van Rijgersma, since he stated (Bland, 1871: 58):

"Professor Cope lately referred to me, for determination, shells from the matrix between the femoral condyles of *Loxomylus latidens*, Cope, one of the great extinct Rodents, the bones of which have been found in the caves of Anguilla. The shells are closely allied to *Tudora pupaeformis*, Sow, now living on Anguilla, and apparently identical with an undetermined species which inhabits St. Martin."

*Loxomylus latidens* was found by van Rijgersma at Simson Bay, "Anguilla" (Cope, 1871a: 608; 1883: 15), this locality is on St. Martin, not on Anguilla as Cope stated. Holthuis (1959: 73-75) discussed the controversy of Anguilla-St. Martin. The malacological facts confirm that the locality of St. Martin is correct. The specimens of the "undetermined species which inhabits St. Martin" were received by Bland from P. T. Cleve or from R. Swift (Bland, 1871: 56).

2. Binney (1884), in a publication on the radula of pulmonate snails, mentioned van Rijgersma as the collector of two species which he had studied:

p. 101, "*Caecilianella Gundlachi*, Pfr. St. Martin. Dr. H. E. Rygersma", figured on his pl. XIV fig. C, and pl. XV fig. B.

p. 126, "*Pineria Viequensis*, Pfr. Island of St. Martin. Dr. van Rijgersma", figured on pl. VII fig. F, and pl. XVI figs. F, G.

Binney did not mention whether he had obtained the specimens from van Rijgersma personally, or via another contact.

3. The most important publication in which van Rijgersma's malacological activity is mentioned, is the study of Mazé (1890). This is a supplement to a catalogue of non-marine shells from the French Antilles. The original catalogue was published by Mazé in 1883, at that time no mollusks from St. Martin were included. The supplement of 1890 mentioned seven species from the islands of Guadeloupe, Saintes, and Désirade; however, the main part was from St. Martin with 48 species. Mazé mentioned locality records together with ecological details, many times descriptions of the species, and remarks. The collectors on St. Martin were indicated with almost all species: Kohlmann and/or van Rijgersma. The last name always misspelled as "Van Rijersma", once "Van Rigersma" and once "Van Rijesma". For eight species no collector has been given, at least part of these mollusks must have been collected by Mazé

himself, since he indicated that they are common and found all over the island. Material of these eight common species undoubtedly was also collected by van Rijgersma and Kohlmann. Although Mazé intended to describe only non-marine mollusks, 12 out of the 48 species in his list are now considered to belong to the marine fauna. The remaining 36 species are land and freshwater shells.

Mazé's list was copied by Vernhout (1914: 181-183) but no collectors were mentioned. Vernhout modernized many of Mazé's specific names, and these names were used again by Schepman (1915: 480). Regarding the land and freshwater mollusks of the Netherlands Antilles, St. Martin for a long time was better known than the other islands (Coomans, 1963a: 84). Vernhout (1914: 185) did not realize that this was due to van Rijgersma's collecting.

4. Henry Augustus Pilsbry (1862-1957), curator of mollusks at the Academy of Natural Sciences in Philadelphia, mentioned van Rijgersma several times in the second series of the "Manual of Conchology".

a) In vol. 11 (1897: 40), Pilsbry cited Mazé (1890) for *Bulimulus eyriesii* from St. Martin, collected by "Van Rijersma". On p. 42, under *Bulimulus lehmanni*, is stated "Island of Anguilla (Swift, Rijersma); St. Martin, at Simson Bay (Maze)". Dr. R. T. Abbott informed us that the specimens from Anguilla are still in the collection of the Academy in Philadelphia; they were collected by van Rijgersma on 16 July 1870. On p. 43, *Bulimulus limnoides* is mentioned from "St. Martin (Van Rijersma)". Van Rijgersma's name is misspelled in this volume, the same way as it was done by Mazé (1890).

b) In vol. 12 of the "Manual of Conchology", Pilsbry (1899: 24) stated under *Drymaeus elongatus* "St. Martins, on the mountains (Swift); Simson Bay (Kohlmann, Van Rijersma)". The record of Simson Bay is from Mazé (1890: 25, as *Bulimulus virgulatus*). The first record, from Robert Swift, might be a specimen received by Swift from van Rijgersma, as was the case with *Pineria viequensis* (see under 1).

c) A few years later, in vol. 16, van Rijgersma was mentioned for the last time by Pilsbry (1903: 111) under *Pineria viequensis*: "Saint Martin: Simson Bay (Van Rijgersma), in rock-crevices, on the lowlands". Pilsbry had the actual specimens from St. Martin, for he studied the radula (: 112). He did not agree with Bland & Binney (1871),

who considered *Pineria viequensis* and *P. schrammi* to be one species (see under 1). Pilsbry called *schrammi* a variety of *P. viequensis*.

5. In various publications we have mentioned van Rijgersma's activities on malacology (Coomans, 1963a: 84-85; 1963b: 115; 1967: 119, 120, 125-142; 1970: 174, 179, 180; 1973b: 16).

#### VAN RIJGERSMA IN THE HISTORICAL LITERATURE

In some historical works van Rijgersma was mentioned: in three studies on the history of the Netherlands Antilles, and in two on the history of the Institutions with which he had contact.

J. C. Waymouth, son-in-law of van Rijgersma, wrote "Memories of Saint Martin (Netherland Part), 1852-1926, preceded by a short sketch of earlier history", Barbados, 1926. It is mainly an autobiography, and since the author was related to van Rijgersma, one could expect information on his wife's father. Unfortunately only very little is said on Dr. van Rijgersma, his biological work is not mentioned, and in the historical facts we spotted some mistakes.

p.18: "The famous Tom Chambers... gained a lot of popularity by his informal practice of homeopathy. He however drew upon himself the ire of the Government Physician Dr. Hendrik Elingsz Van Rijgersma, who had quite recently arrived from Holland; and on his official representations Mr. Chambers was compelled to desist from his medical activities."

p.25: "Dr. Anslyn had succeeded Dr. Van Rijgersma, who died in '76."

This is wrong, van Rijgersma died in 1877.

p.34: "the widow of Doctor Van Rijgersma, who had died since 1876 .... and her family embarked for Holland via the U.S."

Again 1876 is wrong, Mrs. van Rijgersma with her children did not return to Holland, they went to the United States to live there. Waymouth visited them in Brooklyn in 1907, which is described on page 44 of his book.

p.37: "In the year 1899 a matrimonial union took place on the 18th of October .... between J. C. Waymouth, Esq., and Miss A. H. van Rijgersma, which was consummated at the Bride's residence at Little Bay."

The plantation Little Bay was bought by van Rijgersma in 1876.

Johan Hartog, librarian of the Public Library on Aruba, mentioned van Rijgersma in his book "De Bovenwindse Eilanden" (1964), which forms part 4 of the series "Geschiedenis van de Nederlandse Antillen".

p.426: "De toen op Sint Maarten benoemde Hendrik E. van Rijgersma heeft naast zijn practijk belangrijk werk op het gebied der biologie verricht. Helaas is Van Rijgersma jong overleden."

[On St. Martin was appointed then Hendrik E. van Rijgersma who next to his practice did important work on biology. Unfortunately van Rijgersma died young.]

Hartog (1964: 688, note 214) also referred to the articles by Holthuis (1959, 1961).

Coomans (1973b: 13-17, fig. 6) reported on van Rijgersma in a study on the history of medicine in the Netherlands Antilles.

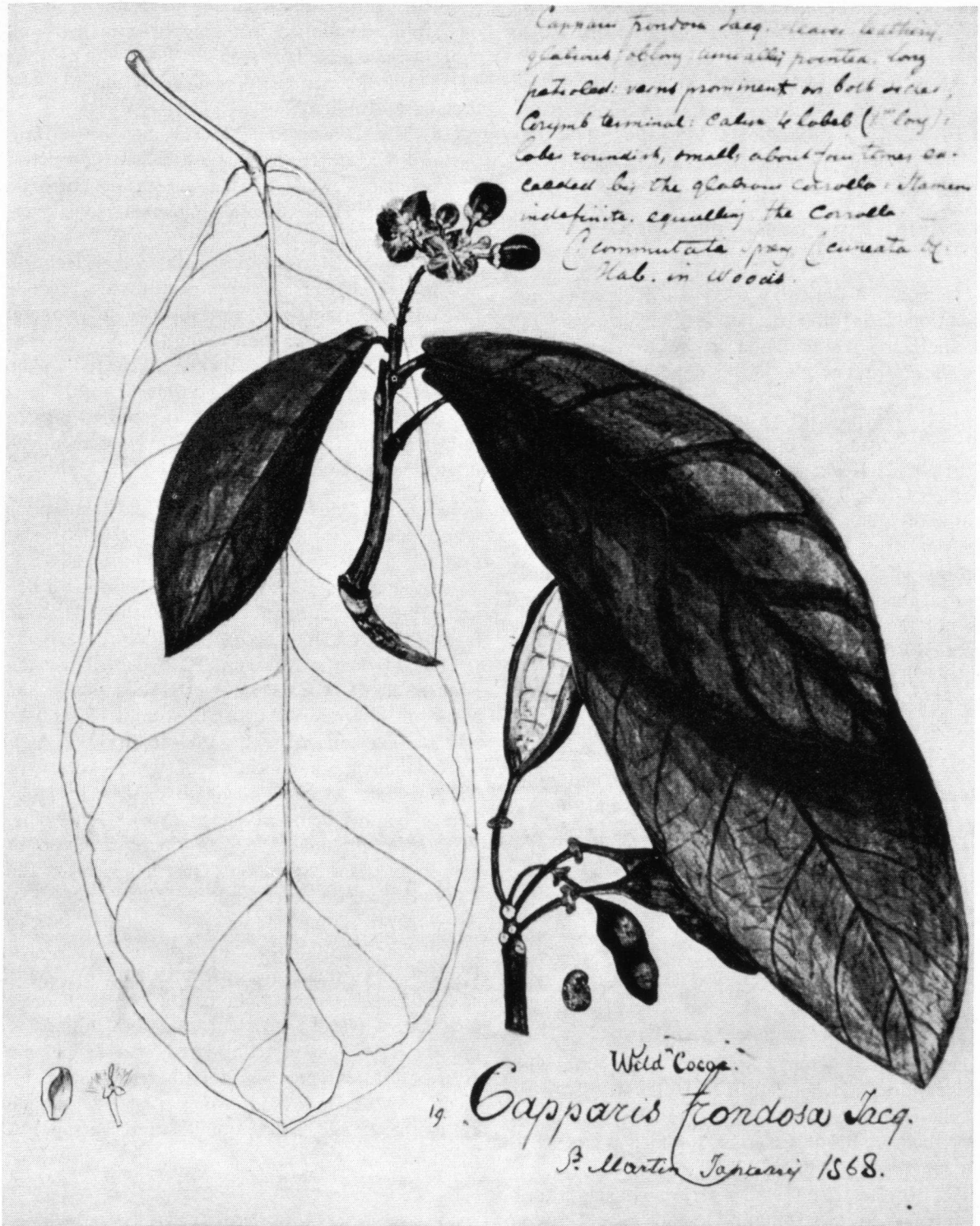
In two studies on the history of the Institutions with which van Rijgersma corresponded and exchanged material his name is mentioned.

Agatha Gijzen (1938), in her thesis on the history of the Rijksmuseum van Natuurlijke Historie from 1820 to 1915, gave a list of correspondents (: 300-335) to the Museum. H. E. van Rijgersma is mentioned on p. 327, the contact with the Museum was from 8 August 1868 until 18 January 1870, he exchanged insects for mollusks.

The manuscript collection of the Academy of Natural Sciences in Philadelphia possesses four letters, handwritten and signed by van Rijgersma. Phillips & Phillips (1963) produced a guide to this manuscript collection. One letter is in the "Tryon-Pilsbry Correspondence" (collection 98), dated 1871. Three letters are in the "Official ANSP Correspondence" (collection 567), dated 1869-1870. Through the courtesy of Mrs. Dr. Venia T. Phillips we received photostatic copies of these four letters (figs. 4, 6). Unfortunately Phillips & Phillips (1963) have considered van Rijgersma as two different persons, and therefore he is indicated in the index on two places: "Rijgersma, H. Evan" (: 308, 519), and "Van Rijgersma, H. E." (: 68, 541).

#### VAN RIJGERSMA'S WORK ON BOTANY

In the course of 1868 van Rijgersma made about sixty colour drawings of plants from St. Martin (cf. pls. II-V). He knew the scientific names of most species, and sometimes gave descriptions or



Figs. II-V. Reproductions of 4 pages with colour drawings from van Rijgersma's manuscript (1868) on the plants of St. Martin.

Plate II. *Casparia baducca*, wild cocoa.





Plate III. *Vinca rosea*, churchyard flower.



Plate IV. *Ruellia tuberosa*.



16. *Ipomoea violacea* L.  
Morning Glory.  
December 1868

Meiring lent aangeleverd door me  
wils in P. Marten

Plate V. *Ipomoea tricolor*, morning glory.



TABLE I

Names of plants from St. Martin in van Rijgersma's manuscript (1868), compared with the identifications by A. L. Stoffers in 1968. The sequence of the table is according to the manuscript.

Identifications by van Rijgersma	Identifications by Stoffers
* <i>Capparis frondosa</i> Jacq. (pl. II)	<i>Capparis baducca</i> L.
* <i>Cleome pentaphylla</i> Linn.	<i>Gynandropsis gynandra</i> (L.) Briq.
<i>Cakile aequalis</i> L'Hve	<i>Cakile lanceolata</i> (West) O. E. Schultz
* <i>Opuntia tuna</i>	<i>Opuntia tuna</i> Mill.
* <i>Lawsonia inermis</i> L.	<i>Lawsonia inermis</i> L.
* <i>Lantana camara</i> Linn.	<i>Lantana camara</i> L.
* <i>Piscidia erijthrina</i> L.	<i>Piscidia piscipula</i> (L.) Sarg.
* <i>Eugenia uniflora</i> L.	<i>Eugenia ligustrina</i> (Sw.) Willd.
<i>Vinca rosea</i> Linn. (pl. III)	<i>Vinca rosea</i> L.
* <i>Clitoria ternatea</i> Linn.	<i>Clitoria ternatea</i> L.
* <i>Tobinia punctata</i> Gr.	<i>Fagara trifoliata</i> Sw.
* <i>Anona muricata</i> Linn.	<i>Annona muricata</i> L.
<i>Anona reticulata</i> Linn.	<i>Annona reticulata</i> L.
* <i>Anona squamosa</i> L.	<i>Annona squamosa</i> L.
* <i>Pisonia inermis</i> Jacq.	<i>Pisonia fragrans</i> Dumond-Cours.
* <i>Heliotropum Curassavicum</i> Linn.	<i>Heliotropium curassavicum</i> L.
* <i>Heliotropum indicum</i> L.	<i>Heliotropium indicum</i> L.
<i>Amaranthus paniculatus</i> Linn.	<i>Amaranthus hybridus</i> L. ssp. <i>cruente</i> (L.) Thell. var. <i>paniculatus</i> (L.) Thell.
* <i>Jatropha multifida</i> L.	<i>Jatropha multifida</i> L.
* <i>Hura crepitans</i>	<i>Hura crepitans</i> L.
* <i>Thespesia populnea</i> Cor.	<i>Thespesia populnea</i> (L.) Soland.
<i>Gomphrena globosa</i> Linn.	<i>Gomphrena globosa</i> L.
<i>Epidendrum</i>	<i>Epidendrum</i>
* <i>Leonurus sibiricus</i> Linn.	<i>Leonurus sibiricus</i> L.
* <i>Opuntia triacantha</i> Law.	<i>Opuntia triacantha</i> P.DC.
* <i>Melocactus communis</i> Lecand	<i>Melocactus communis</i> Link & Otto
* <i>Opuntia</i>	<i>Opuntia dillenii</i> Haw.
* <i>Paritium tiliaceum</i>	<i>Hibiscus tiliaceus</i> L.
* Standelkruiden	? <i>Brassavola cucullata</i> R.Br.
* <i>Sida ciliaris</i> Linn.	<i>Sida ciliaris</i> L.
—	<i>Asclepias curassavica</i> L.
—	<i>Ficus citrifolia</i> Mill.
<i>Desmodium</i>	<i>Desmodium canum</i> (J. F. Gmel.) Schinz & Thell.
—	<i>Albizia lebbeck</i> (L.) Benth.
* <i>Rhizophora Mangle</i> L.	<i>Rhizophora mangle</i> L.
* <i>Capparis cynophallophora</i> L.	<i>Capparis flexuosa</i> (L.) L.
—	Cactaceae
* <i>Argemone Mexicana</i>	<i>Argemone mexicana</i> L.
* <i>Datura stramonium</i> L.	<i>Datura stramonium</i> L.
* <i>Solanum torvum</i> Sw.	<i>Solanum torvum</i> Sw.
* — (pl. IV)	<i>Ruellia tuberosa</i> L.
* —	<i>Opuntia catacantha</i> Link & Otto
<i>Ipomoea violacea</i> L. (pl. V)	<i>Ipomoea tricolor</i> Cav.
* —	<i>Abrus precatorius</i> L.
* <i>Samyda serrulata</i> Linn.	<i>Samyda dodecandra</i> Jacq.
* <i>Morisonia Americana</i> Linn.	<i>Morisonia americana</i> L.
* <i>Capparis Jamaicensis</i>	<i>Capparis cynophallophora</i> L.
* <i>Portulaca pilosa</i> L.	<i>Portulaca pilosa</i> L.
* <i>Portulaca halimoides</i> L.	<i>Portulaca halimoides</i> L.
<i>Ipomoea ventricosa</i> Choix.	<i>Operculina ventricosa</i> Peter
<i>Ricinus communis</i> L.	<i>Ricinus communis</i> L.
* —	<i>Merremia dissecta</i> (Jacq.) Hallier F.
* <i>Cassia senna obovata</i> Collad	<i>Cassia obovata</i> Collad.
* <i>Ipomoea pes-caprae</i>	<i>Ipomoea pes-caprae</i> L.
* <i>Pedilanthus tithymaloides</i>	<i>Pedilanthus tithymaloides</i> (L.) Poit.

\* = these species were mentioned from St. Martin by Boldingh (1909) in his Flora of the Dutch West Indian Islands, vol. I.

remarks. These drawings are now in the possession of W. H. N. Johnson M.D. in Norwalk, Connecticut. They were donated to him by van Rijgersma's son Sigefridus. Dr. Johnson kindly allowed us to photograph the drawings, and these photographs were sent for identification to Prof. Dr. A. L. Stoffers, a specialist on West Indian botany. In table I the names used by van Rijgersma are compared with the identifications by Stoffers, the difference in time between the identifications by van Rijgersma and by Stoffers being exactly one hundred years. Comparing the names in table I it shows that van Rijgersma knew the plants of St. Martin fairly well. It remains a question from whom he received the names, or which botanical literature was available to him. In van Rijgersma's papers we did not find any further notes on plants. In his correspondence two botanical contacts were found: the pharmacist Bavay, also an amateur malacologist, and the physician Fock van Coppenaar of Bonaire, who kept an herbarium.

It was not known earlier that van Rijgersma was also interested in botany, and that he had made a flora of St. Martin with beautiful colour drawings. In the literature on the flora of the Dutch Windward islands (Arnoldo, 1954; Boldingh, 1909, 1913; Stoffers, 1956) he is not mentioned.

#### VAN RIJGERSMA'S SHELL COLLECTION

As a boy in the Netherlands van Rijgersma was already interested in shells, as we know from a letter written in 1868 to Snellen van Vollenhoven. He bought some East Indian shells from sailors, and collected a few *Tellina*'s in Holland himself.

When on St. Martin he started to collect mollusks, and after three years his collection contained 300 species from this island (letter to Harting, 6 December 1866). In 1870 he wrote to Mactier in Philadelphia that he had a complete collection of mollusks from St. Martin. We think that the total number of species from the island collected by van Rijgersma lies between 500 and 600.

He also collected other animals, and he might have had an herbarium of St. Martin plants. The animals were used for exchange, for which he asked shells in return. There is one exception: in 1868 van Rijgersma exchanged half of his shell

collection for insects from Guadeloupe. The insects were collected by his friend Kohlmann, an amateur entomologist. These insects from Guadeloupe, together with insects from St. Martin, were sent to the Rijksmuseum van Natuurlijke Historie in Leiden in 1869, for which he received 523 shells (111 species) in return in 1870. He asked his relatives in the Netherlands to collect shells for him (1869), and his brother Frits did so.

In 1869 van Rijgersma started to send material to Philadelphia, many species of different zoological groups were shipped to the Academy of Natural Sciences (Holthuis, 1959: 70-71), for which he asked shells in return. On 25 November 1869 van Rijgersma wrote to Cope in Philadelphia:

"When there is an opportunity direkt for Philadelphia I will send them [= lizards] provided you keep your promises and send please the collection [of shells] which Dr. Samuel B. Howell was making for me and which must be ready for sending I think."

We are not able to prove that Howell <sup>1)</sup> sent shells to van Rijgersma, since there are no records in the Reports of the Conchological Section over 1870. According to Nolan (1871: 331) the Section had sent mollusks in exchange to S. Hanley and J. C. Cox, the name of van Rijgersma was not mentioned. We doubt if the Section ever sent shells to him, since Nolan continued:

"In consequence of the comparative completeness of our collection in many of the families, we have been forced to decline exchanging with foreign naturalists, except when they are able to furnish us with specified desiderata".

During one of his collecting trips to the island of Anguilla in 1869 van Rijgersma collected one hundred species of fossil shells. In that year he also started to exchange with private collectors in the U.S.A., first with members of the Conchological Section of the Academy (1869 Beadle, 1870 Mactier), however, it is not known what van Rijgersma received from them in return.

In 1870 an exchange contact was established with R. Swift at St. Thomas, in June of that year van Rijgersma received 27 species (173 speci-

<sup>1)</sup> S. B. Howell, 1831-1903, was a physician in Philadelphia and a member of the Academy of Natural Sciences since 1855. He and Cope were two of the founders of the Conchological Section. Howell became chairman of the Standing Committee for Cephalopoda, Pteropoda and Brachiopoda.

mens) of landshells from Puerto Rico, Jamaica, St. Croix, Bonaire, and Venezuela; followed in July 1871 by landshells from St. Lucia and marine mollusks of the genera *Cassis* and "Triton" (= *Cymatium*). More Cassidae were sent by Swift in November 1871.

In 1871 more collectors wanted to exchange mollusks: Willis in Canada, Schramm and Bavay in Guadeloupe. It is known that the exchange with Bavay resulted in 34 species of non-marine shells from Guadeloupe (August 1871). Later, when Bavay was living in France, he sent French mollusks too (October 1875).

After Swift's death (1872) the exchange contact was taken over by Bland in New York, who was interested in landshells. In December 1872 van Rijgersma received 100 species, collected in Cuba (78 species), Jamaica (17), U.S.A. (3), and Guatemala (2). A few shells were received in September 1874, and in December 1875 more material was sent by Bland, from the U.S.A. (16 species), Jamaica (4), and Guatemala (11).

The exchange with Schramm at Guadeloupe probably had no results. However, Schramm's friend Mazé, who also lived on Guadeloupe, received shells in August 1872. Mazé published on this collection of mollusks from St. Martin in 1890, in which van Rijgersma is mentioned as one of the collectors. It is not known to us what was received in return from Mazé.

Exchange with Governor Rawson resulted in marine shells from Barbados and the Bahamas.

When on leave in the Netherlands (1873-1874) contacts were established in Europe. Although descriptive malacology was flourishing in western Europe in the 19th century, taxonomic malacological research in the Netherlands was sparse. At that time there were some private shell collectors in Holland, but van Rijgersma was not in contact with them. He had business relations with two English shell dealers, and he bought shells from Sowerby in 1873. They belonged to the families Achatinellidae, Pholadidae, and Haliotidae. Two years later he received 35 species of "Triton" (= *Cymatium*), 25 "Ranella" (= *Bursa*), 20 *Cassis*, 5 *Pholas*, 2 *Jouannetia*, and *Teredo gigantea*. Exchange with the shelldealer Damon started in or before 1875, we do not know what was sent to St. Martin.

In July 1875 a new French contact was established, with E. Marie, from whom 35 species of land and marine shells of France and 19 trop-

ical species were received. Marie had collected in New Caledonia, French Guyana, and other French colonies, and around 1877 van Rijgersma received a collection of mollusks with over 100 species from New Caledonia, 40 from France, 20 from Guyana, and some more. Many of the New Caledonian specimens were new species, found by Marie and described by the French malacologist J. C. H. Crosse (1826-1898). Some of the specimens sent were types.

All the facts mentioned above give us an idea of the size of van Rijgersma's shell collection. We figure the number of species between 1500 and 2000, of which one third from St. Martin, and the total number of specimens between five and ten thousand, for the greater part from St. Martin. These numbers are confirmed by a copy of a letter, written by van Rijgersma and found in his correspondence:

"My dear Sir

It is true that I wish to dispose of the greater part of my Collection of shells etc. etc. My duplicates amounting to several thousand specimens are for sale as you are asking the prize let me tell you it is difficult. If you have not seen it to form an idea, but more or less there will be between 500-600 species amounting to several thousand specimens which I would dispose of at the prize of £ 50.- other things as birdskins Corals Sponges & Gorgonia at the rate of 25 Ct each species. It is well understood that the species are *good ones* not dead or broken".

It is not known to whom this letter was addressed; since the price is marked in English pounds, we suppose it was written to one of the English shell dealers, R. Damon or G. B. Sowerby (III). It seems reasonable to accept that the duplicate shells he offered were for the main part specimens from St. Martin. We did not find any proof that the sale was established.

#### HISTORY OF THE COLLECTION AFTER HIS DEATH

At the time of his death (March 1877) van Rijgersma had four cases with shells. Not long afterwards, on 27 April, his widow wrote a letter to Th. Bland in New York and asked his help to sell the collection. Bland's answer was dated 4 June 1877, in which he wrote "I cannot hold out any hope that the collection of shells can be

Leiden, den 21 Juli. 1885

Geachte Mevrouw,

Naar aanleiding van eene mededeeling van Prof. Swinger ben ik zoo erg my aan u te adresseeren. Het betreft eene collectie conchylia, thans in uw bezit, die de eventueel soust willen verkoper aan het Rijks Museum van Natuurlijke Historie alhier. Aangenamen zal het my zijn, zoo u de vriendeljkheid soust willen hebben aan my die Catalogus van de collectie te leenen en wat er naar mocht zijn, b.v. vogelhuizen, etc. Ik had of haster kan ik in geen geval gebruiken. Grauwe had ik van u tevens een opgave van de som, waarvoor u alles wilt

afstaan. Natuurlijk zal ik volgens de Catalogus kunnen beoordeelen of ik in uw voorstel zal kunnen treden.

Gelooft my, geachte Mevrouw, met de meeste begroeting

Mw. Dr. Diemmer

Dr. F. A. Jentink

Directeur v. d. Ryks Museum  
van Natuurlijke Historie.

Fig. 9. Letter from Dr. F. A. Jentink, dated 21 July 1885, to the widow of van Rijgersma, asking for information about selling her late husband's collection of shells and birdskins to the Rijksmuseum van Natuurlijke Historie at Leiden.

advantagenously sold here", and he advised to sell it in Europe. In November 1877 van Rijgersma's friend Fock van Coppelaar, physician on the island of Bonaire, on his way to the Netherlands, offered Mrs. van Rijgersma his help to sell the collection in Holland. However, it was not sold.

In 1884-1885 a Dutch scientific expedition explored the colonies in the West Indies. The botanist W. F. R. Suringar (1832-1898) visited St. Martin and saw the mollusks and birdskins. He was informed that Mrs. van Rijgersma wanted to sell these items. Suringar passed this message on to F. A. Jentink (1844-1913), who was director of the Rijksmuseum van Natuurlijke Historie in Leiden since 1884. Jentink sent a letter to Mrs. van Rijgersma at St. Martin, dated 21 July 1885 (fig. 9). The museum was interested to buy the mollusks and birdskins, and asked for a catalog of the objects. Unfortunately the shells were not sold to the Leiden museum, although at that time no material from St. Martin was present in its collection. Horst & Schepman (1894-1908) did not mention the presence of any marine gastropod nor chiton from St. Martin in the collection of the Rijksmuseum van Natuurlijke Historie in Leiden; and the museum had only one landsnail from St. Martin in 1914 (Vernhout, 1914: 178, 181): *Bulimulus guadalupensis*, which was not obtained from van Rijgersma.

Although the collection was not sold to Leiden, we found in the correspondence of van Rijgersma a list of 12 pages, entitled "Shells from West-Indies selected for the Leyden Museum of Nat. Hist. from Dr. v. Rijgersma's Collection" (fig. 10). The list is handwritten, not by van Rijgersma himself nor by his wife, but possibly by one of their children. A few errors in the names indicate that the writer was not familiar with mollusks ("Cerata mayeria" for *Erato maugeriae*, *Trochus* "pymbinus" for *T. jujubinus*, *Adamsiella* "ignobilis" for *A. ignilabris*, *Lima* "combea" for *L. caribea*, *Tellina* "cornuris" for *T. carnaria*, and some other mistakes). We suppose that this list was made up after Jentink's letter, however, it was not sent to Leiden. The list does not contain the complete collection of van Rijgersma, a large number of species he had owned were not mentioned. In addition, the beginning of the list shows that these shells were "selected". The list mentioned 615 species (1202 specimens), all from the West Indies. Of almost every species two specimens were selected, in some cases only one, and the majority was from St. Martin with 387 species. The re-

maining 228 species came from 25 islands in the Caribbean: from Cuba (34 species), Guadeloupe (31), St. Thomas (29), Barbados (22), Jamaica (22), Martinique (14), Curaçao (10), and from other places (each less than ten species).

The list is more or less systematically arranged, and the species are grouped per genus. Four classes of the phylum Mollusca are represented (Gastropoda, Pelecypoda, Scaphopoda, and Amphineura), Cephalopoda are not mentioned. This list indicates some interesting facts on van Rijgersma's curatorial activities:

- a) he was interested in all mollusks, marine and non-marine, recent and fossil;
- b) the collection was arranged systematically;
- c) he collected himself;
- d) he was not interested in keeping large series of specimens, like many shell collectors today, he wanted a few specimens of each species;
- e) he was a careful curator, keeping all the lots separated and well labelled with the locality.

The list is certainly trustworthy as for the localities, as may be concluded from the species endemic to restricted islands or island groups. From Curaçao and Bonaire are mentioned the following species:

*Oliva fusiformis* Lamarck, Curaçao; *Ancillaria glabrata* Sowerby, Bonaire; *Marginella marginata*, Curaçao [= *Prunum marginatum* (Born)]; *Marginella prunum*, Curaçao [= *Prunum prunum* (Gmelin)]; *Marginella interrupta*, Curaçao [= *Persicula interruptolineata* (Mühlfeldt)]; *Cyclostoma carneum*, Curaçao [= *Tudora rupis* H. B. Baker]; *Tudora megachila*, Curaçao [= *T. megacheilos* (Pot. & Mich.)]; *Tudora versicolor* Pfr., Bonaire [= *T. aurantia* (Wood)].

These eight species are indeed restricted to the southern Caribbean, the landshells are endemic to the three southern islands of the Netherlands Antilles.

Mrs. Helen van Rijgersma-Lang, daughter-in-law of Dr. van Rijgersma, gave us the following information about the shell collection, as it was told by her late husband. "When Mrs. van Rijgersma with her children immigrated into the United States in 1893 she took the shell collection with her, it was packed in a number of crates. In New York the collection was sold as a whole to a physician with a German name". From that moment on the collection is lost. We have inquired at all the major museums in the United States, but none of them has a large collection of shells

Shells from West-Indies  
 selected for the Leyden Museum of Nat. Hist.  
Gasteropoda. from Dr. v. Rijgersma's  
Collection

Fam. Strombidae

2	<i>Strombus</i>	<i>incermis</i> Soly.	Bahamas
2	"	<i>accipitrinus</i>	S. Martin
2	"	<i>gigas</i> L.	"
1	"	<i>pupilis</i> L.	"
1	"	"	Barbados
2	"	<i>lobatus</i> Soly.	S. Martin
2	"	<i>gallus</i>	"
2	"	<i>dubius</i> Soly.	"

Fam. Muricidae

2	<i>Murex</i>	<i>porum</i> Gmel.	S. Martin
2	"	<i>notacilla</i> Chem.	"
2	"	<i>brevifrons</i> Lk.	"
2	"	( <i>Lombreno</i> )	W. I.
2	"	spec. undetermined	S. Martin
2	"	<i>hexagonus</i> Lk.	"
2	"	<i>albatus</i> Kien.	"
1	"	<i>elegans</i> Beck	"
2	<i>Purania</i>	<i>pinnata</i>	Barbados

Fig. 10. Part of the first page from the list entitled "Shells from West-Indies selected for the Leyden Museum of Nat. Hist. from Dr. van Rijgersma's Collection". Probably written by one of van Rijgersma's children in 1885.

from St. Martin. Since the shells were sold to a private collector in New York, they may still be in private hands in that area. Therefore a request for information was published in the New York Shell Club Notes (no. 103, 1964: 4), without success.

In several American museums a few lots of shells from St. Martin, collected by van Rijgersma, are preserved. Dr. W. J. Clench informed us that the Museum of Comparative Zoology in Cambridge contains a few lots from St. Martin, obtained from the collection of Th. Bland. These shells had been sent to Bland in 1872. We found a few lots of St. Martin landshells, originally from the Crooke collection, in the American Museum of Natural History in New York. John J. Crooke (1824-1911) of New York was in contact with Bland, who donated many West Indian land mollusks to Crooke (Weingartner, 1955: 52); Bland had received these specimens from van Rijgersma. Some lots have the original label in Bland's handwriting. The mollusk collection of the Academy of Natural Sciences in Philadelphia also has a few lots of shells, collected by van Rijgersma on St. Martin and Anguilla, but they came through the Beadle and the Swift collections. Dr. R. T. Abbott informed us that the two species of cephalopods, sent by van Rijgersma to the Academy in 1869 (Leidy, 1869: 236), could not be found at the present time.

Among the descendants of van Rijgersma no shells have been left, except for two lots: one specimen of *Oliva bulbosa* Röding, without locality, and four specimens of *Cypraea caputserpentis* Linné, from Ceylon, with the original label. These five shells were donated to the present author, who placed them in the mollusk collection of the Zoological Museum Amsterdam.

It is very unfortunate that the collection of van Rijgersma has been lost, since it should represent the first complete collection of mollusks from one of the islands of the former Dutch colonies.

#### MALACOLOGICAL LITERATURE IN VAN RIJGERSMA'S LIBRARY

Several months after van Rijgersma's death in March 1877, an official list was prepared of his properties. In this list was mentioned "one glass case containing medical and other books, about 80 vols." Therefore his personal library certainly was not extensive, and since the majority evidently dealt with medicine, he must have owned only a

small number of books on malacology. From van Rijgersma's manuscript on the mollusks of St. Martin, and from some of the letters found in his correspondence, we know most of the malacological and other biological works which he owned and used for his research.

The following works were present in his library: Adams, C. B., 1849-1852. Contributions to Conchology.

Twelve issues, total 247 pages, were privately published by Adams. These Contributions, in which many new West Indian mollusks were described, are very scarce today, owing to the limited number of copies which were printed (Clench & Turner, 1950: 242). Van Rijgersma often refers to the Contributions in his manuscript.

Bronn, H. G., Klassen und Ordnungen des Thier-Reichs.

From this series one or a few parts were in his library.

Carpenter, P. P., 1857. Catalogue of the Reigen collection of the Mazatlan Mollusca in the British Museum.

Van Rijgersma often compared his West Indian mollusks with those from the tropical Eastern Pacific. Both faunal provinces are closely related.

Chenu, J. C., 1847. Leçons élémentaires d'histoire naturelle.

Hoeven, J. van der, 1856-1858. Handbook of Zoology.

He had the English edition of this originally Dutch work.

Knorr, W. G., 1757-1772. Vergnügen der Augen und des Gemüths in Vorstellung einer allgemeinen Sammlung von Schnecken und Muscheln. 3 vols. Nuremberg.

A Dutch edition was published in Amsterdam, 1770-1772. Van Rijgersma several times refers to this work, under the German title.

Krebs, H., 1864. The West-Indian marine shells with some remarks.

He must have possessed a copy of this very rare privately printed publication, of which only 20 copies were printed. Krebs was in correspondence with van Rijgersma.

Lamarck, J. B. P. A. de, 1835-1845. Histoire naturelle des animaux sans vertèbres. 11 vols. 2nd edition.

This edition, published after the death of Lamarck, was edited by G. P. Deshayes and H. Milne Edwards. In his manuscript van



Rijgersma copied many descriptions of the shells from this work.

Orbigny, A. d', 1839-1842. Mollusques. In: Ramon de la Sagra, Histoire physique, politique et naturelle de l'île de Cuba.

Nowadays this is a very rare book.

Reeve, L. A., 1843-1878. Conchologia Iconica. 20 vols.

It seems that van Rijgersma had only one part, the "Monograph of the genus *Pleurotoma*", issued in vol. 1 (1843-1846).

Schramm, A., 1867. Catalogue des Coquilles et des Crustacés de la Guadeloupe, envoyés à l'Exposition universelle.

Van Rijgersma was in correspondence with Schramm.

Sowerby, G. B. (I, II and III), 1842-1887. Thesaurus Conchyliorum. 5 vols.

Van Rijgersma often referred to this work. At the time when he wrote his manuscript (1875) three volumes and a few parts of vol. 4 of the Thesaurus were published.

Woodward, S. P., 1851-1856. A manual of the Mollusca, or rudimentary treatise of recent and fossil shells.

Van Rijgersma's manuscript also referred to other authors, e.g. L. W. Dillwyn, 1817, A descriptive catalogue of recent shells; and L. C. Kiener, 1834-1880, Coquilles Vivantes. These titles were probably known to him from his literature.

Van Rijgersma was a corresponding member of the Conchological Section of the Academy in Philadelphia. The Section published the "American Journal of Conchology", in total 7 volumes (1865-1872) were issued. He sometimes referred to this publication, although we were informed by the Academy of Natural Sciences that he did not subscribe to the Journal.

The Malacological Society of Belgium, of which van Rijgersma was a member since 1874, had sent vol. 9 (1874) of the "Annales de la Société Malacologique de Belgique" to St. Martin.

Van Rijgersma knew the French "Journal de Conchyliologie", and he had the issue in which *Conus mazei* was described in vol. 22 (1874). The description of this species was copied in his manuscript, and he figured the shell exactly like it was done in the Journal: upside down!

Malacological reprints were received from his friend Bland; Cope sent him the articles published on the material collected by van Rijgersma on St. Martin and other islands.

#### THE CORRESPONDENCE AND CONTACTS OF VAN RIJGERSMA

During his work at St. Martin van Rijgersma was in correspondence with other malacologists, who were studying the mollusk fauna of the Caribbean region. They belonged to various nationalities: United States, Canada, England, France, and Denmark. Van Rijgersma exchanged shells with them, they helped each other with identifications and discussed mutual problems in their correspondence. He was also in contact with biologists in the Netherlands, Belgium, the United States, and with shell dealers in England.

In most cases the correspondence is known only from the letters written to van Rijgersma. Fortunately some of the letters written by him are still present in the archives of the Academy of Natural Sciences in Philadelphia (addressed to Beadle, Cope, and Mactier), in the Rijksmuseum van Natuurlijke Historie in Leiden (addressed to Snellen van Vollenhoven), and in the University Museum in Utrecht (addressed to Harting).

In van Rijgersma's biography his correspondence is mentioned in chronological order; in this chapter his contacts are placed in alphabetical order. As far as possible of each of the correspondents a short biography is made, notes on their malacological work are given, and the contents of the letters is discussed.

In addition to the biological correspondence of van Rijgersma, letters from relatives and friends in the Netherlands were also available for study. These letters were useful for the genealogy of the van Rijgersma family; however, their contents was of no importance to the present study.

#### *Arthur Bavay (1840-1923)*

Bavay was an apothecary in the French Navy. He was stationed at Guadeloupe for a long time, then he went to New Caledonia for about one year, 1873-1874. He returned to France where he was appointed teacher in medical biology at the Medical School in Toulon, and director of the Botanical Garden. In 1896 Bavay was nominated in an important medical position at the central government in Paris ("Membre du Conseil supérieur de Santé"), he retired from this function in 1904. He died in Paris on 13 July 1923 (Lamy, 1923: 172-175).

Bavay was a shell collector, he started to publish on malacology in 1873, but most of his publications were written after 1893. Only a few



papers were about West Indian mollusks; van Rijgersma is not mentioned in any of these papers. He was interested in the malacofauna of French Indochina, and in the families Marginellidae and Pectinidae. (Bavay published in 1904 about unidentified species of *Pecten* in the collection of the Zoological Museum of Amsterdam; together with Ph. Dautzenberg he published on the Pectinidae of the Siboga expedition in 1912.) A bibliography of the malacological works of Bavay was compiled by Mme. H. Fischer (1923).

During his time at Guadeloupe, Bavay started a correspondence with van Rijgersma, the contact was realized via Father Kohlmann, a mutual friend. Bavay's first letter was dated 7 August 1871, and they agreed to exchange shells. This letter mentioned 34 species of mollusks sent to van Rijgersma. Another letter, dated 23 March 1873, is mainly on the *Eucalyptus* plant, of which Bavay had sent seeds to van Rijgersma, with a description how to grow them. Bavay's botanical knowledge is not surprising, since he had studied pharmacy. One letter was sent from Brest on 22 February 1875, when Bavay was on his way to Toulon. This letter was in answer to a letter from van Rijgersma, dealing mainly with shells. The last letter was mailed from Toulon on 19 October 1875, it was about mollusks, and in it Bavay asked for species of the genus *Pecten*.

#### *Elias Root Beadle (1812-1879)*

The Reverend Beadle was corresponding secretary of the Conchological Section of the Academy of Natural Sciences in Philadelphia. He owned a very large collection of shells, consisting of more than ten thousand species with many rarities (Am. J. Conch., vol. 2, 1866: 184).

The first contact with van Rijgersma was through a letter dated 21 May 1869, in which Beadle asked for shells for the Conchological Department of the Academy in exchange for other shells, minerals or fossils. At the same time he asked whether van Rijgersma knew of any shell collectors on the Dutch islands close to the South American mainland. Beadle (1870: 229) reported to the Academy on this contact. He must have received shells, for in the following years at two occasions Beadle donated shells from St. Martin and Anguilla to the collection of the Academy. Another letter from Beadle (dated Philadelphia, 3 February 1871, fig. 5) reported that van Rijgersma was unanimously elected correspondent of the Conchological Section, at the Section's meet-

ing of February 2nd 1871. In the archives of the Academy of Natural Sciences one letter of van Rijgersma addressed to Beadle was found, dated 6 March 1871 (fig. 6): van Rijgersma acknowledged Beadle's letter and he thanked for the honour to be elected correspondent of the Conchological Section.

Also in 1875 van Rijgersma was in contact with Beadle, because in a little notebook we found a remark that he had sent a letter to Beadle in Philadelphia on 15 June 1875, and had received one in return on 4 September 1875. These letters were not discovered.

#### *Thomas Bland (1809-1885)*

Bland was born in Newark, England. He left his native country in 1842 and for some years went to Barbados and Jamaica. From 1850 to 1855 Bland lived in Colombia, then he went to the United States where he settled in New York. Here he died and was buried on 23 August 1885 in the Green-Wood cemetery in Brooklyn, N.Y., where his grave still can be found (Jacobson, 1970: 5).

During his stay in Jamaica Bland met the malacologist C. B. Adams (1814-1853), and that was the start of Bland's interest in malacology. He specialized in West Indian landshells. In New York Bland became a friend of another malacologist, William Greene Binney (1833-1909). From this time on also the North American landshells had his interest. Bland visited St. Thomas in November 1862 where he met R. Swift. Bland published a number of papers on West Indian and North American land gastropods, some of them in cooperation with Binney. Material of Bland's collection is kept in the American Museum of Natural History in New York, the Museum of Comparative Zoology at Harvard University in Cambridge, Mass., and the United States National Museum in Washington D.C. (Crosse & Fisher, 1886: 119-120).

In van Rijgersma's correspondence nine letters from Bland were found, written between 1872 and 1877. The contact between the two started with a letter from Bland, dated 23 September 1872, written after Bland learned of van Rijgersma's interest in malacology through R. Swift's papers and notes. Bland offered landshells from the U.S.A. and the Antilles, and asked in exchange shells from St. Martin and neighbouring islands. Van Rijgersma sent such shells, and the comments on these mollusks in Bland's letters of 12 and

21 December 1872, and 22 January 1873, are very important for our knowledge of the land gastropods of St. Martin (fig. 11). Van Rijgersma received 100 species of West Indian landshells in return, mostly from Cuba.

After his one year leave in the Netherlands (1873-1874), the correspondence with Bland was renewed, they exchanged photographs of each other and continued the exchange of shells. Van Rijgersma also received copies of Bland's papers on malacology. Bland asked for mollusks from Curaçao and Aruba, since these should be of great interest to malacology.

Material of *Cecilioides gundlachi* (Pfeiffer) from St. Martin was sent to Bland. Binney examined these mollusks and published on them in 1884. A proofsheets of Binney's paper was already sent by Bland in his letter of December 1875 to van Rijgersma.

Mrs. van Rijgersma, who after the death of her husband, tried to sell his shell collection in the United States, asked Bland for help. However, in a letter dated 4 June 1877, Bland advised to sell the collection in Europe.

#### *Jules Alexandre Joseph Colbeau (1823-1881)*

Colbeau was secretary of the Société Malacologique de Belgique in Brussels. He is the author of several publications on the malacofauna of Belgium (Roffiaen, 1881). The shell collection of Colbeau was purchased by the "Koninklijk Belgisch Instituut voor Natuurwetenschappen" at Brussels in 1906 (according to information received from Dr. W. Adam).

During his leave in the Netherlands (1873-1874) van Rijgersma came in contact with the Société Malacologique de Belgique. Colbeau sent him a letter, dated 2 February 1874, informing that he was elected member of the Society on 1 February. Van Rijgersma was asked to send a photograph for the Society's files, and to present his publications to the library and shells to the collection of the Society. He was also invited to publish his malacological observations in the "Annales de la Société Malacologique de Belgique". It is not impossible that for this reason van Rijgersma started with a manuscript on the shells of St. Martin in 1875.

Van Rijgersma's answer was dated 1 June 1875, when he was back at St. Martin. He stated that he would like to publish in the journal of the Society, but that it was difficult for him to remit his dues to Belgium. He asked what material he

should send for the Society's collection. Van Rijgersma must have had no possibilities to pay his dues, since three years after his death, on 19 September 1880, another letter was written by Colbeau, enclosing an invoice from the treasurer. Van Rijgersma's dues to the Society had run up, from 1874 to 1880, to 115 francs, and payment was never received. Therefore the Society had stopped sending its journal to him. Van Rijgersma is mentioned as member in the "Annales" of the Society, vols. 9 (1874) - 14 (1879).

#### *Edward Drinker Cope (1840-1897)*

The famous zoologist and paleontologist Cope was born on 28 July 1840 in Philadelphia, where he worked all his life. He became professor of natural history at Haverford College in 1864, and was appointed secretary of the Academy of Natural Sciences. In 1889 Cope became professor of geology and mineralogy at the University of Pennsylvania, and since 1895 professor of zoology and comparative anatomy. Cope died in Philadelphia on 12 April 1897.

He published over 600 scientific publications, mainly dealing with fossil and recent vertebrates.

From the correspondence with van Rijgersma five letters are known to us: three written by Cope, and two from van Rijgersma (both in the manuscript collection of the Academy in Philadelphia). A number of other letters have evidently been lost. The correspondence must have started in or before 1868, the earliest known letter is dated 3 December 1868, written by Cope, and it begins with "Respected Friend". This heading points to previous correspondence, and the letter starts with the information that van Rijgersma was elected Corresponding Member of the Academy of Natural Sciences on 27 October 1868 (fig. 3). We do not know why van Rijgersma was elected corresponding member, probably not because he had sent material to Philadelphia, since nothing to this effect has been recorded in the Proceedings of the Academy of 1868 or before. The first items from van Rijgersma were received in 1869. Cope's letter does not indicate that he had received material from van Rijgersma before 1869, and therefore Holthuis' conclusion (1959: 70) that van Rijgersma was elected a corresponding member because of his contributions to the Academy is not justified.

In this letter of 3 December 1868 Cope asked to collect fossils at the abandoned phosphate caves on the island of Anguilla: "There are prob-

- St. Martin Shells.
1. *H. subaqualis* Shuttle. also *Anguilla* & St. Martin.
  2. *H. Eudactis* Of. I have not seen St. Martin specimens.
  3. *B. elongatus* With. I do not consider *B. Anguillensis* a good species. A St. Martin spec. received from Dr. Cleave is like the typical *Anguillensis*, which I think var. of *elongatus* - also *Anguilla* & St. Martin.
  4. *B. exilis* Gmel. - also *Anguilla* & St. Martin. - one of the St. Martin spec. is same as Of. var. *fulviro obsolete & trigata* Described from Barbuda.
  5. These shells are chiefly young - some seem to be *fraterculus*, but two or three with reddish apex, last whorl rather rugose, white margin to aperture may be *B. limnoides* For. I should like to see perfect specimens.
  6. *B. fraterculus* For.
  7. *Sten. octona* Ch.
  8. *Sten. octonoides* For. - short - perforate - distinctly striate.
  9. *Sten. swifiana* Of. imperforate - long & slender.
  10. *Sten. swifiana* Of.
  11. *Sten. subula* Of. one specimen.
  10. *Plicaria Schirmeri* For. I still think this the same as *P. Nequam* is.
  11. *Pulchellus nitidulus* Of. Shuttleworth do consider the Porto Rico species & scarcely distinguishable from *B. pallax* & *marginatus*.
  12. Not *P. Dyriani* For. - who do determine it? - surely it is *P. pallidus* Of.
  13. *Succinea caudata* For. This I have not seen. I do not know I have 2 spec. of a *Succinea* of St. Martin from Dr. Cleave & several also of his from St. Martin - at present I have not determined them.

Fig. 11. List of non-marine shells from St. Martin, identified by Thomas Bland, dated 30 December 1872.

- 14 *Phyca Torrubiyaana* Desb.
- 15 " subfossil. I have not seen.
- 16 *Macleanius coffea* L.
- 17 " *flavus* Gmel. } These I have not seen from
- 18 " *cingulatus* Of. } St. Martin.
- 19 *Italia pusilla* Gmel.
- 20 *Pedipes mirabilis* Mull.
- 21 *Blauveria heterocheta* Mont. I have not seen this from St. Martin
- 22 *Eudora pupaeformis* Sw. var. also in Anguilla.
- 24 " var.  
 These are I think the same - Mr. Swift supposed them to be *E. quaternata* Lam. and with some reason. The spermatum is much like that of *Chondropoma* in which genus *quaternata* is put by Reeve. I must take an opportunity of securing specimens to Europe for comparison.
- 23 *Chondropoma occidentale* Of. Of. attributes this to Martinique
- 25 *Adecinia picta* Sw. also from St. Drostatus. Dr. Spulerworth refers to this as *A. fasciata* Lam. Mr. Swift considers that the true *fasciata* is from Porto Rico, and described by Of. as *A. thasianella*. I have not had an opportunity of referring to Lamarck.
- 26 *Truncatella caribbeensis* Desb. } I fear the specimens
- 27 " *bilabiata* Of. } are somewhat
- 28 " *subcyathacea*? Gray } mixed - I must
- 29 " *scutaria* Mich. } examine them separately.
- 30 } *Hydrinia crystallina* Of. I believe
- 31 }
- 32 } *Veritina virginica* Lam. surely all one species.
- 33 }

for Dr. Prüssner  
 30 Dec. 1872  
 J.W.

ably Edentates, Carnivores etc. to be discovered, as well as Rodents, and these might by the investigations in this direction furnish the best indication of the palaeontology of the Eastern West-Indies, than we yet possess." Holthuis (1959: 72-75) has discussed van Rijgersma's contributions to paleontology via the works of Cope. Cope's letter was received at St. Martin on 5 January 1869, and van Rijgersma wrote a short message about his election to Cope, dated January 1869 (fig. 4). This message is kept in the manuscript collection of the Academy in Philadelphia. Another, but unknown, letter was sent to Cope on 1 February 1869, which was answered on 19 March. This answer from Cope is in the possession of Dr. W. Johnson in Norwalk, Conn. It tells about the vertebrates which were sent by van Rijgersma, consisting of "a number of new species", and Cope was "anxious to get the next box of mammals, bird skins etc."

Van Rijgersma must have asked for mollusks in exchange, as Cope remarked that S. B. Howell should take care of the package of shells for him. Van Rijgersma would also receive reprints of Cope's articles on St. Martin. After new material was received from St. Martin in Philadelphia it was acknowledged by Cope in a letter dated 5 August 1869, and he would ask his conchological friends again to prepare a package for van Rijgersma. It seems that van Rijgersma never received any shells in return since there are no records on such shipments in the Reports of the Conchological Section over 1870 (Nolan, 1871: 331). It is possible that van Rijgersma received shells from Howell's private collection.

In a now lost letter, van Rijgersma must have asked for a reimbursement to cover the expenses of his collecting trips etc., as Cope in his letter of 5 August 1869 asked how much van Rijgersma would consider sufficient. In the same letter he informed van Rijgersma of the names of the species sent by him in his last shipment: new specimens of the snake *Alsophis rijgersmaei*, and the giant fossil rodents discovered on Anguilla, *Amblyrhiza inundata* and *Loxomylus longidens*. Cope asked for terrestrial animals from other islands (St. Eustatius, St. Kitts, etc.) because extremely little was known about these islands. This letter proves that van Rijgersma had sent quite some material to the Academy in Philadelphia.

The last known letter of this correspondence was written by van Rijgersma on 25 November 1869. The Governor of Anguilla was very much

interested in Cope's publication on the fossils of Anguilla, and he promised his aid in making more fossils from that island available. Van Rijgersma also mentioned that he had found a new species of lizard on St. Eustatius for which he proposed the name *Ameiva eustatiana*. He asked Cope again for the shells that were promised him.

In the following years more material was sent to the Academy in Philadelphia; however, no more letters of the correspondence between Cope and van Rijgersma were found.

#### *Robert Damon (1814-1889)*

Damon was a dealer in natural history specimens in Weymouth, England.

Van Rijgersma exchanged shells with Damon. However, when the correspondence started is not known, possibly during his leave in the Netherlands (1873-1874). On 25 May 1875 a letter was mailed to Damon, according to a remark in a notebook of van Rijgersma. One letter from Damon was found, dated 6 October 1879 (two years after van Rijgersma's death), in which he wrote: "I would be glad to renew our exchanges". Also we found two printed catalogues of shells for sale by Damon, one of these dated 1879.

#### *Gerrit Maurits Dyonisius Fock van Coppenaar (1833-1885)*

Born in Alkmaar, Netherlands, Fock van Coppenaar studied pharmacy and medicine in Amsterdam and Göttingen (Germany), and he became governmental physician at the island of Bonaire. During 1875, after phosphate had been discovered on Bonaire, he surveyed the island and analyzed many samples of this ore (Westermann, 1949: 70). Due to illness Fock van Coppenaar left Bonaire in 1878 to return to the Netherlands, where he died in Amsterdam.

Being a colleague and friend of van Rijgersma, he also shared his love for natural history. Fock van Coppenaar kept a herbarium, of which specimens were sent to van Rijgersma in 1874. From their correspondence only one letter was found, dated Bonaire 29 November 1877. It was addressed to Mrs. van Rijgersma, half a year after her husband's death. Fock van Coppenaar wanted to buy the microscope and golden lancetcase. He offered to try and sell van Rijgersma's collection to some museum in Holland or elsewhere. It is not known whether he has actually made any efforts to do this, if so, he had no success as we



do know that the shell collection did not go to Europe.

(Some of this information was supplied by his grandson, Dr. W. M. Fock van Coppelaar in Ommen.)

#### *R. G. Haliburton ( ? - ? )*

Haliburton was a merchant from Halifax in Canada. He published on the coal fields in Canada (Proc. Trans. Nova Scotian Inst. nat. Sci., vol. 2, 1867-1870), and visited the West Indies for business reasons in 1870.

When on St. Martin Haliburton met van Rijgersma, and after returning to Halifax he wrote a letter dated 1 June 1870. From this letter we know that Haliburton was also interested in natural history. He intended to publish on his travels, and therefore wanted to know anything and everything about St. Martin, and also about the fossils found on Anguilla.

Haliburton knew several malacologists, and he established contacts between van Rijgersma and Robert Swift at St. Thomas, and J. R. Willis in Halifax.

#### *Pieter Harting (1812-1885)*

Harting was born in Rotterdam on 27 February 1812. He studied medicine at the University of Utrecht and was appointed professor at the University of Franeker in 1841. After this University was closed (1843) Harting became a professor of natural history at the University of Utrecht (1843-1883). He wrote several books on microscopes, and was editor of a journal which he had founded "Album der Natuur". He died in Amersfoort on 3 December 1885. His autobiography "Mijne Herinneringen" was published in 1961.

In 1865 van Rijgersma wrote a letter to Harting and inquired about the possibility for obtaining a microscope and other instruments (a telescope and a barometer). He offered to collect natural history objects on St. Martin, if Harting should be interested. These facts are known from Harting's answer, dated Utrecht 2 August 1865, found in van Rijgersma's correspondence. Harting informed him about some microscopes and promised to check the instrument before it was sent to St. Martin. Harting was indeed interested in receiving material from St. Martin for the Museum of Natural History of which he was the director. Because only a few letters from Harting are known, it is important that one was found

in van Rijgersma's correspondence.

In Harting's autobiography van Rijgersma is not mentioned, and in his correspondence no letters from van Rijgersma are present. This is not surprising since many of the letters from Harting's correspondence were taken away soon after his death by his colleagues. For example all the letters from Charles Darwin are missing in the correspondence (information received from his grandson, Prof. Dr. P. N. U. Harting of Amsterdam).

One letter, written by van Rijgersma to Harting, is at present in the possession of the University Museum in Utrecht; it came to our knowledge via Drs. G. T. Haneveld. This letter is dated St. Martin, 6 December 1866, and van Rijgersma informed Harting that he had sent a crate of bird skins and fishes to Utrecht. Part of these fishes were preserved in rum, and he inquired after better preservation liquid and also jars; he offered to do more collecting and to make colour drawings of the fishes. Van Rijgersma did receive the microscope from Harting.

#### *Joseph Kohlmann (1834-1887)*

Some biographical facts about Kohlmann were known before (Holthuis, 1959: 72; Coomans, 1967: 120-121), more facts came to our knowledge through Dr. R. Pinchon of Martinique. Kohlmann was born in Kayserberg, province of Strasbourg, France, on 12 January 1834. He was a Roman Catholic priest, and arrived at Guadeloupe in 1859, where he worked as a science teacher at the Seminary College. From 1867 to 1875 he was a chaplain in Marigot, French St. Martin. In 1875 Kohlmann returned to Guadeloupe, where he died on 24 June 1887.

Kohlmann was an entomologist and specialized in Coleoptera. During his stay on St. Martin Kohlmann and van Rijgersma became friends, they were almost of the same age. They exchanged insects from Guadeloupe and shells from St. Martin. These insects were sent to Snellen van Vollehoven in Leiden, the shells (or part of them) which Kohlmann received came into the hands of Mazé in Guadeloupe. Via Kohlmann van Rijgersma came in contact with malacologists in the French Antilles. In his correspondence we did not find any letter from Kohlmann.

#### *Hendrik Johannes Krebs (1821-1907)*

Krebs was born in Svendborg, Denmark. He became an apothecary and in 1843 moved to St.

Sandvig near Helsing  
 Bornholm  
 Denmark  
 9<sup>th</sup> February  
 1874  
 Dear Sir,  
 I received this Excellent  
 Governor Hansen to give me  
 your address, thinking that  
 you had returned home  
 and all to Europe. In this  
 case I supposed you had  
 taken your collection along  
 and as an illustrated catalogue  
 of the collection of  
 Robert Smith dec. is prepared  
 at Copenhagen by Dr. A. L. Sars.  
 I thought some series of smaller  
 shells might be sent to you  
 for examination etc. The genus  
 Scaloria would in this case

have been of great use, as a  
 plate embracing all the  
 described species will be  
 desirable to have it as complete  
 as possible. Now as your stay  
 at home is only for a short  
 time I have or at least I  
 suppose that you have no  
 shells along.  
 I think it very likely that  
 I will be very glad to admit  
 you at the West-Indies.  
 If I can be of any service  
 to you then please to make  
 use of me.  
 Dear Sir,  
 yours truly  
 H. Krebs

Fig. 12. Letter of H. J. Krebs to van Rijgersma, dated Bornholm, 9 February 1874.

Thomas, Virgin Islands, at that time a colony of Denmark. In 1847 he started a wholesale business, for which he had to travel in the West Indies, Central, South and North America. He returned to Denmark in 1870 where he died in 1907.

Krebs was interested in botany and malacology, and kept a herbarium and a shell collection. His numerous travels over all the Americas gave him an opportunity to collect shells and plants. He left his collections to the University of Copenhagen (Clench, Aguayo & Turner, 1948: 46-48). Krebs published four articles on mollusks, the most important being "The West-Indian marine shells with some remarks" (1864), from which we know that he had visited St. Martin. The mollusks collected by him at St. Martin were discussed in an earlier paper (Coomans, 1963a).

In the correspondence of van Rijgersma one letter from Krebs was found, dated 9 February 1874 (fig. 12), when he was living on the island of Bornholm. At that time van Rijgersma was on leave in the Netherlands. From the contents of this letter it is obvious that they knew each other before. Krebs asked for species of the genus *Scalaria* (= *Epitonium*) for a publication by O. A. L. Mörch. However, since his collection was at St. Martin, van Rijgersma was unable to send any material. Mörch published two articles on the Epitoniidae of the West Indies (1874, 1876), and a list of the West Indian marine mollusks (1875-1877). The species of *Epitonium* from St. Martin in these publications were collected by Krebs, no material from van Rijgersma is mentioned. Krebs had collected 12 species of *Epitonium* on St. Martin (Coomans, 1963b: 134-137); three of these were new species, and one of them was named after Krebs, *Scala krebsii* Mörch. We know that van Rijgersma collected 13 species of Epitoniidae on St. Martin, of which 4 are unrecognizable.

Van Rijgersma possessed a copy of Krebs' publication mentioned above (1864), of which only 20 copies were printed. In his manuscript on the mollusks of St. Martin van Rijgersma several times referred to this publication.

#### *William Laurence Mactier (1818-1888)*

Mactier was a business man in Philadelphia and since 1860 a member of the Academy of Natural Sciences. He was one of the founders of the Conchological Section of the Academy in 1866. Mactier became the first treasurer of the Section and he remained in this function until

his death. He was evidently primarily interested in non-marine shells, since he belonged to the Standing Committees of "Fluviatile Acephala" and "Terrestrial Mollusca (operculated)".

In the records of the Academy of Natural Sciences one letter is present from van Rijgersma, sent to Mactier, dated 4 February 1870. It was an answer to a letter from Mactier, sent to St. Martin together with a box of shells (Unionidae from the United States). Mactier's letter was probably addressed to the physician of St. Martin, and delivered to Dr. P. P. Maillard<sup>2)</sup>, van Rijgersma's predecessor, who was still living on the island. Mactier's letter and shells apparently were intended for van Rijgersma, as they must have known each other through the Conchological Section.

In his letter van Rijgersma offered a complete collection of shells from St. Martin, in exchange for other mollusks. We suppose that this exchange of shells did not take place, anyway, it seems likely that Mactier did not receive a complete collection of St. Martin mollusks. After Mactier's death his family donated part of his shell collection to the Academy in Philadelphia (Roberts, 1889: 447). If Mactier had received shells, we could have expected a number of these in the collection of the Academy of Natural Sciences. However, the Academy has only a few species of mollusks from St. Martin. Also the fact that no letters from Mactier were found in van Rijgersma's correspondence may indicate that there has been no further contact between them.

#### *Edouard-Auguste Marie (1835-1888)*

Marie was born on the island of Tahiti in French Polynesia. He became a French naval officer, and in this capacity he was stationed in various places: New Caledonia, Guadeloupe, Cayenne, Nossi Bé (Madagascar) and Mayotte (Comores). He died in Paris on 11 June 1888 (Crosse & Fischer, 1889: 94-95). Marie collected mollusks in all the places where he was stationed, and published 12 articles on the malacofauna of New Caledonia in the "Journal de Conchyliologie", vols. 14 (1866) - 29 (1881). Other publications were written by H. Crosse in that journal on the mollusks collected by Marie, and many new

<sup>2)</sup> Philogène Philippe Maillard, 1806—1881, was born in St. Croix, and became physician in the Dutch part of St. Martin in September 1830. He died in Philipsburg, the capital of Dutch St. Martin. See Hartog, 1964: 682.

species were described. The widow of Marie sold his large collection to H. Fulton in 1890 (Coomans, 1967: 121).

During his stay at Guadeloupe Marie was in contact with van Rijgersma, five letters from him were found in van Rijgersma's correspondence. The first of these letters was dated 23 July 1875; however, the first contact must have been of an earlier date, since this letter was the answer to a letter and package with shells from van Rijgersma. This letter shows that the marine shells from Guadeloupe and Martinique in Marie's collection had been identified by van Rijgersma, for the latter had a copy of d'Orbigny's book (1839-1842) on the shells of Cuba. Van Rijgersma and Marie exchanged portraits of each other. A second letter from Marie, a few days later, contained a list of shells sent to van Rijgersma from France and several other countries. There was also a list of marine shells from Martinique and Guadeloupe in Marie's collection. In the third letter, dated 21 October 1875, Marie thanked van Rijgersma for another parcel of shells, and informed him that a package from Bavay in France for van Rijgersma was on its way to Guadeloupe. On 6 November 1875 (fig. 13) he wrote that this package had arrived, and he suggested an exchange of landshells from North America. In the last letter, dated 7 February 1877, Marie thanked for the plants he had received from St. Martin, and invited van Rijgersma to come to Guadeloupe.

Also an undated list was found in the correspondence with Marie, containing the names of about 180 species of mollusks from New Caledonia, French Guyana, and France, sent to van Rijgersma.

F. de Folin (1879) described 3 new species of Caecidae from St. Martin: *Caecum sculptum*, *C. tenuicostatum*, and *Meioceras mariae*, after material received from Marie. Pilsbry & Sharp (1897: 107-108) described two new scaphopods from St. Martin, also received from Marie. Although van Rijgersma is not mentioned as the collector of these five new species, he most probably was.

#### *Hippolyte Pierre Mazé (1818-1892)*

Mazé was born in Brest, France, and became an officer in the French navy. He was stationed in the French Antilles, viz. Martinique and Guadeloupe, and in French Guyana. Mazé was interested in botany and he published on the marine algae of French Guyana in 1868. Together with A. Schramm he published on the marine algae of

Guadeloupe in 1865, 1866 and 1870-1877. The algae from Guadeloupe, 1509 species, were purchased in 1887 by the British Museum (History collections Nat. Hist. Depts. Brit. Mus., vol. 1, 1904: 167). After he retired as "Commissaire Général de la Marine", Mazé remained at Guadeloupe, where he died on 29 January 1892.

Except for botany, Mazé was also interested in malacology, especially landshells. He published on the non-marine mollusks of Martinique (1874) and Guadeloupe (1883). In 1890 his last work was published, mainly on non-marine mollusks of St. Martin (Coomans, 1967: 121-122). It is not known what happened to his shell collection.

One letter from Mazé was found in the correspondence of van Rijgersma. It was dated 9 August 1872, and written after Mazé had received a box with land mollusks of St. Martin via Kohlmann. In this letter Mazé more or less extensively reported on some of the shells of this collection. He accepted van Rijgersma's offer to send marine shells from St. Martin. Although the contact was probably of short duration, Mazé's publication of 1890, based mainly on the material collected by van Rijgersma, was of great importance for the knowledge of the fauna of St. Martin. Through this publication the land mollusk fauna of St. Martin for many years was better known than that of any other island of the Netherlands Antilles.

#### *Otto Andreas Lowson Mörch (1828-1878)*

Mörch was a Danish malacologist. He probably never visited the Antilles, although he published a number of articles on the marine mollusks of the West Indies (Coomans, 1963a: 78-83). Van Rijgersma must have known him via Krebs, since Mörch is mentioned in Krebs' correspondence to van Rijgersma. According to van Rijgersma's manuscript on the mollusks of St. Martin, Mörch must have identified some species for him. However, van Rijgersma is not mentioned in Mörch's series of publications (1875-1877) on the West Indian marine mollusks. In van Rijgersma's correspondence no letters from Mörch were found.

#### *Rawson William Rawson (1812-1899)*

Sir Rawson was Governor of the Bahamas with residence on the island of New Providence from 1864 to 1867. He became Governor of Barbados in 1868 to 1875.

Rawson was a collector of shells. There must



Basse Terre 6 novembre 1875

Mon Cher Monsieur,

Je reçois à l'instant même  
la boîte que vous envoie Paray,  
et j'apprends en même temps que  
le courrier de St Martin part  
demain je m'empresse donc de  
vous la faire parvenir.

J'ai l'honneur de vous accuser  
réception de votre lettre du 30  
Octobre. Je vous envoie, en outre  
que j'avais le temps, la liste  
des coquilles terrestres de l'Amérique  
du Nord que je possède pour que  
vous puissiez m'envoyer celles  
que j'en ai point et dont vous  
pourriez disposer, en vous en  
remerciant d'avance.

Il faut espérer que nos

occupations vous permettent  
de venir passer quelque temps à  
la Basse-Terre, je vous attends  
avec impatience pour pouvoir  
faire plus ample connaissance  
avec vous.

Meilleures cordes, Mon  
Cher Monsieur à l'assurance  
des sentiments distingués de  
votre tout dévoué

E. A. Marie

Fig. 13. Letter of E. A. Marie to van Rijgersma, dated [Guadeloupe] Basse Terre, 6 November 1875.



have been correspondence between him and van Rijgersma, as can be concluded from a letter of Bland (23 September 1872) to van Rijgersma: "you correspond, I believe, with my friend Mr. Rawson, Governor of Barbados." However, no letters from Rawson were found in the correspondence, but there is a list of "Shells in the collection of R. W. R[awson], named by Mr. Anthony." It contains the names of 31 species of marine shells. Rawson is mentioned several times in van Rijgersma's manuscript on the mollusks of St. Martin. With the genus *Pachyathron* we found this note:

"Gov. Rawson, who writes Barbados 27 April 1875: Among the Cassididae the only shell of rarity & interest that I possess is the *Pachyathron* of Gaskoin. I forget its specific name. It is very like a small *Marginella* & might well be mistaken for it. You may quote it on my authority."

According to his manuscript van Rijgersma had a number of marine mollusks from Barbados in his collection. These had evidently been exchanged with Rawson. We believe that he also visited Barbados, because in his manuscript is stated (under *Cypraea bicallosa*):

"Of this very rare shell I have seen only one in the collection of Gov. Rawson W. Rawson, Barbados."

#### *Alphonse Schramm (? - 1875)*

Schramm was born in the Alsace-Lorraine part of France. He worked as a customs inspector in Cayenne, French Guyana, and in Pointe-à-Pitre on Guadeloupe. Together with Mazé he published on the marine algae of Guadeloupe in 1865 and later years (Taylor, 1960: 4, 651; Coomans, 1967: 121; Vroman, 1968: 6). Schramm was also interested in mollusks and crustaceans, and he prepared a catalogue (Schramm, 1867a) of these animals from Guadeloupe, which were exhibited at the World Exhibition in Paris in 1867. Two more publications are known from Schramm, on Crustacea (1867b) and mollusks (1873). In 1871 he lost all his collections and books in a fire on Guadeloupe. A few years later he fell ill and returned to France where he died (Crosse & Fischer, 1876: 130).

A letter to van Rijgersma of 3 April 1871 was their first contact. Schramm knew of van Rijgersma's interest in mollusks from several other malacologists, and he intended to visit St. Martin.

It is not known whether the correspondence continued, as no more letters were found. The fire through which Schramm lost all his belongings in 1871 might have caused the discontinuity of the correspondence.

#### *Samuel Constant Snellen van Vollenhoven (1816-1880)*

Snellen van Vollenhoven was born in Rotterdam on 18 October 1816. He studied to become a lawyer. Since he was also an amateur entomologist he was appointed a honorary curator at the Rijksmuseum van Natuurlijke Historie in Leiden in 1846. On 1 July 1854 he became curator of the department of arthropods, in 1860 curator of the department of entomology. The University of Groningen honoured him with a doctorate honoris causa in 1862. Owing to his delicate health Snellen van Vollenhoven retired in 1873 and moved to The Hague, where he died on 22 March 1880.

Four letters from van Rijgersma are kept in the archives of the museum in Leiden (Holthuis, 1959: 71), and two letters from Snellen van Vollenhoven were found in van Rijgersma's correspondence.

The correspondence was started after T. van Stolk, a lawyer from The Hague and a friend of Snellen van Vollenhoven, visited St. Martin to inspect the salt pans in 1868. (Van Stolk was director of the company to exploit the salt pans of St. Martin, see Langemeyer, 1923: 263-264).

At St. Martin, van Stolk was shown van Rijgersma's insect collection. He took along with him a letter to Snellen van Vollenhoven, dated 8 August 1868, in which van Rijgersma offered insects from St. Martin in exchange for mollusks from Holland or the East Indies. Snellen van Vollenhoven informed van Rijgersma on 28 October 1868 that the museum in Leiden was indeed interested in the exchange. More letters were written by van Rijgersma in December 1868 and on 26 March 1869. The first parcel with insects was received in Leiden before 18 May 1869. On that date Snellen van Vollenhoven wrote that the insects had arrived, and probably a number of new species could be found among them. (Holthuis, 1959: 72, mentioned June 1869 as the arrival of the insects, according to the museum's register.) Shells would be sent to St. Martin after J. A. Herklots (1820-1872), curator of invertebrates in Leiden, should have recovered from his illness. The fourth and last letter from van Rijgersma

was dated 25 August 1869; he had sent more insects to Leiden and again asked for the promised shells. In 1870 the museum sent 523 specimens of shells, 111 species (Holthuis, 1959: 72).

The contact between van Rijgersma and the Leiden museum is also mentioned by A. Gijzen (1938: 327). Unfortunately Snellen van Vollenhoven never published on the insects of St. Martin. Specimens of Microlepidoptera and Coleoptera, sent by van Rijgersma, are still present in the collection of the museum.

*George Brettingham Sowerby III (1843-1921)*

The name Sowerby is famous in molluscan literature, as in the 19th century several generations of Sowerbys were studying shells (Van Winkle Palmer, 1964: 5-6, 1966: 1-6; Dance, 1966).

Van Rijgersma started correspondence with G. B. Sowerby III of London in November 1873, when he was on leave in the Netherlands. Three letters from Sowerby were found in van Rijgersma's correspondence. Sowerby was a publisher and shell dealer, and van Rijgersma ordered shells from him. The Sowerby letters are dated 1 December 1873, 15 April 1875 (fig. 14), and 7 July 1875, all containing remarks on shells. In the second letter a pricelist was enclosed with the prices of a number of species of the genera *Strombus*, *Pterocera*, *Aporrhais*, *Rostellaria*, *Terebellum*, and *Struthiolaria*. Within this letter an invoice was enclosed for the shells ordered by van Rijgersma (80 species of *Triton*, *Ranella*, and *Cassis*, together with 8 bivalves: *Pholas*, *Teredo*, and *Jouannetia*, altogether for £ 5.3.0.). The parcel of 15 April 1875 was received at St. Martin on or before 24 May 1875, since on that date van Rijgersma wrote to Sowerby and enclosed his payment. Van Rijgersma discovered that a number of *Triton* (= *Cymatium*) species from the East Indies were identical with species from St. Martin. This fact was already known to Sowerby, although he did not know the occurrence of two species in the West Indies: *Cymatium labiosum* and *C. pileare*.

*Robert Swift (1796-1872)*

Swift was born in Philadelphia where he studied law. He went to Venezuela in 1824 and worked as an agent for the Bolivar Mining Association. Swift moved to St. Thomas in 1835 where he became a merchant. He retired in 1866 and returned to Philadelphia. However, because of the climate Swift moved back to St. Thomas

45 St. Russell Street  
London April 15<sup>th</sup> 1875

Dear Sir,

I have according to your instructions in your favor of Feb. 10<sup>th</sup> this day directed to you for Mr. W. A. Cook (freight paid) per West Indian Mail, for you a box of shells.

I enclose herewith the account, for which I shall be obliged by your sending Cash, upon receipt of the shells.

I enclose a list of what I have of *Strombus* &c.

I thank you for your kind offer to do anything for me in the West Indies but I do not think of anything at present.

Hoping that you will receive the box safely & that its contents will be found satisfactory.

I am Dear Sir

Yours sincerely

G. B. Sowerby

Fig. 14. Letter of G. B. Sowerby [III] to van Rijgersma, dated London, 15 April 1875.

in 1867, here he died on 5 May 1872 (Clench, 1938: 142-143).

Swift had collected shells in Venezuela and on St. Thomas, and published a book "Researches of the Virgin Islands" in 1863, with a "List of marine shells of the Virgin Islands". He was one of the founders of the Conchological Section of the Academy of Natural Sciences in Philadelphia on 26 December 1866 (Am. J. Conch., vol. 3: 1-3).

The malacologist C. B. Adams (1814-1853) was invited by Swift to visit St. Thomas in 1853; during this visit Adams got yellow fever and died on the island (Clench & Turner, 1950: 238). He was also a friend of Th. Bland and H. Krebs.

At the age of 74 Swift came in contact with van Rijgersma. Five letters from Swift were found, the first was dated 16 May 1870 (fig. 15). Swift knew of van Rijgersma and his shell collection from R. Haliburton. On 22 July 1870 van Rijgersma sent a box with land and marine shells from St. Martin and St. Eustatius. In a letter dated 29 July 1870 Swift commented on some of the identifications, and from this we learn which species were collected by van Rijgersma. Swift also recommended some West Indian mollusk literature to van Rijgersma, and later in the year he mailed one of Th. Bland's publications (on the physical geography of the West Indian islands). Van Rijgersma received shells from Swift; from another letter (28 July 1871) we know that he had visited Swift at St. Thomas, probably at the beginning of 1871, after the hurricane season of 1870 (July-October).

More shells were sent to van Rijgersma in 1871, although Swift had been ill for some time during that year (letter of 18 November 1871). The last letter from Swift was written in the year of his death, on 8 January 1872. It dealt mainly with mollusks, viz. Cassidae and Strombidae. Swift indicated that *Cypraea mus* is found at Curaçao, a wrong statement on which we have commented in an earlier publication (Coomans, 1963c). Swift's letter finished with a request for small species of marine mollusks.

It is remarkable that Swift's handwriting was so nice even in his last letter, at the age of 76. He wrote on special paper on which his initials RS were printed. His only daughter left her father's shell collection to the Academy of Natural Sciences in Philadelphia (Crosse & Fischer, 1873: 99). So some of the shells collected by van Rijgersma are now in the collection of the Academy.

Saint Thomas  
 RS 16<sup>th</sup> May 1870

D<sup>r</sup> van Rijgersma  
 St. Martin

Dear Sir

Mr Haliburton, who was here a short time since, on his way to Halifax, mentioned to me, that while in St. Martin, he had the pleasure to make your acquaintance, and that you had a fine collection of West India shells & that you were still zealously collecting - I have devoted some time to this study & possess a fair collection, which I desire to increase especially with West India marine species - It has occurred to me that we might be useful to each other I want good specimens of marine shells, & can offer in return the terrestrial shells from Tortola, St. John, Puerto Rico, Jamaica &c. It might suit you to exchange with me, if so I would be happy to hear from you with note of your desiderata. The land shells of St. Martin would also be acceptable to me.

I am my dear Sir  
 Yours respectfully  
 Robert Swift

Fig. 15. Letter of Robert Swift to van Rijgersma, dated Saint Thomas, 16 May 1870.

*John Robert Willis (1825-1876)*

Willis was born in Philadelphia, U.S.A., but moved to Canada where he became a school-teacher, and later worked as secretary at the office of School Commissioners in Halifax (1865-1875). He was a shell collector and published on the mollusks of Nova Scotia.

After Haliburton had visited van Rijgersma on St. Martin in 1870, he returned to Halifax and informed Willis about van Rijgersma and his malacological work. One letter from Willis was found, dated 24 March 1871. Willis wanted to exchange shells and he could offer marine mollusks from Canada. He advised van Rijgersma to get in contact with his friend Robert Swift on St. Thomas, and he informed how to obtain rare mollusks (e.g., by examining the stomachs of ground feeding fishes, and by using a net in deeper water with dead fish for bait).

We know that the contact with Swift was established; however, we doubt whether or not contact with Willis was continued. Exchange of shells between Willis and Swift or van Rijgersma is not mentioned in "American Malacologists" (1st edition, Falls Church, 1973-1974 : 177).

## II. THE MALACOLOGICAL WORK OF H. E. VAN RIJGERSMA

### INTRODUCTION

Because van Rijgersma's shell collection is lost, we were not able to compare his shells with our present knowledge of the mollusk fauna of St. Martin. Fortunately we have at our disposal some sources from which we can conclude which species of mollusks he collected on St. Martin:

1. The publication of Mazé (1890) on the land-shells of St. Martin, for the main part collected by van Rijgersma. Mazé's work is discussed in a foregoing study (Coomans, 1967).
2. The discussion of the mollusks of St. Martin in van Rijgersma's correspondence with other malacologists (cf. fig. 11).
3. The list of "Shells from West-Indies selected for the Leyden Museum of Nat. Hist. from Dr. v. Rijgersma's Collection" (fig. 10), in which 387 species from St. Martin were mentioned.

4. The manuscript, started by van Rijgersma in 1875, on the marine mollusks of the West Indies, based on his own collection and therefore mainly on the shells of St. Martin (cf. pls. VI-XVII). — This manuscript is in the possession of W. H. N. Johnson M. D. in Norwalk, Connecticut. He received it in 1963 as a gift from van Rijgersma's son Sigefridus, who was his patient.

The manuscript is bilingual, mainly in English and sometimes in Dutch, which proves that it was not intended to be published in this form. It was illustrated by van Rijgersma himself, 82 mollusk species were drawn in natural colours. With a single exception the shells were figured after specimens in his own collection. A few drawings were made after live mollusks with the animal in the shell; also some operculums and radulas were figured. In general each species was treated as follows: the scientific name/two colour drawings of the shell from ventral and dorsal sides/synonyms of the name/description in Latin, exactly copied from other authors (Lamarck, d'Orbigny, Sowerby)/distribution, and occurrence at St. Martin/remarks.

The manuscript comprises 120 pages, some are empty; at the end of some families there is a list with the names of all the West Indian species. The following families were covered:

#### Gastropoda Prosobranchia

- Strombidae (12 pp.)
- Cypræidae, including the genus *Trivia* (16 pp.)
- Cassidae, including the Tonnidae = Doliidae (12 pp.)
- Bursidae (5 pp.)
- Ovulidae (4 pp.)
- "Tritonidae" = Cymatiidae and Colubrariidae (16 pp.)
- Conidae (20 pp.)
- Turridae (5 pp.)

#### Gastropoda Opisthobranchia

- Pleurobranchidae (3 pp.)

#### Gastropoda Pulmonata

- "Auriculidae" = Ellobiidae (8 pp.)

#### Pelecypoda

- Cardiidae, including *Verticordia* (16 pp.)
- Scaphodopa
- Dentaliidae (3 pp.)

The manuscript shows that van Rijgersma, without any training in systematic zoology, was excellently disposed to this discipline. His nomenclature is correct, he used synonyms and gave

priority to the eldest available name. Van Rijgersma was a good observer, we had no difficulties in identifying the mollusks from his drawings; he studied shell, animal, radula and operculum. He compared his observations with the literature, and the shells from St. Martin were compared with those from other Caribbean islands. He was critical and remarked upon the mistakes which he found in the literature. For the distribution he mentioned the localities of the specimens in his collection and those from the literature, sometimes ecological data were added. In comparing his West Indian shells with shells from the tropical Eastern Pacific, described by Carpenter (1857), van Rijgersma discovered that a number of these were vicarious species. In the family Cymatiidae he found that many species from the East and West Indies are identical. He had the idea that the difference in shell shape, as is found within a number of *Cypraea* species, was an example of sexual dimorphism.

THE MOLLUSK FAUNA OF ST. MARTIN, KNOWN TO VAN RIJGERSMA, AND COMPARED WITH OUR PRESENT KNOWLEDGE

In the following list all recent mollusk species known to us from St. Martin are included. The species known to van Rijgersma from the island are marked with an asterisk\*. In the synonymy will be mentioned the names used in the list of "Shells from West-Indies selected for the Leyden Museum of Nat. Hist. from Dr. v. Rijgersma's Collection" (indicated as "Rijgersma list"), and the names used by van Rijgersma in his manuscript on the mollusks of St. Martin (indicated as "Rijgersma manuscript"). Reference is made also to the literature containing data on mollusks from St. Martin. Names of species in these publications, different from our species names, are mentioned in the synonymy. New records for the mollusk fauna of St. Martin are indicated with "New to St. Martin". Some new records came to our attention from a collecting trip to St. Martin in 1964 by Mrs. J. Bogart and Mrs. T. H. Ervin, both from New York City. A few additional new records were supplied by Dr. P. Wagenaar Hummelinck.

Van Rijgersma's remarks about the species, genera and families, treated in his manuscript, were copied and placed between quotation marks. We will not give the descriptions of the species from van Rijgersma's manuscript, since he copied these from the literature.

For a number of species we added some re-

marks, for more information we refer to our foregoing studies on the mollusk fauna of St. Martin (Coomans, 1958, 1963a, 1963b, 1967).

Class GASTROPODA

Subclass PROSOBRANCHIA

Order ARCHAEOGASTROPODA

Family FISSURELLIDAE

***Rimula pycnonema* Pilsbry, 1943**

Collected by Mrs. Bogart and Mrs. Ervin in 1964. — New to St. Martin.

**\**Emarginula pumila* (A. Adams, 1851)**

*Emarginula*, Rijgersma list — Coomans, 1958: 52; 1963b: 118.

Although van Rijgersma did not indicate the specific name, there is only one species of *Emarginula* known from St. Martin, therefore he might have collected this species.

**\**Hemitoma octoradiata* (Gmelin, 1791)**

*Emarginula octoradiata* Gml., *E. depressa*, Rijgersma list — Krebs, 1864: 86; Coomans, 1958: 52; 1963b: 118.

It is not surprising that this variable species is mentioned under two names by van Rijgersma.

**\**Diodora arcuata* (Sowerby, 1862)**

*Fissurella arcuata* Sby., Rijgersma list — Coomans, 1963b: 118.

**\**Diodora cayenensis* (Lamarck, 1822)**

*Fissurella fumata*, Rijgersma list — *F. larva*, Krebs, 1864: 87; Coomans, 1958: 53; 1963b: 119.

***Diodora dysoni* (Reeve, 1850)**

Coomans, 1958: 53; 1963b: 119.

**\**Diodora listeri* (d'Orbigny, 1842)**

*Fissurella Listeri*, Rijgersma list — *F. graeca*, Krebs, 1864: 87; Coomans, 1958: 52; 1963b: 119.

**\**Diodora minuta* (Lamarck, 1822)**

*Fissurella minuta* Lk., Rijgersma list — *F. gemmulata*, Krebs, 1864: 87; Coomans, 1958: 53; 1963b: 119.

***Diodora minuta variegata* (Sowerby, 1862)**

Coomans, 1963b: 119.



**Diodora viridula** (Lamarck, 1822)

Coomans, 1958: 53; 1963b: 119.

**\*Lucapina philippiana** (Finlay, 1930)*Fissurella elongata* Rve., Rijgersma list — Krebs, 1864: 87; Coomans, 1963b: 119.**\*Lucapina sowerbii** (Sowerby, 1835)*Fissurella cancellata*, Rijgersma list — Krebs, 1864: 86; Coomans, 1963b: 119.**Lucapina suffusa** (Reeve, 1850)

Coomans, 1963b: 120.

**Fissurella angusta** (Gmelin, 1791)

Coomans, 1958: 51; 1963b: 120.

**\*Fissurella barbadensis** (Gmelin, 1791)*Fissurella barbadensis* Gm., Rijgersma list — Krebs, 1864: 86; Coomans, 1958: 50; 1963b: 120.**Fissurella barbouri** Farfante, 1943

Coomans, 1963b: 120.

**Fissurella fascicularis** Lamarck, 1822

Coomans, 1958: 51; 1963b: 120.

**\*Fissurella nodosa** (Born, 1778)*Fissurella nodosa*, Rijgersma list — Coomans, 1958: 50; 1963b: 120.**Fissurella punctata** Fischer, 1857*F. pustula*, Krebs, 1864: 88; Coomans, 1958: 51; 1963b: 120.**Fissurella rosea** (Gmelin, 1791)

Coomans, 1963b: 120.

**\*Fissurella nimbose** (Linnaeus, 1758)*Fissurella nimbose*, Rijgersma list. — New to St. Martin.

## Family ACMAEIDAE

**\*Acmaea antillarum** (Sowerby, 1831)*Patella candeana* d'Orb., Rijgersma list — Coomans, 1958: 54; 1963b: 121.**Acmaea jamaicensis** (Gmelin, 1791)

Coomans, 1958: 55; 1963b: 121.

**\*Acmaea leucopleura** (Gmelin, 1791)*Acmaea leucopleura* Gml., Rijgersma list — Coomans, 1958: 54; 1963b: 121.**\*Acmaea pustulata** (Helbling, 1779)*Patella confusa* Gould, *Acmaea pustula* Helb., Rijgersma list — Krebs, 1864: 75—76; Coomans, 1958: 54; 1963b: 121.**Acmaea pustulata pulcherrima** "Guilding" Pilsbry, 1891

Coomans, 1963b: 121.

## Family TROCHIDAE

**\*Synaptocochlea picta** (d'Orbigny, 1842)*Stomatia picta* d'Orb., Rijgersma list — Krebs, 1864: 85; Coomans 1963b: 121.**\*Livona pica** (Linnaeus, 1758)*Turbo pica*, Rijgersma list — Coomans, 1958: 55; 1963b: 122.**\*Tegula excavata** (Lamarck, 1822)*Trochus excavatus* Lk., Rijgersma list — Coomans, 1958: 55—56; 1963b: 122.**\*Tegula fasciata** (Born, 1778)*Trochus carneolus*, Rijgersma list — Krebs, 1864: 84; Coomans, 1963b: 122.**\*Tegula hotessieriana** (d'Orbigny, 1842)*Trochus interruptus (striatus)* Ad., Rijgersma list — Krebs, 1864: 84; *T. maculostriata*, Coomans, 1958: 56; 1963b: 122.

Van Rijgersma had copied this name from Krebs, where it is also cited wrong, see Coomans (1963a: 76, no. 106).

**Tegula lividomaculata** (C. B. Adams, 1845)*T. scalaris*, Coomans, 1958: 56; 1963b: 122.**Calliostoma javanicum** (Lamarck, 1822)

Coomans, 1963b: 122.

**\*Calliostoma jujubinum** (Gmelin, 1791)*Trochus pymbinus* L., Rijgersma list — Coomans, 1963b: 122.

The name "pymbinus" is an error for *jujubinus*.

**Calliostoma pulchrum** (C. B. Adams, 1850)

Coomans, 1963b: 123.

## Family TURBINIDAE

**\*Arene cruentata** (Mühlfeld, 1829)

*Delphinula radiatus* Kien., Rijgersma list — Coomans, 1963b: 123.

**\*Liotia spec.**

*Liotia*, Rijgersma list.

No *Liotia* was recorded from St. Martin before.

**\*Turbo canaliculatus** Herrmann, 1781

*Turbo spenglerianus*, Rijgersma list — *Calcar spenglerianus*, Krebs, 1864: 81—82; Coomans, 1958: 57; 1963b: 123.

**Turbo castaneus** Gmelin, 1791

Krebs, 1864: 80; Coomans, 1958: 57; 1963b: 123.

**\*Turbo castaneus forma crenulatus** Gmelin, 1791

*Turbo crenulatus* Gmel., Rijgersma list — New to St. Martin.

**Astraea caelata** (Gmelin, 1791)

Coomans, 1958: 57; 1963b: 123.

**\*Astraea phoebia** Röding, 1798

*Astrarium longispina* Lk., Rijgersma list — Coomans, 1958: 58; 1963b: 123.

**\*Astraea costulata** (Lamarck, 1822)

*Astrarium costulatum* Lk., Rijgersma list. — New to St. Martin.

This species is close related to *A. phoebia*.

**Astraea tecta** (Lightfoot, 1786)

Collected by Mrs. Bogart and Mrs. Ervin in 1964. — New to St. Martin.

**Astraea tuber** (Linnaeus, 1758)

*Calcar tuber*, Krebs, 1864: 82; Coomans, 1958: 57; 1963b: 124.

## Family PHASIANELLIDAE

**Tricolia adamsi** (Philippi, 1853)

Coomans, 1963b: 124.

**\*Tricolia affinis** (C. B. Adams, 1850)

*Turbo umbilicatus*, Rijgersma list — *Phasianella concinna*, Krebs, 1864: 79; Coomans, 1963b: 124.

**\*Tricolia tessellata** (Potiez & Michaud, 1838)

*Phasianella zebrina* d'Orb., Rijgersma list — Coomans, 1963b: 124.

**Tricolia thalassicola** Robertson, 1958

Coomans, 1963b: 124.

## Family NERITIDAE

**\*Nerita peloronta** Linnaeus, 1758

*Nerita chlorina* Lk., Rijgersma list — Krebs, 1864: 76; Coomans, 1958: 59; 1963b: 124.

**\*Nerita tessellata** Gmelin, 1791

*Nerita tessellata* Gmel., Rijgersma list — Coomans, 1958: 59—60; 1963b: 125.

**\*Nerita versicolor** Gmelin, 1791

*Nerita striata* Chem., Rijgersma list — Coomans, 1958: 60; 1963b: 125.

**Neritina clenchi** Russell, 1940

Collected by Wagenaar Hummelinck at the Freshwater Pond. — New to St. Martin.

**\*Neritina virginea** (Linnaeus, 1758)

*Neritina virginea* L., Rijgersma list — Mazé, 1890: 34 (coll. by van Rijgersma); Coomans, 1958: 61; 1963b: 125.

Specimens from St. Martin, collected by van Rijgersma, were also discussed in the correspondence with Bland.

**\*Smaragdia viridis** (Linnaeus, 1758)

*Neritina viridis* Ln., Rijgersma list — Krebs, 1864: 78; Mazé 1890: 34 (coll. by van Rijgersma); Coomans, 1963b: 125.

**\*Puperita pupa** (Linnaeus, 1767)

*Neritina pupa* L., Rijgersma list. — New to St. Martin.

## Family HELICINIDAE

**\*Helicina fasciata** Lamarck, 1822

*Helicina picta*, Mazé, 1890: 33—34; Coomans, 1967: 125.

This species was also discussed in van Rijgersma's correspondence with Bland and Mazé. Specimens collected by van Rijgersma are kept in the collections of the American Museum of Natural History (New York), and in the Museum of Com-

parative Zoology (Cambridge), they were received from Th. Bland (Coomans, 1967: 125).

**\**Helicina costata* Gray, 1824**

*Pachypoma costatus*, Rijgersma list. — New to St. Martin.

“*Pachypoma*” is an error for *Pachytoma* (= *Helicina*).

Order MESOGASTROPODA

Family CYCLOPHORIDAE

**\**Amphicyclotus beauianus* (Petit, 1853)**

*Cyclostoma Beauii*, Rijgersma. — New to St. Martin.

Specimens from St. Martin were collected by van Rijgersma, and discussed in the correspondence with Mazé.

**\**Amphicyclotus schrammi* (Shuttleworth, 1857)**

*Cyclostoma Schrammi*, Rijgersma. — New to St. Martin.

Collected by van Rijgersma at St. Martin, discussed in the correspondence with Mazé.

Although the occurrence of these two species of *Amphicyclotus* was known to Mazé, they were not mentioned in his publication (1890) on the land shells of St. Martin.

Family AMPULLARIIDAE

***Ampullarius glaucus* (Linnaeus, 1758)**

*Ampullaria effusa*, Mazé, 1890: 31; Coomans, 1967: 125.

Family LITTORINIDAE

**\**Littorina angulifera* Lamarck, 1822**

*Littorina angulifera*, Rijgersma list. — New to St. Martin.

***Littorina meleagris* (Potiez & Michaud, 1838)**

*L. guttata*, Krebs, 1864: 59; Coomans, 1958: 61—62; 1963b: 125.

***Littorina mespillum* (Mühlfeld, 1824)**

Coomans, 1958: 62.

***Littorina mespillum* forma *minima* (Wood, 1828)**

*L. minima*, Krebs, 1864: 60; Coomans, 1963b: 126.

**\**Littorina nebulosa* forma *tessellata* Philippi, 1847**

*Littorina tessellata* Phil., Rijgersma list. — New to St. Martin.

**\**Littorina ziczac* (Gmelin, 1791)**

*Littorina ziczac* Chemn., Rijgersma list — Coomans, 1958: 62; 1963b: 126.

**\**Littorina lineata* d'Orbigny, 1842**

*Littorina lineata* d'Orb., Rijgersma list — Krebs, 1864: 60. — New to St. Martin.

*Littorina ziczac*, *L. lineata*, and *L. lineolata* d'Orbigny, 1842 were until recently considered a single species. Borkowski & Borkowski (1969) proved that they represent three distinct species.

**\**Nodilittorina tuberculata* (Menke, 1828)**

*Littorina trochiformis*, Rijgersma list — Krebs, 1864: 61; Coomans, 1958: 63; 1963b: 126.

***Echininus nodulosus* (Pfeiffer, 1839)**

This species was collected by Mrs. Bogart and Mrs. Ervin in 1964, and is also mentioned from St. Martin by Kristensen (1965).

**\**Tectarius muricatus* (Linnaeus, 1758)**

*Littorina muricata*, Rijgersma list — Krebs, 1864: 60; Coomans, 1958: 63; 1963b: 126.

Family CHONDROPOMIDAE

***Chondropoma ignea* Reeve, 1863**

Vernhout, 1914: 187; Coomans, 1967: 126.

***Chondropoma julieni* Pfeiffer, 1866**

Mazé, 1890: 32; Coomans, 1967: 126.

**\**Chondropoma pupaeformis* (Sowerby, 1843)**

*Tudora pupaeformis*, Rijgersma list — Mazé, 1890: 31 (coll. by van Rijgersma); Coomans, 1967: 126.

The species is also mentioned in van Rijgersma's correspondence with Swift as *Cyclostoma Pupaeformis*. In the correspondence with Bland a subfossil variety from St. Martin is discussed, called *Tudora quaternula* Lamarck. For further remarks see Coomans, 1967: 126.

**\**Adamsiella crenulata* (Potiez & Michaud, 1838)**

*Chondropoma crenulatum*, Mazé, 1890: 32; Coomans, 1967: 126.

Specimens from St. Martin, collected by van Rijgersma, are discussed in the correspondence with Mazé as *Cyclostoma crenulatum*.

**Adamsiella crenulata martinensis** Coomans, 1967

Coomans, 1967: 126—128, figs. 39—41.

**\*Annularia occidentale** (Pfeiffer, 1860)

*Choanopoma occidentalis*, Rijgersma list — Mazé, 1890: 32 (coll. by van Rijgersma); Coomans, 1967: 128.

**\*Annularia spec.**

*Cistula*, Rijgersma list. — Unidentifiable.

## Family HYDROBIIDAE

**\*Pyrgophorus coronatus** (Pfeiffer, 1840)

*Paludestrina Candearia*, Mazé, 1890: 31 (coll. by van Rijgersma); Coomans, 1967: 128.

This species, and the following, were placed by us before in the genus *Lyrodes*, as was suggested by Morrison (1939: 87-88). According to Taylor (1966: 182-183, 194) the Antillean species belong to *Pyrgophorus* Ancey, 1888, whilst *Lyrodes* Dœring, 1884, is limited to southern Brasil and northern Argentina.

**\*Pyrgophorus crystallinus** (Pfeiffer, 1840)

*Paludestrina Auberiana*, Mazé, 1890: 31 (coll. by van Rijgersma); Coomans, 1967: 128.

Specimens from St. Martin were discussed in Bland's correspondence under the name *Hydrobia crystallina* Pfr.

## Family TRUNCATELLIDAE

**\*Truncatella bilabiata** Pfeiffer, 1840

*Truncatella bilabiata* Pfr., Rijgersma list — Mazé, 1890: 33 (coll. by van Rijgersma); Coomans, 1963b: 127.

Also discussed in Bland's correspondence.

**\*Truncatella caribaeensis** Reeve, 1842

Mazé, 1890: 32—33 (coll. by van Rijgersma); Coomans, 1963b: 127.

Material from St. Martin was also discussed in the correspondence with Bland. This species is often assigned to Sowerby, who had it as a manuscript name. The author is Reeve.

**\*Truncatella clathrus** Lowe, 1832

Mazé, 1890: 33 (coll. by van Rijgersma); Coomans, 1963b: 127.

**\*Truncatella pulchella** Pfeiffer, 1839

Coomans, 1958: 64; 1963b: 127.

Specimens from St. Martin, collected by van Rijgersma, were discussed in his correspondence with Bland under the name *Truncatella subcylindrica* Gray.

**\*Truncatella scalaris** (Michaud, 1830)

Mazé, 1890: 33 (coll. by van Rijgersma); Coomans, 1963b: 127.

Also discussed in Bland's correspondence.

## Family RISSOIDAE

**Rissoina bryerea** (Montagu, 1803)

Coomans, 1963b: 128.

**\*Rissoina catesbyana** d'Orbigny, 1842

*Rissoa catesbyana* d'Orb., Rijgersma list — Krebs, 1864: 57; Coomans, 1963b: 128.

**Rissoina elegantissima** d'Orbigny, 1842

Krebs, 1864: 57; Coomans, 1963b: 128.

**\*Rissoina princeps** (C. B. Adams, 1850)

*Rissoa princeps* Ad., Rijgersma list. — New to St. Martin.

**\*Rissoina sagraiana** d'Orbigny, 1842

*Rissoa sagraiana* d'Orb., Rijgersma list. — New to St. Martin.

**\*Rissoina striatocostata** d'Orbigny, 1842

*Rissoa striatocostata* d'Orb., Rijgersma list. — New to St. Martin.

In addition to the four species of *Rissoina* mentioned above from St. Martin by van Rijgersma, his list also had two unidentified species of "*Rissoa*" from St. Martin.

**Zebina browniana** (d'Orbigny, 1842)

Coomans, 1963b: 128.

## Family CAECIDAE

**Caecum irregulare** de Folin, 1867

Coomans, 1963b: 129.

Some authors consider this species identical with *C. pulchellum*.

**\*Caecum pulchellum** Stimpson, 1851

*Caecum anellum*, Rijgersma list. — New to St. Martin.

We suppose that the name "anellum" is an error for *pulchellum*. Specimens from St. Martin were also collected in 1964 by Mrs. Bogart and Mrs. Ervin.

**\*Caecum sculptum** de Folin, 1879

Coomans, 1963b: 129.

St. Martin is the type locality. The specimens were received by de Folin (1879: 14, pl. 1, figs 1-2) from Marie. It is suggested that van Rijgersma was the actual collector of these shells.

**\*Caecum tenuicostatum** de Folin, 1879

Coomans, 1963b: 129.

For remarks see former species.

**\*Meioceras mariae** de Folin, 1879

Coomans, 1963b: 129.

Also for this species St. Martin is the type locality. De Folin honoured Marie from whom he had received the specimens, although they were probably collected by van Rijgersma. This species might be identical with *M. nitidum*.

**Meioceras nitidum** (Stimpson, 1851)

Coomans, 1963b: 129.

## Family VITRINELLIDAE

**\*Vitrinella elegans** (A. Adams, 1850)

*Adeorbis elegans* Ad., Rijgersma list. — New to St. Martin.

**\*Cyclostremiscus beauii** (Fischer, 1857)

*Cyclostrema Beauii*, Rijgersma list. — New to St. Martin.

## Family ARCHITECTONICIDAE

**\*Heliacus cylindricus** (Gmelin, 1791)

*Solarium cylindraceum* Chem., Rijgersma list — Coomans, 1963b: 130.

The occurrence of this species at St. Martin was questionable before, however, van Rijgersma mentioned it from this island.

**Heliacus infundibuliformis** (Gmelin, 1791)

Krebs, 1864: 63; Coomans, 1963b: 130.

## Family TURRITELLIDAE

**\*Turritella exoleta** (Linnaeus, 1758)

*Turritella exoleta* L., Rijgersma list — Krebs, 1864: 46; Coomans, 1963b: 130.

**Turritella variegata** (Linnaeus, 1758)

Coomans, 1963b: 130.

**Vermicularia knorri** (Deshayes, 1843)

Collected by Mrs. Bogart and Mrs. Ervin in 1964. — New to St. Martin.

**Vermicularia spirata** (Philippi, 1836)

Coomans, 1963b: 130.

## Family VERMETIDAE

Van Rijgersma mentioned in his list \* *Teredo gigantea* from St. Martin. It is not impossible that with this name not a pelecypod was meant, but the tubiform shell of a vermetid or *Vermicularia*.

**Dendropoma irregulare** (d'Orbigny, 1842)

Coomans, 1963b: 131.

**\*Serpulorbis decussatus** (Gmelin, 1791)

*Vermetus decussatus* Gmel., Rijgersma list — Coomans, 1963b: 131.

**Serpulorbis riisei** (Mörch, 1862)

Collected in 1964 by Mrs. Bogart and Mrs. Ervin. — New to St. Martin.

## Family PLANAXIDAE

**Planaxis lineatus** (Da Costa, 1778)

Krebs, 1864: 52; Coomans, 1963b: 131.

**\*Planaxis nucleus** (Bruguière, 1789)

*Planaxis nucleus* Wood, Rijgersma list — Krebs, 1864: 52; Coomans, 1963b: 131.



## Family MODULIDAE

**\*Modulus modulus** (Linnaeus, 1758)

*Modulus lenticularis* Chem., Rijgersma list — Krebs, 1864: 62; Coomans, 1958: 67; 1963b: 131.

## Family POTAMIDIDAE

**\*Cerithidea costata** (Da Costa, 1778)

*Cerithium costatum* Wood, Rijgersma list — *Cerithium Petittii*, Krebs, 1864: 50; Coomans, 1958: 68; 1963b: 132.

**\*Batillaria minima** (Gmelin, 1791)

*Cerithium nigrescens* Menke, *C. septemstriatum* Saye, Rijgersma list — Coomans, 1958: 68; 1963b: 132.

This very variable species is common around St. Martin, therefore it is not surprising that van Rijgersma mentioned it in his list under two different names.

## Family DIASTOMIDAE

**Alabina cerithioides** (Dall, 1889)

Coomans, 1963b: 132.

## Family CERITHIIDAE

**Cerithium algicola** C. B. Adams, 1848

Coomans, 1958: 69; 1963b: 132.

**\*Cerithium atratum** (Born, 1778)

*Cerithium atratum* Born, Rijgersma list. — New to St. Martin.

**\*Cerithium eburneum** Bruguière, 1792

*Cerithium eburneum* Brug., Rijgersma list — Coomans, 1958: 69; 1963b: 133.

**\*Cerithium litteratum** (Born, 1778)

*Cerithium litteratum* Born, Rijgersma list — Krebs, 1864: 49; Coomans, 1958: 69; 1963b: 133.

**\*Cerithium litteratum forma semiferrugineum** Lamarck, 1822

*Cerithium semiferrugineum* Lk., Rijgersma list — Krebs, 1864: 50; Coomans, 1963b: 133.

Most 19th century authors considered *C. semiferrugineum* a distinct species.

**\*Cerithium variabile** C. B. Adams, 1845

*Cerithium ferrugineum*, Rijgersma list — Coomans, 1958: 70; 1963b: 133.

Houbrick (1974: 14) mentioned *C. variabile* as a junior synonym of *C. lutosum* Menke, 1828.

**\*Bittium varium** (Pfeiffer, 1840)

*Cerithium gibberulum* Ad., Rijgersma list — Krebs, 1864: 48; Coomans, 1963b: 133.

**\*Alaba incerta** (d'Orbigny, 1842)

*Rissoa melanura* Ad., Rijgersma list — Krebs, 1864: 54; Coomans, 1963b: 133.

## Family CERITHIOPSIDAE

**\*Cerithiopsis punctatum** (Linnaeus, 1758)

*Cerithiopsis punctatus* L., Rijgersma list. — New to St. Martin.

**Cerithiopsis rugulosum** (C. B. Adams, 1850)

*Cerithium rugulosum*, Krebs, 1864: 50; Coomans, 1963b: 133.

**\*Seila adamsii** (H. C. Lea, 1845)

*Cerithium terebellum* Ad., Rijgersma list — Krebs, 1864: 50; Coomans, 1963b: 134.

## Family JANTHINIDAE

**\*Janthina globosa** Swainson, 1822

*Janthina prolongata*, Rijgersma list. — New to St. Martin.

## Family TRIPHORIDAE

**Triphora decorata** (C. B. Adams, 1850)

Coomans, 1958: 71; 1963b: 134.

**\*Triphora ornata** (Deshayes, 1832)

*Triforis anatum* D'Orb., Rijgersma list. — New to St. Martin.

The name in van Rijgersma's list "anatum D'Orb." is evidently a misspelling of *ornatum* Desh.

**\*Triphora turrithomae** (Dillwyn, 1817)

*Triforis mirabilis* Ad., Rijgersma list — Coomans, 1963b: 134.

**\*Triphora spec.**

*Triphora* spec. undeterm., Rijgersma list.

## Family EPITONIIDAE

**\*Opalia crenata (Linnaeus, 1758)**

*Siliquaria crenata* L., Rijgersma list — *Scalaria crenata*, Krebs, 1864: 63; Coomans, 1963b: 134.

**Opalia hottessieriana (d'Orbigny, 1842)**

*Scalaria hottessieriana*, Krebs 1864: 64; Coomans, 1963b: 134—135.

**\*Epitonium albidum (d'Orbigny, 1842)**

*Siliquaria albida* d'Orb., Rijgersma list — Coomans, 1963b: 135.

Also collected in 1964 at St. Martin by Mrs. Bogart and Mrs. Ervin.

**\*Epitonium candeanum (d'Orbigny, 1842)**

*Siliquaria turricula* Sby., Rijgersma list — Mörch, 1874: 262; Coomans, 1963b: 135.

**\*Epitonium denticulatum (Sowerby, 1844)**

*Siliquaria denticulata* Sby., Rijgersma list. — New to St. Martin.

**\*Epitonium foliaceicostum (d'Orbigny, 1842)**

*Siliquaria muricata* Born, Rijgersma list — *Scala pretiosula*, Mörch, 1874: 252—253; Coomans, 1963b: 135.

**Epitonium krebsii (Mörch, 1874)**

*Scala krebsii*, Mörch, 1874: 252; Coomans, 1958: 72; 1963b: 135.

**\*Epitonium lamellosum (Lamarck, 1822)**

*Siliquaria lamellosa* Lmk., Rijgersma list — *Scalaria lamellosa*, Krebs, 1864: 64; Coomans, 1958: 71; 1963b: 136.

**Epitonium novangliae (Couthouy, 1838)**

Coomans, 1963b: 136.

**\*Epitonium occidentale (Nyst, 1871)**

*Siliquaria tenuis* Sby., Rijgersma list — *Scalaria tenuis*, Krebs, 1864: 65; Coomans, 1963b: 136.

**Epitonium turritellulum (Mörch, 1874)**

*Scala turritellula*, Mörch, 1874: 264; Coomans, 1963b: 136.

**\*Epitonium unifasciatum (Sowerby, 1844)**

*Siliquaria unifasciata* Lk., Rijgersma list — *Scala unifasciata*, Mörch, 1874: 259; Coomans, 1958: 71; 1963b: 136.

**\*Epitonium venosum (Sowerby, 1844)**

*Siliquaria venosa* Sby., Rijgersma list. — New to St. Martin.

**\*Epitonium spec.**

*Siliquaria lumbricalis*, Rijgersma list.

This is an unidentifiable species. Van Rijgersma's list mentioned two more *Epitonium* species as "*Siliquaria* spec. undetermined". They may belong to the species mentioned above which were not known to him.

Two more unrecognizable species of *Epitonium* were described in the literature from St. Martin: "*Scala filaris* Mörch, 1874" and "*Scalaria Martini* Wood", for remarks see Coomans (1963a: 76; 1963b: 136-137).

**\*Cirsotrema dalli Rehder, 1945**

*Siliquaria varicosa* Lk., Rijgersma list. — New to St. Martin.

*Scalaria varicosa* Lamarck, 1822 from the Philippine Islands is the type species of *Cirsotrema*. It is unlikely that van Rijgersma had collected this species on St. Martin. Two species of *Cirsotrema* are found in the West Indies (Clench & Turner, 1950: 226-229), of which *C. dalli* is close to the Pacific *C. varicosa* in shape and size of the shell.

## Family EULIMIDAE

**\*Balcis intermedia (Cantraine, 1835)**

*Eulima jamaicensis* Ad., Rijgersma list — Krebs, 1864: 74; Coomans, 1963b: 137.

## Family STILIFERIDAE

**\*Stilifer subulatus Broderip & Sowerby, 1832**

*Stylifer subulata* Broc., Rijgersma list — *Stylina subulata*, Krebs, 1864: 66; Coomans, 1963b: 137.

**\*Stilifer spec.**

*Stylifer astericola*, Rijgersma list.

*Stilifer astericola* Broderip, 1832, is from the

Galapagos Islands. This species is recently discussed by Lützen (1972: 4). At this moment it seems impossible to indicate which Caribbean species was collected. Stiliferidae are parasitic gastropods on Echinodermata.

#### Family HIPPONICIDAE

##### \**Cheilea equestris* (Linnaeus, 1758)

*Capulus mitrula*, Rijgersma list — Coomans, 1963b: 137.

##### \**Hipponix antiquatus* (Linnaeus, 1767)

*Hipponyx antiqualis*, Rijgersma list — Coomans, 1958: 73; 1963b: 137.

A variety *minor* Mörch, 1877 (:99) was described from St. Martin, the specimens were collected by Krebs.

##### *Hipponix grayanus* Menke, 1853

Coomans, 1963b: 138.

##### \**Hipponix subrufus* (Lamarck, 1822)

*Capulus subrufa*, Rijgersma list. — New to St. Martin.

#### Family CAPULIDAE

##### \**Capulus incurvus* (Gmelin, 1790)

*Capulus incurvus* Gml., *Capulus intorta* Lk, Rijgersma list — Krebs, 1864: 70; Coomans, 1963b: 138.

#### Family CALYPTRAEIDAE

##### \**Calyptraea centralis* (Conrad, 1841)

*Calyptraea Dillwyni* Lk., Rijgersma list — *Trochita candeana*, Krebs, 1864: 69; Coomans, 1963b: 139.

Although the synonymy of *Calyptraea dillwyni* with *C. centralis* could not be established, the occurrence of *C. centralis* at St. Martin makes it fairly sure that this species was collected.

##### \**Crucibulum auricula* (Gmelin, 1791)

*Trochita*, Rijgersma list — Krebs, 1864: 69; Coomans, 1963b: 139.

The name "Trochita" may stand for *Crucibulum auricula*, which is known from St. Martin.

##### \**Crepidula aculeata* (Gmelin, 1791)

*Crepidula aculeata* Lk., Rijgersma list — Mörch, 1877: 102; Coomans, 1963b: 139.

##### *Crepidula convexa* Say, 1822

*Crypta navicula*, Mörch, 1877: 105; Coomans, 1963b: 139.

##### *Crepidula glauca* Say, 1822

Collected in 1964 by Mrs. Bogart and Mrs. Ervin. — New to St. Martin.

##### \**Crepidula plana* Say, 1822

*Crepidula unguiformis*, Rijgersma list. — New to St. Martin.

##### \**Crepidula proteus* d'Orbigny, 1845

*Crepidula protea* d'Orb., Rijgersma list. — New to St. Martin.

#### Family XENOPHORIDAE

##### \**Xenophora conchyliophora* (Born, 1780)

*Xenophorus* spec. undetermined, Rijgersma list — Coomans, 1963b: 139.

We suppose that van Rijgersma had collected this species, since it is known from St. Martin.

#### Family STROMBIDAE

This family was discussed in van Rijgersma's manuscript on the mollusks of St. Martin. He gave the following description of the family characters:

"This family is very natural, the shell with an expanded lip, deeply notched near the canal. Operculum in our W. Indian species claw shaped with a keelshaped line in the middle & not serrated on the outer edge. Radula short, median tooth 7 cusped, laterals slender dentate hooks."

##### \**Strombus costatus* Gmelin, 1791

*Strombus accipitrinus* Martini, *S. costatus* Gml., Rijgersma manuscript with one drawing in colour; *S. accipitrinus*, *S. aubius* Sby., Rijgersma list — Coomans, 1963b: 139.

"Veel minder algemeen dan de voorgaande schijnt het toch over de geheele Antilles verbreid te zijn, en varieert in groote en kleur, tuschen geel en steenrood afwisselende, van binnen melkwit. Strombus dubius schijnt het jong van bovengenoemde soort te zijn, doch in the

Thesaurus zie ik niet de localiteit opgegeven.”

[Although far less common than the preceding species (= *Strombus gallus*) it seems to be distributed over the entire Antilles, and varies in size and colour, alternating between yellow and brickred, inside milky white. *Strombus dubius* seems to be the juvenile of this species, however, in the Thesaurus (= Thesaurus Conchyliorum, by G. B. Sowerby) the locality is not mentioned.] *Strombus inermis* Sowerby was described and figured by van Rijgersma as a separate species (pl. VI), with these remarks:

“wordt hier niet gevonden. 2 exemplaren van Gov. Rawson in mijn collectie, localiteit Bahamas. Sommige Conchyleogen beschouwen deze schelp als een varieteit van *Sr. accipitrinus*.”

[Is not found here. 2 specimens from Governor Rawson in my collection, locality Bahamas. Some conchologists consider this shell to be only

a variety of *Strombus accipitrinus*.]

At present *Strombus inermis* is considered a synonym of *S. costatus*, the shell is less heavy.

**\**Strombus gallus* Linnaeus, 1758**

*Strombus gallus* Linn., Rijgersma list, and manuscript with one colour drawing of shell and animal (pl. VI) — Coomans, 1963b: 140.

“Minder algemeen dan de voorgaande soorten en leeft ook op grootre diepte, St. Martin. Variëert, met eene van buiten steenroode schaal en van binnen roodachtig geel. Tusschen de jongen van *Gallus* en *lobatus* is niet veel verschil doch *lobatus* is altijd herkenbaar door de spilplooijen in de bovenhoek van de mond.”

[Less common than the preceding species and also lives at greater depth, St. Martin. Variable, outside of the shell brick red and inside reddish

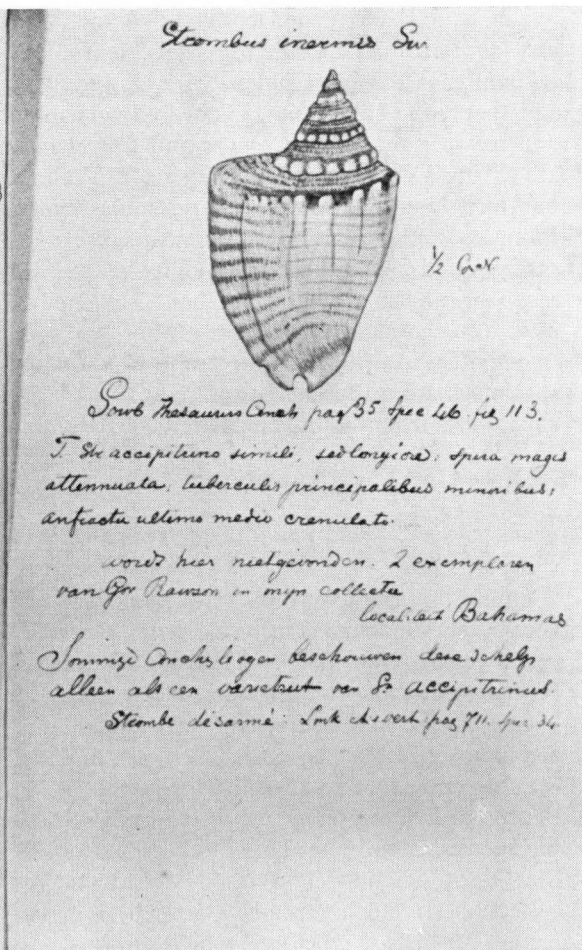


Plate VI. *Strombus gallus* and *Strombus costatus* juv. (= *S. inermis*), from van Rijgersma's manuscript on the mollusks of St. Martin (1875).

yellow. There is not much difference between the juveniles of *gallus* and *lobatus*, however, *lobatus* can always be recognized by the spindle plaits in the upper part of the aperture.]

**\**Strombus gigas* Linnaeus, 1758**

*Strombus gigas* Ln., Rijgersma list, and manuscript with colour drawings of the shell, operculum, and radula — Coomans, 1958: 75; 1963b: 140.

“Algemeen verbreid over de WestIndien, varierende in kleur en vorm, de oude voorwerpen met mos en zewier begroeid herbergen dan *Caecum* en *Emarginula*. Zeer jonge exemplaren zijn omstreeks een duim lang en gelijken veel op Triton, langwerpige ronde rooskleurige parels vind men, maar zeer zeldzaam in de schelp. Het dier wordt door de armen gegeten, en dient ook voor aas. De schelp bij de visschers om er op te blazen nadat men er de top heeft afgeslagen. Volgens Gouverneur Rawson zijn de exemplaren van Barbados roodachtig en oranje, die van de Bahamas rooskleurig (delicate pink).” [Common in the West Indies, variable in colour and shape, the old specimens covered with moss and seaweed on which *Caecum* and *Emarginula* are living. Very young specimens are about one inch long and very much resemble *Triton*. Elongate round pink coloured pearls are very rarely found in the shell. The animal is eaten by the poor, and is also used for bait. The shell is used by fishermen to blow on it after the apex is cut off. According to Governor Rawson the specimens from Barbados are reddish and orange, those from the Bahamas are delicate pink.]

**\**Strombus pugilis* Linnaeus, 1758**

*Strombus pugilis* L., Rijgersma list, and manuscript with a colour drawing. — New to St. Martin.

“Schijnt op grootere diepte te leven dan de vorige soorten, is hier zeer zeldzaam. Voorwerpen van St. Martin, St. Thomas, Tortola & Barbados in mijne verzameling. Heeft zeer veel overeenkomst met een schelp van Panama, de *Strombus gracilior* die echter lichter van kleur is en meer slender van vorm”.

[Seems to live at greater depth than the preceding species, is very rare here. Specimens from St. Martin, St. Thomas, Tortola & Barbados in my collection. It much resembles a shell from Panama, *Strombus gracilior*, which however, is lighter in colour and more slender in shape.] Van Rijgersma was correct, the Caribbean

*Strombus pugilis* and the Eastern Pacific *S. gracilior* Sowerby, 1825, are vicarious species.

**\**Strombus raninus* Gmelin, 1791**

*Strombus lobatus* Sby., Rijgersma list; *Strombus lobatus* Swainson, *S. bituberculatus* Lmk., Rijgersma manuscript with two colour drawings — *Strombus costoso-muricatus*, Krebs, 1864: 1; Coomans, 1963b: 140.

“Zeldzaam St. Martin, Barbados very common (gov. Rawson).

Het is volstrekt niet moeilijk om *gallus* en *lobatus* van elkander te herkennen, de jonge schelp vereist echter eenige oplettendheid, de 2 knobels zijn niet altijd even groot ontwikkeld, bij sommige zijn ze zeer kort, bij een ander exemplaar in mijne collectie van St. Thomas meer dan een centemeter lang.”

[Rare at St. Martin, Barbados very common (Governor Rawson). It is not at all difficult to distinguish *gallus* from *lobatus*, however, the juvenile shell requires some attention, the 2 knobs are not always very well developed, sometimes they are very short, in another specimen from St. Thomas in my collection they are more than one centimetre long.]

Family LAMELLARIIDAE

**\**Lamellaria rangii* (Bergh, 1853)**

*Lamellaria* spec. undeterm., Rijgersma list — *Sigaretus Rangii*, Mörch, 1877: 93; Coomans, 1963b: 140.

Although unidentified by van Rijgersma, we suppose that this species was collected by him, since *L. rangii* is known from St. Martin.

Family ERATOIDAE

**\**Erato maugeriae* Gray, 1832**

*Marginella (Cerata mayeria)* Gray, Rijgersma list — Mörch, 1877: 51; Coomans, 1963b: 140.

Although the name was seriously misspelt in the list, and placed in *Marginella*, our identification must be correct.

The species of the genus *Trivia* were described in van Rijgersma's manuscript, but placed by him in *Cypraea*. *Trivia* was considered a subgenus with these characters:

“Shell small, funt lirate, back with ribs or tubercles.”

**\*Trivia antillarum** Schilder, 1922

*Trivia subrostrata*, Rijgersma list; *Cypraea subrostrata* Gray, Rijgersma manuscript, with one colour drawing. — New to St. Martin.

“Except color there appears to be very little difference between this and *globosa*, they are of equal size and height, but *subrostrata* has more ribs and the interstices are finely striated. — It may be that our shell is not the *subrostrata*, as Dr. Carpenter in his Catalogue of Mazatlan Shells fol. 379 says The West Indian shell (Bristol Mus) is of a richer colour, with the beaks less rostrate, and the dorsal sinus deeper and broader. Long. 25. lat. 18. alt. 16. loc. St. Martin and other West Indian Islands, not common. Mazatlan, Carpenter Catalogue spec 444. Gallapagos Islands, Sowerby.”

Van Rijgersma's remarks indicate that he agreed with Carpenter that the Eastern Pacific *Trivia subrostrata* probably is not identical with the Caribbean species; Schilder has separated them and named the West Indian species *Trivia antillarum*.

**\*Trivia leucosphaera** Schilder, 1931

*Trivia globosa* Gray, Rijgersma list; *Cypraea globosa* Gray, Rijgersma manuscript with 3 colour drawings — Mörch, 1877: 50; Coomans, 1963b: 140.

**\*Trivia nix** Schilder, 1922

*Cypraea nivea* Rve., Rijgersma list; *Cypraea nivea* Gray, Rijgersma manuscript with 2 drawings. — New to St. Martin.

“loc. St. Martin, W. Indies, also subfossil from Barbados, not common.”

**\*Trivia pediculus** (Linnaeus, 1758)

*Trivia sulcata*, Rijgersma list; *Cypraea sulcata* Dillw., *C. pediculus* Linn., Rijgersma manuscript with two colour drawings — Krebs, 1864: 41; Coomans, 1963b: 140.

“loc. found plentifully in the West Indies, St. Martin, Guadeloupe, St. Thomas, Barbados etc. Rumphius in his Amboinische Rariteits Kamer blad. 118. . 1705 was the first who applied this name for the East Indian shell. Linnaeus used the same name for all the small Triviae from East & West Indies and Europe. The East Indian species is therefore the *pediculus*, not *oryzae* Lmk. and the Lamarck name *pediculus* for our shell should be *sulcata* Dillw. by priority, although the name *pediculus* is now in general use, it varies very much in sides and in colors.”

**\*Trivia quadripunctata** (Gray, 1827)

*Cypraea quadripunctata* Gray, *C. rotunda* Kiener, Rijgersma manuscript with two colour drawings — Krebs, 1864: 42; Coomans, 1963b: 141.

“Loc. West Indian Islands. St. Martin common.”

**\*Trivia suffusa** (Gray, 1832)

*Cypraea suffusa* Gray, Rijgersma list; *C. suffusa* Gray, *C. Armandina* Duclos, Rijgersma manuscript with two colour drawings — Krebs, 1864: 42; Coomans, 1963b: 141.

“loc. West Indies, St. Martin, common.”

## Family CYPRAEIDAE

This family was in van Rijgersma's manuscript characterized as:

“The Cypraeiden are easily distinguished by the form of their shells, no operculum, and radula as Triton nl. 3-1-3.”

**\*Trona zebra** (Linnaeus, 1758)

*Porcellana exanthema* L., Rijgersma list; *Cypraea exanthemata* Linn., Rijgersma manuscript with two colour drawings (pl. VII) — Krebs, 1864: 41; Coomans, 1958: 78; 1963b: 141.

“Hab. West Indies, not rare, under Coral stones, his nearest analogue is *C. Cervinetta* from Panama but Dr. Carpenter says that an examination of several hundred specimens (from Mazatlan) shows that the characters usually relied on to separate the species are by no means constant. The young ones have no ocellated spots but are only banded and more of a lead color. *C. zebra* Linn. *C. plumbea* Gml. *C. bifasciata* Gml. *C. dubia* Gml. are all synonymes.

The radula of *C. exanthemata* is nearly as long as the shell (in Triton it is short) median and lateral teeth tricusped hooks.”

**\*Luria cinerea** (Gmelin, 1791)

*Luponia cinerea* Gml., Rijgersma list; *Cypraea cinerea* Gml., *C. sordida* Lmk., Rijgersma manuscript with two colour drawings — *Cypraea succincta*, Krebs, 1864: 42; Coomans, 1958: 78—79; 1963b: 141.

“Common. St. Martin and other islands. Specimens from Barbados oblong cylindrical, they differ very much according to their age, *cinerea* are the young and *sordida* the old specimens agreeing with Lamarck description. Some are ob-



long other ovate: and may be the difference in the Sexes.”

Van Rijgersma had guessed very well that the size of the shells in Cypraeidae is related to the sex of the animal.

\**Erosaria spurca acicularis* (Gmelin, 1791)

*Cypraea spurca*, Rijgersma list; *C. spurca* Linn. var. *flaveola* Linn., *C. acicularis* Gml., Rijgersma manuscript with one drawing in colour — Krebs, 1864: 42; Coomans, 1963b: 141.

“loc. St. Martin not common but found at mostly all the West Indian Islands. Cape verd. Mediterranean, Indian & Pacific Ocean-Sowb.

Méditerranée aux Iles Canaris et aux Antilles - D'Orb.

Our shell is the var. *flaveola* and only differs a little in the colors, having the under part pure

white and not yellow as those from the Canarian Islands. The shell here depicted is one of the largest out my collection.”

Van Rijgersma gave a correct description of the two subspecies, but he was wrong about the identification. The Caribbean subspecies with the white ventral side is *Erosaria spurca acicularis*, the Mediterranean subspecies has a yellow ventral side and should be called *E. spurca spurca* (syn. *spurca flaveola*).

Van Rijgersma described two more species of *Cypraea* in his manuscript, although he had no specimens from St. Martin: *Propustularia surinamensis* (Perry, 1811), in the manuscript as *Cypraea bicallosa* Gray, with these remarks:

“Loc. St. Vincent, West Indies. Of this very rare shell I have seen only one in the collection of

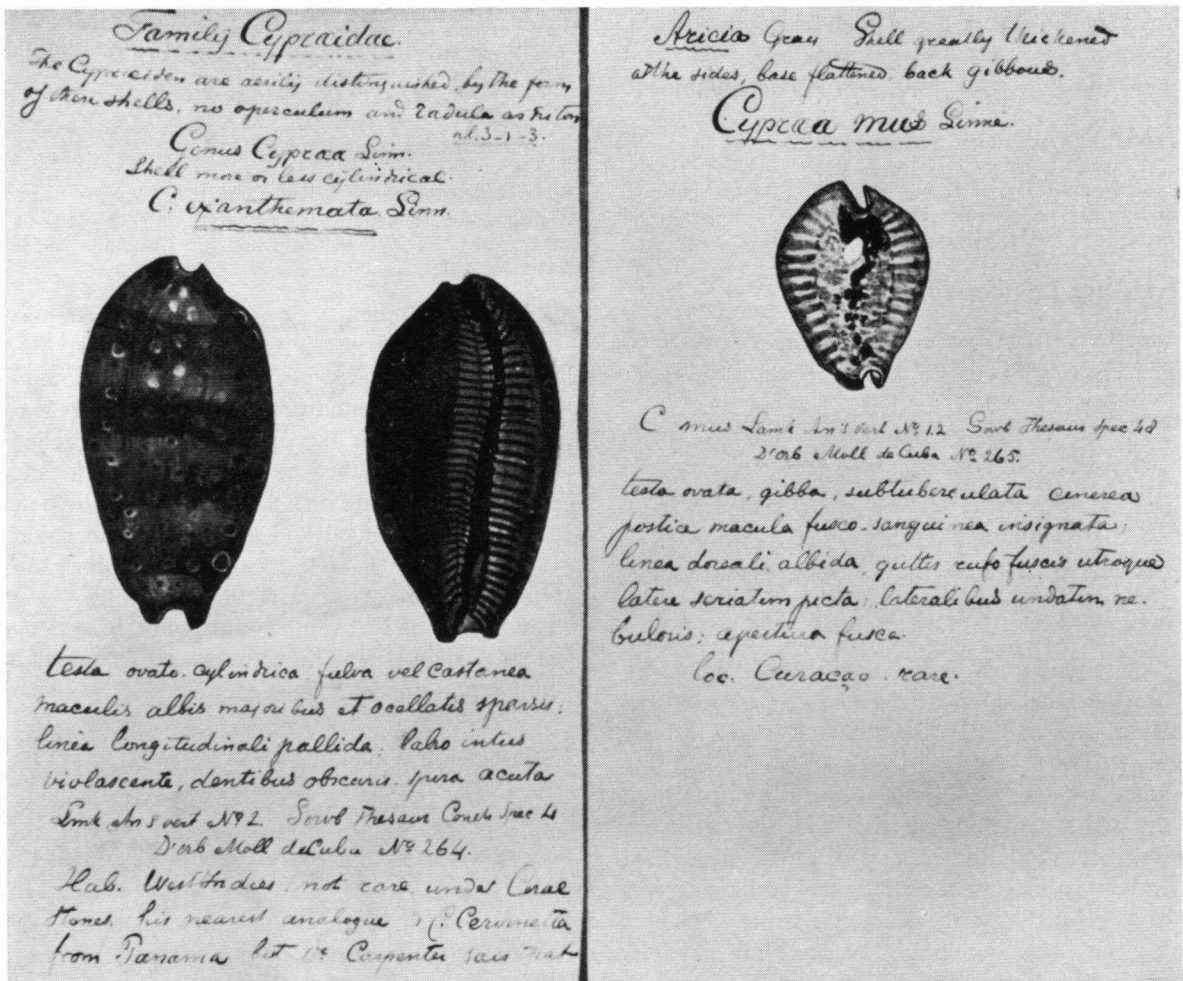


Plate VII. *Trona zebra* (= *Cypraea exanthemata*) and *Siphocypraea* (= *Cypraea*) *mus*, from van Rijgersma's manuscript on the mollusks of St. Martin (1875).

Gov. Rawson W. Rawson, Barbados, C. Aubreyana Jousseume appears to be the young."

*Siphocypraea mus* (Linnaeus, 1758) is described as *Cypraea mus* Linné in van Rijgersma's manuscript, with one colour drawing (pl. VII) and these remarks:

"*Aricia* Gray. Shell greatly thickened at the sides, base flattened, back gibbous. loc. Curaçao, rare."

The locality Curaçao must be wrong, see Coomans (1963c).

#### Family OVULIDAE

Van Rijgersma started this family in his manuscript with these remarks:

"The shells of the genus *Ovula* placed by Dr. Bronn, Klassen und Ordnungen, with *Cypraea* in the family *Cypraeidae*, are a separate family named *Ovulidae* in the Catalogue of Matzatlan shells, following Dr. Carpenter not calling this family *Amphiperasidae* as American authors do. Dr. Theodore Gill has in the American Conchological journal pointed out the difference between the *Cypraea*'s and *Ovula*'s consisting principally in the habit of the animal living on the stems of *Gorgonia*'s, the radula as not belonging to the *taenioglossa* & by the simple rolling of the shell itself."

#### \**Neosimnia acicularis* (Lamarck, 1810)

*Ovulum aciculare* Lmk., Rijgersma list; *Ovula (Volva) aciculare* Lmk., Rijgersma manuscript with two colour drawings — Krebs, 1864: 43; Coomans, 1963b: 142.

"Hab. very common on the stems of *Gorgonia flabellum*. Very different in colours violet, darker reddish purple, or very pale fawn or yellow."

#### \**Cyphoma gibbosa* (Linnaeus, 1758)

*Calpurnus gibbosa*, Rijgersma list; *Ovula (Cyphoma) gibbosa* Linn., Rijgersma manuscript with two colour drawings — Coomans, 1963b: 142.

"A very common West Indian shell, from Curaçao — Jamaica — Also Brazilian coast. the loc. Panama in the Thesaur. Conch. is an error, the shells are mostly smaller and the animal is very pretty with square yellow marks."

#### Family NATICIDAE

#### \**Natica canrena* (Linnaeus, 1758)

*Natica canrena*, Rijgersma list — Krebs, 1864: 66; Coomans, 1958: 76—77; 1963b: 142.

#### *Natica livida* Pfeiffer, 1840

Coomans, 1963b: 142.

Also collected by Mrs. Bogart and Mrs. Ervin in 1964.

#### *Natica proxima* C. B. Adams, 1850

Mörch, 1877: 65; Coomans, 1963b: 142.

#### \**Polinices hepaticus* (Röding, 1798)

*Natica fuscata*, Rijgersma list — Krebs, 1864: 66; Coomans, 1963b: 142.

#### \**Polinices lacteus* (Guilding, 1834)

*Natica nitida* Don., Rijgersma list — Coomans, 1958: 77; 1963b: 143.

#### *Sigatica semisulcata* (Gray, 1839)

*Natica semisulcata*, Mörch, 1877: 57; Coomans, 1963b: 143.

#### \**Sinum maculatum* (Say, 1831)

*Sigaretus zonalis* d'Orb., Rijgersma list — Krebs, 1864: 68; Coomans, 1963b: 143.

#### \**Sinum perspectivum* (Say, 1831)

*Sigaretus haliotoides* Lk., Rijgersma list — Coomans, 1963b: 143.

#### \**Stigmaulax sulcata* (Born, 1778)

*Natica sulcata*, Rijgersma list. — New to St. Martin.

#### Family VANIKOROIDAE

#### \**Vanikoro striata* (d'Orbigny, 1842)

*Narica striata* d'Orb., Rijgersma list. — New to St. Martin.

#### Family CASSIDAE

In his manuscript van Rijgersma characterized this family as follows:

"Shell ventricose, spire short. Canal sharply recurved. Operculum none or rudimentary, horny. Radula short 3-1-3 not differing much from *Strombus*."

#### \**Cassis flammea* (Linnaeus, 1758)

*Cassis flammea* d'Orb., Rijgersma list; *Cassis flammea* Linn., Rijgersma manuscript with one colour drawing (pl. VIII). — New to St. Martin.

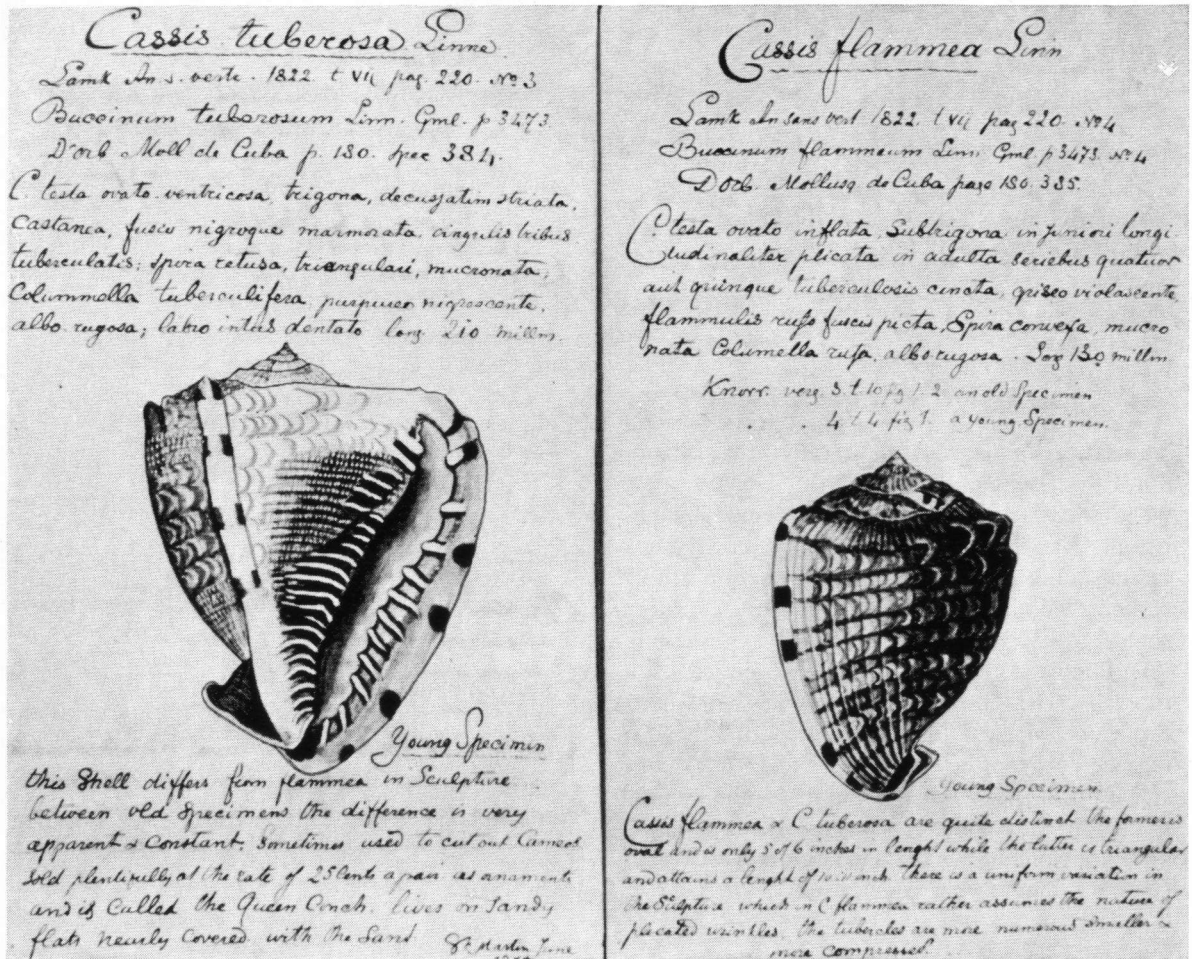


Plate VIII. *Cassis tuberosa* and *Cassis flammea*, from van Rijgersma's manuscript on the mollusks of St. Martin (1875).

"*Cassis flammea* & *C. tuberosa* are quite distinct, the former is oval and is only 5 or 6 inches in length while the latter is triangular and attains a length of 10-11 inch. There is a uniform variation in the sculpture which in *C. flammea* rather assumes the nature of plicated wrinkles, the tubercles are more numerous smaller & more compressed."

**\**Cassis madagascariensis* Lamarck, 1822**

*Cassis Madagascariensis* Lmk, Rijgersma manuscript with two drawings of the operculum — Coomans, 1963b: 143.

"St. Martin, Guadeloupe. Not rare."

**\**Cassis tuberosa* (Linnaeus, 1758)**

*Cassis tuberosa* Linn., Rijgersma list; *Cassis tuberosa* Linne, Rijgersma manuscript with one colour drawing (pl. VIII) — Krebs, 1864: 35; Coomans, 1958: 81; 1963b: 143—144.

"This shell differs from flammea in sculpture, between old specimens the difference is very apparent & constant. Sometimes used to cut out Cameos. Sold plentifully at the rate of 25 cents a pair as ornaments and is called the Queen Conch. lives on sandy flats nearly covered with the sand. St. Martin June 1875."

This is one of the few species for which van Rijgersma mentioned the vernacular name (Coomans, 1970: 177).

**\**Cypræacassis testiculus* (Linnaeus, 1758)**

*Cassis testiculus* Linné, Rijgersma list; Rijgersma manuscript with one colour drawing — Coomans, 1963b: 144.

"A very common shell in the West Indies, also on the Brazilian coast & the coast of Africa, according M. M. Webb & Berthelot (D'Orb. Moll de Cub.). This is the largest shell from

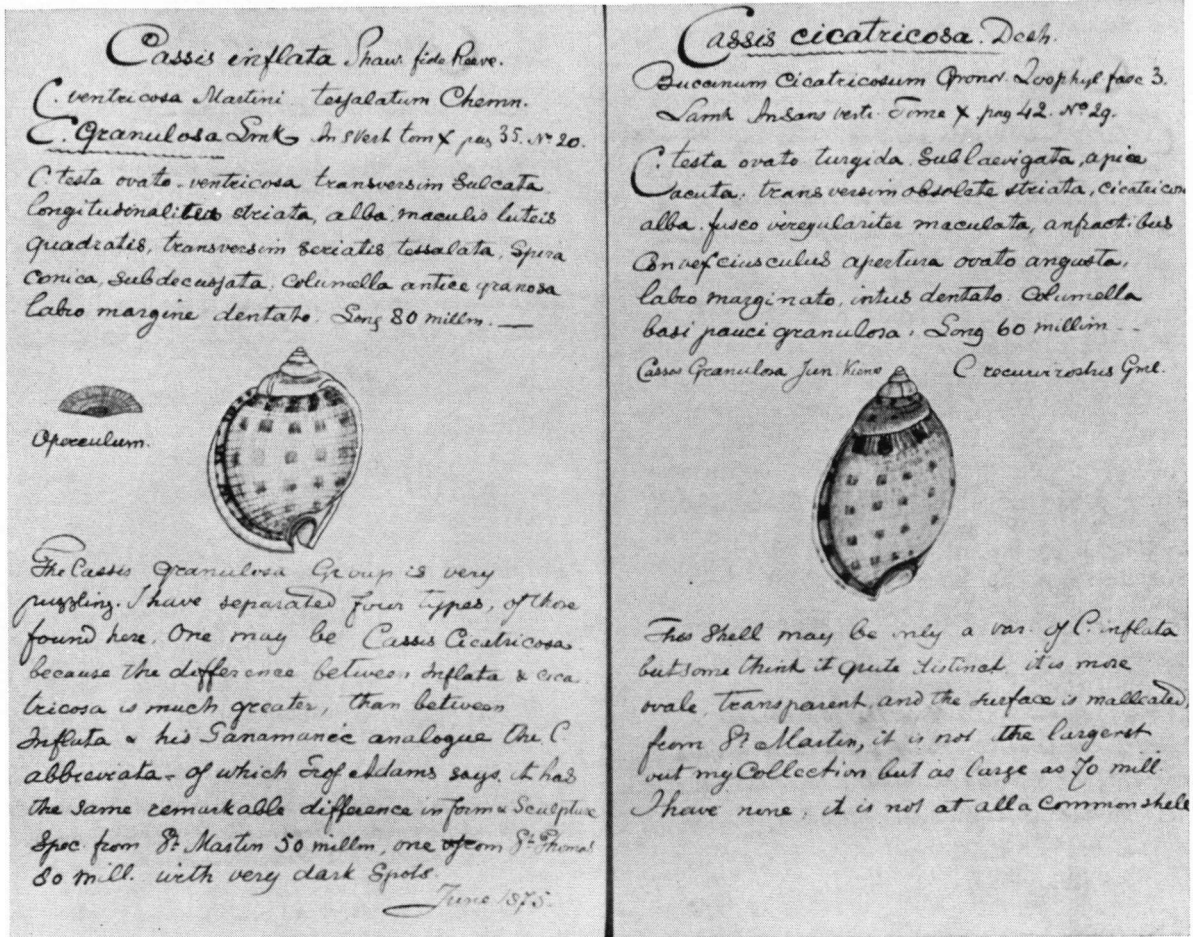


Plate IX. *Phalium granulatum* (= *Cassis inflata*) and *Phalium cicatricosum* (= *Cassis cicatricosa*), from van Rijgersma's manuscript on the mollusks of St. Martin (1875).

my collection, mostly smaller. St. Martin North and East side of the Island on a coral or rocky bottom."

**\*Phalium cicatricosum (Meuschen, 1787)**

*Cassis cicatricosa* Desh., Rijgersma manuscript with one colour drawing (pl. IX) — Coomans, 1963b: 144.

"This shell may be only a var. of *C. inflata* but some think it quite distinct, it is more ovale, transparent, and the surface is malleated, from St. Martin, it is not the largest out my collection but as large as 70 mill. I have nine: it is not at all a common shell."

**\*Phalium granulatum (Born, 1778)**

*Cassis granulosa* Lk., Rijgersma list; *Cassis inflata* Shaw fide Reeve, Rijgersma manuscript with 2 colour drawings of the shell and the operculum (pl. IX) — *Cassis gibba*, Krebs, 1864: 34; Coomans, 1963b: 144.

"The *Cassis granulosa* group is very puzzling. I have separated four types, of those found here. One may be *Cassis cicatricosa*, because the difference between *inflata* & *cicatricosa* is much greater, than between *inflata* & his Panamanic analogue the *C. abbreviata* - of which Prof. Adams says it has the same remarkable difference in form & sculpture. Spec. from St. Martin 50 millm, one from St. Thomas 80 mill. with very dark spots. June 1875."

**\*Morum oniscus (Linnaeus, 1767)**

*Oniscia oniscus* Sowerby, Rijgersma list; *Oniscia oniscus*, *Oniscia Lamarckii* Desh., *Casidaria oniscus* Lmk, Rijgersma manuscript with two colour drawings — Krebs, 1864: 35; Coomans, 1958: 82; 1963b: 144.

"Shell with a short spire and a long narrow aperture, slightly truncated in front, outer lip thickened, denticulated, inner lip granulated.



Hab. St. Martin, Cuba, Guadeloupe, St. Lucie, Barbados, a very common West Indian shell. The *oniscia* Lamarck in Desh. & *oniscus* Sowerby appears to be the same shell, my St. Martin specimens are all white, underneath. Length about 23 millm."

Van Rijgersma, and a number of recent authors, consider *Morum oniscus* and *M. lamarckii* (Deshayes, 1844) synonymous, but we think they are different species. *M. oniscus* has a length of 20 mm, colour of the last whorl black, parietal shield white. *M. lamarckii* is 30 mm, light brown with a dark brown band under the suture, and a pink parietal shield. We have collected *M. oniscus* at St. Martin and St. Eustatius (Windward Group), and *M. lamarckii* was collected by us on Aruba, Curaçao and Bonaire (Leeward Group).

#### *Morum strombiformis* (Reeve, 1849)

Collected by us at St. Martin, although not mentioned in our publication on the marine mollusks of this island (Coomans, 1963b). — New to St. Martin.

Van Rijgersma mentioned two more Cassidae in his manuscript, although he had no specimens from St. Martin: *Oniscid dennisoni* Reeve from Guadeloupe, and *Pachyathron* spec. On *Pachyathron* he remarked:

"Shell small, oblong, striated with lines of growth; spire small, depressed, with channelled suture; aperture with callous denticulated lips, like Cypraea, from the West Indies. Gov. Rawson, who writes Barbados 27 April 1875: Among the Cassididae the only shell of rarity & interest that I possess is the *Pachyathron* of Gaskoin. I forget its specific name. It is very like a small *Marginella* & might well be mistaken for it. You may quote it on my authority."

*Pachyathron cypraeoides* (C. B. Adams, 1845) is known to the present author from the islands of Aruba, Curaçao and Bonaire (Coomans, 1972). *P. cassidiforme* Gaskoin, 1853 is known from St. Vincent and the Grenadines (Coomans, 1973a); Rawson's specimen from the neighbouring island of Barbados might belong to this species. The genus *Pachyathron* is placed now in the Marginellidae.

### Family CYMATIIDAE

For this family van Rijgersma used in his manu-

script the former name Tritonidae, characterized by:

"Shell very much as by the Muricidae. Operculum ovate, subconcentric, radula short, 3-1-3, much like *Strombus* & *Cassis*. Genus *Triton* Lmk. Shell with disconnected varices, canal prominent, lips denticulated (Woodward)."

#### \**Cymatium caribbaeum* Clench & Turner, 1957

*Triton cynocephalum* Lmk., Rijgersma list; Rijgersma manuscript with one colour drawing — Krebs, 1864: 23; Coomans, 1963b: 144.

"Length 60 millm. and smaller, common in St. Martin, also from Guadeloupe, St. Thomas, Barbados etc. Operculum large nearly closing the mouth. Epidermis hairy & thin."

#### \**Cymatium femorale* (Linnaeus, 1758)

*Triton femoralis* L., Rijgersma list; *Triton femorale* Lmk., Rijgersma manuscript with 3 colour drawings (pl. X) — Krebs, 1864: 23; Coomans, 1958: 83; 1963b: 144—145.

"a very common shell found at mostly all the islands. Epidermis thin and smooth, at interfalls beautifully erected and studded with stiff hairs of a darker colour. Length of my largest millm. 120."

#### \**Cymatium gracilis* (Reeve, 1844)

*Triton vespaceum* Lmk., Rijgersma list; Rijgersma manuscript with one colour drawing. — New to St. Martin.

"about half dozen specimen from St. Martin in my collection, name given me by Prof. Mörch. most specimen with 5 whorls, this has 6."

Although *Cymatium vespaceum* (Lamarck, 1822) is a West Indian species, the figure made by van Rijgersma is evidently the closely related *C. gracilis*, according to J. C. van Raam (1971). In our previous publication (Coomans, 1963b: 145, no. 152) *C. gemmatum* (Reeve) was mentioned from St. Martin. However, this is not a Caribbean species. These specimens also belong to *C. gracilis*.

#### \**Cymatium krebsii* (Mörch, 1877)

*Triton fusiformis* Rve, Rijgersma list; *Triton ficiformis* Reeve, Rijgersma manuscript with one colour drawing. — New to St. Martin.

"I have 7 specimens of this shell in my collection of which this is the largest and much rubbed, the small ones are younger and have these col-

*Familie Tritonidae*

Shell very much as Bay the Muricidae.  
 Operculum ovate Subconcentric radula short  
 3.1.3 much like *Promina* & *Cassid*.

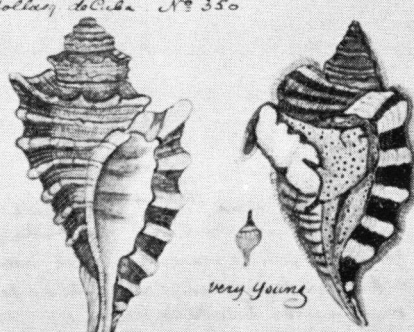
*Genus Triton Smk.*

Shell with dis connected varicos canal prominent  
 Lips dent. ciliated (woodward)

*Triton femorale Smk*


Tr. testa fusiformi, trigona transversim sulcata  
 rugosa et striata, fulvo-rufescente; anfractibus superne  
 angulatis, ultimo triangulari ad angulum  
 tuberculo majusculo instructo Cauda recta longiuscula

Smk. *Atlas* var. 18. Tome 1<sup>er</sup> page 632  
 D'Orb. *Mollusq. de Cuba* N° 350



a very Common Shell found at mollus all the  
 Islands. Epidermis thin and smooth, at intervals beautifully  
 erected and studded with stiff hairs of a darker colour  
 Length of my largest. millm 120

*Triton tuberosum Lamk*  
*Antillarum D'Orb.*



Tr. testa ovata, caudata transversim sulcata  
 rufo rubente, vertice magno, tuberoso superne  
 angulato anfractibus angulo tuberculiferis.  
 Tuberculo dorsali magno, compresso Cauda  
 ascendente. Columella superne callosa.

Smk. *Atlas* 14. Tome 1<sup>er</sup> page 635  
 D'Orb. *Moll. de Cuba* N° 352

There appears to be no difference between  
 the East Indian and our species except as  
 D'Orb. has it 'mais elle s'en distingue par ses  
 tours moins ventrus et moins anguleux. a  
 difference only perceptible in picked species.  
 Common Cuba Martinique Guadeloupe  
 St. Thomas Jamaica St. Martin.  
 July 13<sup>th</sup> 5.

Plate X. *Cymatium femorale* (= *Triton f.*) and *Cymatium muricinum* (= *Triton tuberosum*), from van Rijgersma's manuscript on the mollusks of St. Martin (1875).

ours & Epidermis preserved: they look like the young of pileare, but the mouth is narrower and they are lighter of colours. I have not seen the diagnosis but the name is given me through the kindness of Govr Rawson by Prof. Mörch. Hab: St. Martin."

According to van Rijgersma's figure he obviously had *Cymatium krebisii*. This species was described by Mörch in 1877, van Rijgersma compiled his manuscript in 1875, and therefore got another name from Mörch. Two mistakes were made by van Rijgersma: *Triton fusiformis* was described by Kiener, not by Reeve; the name *Triton* "ficiformis" Reeve is an error for *T. ficoides* Reeve.

Some authors consider *C. krebisii* a variety of *C. corrugatum* (Lamarck, 1816).

**\*Cymatium labiosum (Wood, 1828)**

*Triton labiosum* Mörch, Rijgersma list; *Triton labiosum*

Wood, *T. rutile* Mencke, *T. Loroisii* Petit, Rijgersma manuscript with 3 colour drawings — Krebs, 1864: 23; Coomans, 1963b: 145.

"This species is not rare and varies much in size and colours. Some are of a reddish yellow, others dark brown; with or without varices: but mostly without. Operculum ovate with apical nucleus. Hab. St. Martin, Guadeloupe, St. Thomas, Barbados."

This species is also discussed in the correspondence with Swift.

**\*Cymatium muricinum (Röding, 1798)**

*Triton tuberosum* Lamk, *Antillarum* D'Orb., Rijgersma manuscript with one colour drawing (pl. X) — Coomans, 1958: 82; 1963b: 145.

"There appears to be no difference between the East Indian and our species except as D'Orb. has it 'mais elle s'en distingue par ses tours



moins ventrus et moin anguleux. a difference only perceptible in picked species. Common. Cuba, Martinique, Guadeloupe. St. Thomas, Jamaica, St. Martin. July 1875."

**\*Cymatium nicobaricum (Röding, 1798)**

*Triton chlorostomum* Lk., *T. pulchellum* Adams, Rijgersma list; *T. chlorostomum* Lmk., Rijgersma manuscript with two colour drawings — *Cymatium chlorostomum*, Coomans, 1958: 82; 1963b: 145.

"Long 40 millm: Moll. de Cuba no. 351. My specimen is much larger than the one described by D'Orb. nearly 65 millm. I have received one from Sowerby, loc. Philippines. St. Martin, Guadeloupe, St. Thomas, Cuba."

This species was mentioned twice in van Rijgersma's list, as *Triton chlorostomum* Lamarck, 1822, which is a junior synonym of *Cymatium nicobaricum*, and as *Triton pulchellum* C. B. Adams, 1850, which is a juvenile *C. nicobaricum*.

**\*Cymatium pileare (Linnaeus, 1758)**

*Triton aquatilis* Rve, Rijgersma list; *Triton pileare* Linn., *T. Martinianum* D'Orb., Rijgersma manuscript with two colour drawings (pl. XI) — Krebs, 1864: 24, Coomans 1958: 82; 1963b: 145.

"Long 80 millm. Our shell is called Martinianum by D'Orbigny on account he thinks that the Mediterr. spec. the *Olearium* Linn. should be called so, nl pileare.

In the St. Martin spec. is the mouth not very red, when fresh covered with the same form of Epidermis as femorale, common. Some var. are called *Triton aquatilis* Rve."

**\*Cymatium spec.**

*Triton gibbosus* Rve, Rijgersma list; *Triton gibbosum* Reeve, Rijgersma manuscript with one colour drawing.

"Of this small and beautiful shell I have 3 spec. in my collection and two very young ones ap-

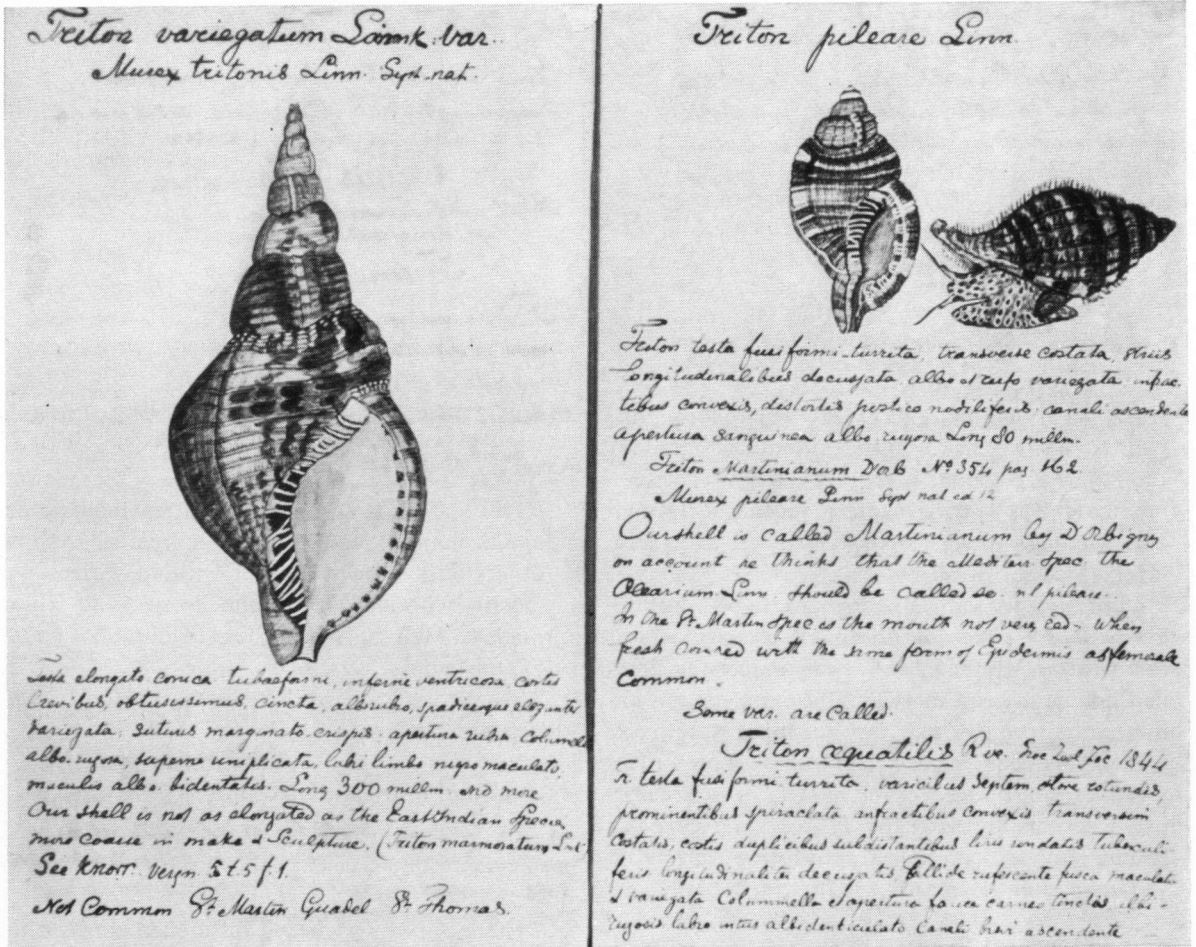


Plate XI. *Charonia variegata* (= *Triton variegatum*) and *Cymatium pileare* (= *Triton p.*), from van Rijgersma's manuscript on the mollusks of St. Martin (1875).

parently the young, not common, resembling a ranella. St. Martin."

*Cymatium gibbosum* (Broderip, 1833) is an Eastern Pacific species. Van Rijgersma's drawing looks as if it represents a juvenile specimen, of which we cannot conclude to which Caribbean species it belongs.

Van Rijgersma included one more species of *Cymatium* in his manuscript: *Cymatium parthenopeum* (von Salis, 1793), under the name *Triton Americanus* D'Orb. He had no specimens from St. Martin, and the species is not figured. However, to the description, copied from d'Orbigny van Rijgersma added these remarks:

"I have seen one specimen in the Collection of the late Mr. Robert Swift and one from Gov. Rawson of Barbados, the shell appears to be rare, and is perhaps nothing else than a straggler from South America the *Triton olearium* L. as I find *Tr. costatum* Born mentioned from Guadeloupe in Mr. Krebs list."

**\*Charonia variegata** (Lamarck, 1816)

*Triton variegatum* Lk, Rijgersma list; *Triton variegatum* Lamk. var., *Murex tritonis* Linn., Rijgersma manuscript with one colour drawing (pl. XI) — *Charonia tritonis nobilis*, Coomans, 1958: 83; 1963b: 145.

"Long 300 millm and more. Our shell is not as elongated as the East Indian Species, more coarse in make & sculpture. (*Triton marmoratum* Lmk.) See Knorr. Vergn. 5.t.5.f.1. Not common St. Martin, Guadel. St. Thomas."

**\*Distorsio clathratus** (Lamarck, 1816)

*Triton cancellinum*, *T. clathratum* Lmk., Rijgersma manuscript. — New to St. Martin.

"rare, one from St. Thomas, and a young from St. Martin in my collection, from Tobego, Gov. Rawson."

Family BURSIDAE

Van Rijgersma mentioned several species of the genus *Bursa* (= *Ranella*) in his manuscript, however, they were not placed in a separate family but united with the Tritonidae (= Cymatiidae). The genus *Ranella* was characterized as:

"shell with two rows of continuous varices, one on each side."

**\*Bursa thomae** (d'Orbigny, 1842)

*Ranella Thomas* d'Orb., Rijgersma list; *Ranella Thomae*

D'Orb., *R. rhodostoma* Swb., Rijgersma manuscript with two colour drawings. — New to St. Martin.

"I believe that the shells in general named *R. rhodostoma* Sowb. are the same as this shell. *rhodostoma* is from Maksba l'une des Philippines, it is true D'orb sais. Apertura alba: but may not his specimen be bleached and lost his colour? The specimens from the West Indies, named *rhodostoma* dont differ from the *Thomae* except the colour of the mouth being of a beautiful rose purple in all his parts. not common. St. Martin; Guadeloupe; St. Thomas & Barbados."

Van Rijgersma united the Indo-Pacific *Bursa rhodostoma* (Sowerby, 1835), with a reddish aperture, and the West Indian *Bursa thomae* (d'Orbigny), characterized by its purple aperture. Although they are related, we consider them as separate species.

Van Rijgersma mentioned more Caribbean species of *Bursa* in his manuscript, although he had no specimens from St. Martin:

*Bursa granularis* (Röding, 1798), as *Ranella Cubaniana* D'Orb., with one colour drawing, and these remarks: "Several semifossil from Barbados."

*Bursa spadicea* (Montfort, 1810), as *Ranella crassa* (Reeve) Dillw., with remarks: "I have not seen it. Guadeloupe D'Orb."

*Bursa corrugata* (Perry, 1811), as *Ranella ponderosa* Reeve, from Guadeloupe and Jamaica.

Family TONNIDAE

Van Rijgersma placed the species of the genus *Tonna*, for which he used the synonym *Dolium*, in the family Cassididae. He characterized the genus *Dolium* as:

"Shell venticose; spirally furrowed; spire small; aperture very large; outer lip crenated, no operculum. Woodward."

**\*Tonna galea antillarum** (Mörch, 1877)

*Dolium galea* Linn., Rijgersma list; *Dolium galea* Linn., Rijgersma manuscript with one colour drawing (pl. XII) — Coomans, 1963b: 145.

"This Mediterranean species is found but seldom at St. Martin, and mostly small and dead spec. it appears to be very widely distributed from Barbados Guadeloupe & St. Martin, St. Thomas."

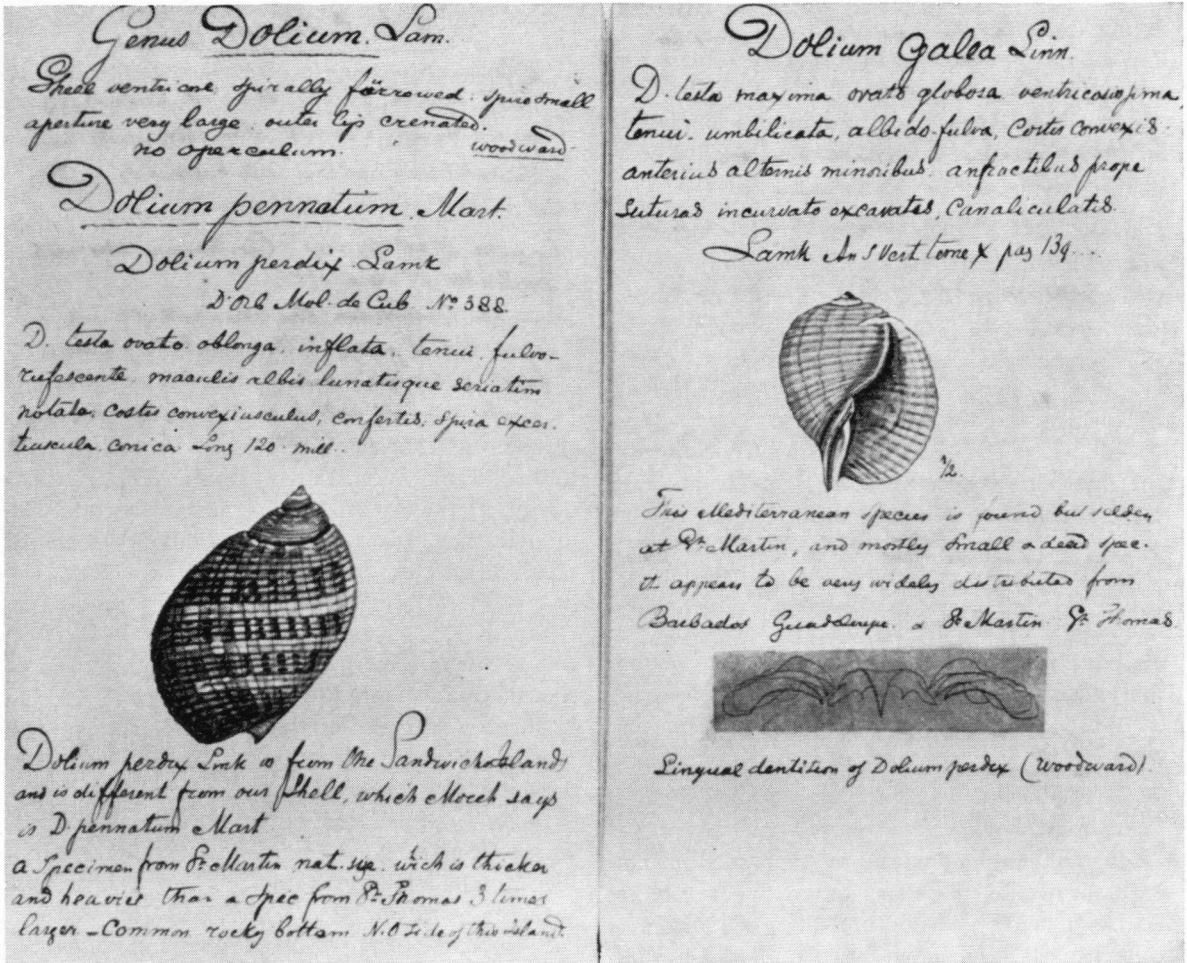


Plate XII. *Tonna maculosa* (= *Dolium pennatum*) and *Tonna galea antillarum* (= *Dolium galea*), from van Rijgersma's manuscript on the mollusks of St. Martin (1875).

This species is found at both sides of the Atlantic; *Tonna galea galea* (Linnaeus, 1758) lives in the tropical eastern Atlantic and in the Mediterranean Sea, the subspecies *T. galea antillarum* is from the West Indies.

**\**Tonna maculosa* (Dillwyn, 1817)**

*Dolium perdix* Lin., Rijgersma list; *Dolium pennatum* Mart., *Dolium perdix* Lamk., Rijgersma manuscript with one colour drawing and figure of the radula (pl. XII) — Krebs, 1864: 35; Coomans, 1963b: 146.

"*Dolium perdix* Lmk is from the Sandwich Islands and is different from our shell, which Morch says is *D. pennatum* Mart. A specimen from St. Martin, nat. size, which is thicker and heavier than a spec. from St. Thomas 3 times larger. — common, rocky bottom, N.O. side of this island."

Two closely related species are known: *Tonna perdix* (Linnaeus, 1758) from the Indo-Pacific, and *Tonna maculosa* from the West Indies. Some authors consider the Caribbean species a subspecies: *T. perdix occidentalis* (Mörch, 1877).

**Order NEOGASTROPODA**

**Family MURICIDAE**

**\**Chicoreus brevifrons* (Lamarck, 1822)**

*Murex brevifrons* Lk., Rijgersma list — Coomans, 1958: 85; 1963b: 146.

**\**Phyllonotus pomum* (Gmelin, 1791)**

*Murex pomum* Gml., Rijgersma list — *Murex pomiformis*, Krebs, 1864: 21; *Hexaplex pomum*, Coomans, 1963b: 146.

**Favartia cellulosa nucea** (Mörch, 1850)

*Murex nuceus*, Krebs, 1864: 21; Coomans, 1963b: 146.

Specimens from St. Martin were collected by Mrs. Bogart and Mrs. Ervin in 1964.

**\*Murex cailleti** Petit, 1856

*Murex elegans* Beck, Rijgersma list. — New to St. Martin.

Erroneously mentioned from St. Martin in Krebs, 1864: 19; for remarks see Coomans (1963a: 72; 1963b: 146).

**\*Murex motacilla** Gmelin, 1790

*Murex motacilla* Chemn., Rijgersma list. — New to St. Martin.

**\*Aspella anceps** (Lamarck, 1822)

*Ranella anceps* Lmk., Rijgersma manuscript with two colour drawings. — New to St. Martin.

The Muricidae were not mentioned in van Rijgersma's manuscript, however, this species was placed in the genus *Ranella* in the last century. He gave these remarks:

"I have received *Ranella anceps* from Mauritius it is much larger than our shell, and agrees with the picture given in Chenu Manuel de Conch. Mr. Swift of St. Thomas thinks our shell may be *R. hastula* Reeve. loc. Anguilla, also St. Martins (with hermit Crabs)."

**\*Morula nodulosa** (C. B. Adams, 1845)

*Engina nodulosa* Adams, Rijgersma list — *Recinula nodulosa*, Krebs, 1864: 27; *Drupa nodulosa*, Coomans, 1958: 87; 1963b: 147.

**\*Purpura patula** (Linnaeus, 1758)

*Purpura patula* Lin., Rijgersma list — Krebs, 1864: 26; Coomans, 1958: 86; 1963b: 147.

**\*Thais deltoidea** (Lamarck, 1822)

*Purpura tropa* Bolt., Rijgersma list — Coomans, 1958: 86; 1963b: 147.

Specimens from St. Martin are discussed in the correspondence of Swift with van Rijgersma, as *Purpura deltoidea*.

**\*Thais haemastoma** (Linnaeus, 1758)

*Purpura fasciata* Rve., Rijgersma list. — New to St. Martin.

**\*Thais rustica** (Lamarck, 1822)

*Purpura undata* Lk., Rijgersma list — *Purpura rustica*, Krebs, 1864: 27; Coomans, 1958: 86—87; 1963b: 147.

**\*Tritonalia intermedia** (C. B. Adams, 1850)

*Murex alveatus* Kien., Rijgersma list — Krebs, 1864: 18; Coomans, 1963b: 147.

**\*Muricopsis oxytatis** M. Smith, 1938

*Murex hexagonus* Lk., Rijgersma list. — New to St. Martin.

**\*"Murex" spec.**

*Murex* spec. undetermined, Rijgersma list.

## Family MAGILIDAE

**\*Coralliophila abbreviata** (Lamarck, 1816)

*Purpura galea* Chen., Rijgersma list. — New to St. Martin.

**Coralliophila caribaea** Abbott, 1958

Collected at St. Martin by Mrs. Bogart and Mrs. Ervin in 1964. — New to St. Martin.

## Family COLUMBELLIDAE

**\*Columbella mercatoria** (Linnaeus, 1758)

*Columbella mercatoria* Lk., Rijgersma list — Krebs, 1864: 29; Coomans, 1958: 88; 1963b: 148.

**\*Pyrene ovulata** (Lamarck, 1822)

*Columbella ovulata* Lk., Rijgersma list — Krebs, 1864: 30; Coomans, 1963b: 148.

**Pyrene ovuloides** (C. B. Adams, 1850)

Coomans, 1963a: 73; 1963b: 148.

**\*Nitidella dichroa** (Sowerby, 1858)

*Columbella dichroa* Sby., Rijgersma list. — New to St. Martin.

**Nitidella laevigata** (Linnaeus, 1758)

*Columbella laevigata*, Krebs, 1864: 29; Coomans, 1963b: 148.

**Nitidella nitida** (Lamarck, 1822)

*Columbella nitida*, Krebs, 1864: 29; *Nitidella nitidula*, Coomans, 1958: 89; 1963b: 148.

**\*Nitidella pusilla** (Sowerby, 1844)

*Columbella pusillus* Sby., Rijgersma list. — New to St. Martin.

**\*Mitrella dermestoides** (Lamarck, 1822)

*Columbella dermestoides* Kien., Rijgersma list. — New to St. Martin.

**\*Mitrella fenestrata** (C. B. Adams, 1850)

*Columbella pusiformis* d'Orb., Rijgersma list. — New to St. Martin.

C. "pusiformis" is an error for *fusiformis*.

**\*Mitrella ocellata** (Gmelin, 1791)

*Columbella ocellata* d'Orb., *C. argus* d'Orb., *Nitidella cribraria*, Rijgersma list — Krebs, 1864: 30; Coomans, 1958: 89; 1963b: 148.

**\*Anachis atomella** (Duclos, 1835)

*Columbella atomella* Ducl., Rijgersma list. — New to St. Martin.

**\*Anachis catenata** (Sowerby, 1844)

*Columbella catenata*, Rijgersma list — Krebs, 1864: 28; Coomans, 1963b: 149.

**\*Anachis hotessieri** (d'Orbigny, 1845)

*Columbella Hotessieri* d'Orb., Rijgersma list. — New to St. Martin.

**Anachis obesa** (C. B. Adams, 1845)

Coomans, 1963b: 149.

**\*Anachis pulchella** (Kiener, 1834)

*Columbella pulchella* Kien., Rijgersma list — Krebs, 1864: 30; Coomans, 1963b: 149.

**\*Anachis spec.**

*Truncaria eurytoides*, Rijgersma list.

*Truncaria eurytoides* Carpenter, 1864, at the moment called *Aesopus eurytoides*, is a species from tropical West America (Van Winkle Palmer, 1958: 213, pl. 23). According to Weisbord (1962: 336) the species is closely related to the West Indian *Brachystyloma caribbeana* Weisbord, 1962. Robertson (1963) is of the opinion, and we agree, that the genus *Brachystyloma* Weisbord is a synonym of *Anachis* H. & A. Adams. Therefore it is likely that van Rijgersma collected on St. Martin a species of *Anachis*, unknown to him, which

resembled the West American *Truncaria eurytoides*.

**\*Nassarina pulchella** (C. B. Adams, 1851)

*Buccinum pulchellum* Ad., Rijgersma list. — New to St. Martin.

## Family BUCCINIDAE

**Engoniophos guadeloupensis** (Petit, 1852)

Coomans, 1963b: 149.

**Engoniophos uncinatus** (Say, 1826)

Coomans, 1963b: 149.

**\*Antillophos candei** (d'Orbigny, 1842)

*Nassa Candei*, Rijgersma list. — New to St. Martin.

**\*Engina turbinella** (Kiener, 1836)

*Engina turbinella* Kien., Rijgersma list — *Recinula turbinella*, Krebs, 1864: 27; Coomans, 1963b: 149.

**Pisania pusio** (Linnaeus, 1758)

Collected by Mrs. Bogart and Mrs. Ervin in 1964. — New to St. Martin.

**\*Polia auritula** (Link, 1807)

*Buccinum auricula* Lk., Rijgersma list — *Cantharus auritula*, Coomans, 1958: 90; 1963b: 150.

**\*Polia tineta** Conrad, 1846

*Buccinum undosum* Lin., Rijgersma list. — New to St. Martin.

**\*Bailya parva** (C. B. Adams, 1850)

*Triton eximius* Rawson, Rijgersma list. — New to St. Martin.

*Triton* "eximius Rawson" is an error for *eximium* Reeve.

## Family COLUBRARIIDAE

In a previous study (Coomans, 1963b: 150) we have placed the genus *Colubraria* Schumacher, 1817, in the family Buccinidae. The systematic place of *Colubraria* was not established (see Coomans, 1958: 87) until recently. Anatomical research by Ponder (1968) indicated that the Colubrariidae

form a distinctive family belonging to the superfamily Buccinacea.

Van Rijgersma did not use the genus name *Colubraria*. The species were treated as *Triton*; however, he placed them together into the subgenus *Epidromus*.

**\*Colubraria lanceolata** (Menke, 1828)

*Triton lanceolatum* Kiener, Rijgersma manuscript with one colour drawing — Krebs, 1864: 23; Coomans, 1963b: 150.

“Not rare quite distinguishable from the Mediterranean spec. *Tr. reticulatum* Bl. Habitat. St. Martin & St. John. Porto-Rico. Lmk. An s.v. Guadeloupe Schramm.”

**\*Colubraria obscura** (Reeve, 1844)

*Triton testaceum* Mörch, Rijgersma manuscript with one colour drawing — Krebs, 1864: 24, Coomans, 1963b: 150.

“Of this common shell I have a few specimens from St. Martin and one from St. Thomas. I have not seen the diagnosis but the name is given me by Mr. Robert Swift. St. Thomas”.

Family NASSARIIDAE

**Nassarius albus** (Say, 1826)

*Nassarius ambiguus*, Coomans, 1958: 91; Coomans, 1963b: 150.

**\*Nassarius hotessieri** (d'Orbigny, 1845)

*Nassa Hotessieri* d'Orb., Rijgersma list. — New to St. Martin.

**\*Nassarius sturmi** (Philippi, 1848)

*Nassa sturnis* Phil., Rijgersma list. — New to St. Martin.

*Nassa* “*sturnis*” is an error for *sturmi*. According to Warmke & Abbott (1961: 118) this species is probably identical with *Nassarius vibex*. Other authors consider it a variety of *N. vibex*.

**\*Nassarius vibex** (Say, 1822)

*Nassa vibex* Saye, Rijgersma list. — New to St. Martin.

Family FASCIOLARIIDAE

**\*Fasciolaria tulipa** (Linnaeus, 1758)

*Fasciolaria tulipa* Lk., Rijgersma list — Krebs, 1864: 15; Coomans, 1958: 92; 1963b: 151.

**\*Leucozonia nassa** (Gmelin, 1791)

*Leucozonia cingulifera* Lk., Rijgersma list — Coomans, 1958: 92; 1963b: 151.

**\*Leucozonia ocellata** (Gmelin, 1791)

*Turbinella ocellata* Lk., Rijgersma list — *Turbinella nigella*, Krebs, 1864: 17; Coomans, 1963b: 151.

**\*Latirus brevicaudatus** (Reeve, 1847)

*Turbinella attenuale* Reeve., Rijgersma list. — New to St. Martin.

*Turbinella* “*attenuale*” is an error for *attenuata*.

**\*Latirus infundibulum** (Gmelin, 1791)

*Latirus infundibulum* Lk., Rijgersma list — *Turbinella ananas*, Krebs, 1864: 16; Coomans, 1963b: 151.

Family VASIDAE

**\*Vasum muricatum** (Born, 1778)

*Turbinella muricata* Reeve., Rijgersma list — Coomans, 1963b: 151.

Family OLIVIDAE

**\*Oliva reticularis** Lamarck, 1811

*Oliva reticularis* Lk., Rijgersma list — Krebs, 1864: 40; Coomans, 1958: 93; 1963b: 152.

**Olivella bullula** (Reeve, 1850)

*Oliva pura*, Krebs, 1864: 40; Coomans, 1963b: 152.

**Olivella dealbata** (Reeve, 1850)

Coomans, 1963b: 152.

**\*Olivella floralia** (Duclos, 1835)

*Oliva oryza*, Rijgersma list — Krebs, 1864: 40; Coomans, 1963b: 152.

**\*Olivella minuta** (Link, 1807)

*Oliva mutica* Saye, Rijgersma list — Coomans, 1963b: 152.

**\*Olivella miriadina** (Duclos, 1835)

Coomans, 1963b: 152.



This species is also mentioned from St. Martin by Dautzenberg (1900: 170-171), who had obtained the specimens from E. Marie. Since Marie and van Rijgersma exchanged mollusks, it is not impossible that these specimens were collected by the latter.

**\*Olivella nivea** (Gmelin, 1791)

*Oliva micans* Sby., Rijgersma list — Coomans, 1963b: 152.

Our synonymy of *O. micans* with *O. nivea* is questionable.

**\*Olivella petiolita** (Duclos, 1835)

*Oliva paniculata* Mart., Rijgersma list — Coomans, 1963b: 153.

*Oliva panniculata* Duclos, 1835, is a species from the Indian Ocean. Our identification with *Olivella petiolita* remains questionable.

**Olivella perplexa** Olsson, 1956

Coomans, 1963b: 153.

**\*Jaspidella jaspidea** (Gmelin, 1791)

*Oliva exigua*, Rijgersma list — Coomans, 1963b: 153.

Family CANCELLARIIDAE

**Cancellaria conradiana** Dall, 1890

Coomans, 1963b: 153.

**\*Cancellaria reticulata** (Linnaeus, 1767)

*Cancellaria reticulata*, Rijgersma list — Krebs, 1864: 34; Coomans, 1963b: 153.

**\*Trigonostoma rugosa** (Lamarck, 1822)

*Cancellaria rugosa* Lk., Rijgersma list — Krebs, 1864: 34; Coomans, 1963b: 153.

Family MARGINELLIDAE

**Marginella eburneola** Conrad, 1834

Coomans, 1963b: 154.

**\*Persicula catenata** (Montagu, 1803)

*Marginella catenata* Mart., Rijgersma list — Krebs, 1864: 43; Coomans, 1963b: 154.

**\*Persicula lavalleana** (d'Orbigny, 1842)

*Marginella lavalleana* d'Orb., Rijgersma list — Coomans, 1958: 98; 1963b: 154.

**\*Cypraeolina ovuliformis** (d'Orbigny, 1842)

*Marginella ovuliformis* d'Orb., Rijgersma list. — New to St. Martin.

**\*Hyalina pallida** (Linnaeus, 1758)

*Marginella pallida* Lmk., Rijgersma list — *Volvaria pelucida*, Krebs, 1864: 46; Coomans, 1963b: 154.

**Volvarina albolineata** (d'Orbigny, 1842)

*Hyalina albolineata*, Coomans, 1963b: 154.

**\*Volvarina avena** (Valenciennes in Kiener, 1834)

*Marginella avena*, Rijgersma list — *Hyalina avena*, Coomans, 1958: 98; 1963b: 154.

**Volvarina avenacea** (Deshayes, 1844)

*Hyalina avenacea*, Coomans, 1963b: 154.

**\*Volvarina lactea** (Kiener, 1841)

*Marginella lactea* Kien., Rijgersma list — *Hyalina lactea*, Coomans, 1958: 98; 1963b: 154.

This species is also discussed in the correspondence of R. Swift with van Rijgersma.

**Volvarina subtriplicata** (d'Orbigny, 1842)

*Marginella subtriplicata*, Krebs, 1864: 46; *Hyalina subtriplicata*, Coomans, 1963b: 155.

Family MITRIDAE

**\*Mitra barbadensis** (Gmelin, 1791)

*Mitra striatula* Lk., Rijgersma list — Krebs, 1864: 36—37; Coomans, 1958: 95; 1963b: 155.

**Mitra nodulosa** (Gmelin, 1791)

Collected in 1964 by Mrs. Bogart and Mrs. Ervin. — New to St. Martin.

**\*\*“Mitra” spec.**

*Mitra* spec. undeterm., Rijgersma list.

Since van Rijgersma used the genus name *Mitra* for all species of the Mitridae, this unidentified species may belong to another genus.

**\*Pusia albocincta** (C. B. Adams, 1845)

*Mitra sulcata* Gm., Rijgersma list. — New to St. Martin.

**Pusia dermestina** (Lamarck, 1811)

*Mitra dermestina*, Krebs, 1864: 37; Coomans, 1963b: 155.

**\*Pusia histrio** (Reeve, 1844)

*Mitra histrio* Rve., Rijgersma list. — New to St. Martin.

**\*Pusia puella** (Reeve, 1845)

*Mitra puella* Rve., Rijgersma list — Krebs, 1864: 38; Coomans, 1963b: 155.

**\*Pusia pulchella** (Reeve, 1845)

*Mitra speciosa* Rve., Rijgersma list. — New to St. Martin.

*Pusia speciosa* (Reeve, 1844) is an Indo-Pacific species. Since Reeve (1844, species 148) stated

that *Mitra speciosa* "has very much the appearance of the *Mitra pulchella*" we suppose that van Rijgersma had collected this Caribbean species.

Family CONIDAE

This family was treated by van Rijgersma in his manuscript on the mollusks of St. Martin. He mentioned these characters:

"Shell inversely conical, aperture long and narrow, outer lip notched at or near the suture; operculum minute lamella."

**\*Conus aurantius** Hwass, 1792

*Conus aurantius* Brug., Rijgersma list; *Conus leucostictus* Gml, *aurantius* Brug., Rijgersma manuscript with one colour drawing (pl. XIII) — New to St. Martin.

"Hab St Martin & Guadeloupe."

For a long time this species was considered to

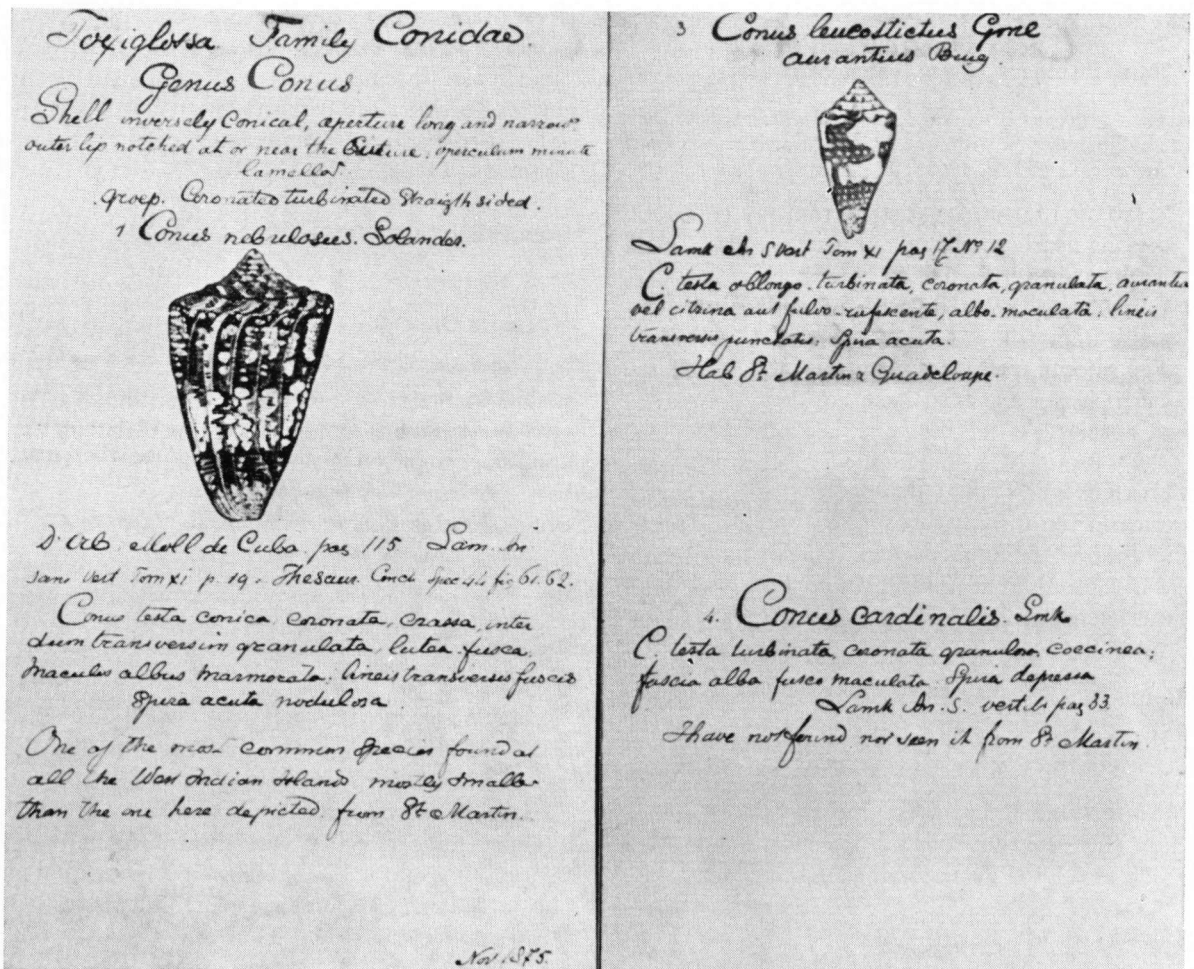


Plate XIII. *Conus regius* (= *C. nebulosus*) and *Conus aurantius* (= *C. leucostictus*), from van Rijgersma's manuscript on the mollusks of St. Martin (1875).

be from the Indo-Pacific, until it was discovered in the Netherlands Antilles (Coomans, 1963d: 9). However, one century ago van Rijgersma knew it from the Lesser Antilles. His drawing clearly shows a specimen of *C. aurantius*.

**\**Conus daucus* Hwass, 1792**

*Conus daucus* Brug., Rijgersma list; *Conus daucus*, *C. arausiacus* Chemn., *C. transiensis* Chemn., Rijgersma manuscript with one colour drawing — Krebs, 1864: 4; Coomans, 1963b: 155.

“St Martin, not common.”

**\**Conus jaspideus* Gmelin, 1791**

*Conus mindanus*, Krebs, 1864: 5; Coomans, 1963b: 156.

The name of this species is not mentioned in van Rijgersma's manuscript; however, he gave a drawing of a specimen from St. Martin, and discussed it under the following forma.

**\**Conus jaspideus* forma *verrucosus* Hwass, 1792**

*Conus verrucosus* Brug. var.?, *C. echinulatus* Kiener, Rijgersma manuscript with one colour drawing — *Conus verrucosus*, Coomans, 1963b: 156.

“Hab. St Martin. 2 varieties from my collection the one nearly smooth the other very granulated. Krebs called this a *Con. mindanus* Hwass, & *Cretaceus*, the var. b. Anthony called it *C. Duvallii*, *Bernardi*.”

The smooth *Conus jaspideus* and the granulated *C. verrucosus* have long been considered two distinct species. At the moment they are recognized as two forms of a single species. It was found (Coomans, 1973c) that the shells of a number of species in the Conidae may appear in two forms, smooth and granulated. Van Rijgersma already had disclosed this feature in *Conus jaspideus*, both forms were mentioned and figured in his manuscript.

**\**Conus mus* Hwass, 1792**

*Conus mus* Bruguière, Rijgersma manuscript with one colour drawing — Krebs, 1864: 5; Coomans, 1963b: 156.

“Common, all the West Indian Islands, when the shell has not lost his Epidermis it is of a yellow colour, inside of the mouth blue.”

**\**Conus centurio* Born, 1778**

*Conus centurio* Born, Rijgersma list; *Conus centurio* Born, *C. tribunus* Gml., Rijgersma manuscript. — New to St. Martin.

“Hab. dans la partie S. des Antilles, les eaux de l'île Margarita, sur les côte de Venezuela.”

This species is not figured by van Rijgersma in his manuscript, and his text indicated that the species is found south of the Antilles. However, his list mentioned one specimen from St. Martin.

**\**Conus mappa* Lightfoot, 1786**

*Conus cedo-nulli* Brug., Rijgersma manuscript. — New to St. Martin.

“Found only one at St. Martin, in to bad a state to be drawn.”

We agree to the name *Conus mappa* for this species, as was suggested by Holeman & Kohn (1970), since it is the eldest available name. *Conus insularis* Gmelin, 1791, and *Conus dominicanus* Hwass, 1792, are considered junior synonyms. However, we do not agree with these authors that *Conus aurantius* Hwass is a synonym of *C. mappa*. E. X. Maier (1969) and the present author have studied specimens of both species from the Zoological Museum in Amsterdam, and from other collections. We came to the conclusion that *Conus aurantius* and *C. mappa* are distinct species (Coomans, 1973c: 322—324, figs. 15—16).

**\**Conus regius* Gmelin, 1791**

*Conus nebulosus* Sby., Rijgersma list; *Conus nebulosus* Solander, Rijgersma manuscript with one colour drawing (pl. XIII) — *Conus leucostictus*, Krebs, 1864: 5; Coomans, 1958: 99; 1963b: 156.

“One of the most common species found at all the West Indian islands, mostly smaller than the one here depicted from St Martin. Nov. 1875.”

**\**Conus spurius* Gmelin, 1791**

*Conus leoninus* Brug., Rijgersma list; *Conus leoninus* Brug., Rijgersma manuscript with one colour drawing (pl. XIV); *Conus spurius* Gml., *C. proteus* Brug., Rijgersma manuscript with one colour drawing (pl. XIV) — Coomans, 1963b: 156.

In his manuscript van Rijgersma mentioned this species under two separate names, although he wrote on *leoninus*:

“Hab. St Martin, rare. Guadeloupe, Schramm. —there appears to be very little difference between this and the following species, *leoninus* has a flatter spire and in being rather streaked than spotted the color of the spots is also constantly different. St. Martin. Nov. 1875.”

With *C. spurius* is written:

“Hab St Thomas W. Indies Sowb. Cuba: & St

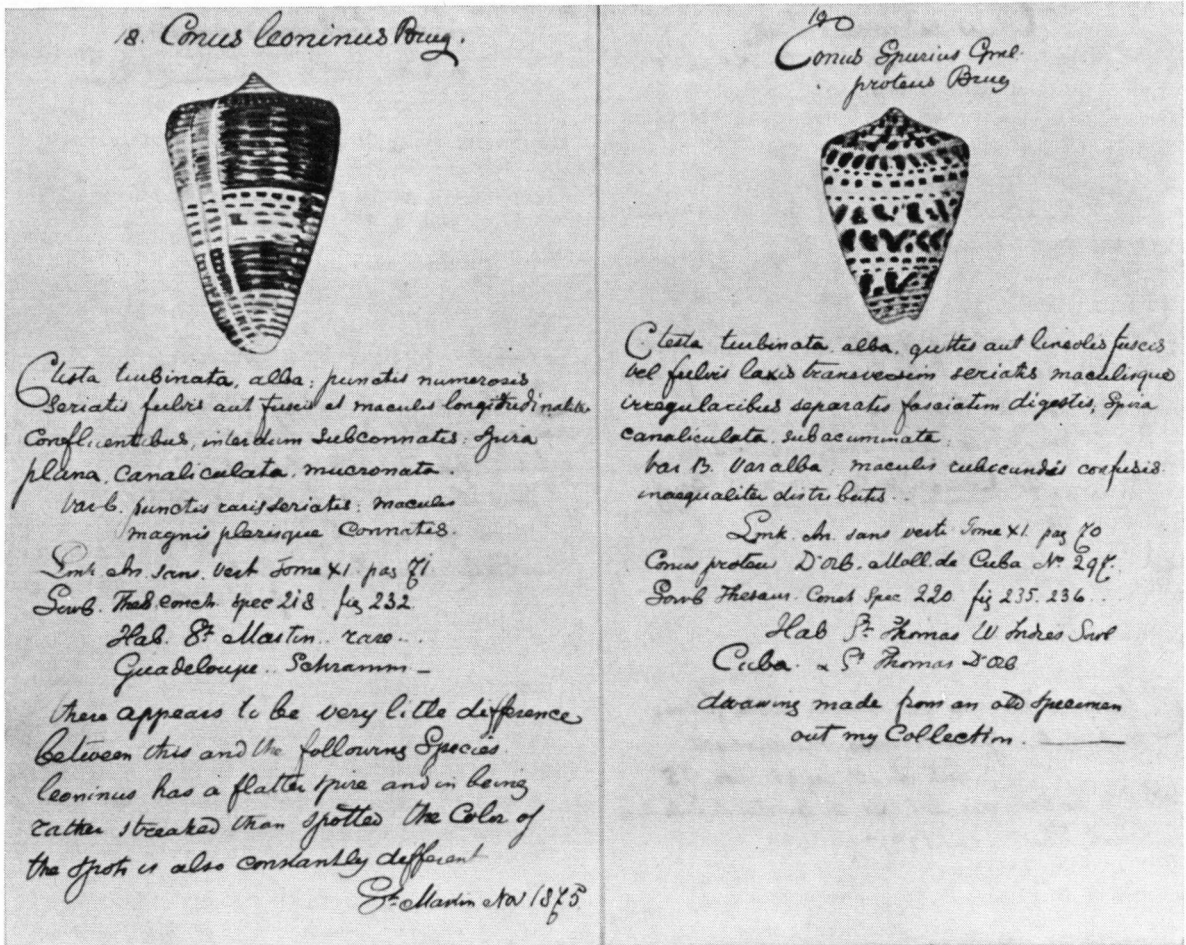


Plate XIV. Two colour forms of *Conus spurius*, from vanRijgersma's manuscript on the mollusks of St. Martin (1875).

Thomas D'Orb. — drawing made from an old specimen out my collection.”

At present we recognize several colour forms of *Conus spurius*, since the pattern of the spots on the last whorl is very variable in this species: forma *ochraceus* Lamarck, 1810, forma *phlogopus* Tomlin, 1937 (= *flammeus* Lamarck, 1810, non Röding, 1798), forma *atlanticus* Clench, 1942, and forma *aureofasciatus* Rehder & Abbott, 1953.

In his manuscript van Rijgersma mentioned more Conidae from the West Indies, although he had no specimens from St. Martin: *Conus cardinalis* Hwass, 1792, *C. clerii* Reeve, 1844, *C. columba* Hwass, 1792 (with one drawing), *C. granulatus* Linnaeus, 1758 (with one colour drawing), *C. mazei* Deshayes, 1874 (with two colour drawings,

copied from the original publication in the “Journal de Conchyliologie”, vol. 22, pl. 1, fig. 1, published in 1874, one year before van Rijgersma wrote his manuscript), *C. ochraceus* Lamarck, 1810, *C. pygmaeus* Reeve, 1844 (with one colour drawing), *C. ranunculus* Hwass, 1792, *C. speciosissimus* Reeve, 1848.

Six more Conidae were mentioned in the manuscript, supposed to be Caribbean species, although at present we know that they do not belong to the West Indian fauna. These species and their erroneous localities were copied by van Rijgersma from the literature. They are: *Conus characteristicus* Fischer, 1807, *C. coffaea* Gmelin, 1791, *C. mercator* Linnaeus, 1758, *C. minutus* Röding, 1798, *C. narcissus* Lamarck, 1810, and *C. roseus* Lamarck, 1810.

## Family TURRIDAE

Van Rijgersma mentioned 18 species of this family in his manuscript. The figures and descriptions of six species were copied from Reeve's (1843-1846) "Monograph of the genus *Pleurotoma*" (Conch. Icon., vol. 1). The remaining 12 species were named only, with an indication where they are described, and a locality. None of these 18 species was mentioned from St. Martin.

In van Rijgersma's list of shells selected for the Leiden Museum there are 15 species of this family mentioned from St. Martin, of which one unidentified. Unfortunately it is impossible to give the correct name of 9 of these species. They are not figured and therefore uncomparable with the known species from the Lesser Antilles. Some of his names do not belong to Caribbean species of Turridae. The six species, figured in the manuscript, are not mentioned in the list.

***Drillia coccinata* (Reeve, 1845)**

*Pleurotoma coccinata*, Krebs, 1864: 8; Coomans, 1963b: 156.

**\**Pyrgocythara balteata* (Reeve, 1846)**

*Pleurotoma balteata* Rve., Rijgersma list — *Mangelia balteata*, Krebs, 1864: 13; Coomans, 1963b: 156.

According to Powell (1966: 118) this species belongs to the genus *Pyrgocythara*.

***Pyrgocythara coxi* Fargo, 1953**

*Pleurotoma pura*, Krebs, 1864: 11; Coomans, 1963a: 72; 1963b: 157.

***Mangelia fusca* (C. B. Adams, 1845)**

Coomans, 1963b: 156.

**\**Mangelia quadrata* (Reeve, 1845)**

*Pleurotoma quadrata* Rve., Rijgersma list — Krebs, 1864: 14; Coomans, 1963b: 157.

**\**Mangelia lavalleana* (d'Orbigny, 1845)**

*Pleurotoma Lavalleana* d'Orb., Rijgersma list. — New to St. Martin.

***Mangelia trilineata* (C. B. Adams, 1845)**

*Pleurotoma costata*, Krebs, 1864: 8; Coomans, 1963b: 157.

***Monilispira albocincta* (C. B. Adams, 1845)**

*Pleurotoma albocincta*, Krebs, 1864: 7; Coomans, 1963b: 157.

**\**Fenimorea fucata* (Reeve, 1845)**

*Pleurotoma fucata* Rve., Rijgersma list — Krebs, 1864: 9; Coomans, 1963b: 157.

**\**Daphnella lymneiformis* (Kiener, 1840)**

*Pleurotoma lymnariformis* Kien., Rijgersma list — Krebs, 1864: 12; Coomans, 1963b: 157.

*Pleurotoma* "lymnariformis" is an error for *lymneiformis*.

**\**Crassispira fuscescens* (Reeve, 1843)**

*Pleurotoma fuscescens* Gray, Rijgersma list. — New to St. Martin.

The following nine species of "*Pleurotoma*" are mentioned from St. Martin in van Rijgersma's list. They may be new to the fauna of St. Martin; however, it is impossible to check the correctness of his identifications.

**\**Pleurotoma albomaculata* "Reeve"**

Van Rijgersma was wrong concerning the author's name of this species. Both d'Orbigny and C. B. Adams used the name *Pleurotoma albomaculata* in 1845 for two distinct Caribbean species.

**\**Pleurotoma antillarum* d'Orbigny, 1845****\**Pleurotoma auberiana* d'Orbigny, 1845****\**Pleurotoma dorvilliae* Reeve, 1845**

This name was misspelt in the list as "Dorvilla".

**\**Pleurotoma guildingii* Reeve, 1845****\**Pleurotoma pagodus* Reeve, 1845****\**Pleurotoma paxillus* Reeve, 1845****\**Pleurotoma pentagonalis* Reeve, 1845****\**Pleurotoma spec.***

## Family TEREBRIDAE

***Terebra cinerea* (Born, 1778)**

Collected in 1964 by Mrs. Bogart and Mrs. Ervin. — New to St. Martin.

**\*Terebra dislocata** (Say, 1822)

*Terebra rudis*, *Terebra Petiti*, Rijgersma list. — New to St. Martin.

**\*Terebra hastata** Gmelin, 1791

*Terebra hastata* Sby., Rijgersma list. — New to St. Martin.

## Subclass OPISTHOBRANCHIA

## Order CEPHALASPIDEA

## Family PYRAMIDELLIDAE

**\*Pyramidella dolabrata** (Linnaeus, 1758)

*Obeliscus dolabratus*, Rijgersma list — Krebs, 1864: 71; Coomans, 1963b: 158.

**\*Pyramidella spec.**

*Obeliscus annulatus* Ad., Rijgersma list.

*Pyramidella annulata* (A. Adams, 1854) is not a West Indian species.

**\*Pyramidella spec.**

*Monoptychma spirata* Ad., Rijgersma list.

“*Monoptychma*” is an error for *Monostygma*. *Pyramidella spirata* (A. Adams, 1851) is not known from the Caribbean.

**Triptychus niveus** (Mörch, 1875)

*Obeliscus (Triptychus) niveus*, Mörch, 1875: 159; Coomans, 1963b: 158.

**Odostomia laevigata** (d'Orbigny, 1842)

Coomans, 1963b: 158.

**\*Turbonilla interrupta** Totten, 1835

*Truncatella modesta*, Mazé, 1890: 33 (coll. by van Rijgersma); Coomans, 1963b: 158.

**\*Turbonilla pulchella** (d'Orbigny, 1842)

*Chemnitzia pulchella* d'Orb., Rijgersma list. — New to St. Martin.

## Family ACTEONIDAE

**\*Acteon punctostriatus** (C. B. Adams, 1840)

*Tornatella punctata* d'Orb., Rijgersma list. — New to St. Martin.

## Family HYDATINIDAE

**\*Hydatina spec.**

*Hydatina*, Rijgersma list.

This is the first record of *Hydatina* from St. Martin.

**\*Micromelo undatus** (Bruguière, 1792)

*Bulla nitidula*, Rijgersma list — Krebs, 1864: 92; Coomans, 1963b: 159.

## Family SCAPHANDRIDAE

**Tornatina bullata** (Kiener, 1834)

*Tornatina bullata*, Mörch, 1875: 171; *Retusa bullata*, Coomans, 1963b: 161.

**\*Tornatina candei** (d'Orbigny, 1841)

*Bulla candei*, Rijgersma list. — New to St. Martin.

**\*Tornatina canaliculata** (Say, 1832)

*Tornatella canaliculata*, Rijgersma list. — New to St. Martin.

**Tornatina recta** (d'Orbigny, 1841)

*Tornatina recta*, Mörch, 1875: 171; *Acteocina recta*, Coomans, 1963b: 159.

**\*Cylichna auberii** (d'Orbigny, 1841)

*Cylichna (Bulla) auberii*, Rijgersma list. — New to St. Martin.

**Cylichna krebssii** Mörch, 1875

*Cylichna krebssii*, Mörch, 1875: 172; Coomans, 1963b: 159.

## Family BULLIDAE

**\*Bulla occidentalis** A. Adams, 1850

*Bulla occidentalis*, Rijgersma list — Coomans, 1963b: 160.

**\*Bulla umbilicata** Röding, 1798

*Bulla amygdalus* List., *Bulla media* Phil., Rijgersma list — *Bulla maculosa*, Krebs, 1864: 93; Coomans, 1963b: 160.

**\*“Bulla” spec.**

*Bulla* indet., Rijgersma list.



## Family ATYIDAE

**\*Atys caribaeus** (d'Orbigny, 1841)

*Bulla caribea* d'Orb., Rijgersma list — Mörch, 1875: 172; Coomans, 1963b: 160.

**Atys guildinii** Sowerby, 1869

Coomans, 1963b: 160.

**Atys riiseana** Mörch, 1875

*Atys Riiseana*, Mörch, 1875: 173; Coomans, 1963b: 160.

**\*Haminoea antillarum** (d'Orbigny, 1841)

*Philine (antillarum)*, Rijgersma list — Coomans, 1963b: 160.

**\*Haminoea elegans** (Gray, 1825)

*Bulla Guildingii*, Rijgersma list — Krebs, 1864: 94; Coomans, 1963b: 161.

Also collected at St. Martin by Mrs. Bogart and Mrs. Ervin in 1964.

**Haminoea petiti** (d'Orbigny, 1841)

Mörch, 1875: 174; Coomans, 1963b: 161.

## Order ANASPIDEA

## Family APLYSIIDAE

**Aplysia dactylomela** Rang, 1828

Marcus & Marcus, 1963: 10.

**\*Dolabrifera ascifera** (Rang, 1828)

*Dolabrifera ascifera* Rang, Rijgersma manuscript with one colour drawing of the animal, and two drawings of the shell (pl. XV). — New to St. Martin.

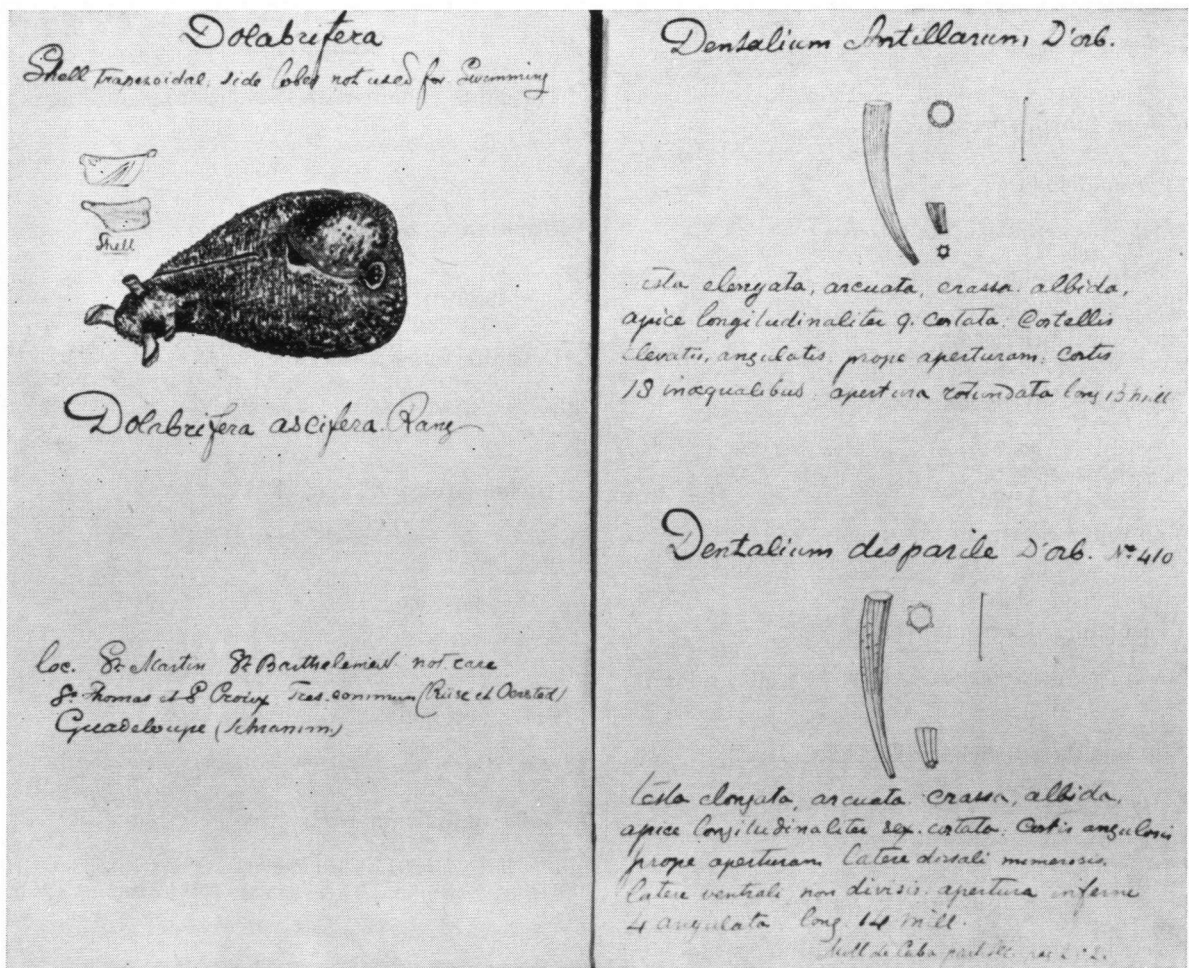


Plate XV. *Dolabrifera ascifera*, *Dentalium antillarum* and *Dentalium disparile*, from van Rijgersma's manuscript on the mollusks of St. Martin (1875).

“loc. St Martin St Barthelemew, not rare. St Thomas et S Croix, Tres-commun (Riise et Oersted). Guadeloupe (Schramm.)”

Van Rijgersma placed the genus *Dolabrifera* in the family Pleurobranchidae. He described the genus as:

“Shell trapezoidal; side lobes not used for swimming.”

**Dolabrifera dolabrifera** (Rang, 1828)

Marcus & Marcus, 1963: 10—11.

Order ASCOGLOSSA

Family ELYSIIDAE

**Elysia cauze** Marcus, 1957

Marcus & Marcus, 1963: 22.

**Tridachia crispata** Mörch, 1863

Marcus & Marcus, 1963: 23.

Order NOTASPIDEA

Family PLEUROBRANCHIDAE

\***Pleurobranchus quadridens** (Mörch, 1863)

*Berthella quadridens* Mörch, Rijgersma manuscript with five drawings. — New to St. Martin.

“Hab. St Martin, St Thomas, Guadeloupe.”

Order NUDIBRANCHIA

Family DORIDIDAE

**Cadlina rumia** Marcus, 1955

Marcus & Marcus, 1963: 25.

Family FAVORINIDAE

**Dondice occidentalis** (Engel, 1925)

Marcus & Marcus, 1963: 48.

Subclass PULMONATA

Order BASOMMATOPHORA

Family ELLOBIIDAE

This family was treated in v. Rijgersma's manu-

script under the name Auriculidae, with these characters:

“Amphibious animals living at the sea shore on sticks, under seaweed, or at the roots of the mangrove trees (*Rhizophora mangle*).”

\***Melampus coffeus** (Linnaeus, 1758)

*Melampus coniformis*, Rijgersma list; *Melampus coffeus* Linn., *Voluta minuta* Gml., *Ellobium Barbarense* Bolt., *Bulimus coniformis* Brug., Rijgersma manuscript with two colour drawings of the shell and two drawings of head and body of the animal — Mazé, 1890: 29 (coll. by van Rijgersma); Coomans, 1958: 103; 1963b: 161.

“Hab. Antilles Florida very common, St Martin Simsonbaylagoon on sticks.”

The species is also discussed in the correspondence with Bland.

\***Pira monile** (Bruguère, 1789)

*Melampus flavus* Gme., *Auricula monilis* Lmk., *M. coronatus* C. B. Adams, *M. coronulus* H. & A. Ad., Rijgersma manuscript with two colour drawings — *Melampus flavus*, Mazé, 1890: 29 (coll. by van Rijgersma); Coomans, 1963b: 161.

“Obconic smooth, spire short, convex, suture slightly impressed, whorls 9—10, aperture narrow, lip with about ten transverse ribs within, parietal wall and columella each with a prominent fold. Chestnut color, with three equidistant revolving light colored bands. length 13, diam. 8.6 mill.

Hab. Florida. From West Indies. (Tryon). West Indies, not common, under seaweed, St. Martin. Tab. XIII fig 4—7 from Ramon de la Sagra Atlas is *Mel. flavus*. 5—6 *M. coffeus* & 1—3 *M. pusillus*.—”

Specimens from St. Martin were also mentioned in the correspondence with Bland.

\***Detracia bullaoides** (Montagu, 1808)

*Melampus cingulatus* Pfeiffer, *Auricula Oliva* D'Orb., Rijgersma manuscript with two colour drawings — *Melampus cingulatus*, Mazé, 1890: 29 (coll. by van Rijgersma); Coomans, 1963b: 162.

“Hab. West Indies and Florida. St Martin, rare.”

Also mentioned in the correspondence with Bland.

\***Tralia ovula** (Bruguère, 1789)

*Tralia* Gray, Rijgersma list; *Melampus pusillus* Gml., *Bulimus ovulus* Brug., *Auricula nitens* Lmk., *Voluta triplicata* Donovan. doc. Pfr., Rijgersma manuscript with two colour drawings of the shell and two drawings of the animal and foot — *Melampus pusillus*, Mazé, 1890: 29 (coll. by van Rijgersma); Coomans, 1963b: 162.

"Hab. St Martin under seaweed on the bayside. West Indies & Florida.

Whorls 6—7, the last slightly shouldered; aperture narrow above, much wider below, lip simple, acute, with a transverse lamina within, columella with a prominent fold, parietal wall with two teeth. Color dark brown and leaden, the longest measure 15 mill but mostly smaller. by the young animal (which I had occasion to examin) was the foot divided transversely."

Also mentioned from St. Martin in the correspondence with Bland.

**\*Pedipes mirabilis** (Mühlfeld, 1818)

*Pedipes mirabilis*, Rijgersma list; *Pediceps mirabilis* Mühlf., *P. quadridens* Pfr., *P. tridens* Pfr., *P. ovalis* C. B. Adams, Rijgersma manuscript with one colour drawing of the shell and two drawings of the animal — Mazé, 1890: 29 (coll. by van Rijgersma); Coomans, 1963b: 162.

"Hab. Habana (Arango). Guadeloupe Barbados. St Martin. On the seashore under stones, seaweed & where the influence of fresh water can be felt. Animal much smaller than these of the neighbouring islands, the largest and most perfect I have from Barbados, of which locality I have copied one.

Animal (by the St. Martin spec. considered young ones) transparent white, feelers, eyes & mouth black with 2 broad frontal lobes, feet divided across not walking like *Truncatella*, but sliding like a common snail.

Measure spec. from Barbados length 6 millm by 4.5 mm

spec from St. Martin length 2.5 by 2 millm."

Specimens from St. Martin are also discussed in the correspondence with Bland.

**\*Blauneria heteroclita** (Montagu, 1808)

This species was collected by van Rijgersma at St. Martin. The specimens were sent to Th. Bland in New York, who discussed them in his correspondence. — New to St. Martin.

Family PHYSIDAE

**\*Aplexa sowerbyana** (d'Orbigny, 1841)

*Aplexa Sowerbyana*, Mazé, 1890: 30 (coll. by van Rijgersma); Coomans, 1967: 129.

Specimens from St. Martin were also discussed in the correspondence with Bland.

**Aplexa orbignyi** (Mazé, 1883)

*Aplexa Orbignyi*, Mazé, 1890: 30; Coomans, 1967: 129.

**\*Physa spec.**

Subfossil specimens were collected by van Rijgersma and discussed in the correspondence with Bland.

Family PLANORBIDAE

**\*Plesiophysa granulata** (Sowerby, 1873)

*Physa (Plesiophysa) Guadeloupensis*, Mazé, 1890: 30 (coll. by van Rijgersma); Coomans, 1967: 129—130.

**Australorbis glabratus** (Say, 1818)

Coomans, 1967: 130.

**Australorbis glabratus christopherensis** Pilsbry, 1934

Coomans, 1967: 130.

?**Australorbis olivaceus** (Spix & Wagner, 1827)

The occurrence of this species on St. Martin is uncertain (Coomans, 1967: 130).

Order STYLOMMATOPHORA

Family CHONDRINIDAE

**\*Gastrocopta pellucida** (Pfeiffer, 1841)

*Pupa pellucida*, Mazé, 1890: 26—27 (coll. by van Rijgersma); Coomans, 1967: 131.

This species is also mentioned in the correspondence with Th. Bland. Specimens from Bland's collection, collected by van Rijgersma at St. Martin, are kept in the Museum of Comparative Zoology, Harvard University. It is the only species of *Gastrocopta* known to van Rijgersma from St. Martin. More species of *Gastrocopta* were collected by Wagenaar Hummelinck and mentioned by Haas (1960).

**Gastrocopta pellucida hordeacella** (Pilsbry, 1916)

Haas, 1960: 10; Coomans, 1967: 131.

**Gastrocopta barbadensis** (Pfeiffer, 1853)

Haas, 1960: 6—7; Coomans, 1967: 131.

**Gastrocopta polyptyx** Pilsbry, 1916

Haas, 1960: 10; Coomans, 1967: 131.

**Gastrocopta servilis** (Gould, 1843)

Haas, 1960: 10; Coomans, 1967: 131.

**Gastrocopta servilis riisei** (Pfeiffer, 1852)

Haas, 1960: 11—12; Coomans, 1967: 131.

## Family PUPILLIDAE

**\*Pupoides albilabris nitidulus** (Pfeiffer, 1839)*Bulimulus nitidulus*, Mazé, 1890: 26 (coll. by van Rijgersma); Haas, 1960: 5; Coomans, 1967: 132.

Also mentioned from St. Martin in the correspondence with Bland. These specimens, collected by van Rijgersma, are present in the collection of the Museum of Comparative Zoology at Cambridge, ex coll. Bland.

## Family SUCCINEIDAE

**\*Succinea approximans** Shuttleworth, 1854

Coomans, 1967: 132.

Six specimens from St. Martin are present in the mollusk collection (no. 64921) of the American Museum of Natural History in New York, ex Crooke coll., misidentified as *S. riisei* Pfeiffer. Crooke probably received these specimens from Th. Bland (cf. Weingartner, 1955: 52), while Bland must have received them from van Rijgersma. However, *Succinea approximans* or *S. riisei* are not mentioned in the correspondence with Bland.

**\*Succinea approximans var. martiniana** Mazé, 1890

Mazé, 1890: 28; Coomans, 1967: 132.

Van Rijgersma was the collector of this new variety, which was named by Mazé after the locality St. Martin.

**\*Succinea candeana** Lea, 1841

Mazé, 1890: 27—28 (coll. by van Rijgersma); Coomans, 1967: 132.

Also discussed in the correspondence with Bland and Mazé.

**Omalonyx guadeloupensis** (Lesson, 1838)

Mazé, 1890: 28—29; Coomans, 1967: 133.

## Family EUCONULIDAE

**\*Guppya gundlachi** (Pfeiffer, 1840)*Helix Gundlachi*, Mazé, 1890: 24 (coll. by van Rijgersma); Coomans, 1967: 133.

This species is also mentioned in the correspondence with Mazé and with Bland. Specimens from St. Martin, collected by van Rijgersma, are kept in the Museum of Comparative Zoology, Harvard University, ex coll. Bland.

## Family FERUSSACIIDAE

**\*Cecilioides gundlachi** (Pfeiffer, 1850)*Achatinella Gundlachi*, Rijgersma list — *Caecilianella Gundlachi*, Binney, 1884: 101 (coll. by van Rijgersma); *Geostilbia Gundlachi*, Mazé, 1890: 23 (coll. by van Rijgersma); Coomans, 1967: 133—134.

The specimens from St. Martin discussed and figured by Binney (1884: 101, pl. 7 fig. F, pl. 16 figs. F-G) were received by him via Th. Bland.

## Family SUBULINIDAE

**\*Subulina octona** (Bruguière, 1792)*? Achatina (octona) Chemn.*, Rijgersma list — *Stenogyra octona*, Mazé, 1890: 22 (coll. by van Rijgersma); Haas, 1962: 49—51; Coomans, 1967: 134.

Also mentioned from St. Martin in Bland's correspondence.

**Leptinaria lamellata** (Potiez & Michaud, 1838)*Tornatellina lamellata*, Mazé, 1890: 23; Coomans, 1967: 134.**Leptinaria gloynii** (Gibbons, 1879)

Haas, 1962: 54; Coomans, 1967: 134.

**\*Lamellaxis gracilis** (Hutton, 1834)*Stenogyra subula*, Mazé, 1890: 22—23; Haas, 1962: 56; Coomans, 1967: 135.

Specimens from St. Martin are discussed in the correspondence with Bland and with Mazé.

**\*Lamellaxis micrus** (d'Orbigny, 1835)*Stenogyra octonoides*, Rijgersma list — Mazé, 1890: 22 (coll. by van Rijgersma); Haas, 1962: 56; Coomans, 1967: 135.

Also mentioned in the correspondence with Bland.

**Opeas pumilum** (Pfeiffer, 1840)

Haas, 1962: 55; Coomans, 1967: 135.

**\*Obeliscus swiftianus** (Pfeiffer, 1852)

*Stenogyra Swiftiana*, Rijgersma list — Mazé, 1890: 23 (coll. by van Rijgersma); Coomans, 1967: 135.

Also mentioned in the correspondence with Bland.

## Family OLEACINIDAE

**Melaniella gracillima sanctithomensis** (Pilsbry, 1907)

*Pichardiella gracillima sanctithomensis*, Haas, 1962: 58—59; Coomans, 1967: 136.

## Family BULIMULIDAE

**\*Bulimulus guadaloupensis** (Bruguière, 1789)

*Bulimulus exilis*, Mazé, 1890: 24; Coomans, 1967: 136.

Also mentioned from St. Martin, collected by van Rijgersma, in the correspondence with Bland and with Mazé.

**\*Bulimulus guadaloupensis eyriesii** (Drouët, 1859)

Mazé, 1890: 24 (coll. by van Rijgersma); Coomans, 1967: 137.

Also mentioned in the correspondence with Bland and Mazé.

**Bulimulus diaphanus** (Pfeiffer, 1854)

Coomans, 1967: 137.

**\*Bulimulus fraterculus** (Potiez & Michaud, 1838)

Mazé, 1890: 25 (coll. by van Rijgersma); Coomans, 1967: 137.

This species is also mentioned in the correspondence with Bland. Five specimens from St. Martin are present in the mollusk collection (no. 62489) of the American Museum of Natural History in New York, ex Crooke collection, and probably obtained via Bland from van Rijgersma.

Breure (1974) considered *B. fraterculus* a subspecies of *B. diaphanus*.

**Bulimulus lehmanni** (Pfeiffer, 1865)

Mazé, 1890: 25; Coomans, 1967: 137.

**\*Bulimulus limnoides** (Férussac, 1832)

Mazé, 1890: 26 (coll. by van Rijgersma); Pilsbry, 1897: 42—43 (coll. by van Rijgersma); Coomans, 1967: 137.

Also mentioned in the correspondence with Bland.

**\*Drymaeus elongatus** (Röding, 1798)

*Bulimulus virgulatus*, Mazé, 1890: 25 (coll. by van Rijgersma); Coomans, 1967: 137—138.

Also mentioned in the correspondence with Bland.

**Drymaeus elongatus anguillensis** (Pfeiffer, 1865)

Pilsbry, 1899: 25—27; Coomans, 1967: 138.

Specimens from St. Martin were discussed in the correspondence with Bland. However, they were collected by the Swedish geologist P. T. Cleve (cf. Coomans, 1967: 122).

## Family AMPHIBULIMIDAE

**Pellicula depressa** (Rang, 1834)

Mazé, 1890: 27; Coomans, 1967: 138.

## Family UROCOPTIDAE

**\*Pseudopineria viequensis** (Pfeiffer, 1856)

*Pineria Viequensis*, Binney, 1884: 126 (coll. by van Rijgersma); Pilsbry, 1903: 111—112 (coll. by van Rijgersma); Coomans, 1967: 139.

Specimens collected at St. Martin by van Rijgersma are present in several museums in the United States. One lot is in the collection of the Museum of Comparative Zoology at Cambridge, ex coll. Bland; two lots are present in the American Museum of Natural History in New York, ex coll. Crooke. The specimens discussed and figured by Binney (1884: 126, pl. 14 fig. C, pl. 15 fig. B), evidently were received from his friend Th. Bland.

**\*Pseudopineria viequensis schrammi** (Fischer, 1858)

*Pineria Schrammi*, Bland & Binney, 1871: 23 (coll. by van Rijgersma); *Helix Schrammi*, Nolan, 1872: 290 (coll. by van Rijgersma); Mazé, 1890: 27 (coll. by van Rijgersma); Coomans, 1967: 139.

Specimens from St. Martin were also discussed in the correspondence with Bland, Mazé, and Swift. In the collection of the United States Na-

tional Museum there is one lot from St. Martin, ex coll. Rawson. These specimens evidently were collected by van Rijgersma, since he exchanged shells with Rawson.

**\*Brachypodella antiperversa** (Férussac, 1821)

*Cylindrella collaris*, Mazé, 1890: 27 (coll. by van Rijgersma); Coomans, 1967: 139.

Family STREPTAXIDAE

**Streptartemon deplanchei** (Drouët, 1859)

*Streptaxis deplanchei*, Clench, 1958: 19; Coomans, 1967: 140.

This species was not living at St. Martin in the last century. It has recently been introduced from the mainland of South America. Specimens were collected by Wagenaar Hummelinck and studied by Venmans (1963: 69, 73), who considered them an ecological race and described them as var. *martiniana*.

**Gulella bicolor** (Hutton, 1834)

Venmans, 1963: 44, 52; Coomans, 1967: 140.

This species was introduced in the West Indies from India. We doubt if it was living at St. Martin in van Rijgersma's time.

Family SAGDIDAE

**Hojeda boothiana** (Pfeiffer, 1839)

Specimens were collected by G. A. Seaman (pers. comm. 1967). — New to St. Martin.

**\*Hojeda subaquila** (Shuttleworth, 1854)

*Helix subaquila*, Mazé, 1890: 23 (coll. by van Rijgersma); Coomans, 1967: 140.

Mentioned in the correspondence with Bland. One lot, collected by van Rijgersma, is in the collection of the Museum of Comparative Zoology, Harvard University, ex. coll. Bland.

**\*Lacteoluna selenina** (Gould, 1848)

*Helix bracteola*, Mazé, 1890: 23; Coomans, 1967: 141.

Although van Rijgersma is not indicated as the collector by Mazé, this species is mentioned (as *Helix vortex*) in his correspondence.

Family HELMINTHOGLYPTIDAE

**Cepolis euclasta** (Shuttleworth, 1854)

Coomans, 1967: 141.

Class PELECYPODA

Order ARCOIDA

Family ARCIDAE

**\*Arca imbricata** Bruguière, 1789

*Arca umbonata* Lk., Rijgersma list — Coomans, 1963b: 162.

**\*Arca zebra** Swainson, 1833

*Arca occidentalis*, *Bissoarca*, Rijgersma list — Coomans, 1963b: 162.

“*Bissoarca*” is an error for *Byssoarca* Swainson, 1833, this subgenus was used by Swainson for *Arca zebra*.

**Barbatia cancellaria** (Lamarck, 1819)

Coomans, 1963b: 163.

**Barbatia candida** (Helbling, 1779)

Coomans, 1963b: 163.

**Barbatia domingensis** (Lamarck, 1819)

Coomans, 1963b: 163.

**\*Barbatia listeri** (Philippi, 1849)

*Arca listeri* Ph., Rijgersma list. — New to St. Martin.

**Arcopsis adamsi** (E. A. Smith, 1888)

Coomans, 1963b: 163.

**\*Anadara notabilis** (Röding, 1798)

*Arca Deshayesi*, Rijgersma list — Coomans, 1963b: 163.

**Anadara ovalis** (Bruguière, 1789)

Coomans, 1963b: 163.

Family GLYCYMERIDAE

**\*Glycymeris decussata** (Linnaeus, 1758)

*Pectunculus pinnaceus* Lk., Rijgersma list — Coomans, 1963b: 163.

P. “*pinnaceus*” is an error for *pennaceus*.



**Glycymeris pectinata** (Gmelin, 1791)

Coomans, 1963b: 163.

**Glycymeris undata** (Linnaeus, 1758)

Coomans, 1963b: 163.

## Order MYTILOIDA

## Family MYTILIDAE

**\*Botula fusca** (Gmelin, 1791)*Lithodomus cinnamomeus* Lk., Rijgersma list. — New to St. Martin.**\*Brachidontes citrinus** (Röding, 1798)*Modiola citrinus*, Rijgersma list — Coomans, 1963b: 164.**\*Brachidontes exustus** (Linnaeus, 1758)*Mytilus Dominguenensis*, Rijgersma list — Coomans, 1963b: 164.**\*Brachidontes lavalleanus** (d'Orbigny, 1842)*Mytilus lavalleanus* d'Orb., Rijgersma list. — New to St. Martin.**\*Musculus lateralis** (Say, 1822)*Crenella marmorata*, Rijgersma list — Coomans, 1963b: 164.**\*Modiolus americanus** Leach, 1815*Modiola americana*, Rijgersma list — Coomans, 1963b: 164.**\*Lithophaga antillarum** (d'Orbigny, 1842)*Lithodomus Antillarum*, Rijgersma list — Coomans, 1963b: 164.**\*Lithophaga aristata** (Dillwyn, 1817)*Modiola caudigera* Lk., Rijgersma list. — New to St. Martin.**Lithophaga bisulcata** (d'Orbigny, 1842)

Coomans, 1963b: 164.

**\*Lithophaga nigra** (d'Orbigny, 1842)*Lithodomus niger* List., Rijgersma list. — New to St. Martin.

## Family PINNIDAE

**\*Pinna carnea** Gmelin, 1791*Pinna*, Rijgersma list — Coomans, 1963b: 165.

Although van Rijgersma did not indicate the specific name, we suppose that *P. carnea* was collected by him, since it is the only species of *Pinna* known from St. Martin.

## Order PTERIOIDA

## Family PTERIIDAE

**\*Pteria colymbus** (Röding, 1798)*Avicula macroptera*, *A. atlantica*, Rijgersma list — Coomans, 1963b: 165.**\*Pinctada radiata** (Leach, 1814)*Avicula squamulosa* Lk., Rijgersma list — Coomans, 1963b: 165.

## Family ISOGNOMONIDAE

Van Rijgersma mentioned in his list \* *Perna obliqua* from St. Martin. This name probably stands for one of the species of *Isognomon*.

**Isognomon bicolor** (C. B. Adams, 1845)

Coomans, 1963b: 164.

**Isognomon radiatus** (Anton, 1839)

Coomans, 1963b: 164.

## Family PLICATULIDAE

**\*Plicatula gibbosa** Lamarck, 1801*Plicatula cristata* Lk., *P. reniformis* Lk., Rijgersma list — Coomans, 1963b: 165.

## Family PECTINIDAE

**\*Pecten ziczac** (Linnaeus, 1758)*Pecten ziczac* Chemn., Rijgersma list — Coomans, 1963b: 165.**\*\*“Pecten” spec.***Pecten* indet., Rijgersma list.

This unidentified species may belong to one of the following species.

**\*Nodipecten nodosus** (Linnaeus, 1758)*Pecten nodosus* Ln., Rijgersma list. — New to St. Martin.

**Lyropecten antillarum** (Récluz, 1853)

Collected in 1964 by Mrs. Bogart and Mrs. Ervin. — New to St. Martin.

**Chlamys imbricata** (Gmelin, 1791)

Coomans, 1963b: 166.

**\*Chlamys ornata** (Lamarck, 1819)

*Pecten ornatus* Lk., Rijgersma list — Coomans, 1963b: 166.

**Aequipecten gibbus gibbus** (Linnaeus, 1758)

Coomans, 1963b: 166.

**\*Aequipecten gibbus nucleus** (Born, 1778)

*Pecten nucleus* Born, Rijgersma list — Coomans, 1963b: 166.

**Aequipecten muscosus** (Wood, 1828)

Coomans, 1963b: 166.

## Family SPONDYLIDAE

**\*Spondylus americanus** Herrmann, 1781

*Spondylus coccineus*, *S. echinatus* d'Orb., Rijgersma list — Coomans, 1963b: 166.

## Family LIMIDAE

**Lima lima** (Linnaeus, 1758)

Coomans, 1963b: 166.

**\*Lima lima forma multicostata** Sowerby, 1843

*Lima combea*, Rijgersma list. — New to St. Martin.

*Lima* "combea" is an error for *caribea*.

**\*Lima pellucida** C. B. Adams, 1846

*Lima fasciata*, Rijgersma list — *Lima inflata*, Krebs, 1864: 133; Coomans, 1963b: 166.

**\*Lima scabra** (Born, 1778)

*Lima scabra*, Rijgersma list — Coomans, 1963b: 167.

**\*Lima scabra forma tenera** Sowerby, 1843

*Lima tenera*, Rijgersma list — Coomans, 1963b: 167.

**\*Lima spec.**

*Lima Antillarum*, Rijgersma list.

*Lima antillarum* is a nomen nudum of van Rijgersma.

## Family ANOMIIDAE

**\*Pododesmus rudis** (Broderip, 1844)

*Anomia*, Rijgersma list — Coomans, 1963b: 167.

We suppose that the *Anomia* of van Rijgersma's list represents this species.

## Family OSTREIDAE

**Ostrea cristata** Born, 1778

Coomans, 1963b: 167.

**\*Ostrea frons** Linnaeus, 1758

*Ostrea frons*, Rijgersma list — Coomans, 1963b: 167.

**Ostrea permollis** Sowerby, 1871

Coomans, 1963b: 167.

**\*Crassostrea rhizophorae** (Guilding, 1828)

*Ostrea parasitica* Gml., Rijgersma list — Coomans, 1963b: 167.

**Pycnodonte thomasi** (McLean, 1941)

Coomans, 1963b: 167.

## Order VENEROIDA

## Family CRASSATELLIDAE

**Crassinella lunulata** (Conrad, 1834)

*C. guadaloupenensis*, Coomans, 1963b: 168.

According to Harry (1966) *Crassinella guadaloupenensis* (d'Orbigny, 1846) is a junior synonym of *C. lunulata*.

**\*Crassinella martinicensis** (d'Orbigny, 1842)

*Crassatella martinicensis* d'Orb., Rijgersma list. — New to St. Martin.

## Family CARDITIDAE

**\*Cardita gracilis** Shuttleworth, 1856

*Cardita radiata* Phil., Rijgersma list — Coomans, 1963b: 168.

## Family SPHAERIIDAE

**Eupera viridante** (Morelet in Prime, 1865)*Sphaerium viridans*, Mazé, 1890: 34; Coomans, 1967: 142.

## Family DIPLODONTIDAE

**Diplodonta nucleiformis** (Wagner, 1852)

Coomans, 1963b: 168.

**Diplodonta punctata** (Say, 1822)

Coomans, 1963b: 168.

## Family LUCINIDAE

**Lucina blanda** (Dall & Simpson, 1901)

Coomans, 1963b: 168.

**\*Lucina pensylvanica** (Linnaeus, 1758)*Lucina pensylvanica*, Rijgersma list — Coomans, 1963b: 168.**\*Lucina pensylvanica forma aurantia** Deshayes, 1832*Lucina aurantia* Desh., Rijgersma list. — New to St. Martin.

Although not mentioned in our publication on the marine mollusks of St. Martin (Coomans, 1963b), this form was collected by us in 1959 at Simson Bay Lagoon.

**\*\*“Lucina” spec.***Lucina tubulata*, Rijgersma list.

An unidentifiable species.

**\*\*“Lucina candeana”** d’Orbigny, 1842*Lucina candeana*, Rijgersma list.

According to some authors *Lucina candeana* d’Orbigny must be placed in the genus *Diplodonta*.

**\*Codakia costata** (d’Orbigny, 1842)*Lucina costata* d’Orb., Rijgersma list — Coomans, 1963b: 169.**\*Codakia orbicularis** (Linnaeus, 1758)*Lucina tigrina* Desh., Rijgersma list — Coomans, 1963b: 169.**Codakia orbiculata** (Montagu, 1808)

Coomans, 1963b: 169.

**\*Phacoides muricatus** (Spengler, 1798)*Lucina scabra* Lk., Rijgersma list. — New to St. Martin.**\*Divaricella dentata** (Wood, 1815)*Lucina Chemnitzii* Ph., Rijgersma list — *Lucina serrata*, d’Orbigny, 1842: 295—296; Coomans, 1963b: 169.**\*Divaricella quadrisulcata** (d’Orbigny, 1842)*Lucina quadrisulcata* d’Orb., Rijgersma list — Coomans, 1963b: 169.

## Family CHAMIDAE

**\*Chama spec.***Chama* indet., Rijgersma list.

Although five species of Chamidae are known from St. Martin, only this unidentified *Chama* is known from van Rijgersma’s list.

**Chama congregata** Conrad, 1833

Coomans, 1963b: 169.

**Chama macerophylla** Gmelin, 1791

Coomans, 1963b: 169.

**Chama sarda** Reeve, 1847

Collected at St. Martin in 1964 by Mrs. Bogart and Mrs. Ervin. — New to St. Martin.

**Chama sinuosa** Broderip, 1836

Coomans, 1963b: 169.

**Pseudochama radians** (Lamarck, 1819)

Coomans, 1963b: 170.

## Family ERYCINIDAE

**Basterotia elliptica** (Récluz, 1850)

Coomans, 1963b: 170.

**\*Basterotia quadrata** (Hinds, 1843)*Corbula quadrata*, Rijgersma list — Coomans, 1963b: 170.

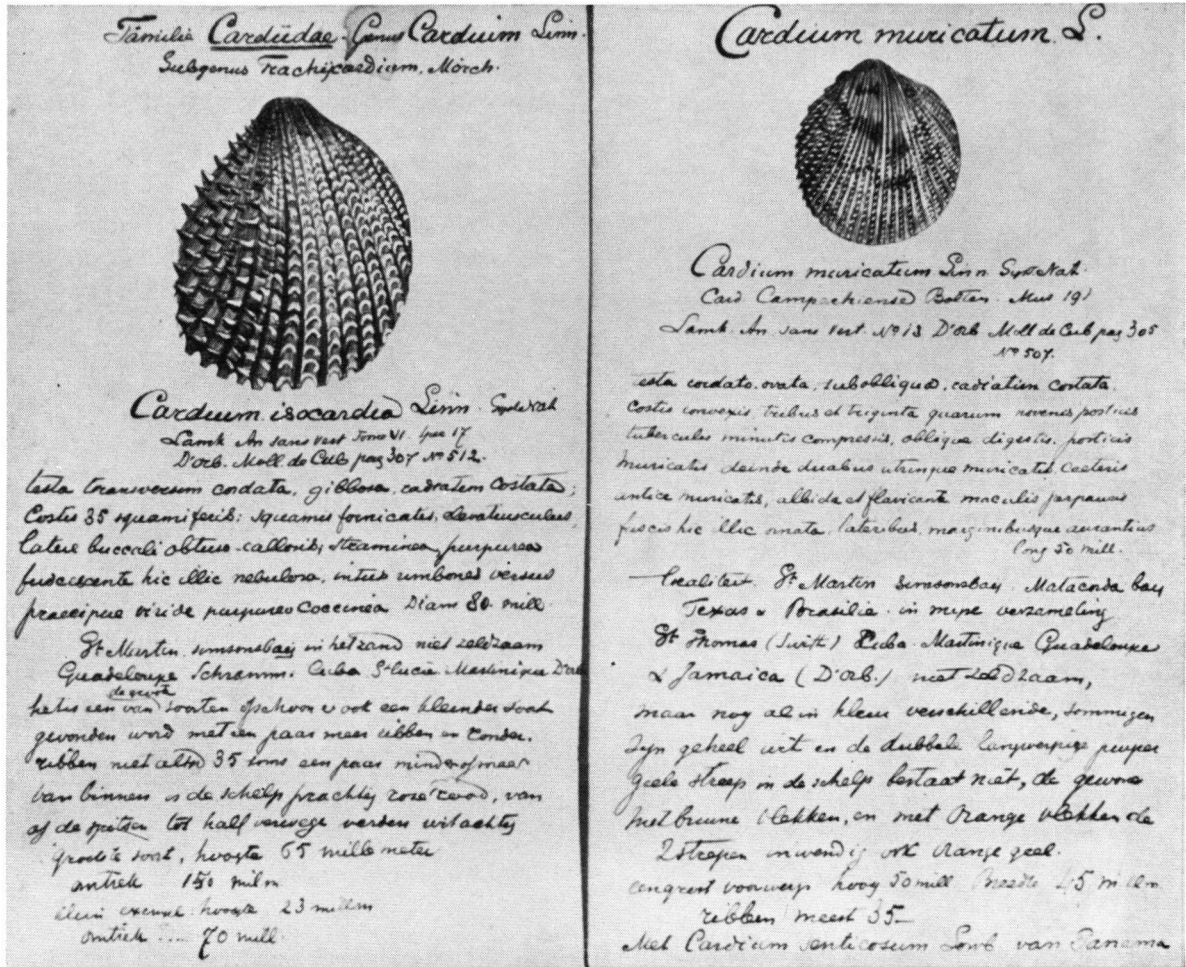


Plate XVI. *Trachycardium isocardia* and *Trachycardium muricatum*, from van Rijgersma's manuscript on the mollusks of St. Martin (1875).

Family CARDIIDAE

This is the only pelecypod family which was treated by van Rijgersma in his manuscript on the mollusks of St. Martin. Most of the species were described in Dutch. For all species he used the generic name *Cardium*.

\**Trachycardium isocardia* (Linnaeus, 1758)

*Cardium Isocardia*, Rijgersma list; *Cardium isocardia* Linn., Rijgersma manuscript with one colour drawing (pl. XVI) — Coomans, 1963b: 170.

“St Martin, Simsonbay in het zand niet zeldzaam. Guadeloupe Schramm. Cuba, St Lucie, Martinique D’Orb.

het is een van de groote soorten ofschoon er ook een kleinder soort gevonden word met een

paar meer ribben en ronder, ribben niet altijd 35 soms een paar minder of meer van binnen in de schelp prachtig rose rood, van af de spitsen tot half verwege verder witachtig grootste soort, hoogte 65 millimeter omtrek 150 mil.m. klein exempl: hoogte 23 millm omtrek . . . . 70 mill.”

[St. Martin, Simson Bay in sand, not rare. Guadeloupe Schramm. Cuba, St. Lucie, Martinique D’Orb. It is one of the larger species although also a smaller species is found with more ribs and more roundish. Ribs not always 35 sometimes a few less or more, the inside of the shell is beautifully rose red, from the apex to half way down whitish. Large specimen, length 65 mm, outline 150 mm; small specimen: length 23 mm, outline 70 mm.]

**\*Trachycardium muricatum** (Linnaeus, 1758)

*Cardium muricatum*, Rijgersma list; *Cardium muricatum* L., *C. Campechiense* Bolten, Rijgersma manuscript with one colour drawing (pl. XVI) — Coomans, 1963b: 170.

“localiteit. St Martin Simsonbay, Matacorda bay Texas & Brasilië, in mijne verzameling. St Thomas (Swift), Cuba, Martinique Guadeloupe & Jamaica (D’Orb.) niet zeldzaam, maar nog al in kleur verschillende, sommigen zijn geheel wit en de dubbele langwerpige purpergeele streep in de schelp bestaat niet, de gewone met bruine vlekken, en met orange vlekken de 2 strepen inwendig ook orange geel, een groot voorwerp hoog 50 mill. Breedte 45 millm. ribben meest 35. Met *Cardium senticosum* Sowb. van Panama heeft het zeer veel overeenkomst.”

[locality, St. Martin Simson Bay, Matacorda Bay Texas & Brazil, in my collection. St. Thomas (Swift) Cuba, Martinique, Guadeloupe & Jamaica (d’Orb.) not rare, but variable in colour, some are totally white and the double elongate purplish yellow stripe within the shell is not present; the ordinary with brown spots, and with orange spots the 2 stripes internally also orange yellow, a large specimen length 50 mm, width 45 mm, ribs mostly 35. The species looks very much like *Cardium senticosum* Sowb. from Panama.]

**\*Trachycardium magnum** (Linnaeus, 1758)

*Cardium subelongatum* Sby., Rijgersma list; *Cardium subelongatum* Sowb., *C. angulatum* D’Orb., Rijgersma manuscript with one colour drawing — Coomans, 1963b: 170.

“Deze schelp is gemakkelijk te herkennen van *isocardia* & *muricata*, door zijn langwerpige vorm en omdat het slechts zeer weinig en dan wel alleen bij de rand gestekeld is. Goede exemplaren zijn geheel met een vrij dikke geele oppervlucht bedekt, van binnen geheel wit behalve de achterrand die schoon citroengeel is, slotgroeven geelachtig en de gekartelde rand steenrood. De naam *C. angulatum* Lmk An. s. v. Tom VI, no. 19 bl. 399 wordt meestal niet gebruikt, omdat, la coquille qui, dans la collection du Museum, port ce nom, est un grand et bel individu du *Card. rugosum* no 23. Hoogte van mijn grootste exempl 70 mill. breedte 55 millm. dikte 40 millm.”

[This shell is easily to be distinguished from *isocardia* & *muricata* by its elongate shape and because it has very few spines and only at

the sides. Fine specimens are covered completely with a rather thick yellow epidermis, inside white except the posterior margin which is nice lemon yellow, hinge grooves yellowish, and the notched margin stony red. The name *C. angulatum* Lmk. Anim. sans Vert., vol. 6, no. 19, p. 399 is mostly not used, because the shell in the collection of the Museum which bears this name is a large and nice specimen of *Card. rugosum* no. 23. Length of my largest specimen 70 mm, width 55 mm, thick 40 mm.]

**\*Papyridea hiatus** (Meuschen, 1787)

*Cardium bullatum*, Rijgersma list; *Cardium bullatum* Linn., *C. soleniforme* Brug., *C. spinosum* Meuschen, *C. asperum* Sowb., Rijgersma manuscript with one colour drawing — Coomans, 1963b: 170.

“loc. St Martin, in het zand Simsonbay. West Indies. Varieert in kleur en heeft op iedere klep 45—50 dunne ribben, dus veel minder dan het voorwerp door D’Orb. beschreven.”

[loc. St. Martin, in sand, Simson Bay. West Indies. Colour variable and on each valve has 45—50 thin ribs, thus less than the specimen described by d’Orbigny.]

**\*Papyridea semisulcata** (Gray, 1825)

*Cardium Petianum* d’Orb., Rijgersma list; *Cardium ringiculum* Sow., *C. Petitianum* D’Orb., Rijgersma manuscript with two colour drawings — Coomans, 1963b: 171.

“loc. St Martin, niet zeldzaam, en verscheidene andere eilanden St Thomas, Guadeloupe, Cuba Martinique etc. Varieert in kleuren waarvan de voornaamste zijn wit met rood aan de spitsen, geheel citroengeel of orange, heeft veel overeenkomst met *bullatum* en is misschien wel een jong van bovengenoemd weekdier, temeer nog daar ik nooit geen kleine voorwerpen van *Bullatum* gezien heb.”

[loc. St Martin, not rare, and some other islands St. Thomas, Guadeloupe, Cuba, Martinique etc. Variable in colour, the main colours are white with red at the apex, lemon yellow all over or orange, looks much like *bullatum* and is perhaps a juvenile of that mollusk, especially since I have never seen small specimens of *bullatum*.]

**\*Laevicardium laevigatum** (Linnaeus, 1758)

*Cardium serratum* Lm., *C. citrinum*, Rijgersma list; *Car-*

*dium serratum* Linn., *C. laevigatum* Gml., *C. Citrinum* Chemn., *C. oviputamen* Reeve?, Rijgersma manuscript with two colour drawings (pl. XVII) — Coomans, 1963b: 171.

“loc. St Martin in het zand niet zeldzaam. Guadeloupe, St Thomas & Barbados enz. aux côtes du Bresil et des Antilles: D’Orb.

drie verscheidenheden bestaan van deze schelp  
1 de hier afgebeelde Citroengeel van kleur,  
2 wit met bruine zigzac vlekken of streepjes,  
3 Orange geel met dunne concentrische streepjes, ook verschilt veel in grootte.”

[loc. St. Martin in sand not rare, Guadeloupe, St. Thomas & Barbados etc. the coasts of Brazil and the Antilles: d’Orb. There are three varieties of this shell: 1. the one here figured lemon yellow in colour, 2. white with brown zigzac spots or stripes, 3. orange yellow with thin concentric stripes. Also the size is variable.]

**Americardia guppyi** (Thiele, 1910)

Coomans, 1963b: 171.

This species is discussed and figured in van Rijgersma’s manuscript under the name *Cardium antillarum* d’Orbigny, 1846. *Americardia antillarum* and *A. guppyi* are closely related. *A. guppyi* was collected by us on French St. Martin. Van Rijgersma had not found the species on this island, he compared the Caribbean species with *Cardium graniferum* Broderip & Sowerby, 1844:

“if our shell is the *C. graniferum* of Brod. & Sowb. found at the Pacific coast of Central America his name should be retained as it has two years precedence. I have not seen the pacific shell but it appears to me Dr. Carpenter thinks them to be different as he dont quote our shell, and sais of his Mazatlan species ‘The interstices between the ribs are decussated by a series of

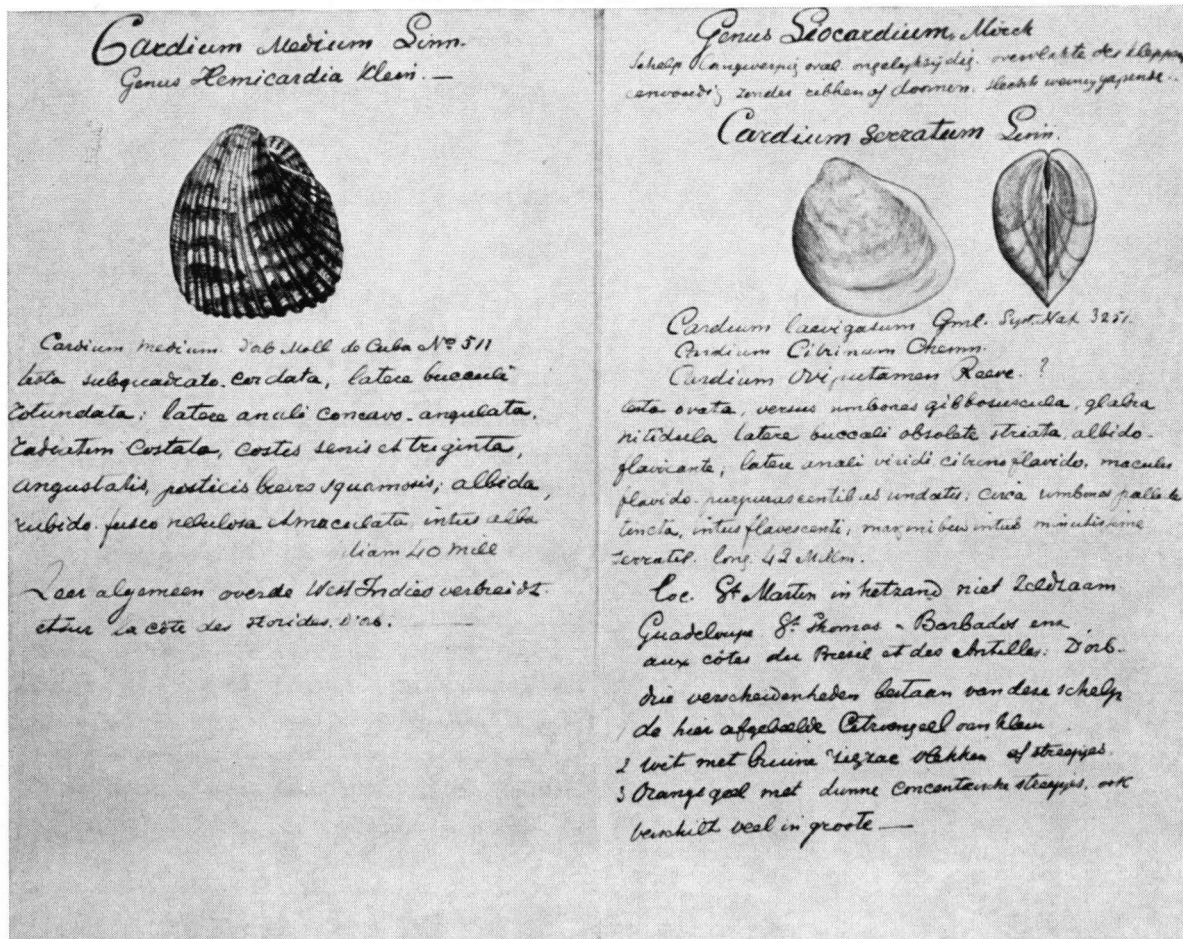


Plate XVII. *Americardia media* (= *Cardium medium*) and *Laevicardium laevigatum* (= *Cardium serratum*), from van Rijgersma’s manuscript on the mollusks of St. Martin (1875).



rectangular impressed pits laid transversely', while D'Orb diagnosis is 'interstitiis transversum striatis'. Not found at St Martin. Cuba Guadeloupe Martinique Jamaica D'Orb. St Thomas (R. Swift.)"

**\*Americardia media** (Linnaeus, 1758)

*Cardium medium* Lm., Rijgersma list; *Cardium medium* Linn., Rijgersma manuscript with one colour drawing (pl. XVII) — Coomans, 1963b: 171.

"Zeer algemeen over de West Indies verbreidt, et sur la côte des Florides, D'Orb."

[Very common in the West Indies, and at the coast of Florida, d'Orbigny.]

Family VENERIDAE

**\*Antigona listeri** (Gray, 1838)

*Venus Listeri* Gray, Rijgersma list — Coomans, 1963b: 171.

**\*Antigona rigida** (Dillwyn, 1817)

*Venus rugosa* Gml., Rijgersma list. — New to St. Martin.

Also collected at St. Martin by Mrs. Bogart and Mrs. Ervin in 1964.

**Antigona rugatina** (Heilprin, 1887)

Collected at St. Martin in 1964 by Mrs. Bogart and Mrs. Ervin. — New to St. Martin.

**\*Chione cancellata** (Linnaeus, 1767)

*Venus cancellata*, Rijgersma list — Coomans, 1963b: 171.

**Chione intapurpurea** (Conrad, 1849)

Coomans, 1963b: 171.

**\*Chione paphia** (Linnaeus, 1767)

*Cytherea affinis* Gml., Rijgersma list — Coomans, 1963b: 171.

**\*Chione pygmaea** (Lamarck, 1818)

*Venus pygmaea* Lk., *Venus inaequalis* d'Orb., Rijgersma list — Coomans, 1963b: 171.

**\*Anomalocardia brasiliiana** (Gmelin, 1791)

*Venus flexuosa* L., Rijgersma list — Coomans, 1963b: 172.

**\*Anomalocardia puella** (Pfeiffer in Philippi, 1846)

*Venus auberiana*, Rijgersma list. — New to St. Martin.

**Transenella conradiana** (Dall, 1883)

Collected at St. Martin in 1964 by Mrs. Bogart and Mrs. Ervin. — New to St. Martin.

**\*Transenella cubaniana** (d'Orbigny, 1842)

*Venus Cubaniana* d'Orb., Rijgersma list — Coomans, 1963b: 172.

**Tivela abaconis** Dall, 1902

Coomans, 1963b: 172.

**\*Tivela trigonella** (Lamarck, 1818)

*Cytherea trigonella*, Rijgersma list. — New to St. Martin.

**Pitar albida** (Gmelin, 1791)

Coomans, 1963b: 172.

**\*Pitar circinata** (Born, 1778)

*Cytherea circinalis* Born, Rijgersma list — Coomans, 1963b: 172.

**Pitar fulminata** (Menke, 1828)

Coomans, 1963b: 172.

**Gouldia cerina** (C.B. Adams, 1845)

Coomans, 1963b: 172.

**\*Macrocallista maculata** (Linnaeus, 1758)

*Cytherea maculata* Ln., Rijgersma list — Coomans, 1963b: 172.

Three more species of Veneridae were mentioned in van Rijgersma's list: *\*Venus spec.*, *\*V. Antillarum*, and *\*Cytherea venetiana*. They are unidentifiable, the last name is probably a misspelling.

Family PETRICOLIDAE

**Petricola lapicida** (Gmelin, 1791)

Coomans, 1963b: 172.

**\*Rupellaria typica** (Jonas, 1844)

*Petricola typica*, Rijgersma list. — New to St. Martin.

Family TELLINIDAE

**Tellina caribaea** d'Orbigny, 1842

Coomans, 1963b: 173.

**\*Tellina lineata** Turton, 1819

*Tellina lineata* Turton, Rijgersma list — Coomans, 1963b: 173.

**\*Tellina listeri** Röding, 1798

*Tellina Antoni* Phil., *T. interrupta* Wood, Rijgersma list — Coomans, 1963b: 173.

**\*Tellina radiata** Linnaeus, 1758

*Tellina radiata* Lk., Rijgersma list — Coomans, 1963b: 173.

**Tellina radiata forma unimaculata** Lamarck, 1818

Coomans, 1963b: 173.

**\*Tellina aequistriata** Say, 1824

*Tellina Guadeloupensis* d'Orb., Rijgersma list. — New to St. Martin.

**\*Tellina alternata** Say, 1822

*Tellina subradiata*, Rijgersma list. — New to St. Martin.

**\*Tellina candeana** d'Orbigny, 1842

*Tellina Candea* d'Orb., Rijgersma list. — New to St. Martin.

**\*Tellina consobrina** d'Orbigny, 1842

*Tellina consobrina*, Rijgersma list. — New to St. Martin.

**\*Tellina gouldii** Hanley, 1846

*Tellina cuneata* d'Orb., Rijgersma list. — New to St. Martin.

**\*Tellina magna** Spengler, 1798

*Tellina magna* Spengl., Rijgersma list. — New to St. Martin.

**\*Tellina martinicensis** d'Orbigny, 1842

*Tellina martinicensis* d'Orb., Rijgersma list. — New to St. Martin.

**\*Tellina similis** Sowerby, 1806

*Tellina similis* Sby., Rijgersma list. — New to St. Martin.

**\*Tellina spec.**

*Tellina* indet., Rijgersma list.

**\*Arcopagia fausta** (Pulteney, 1799)

*Tellina fausta* Duclos, Rijgersma list — Coomans, 1963b: 173.

**\*Apolymetis intastriata** (Say, 1826)

*Tellina Gruneri* Phil., Rijgersma list. — New to St. Martin.

**\*Strigilla carnaria** (Linnaeus, 1758)

*Tellina carnaria*, *T. cornuris* (Jr.), Rijgersma list — Boss, 1969: 352.

*Tellina* "cornuris (Jr.)" in van Rijgersma's list is an error for *carnaria* juv.

**Strigilla pseudocarnaria** Boss, 1969

*Strigilla rombergi*, Coomans, 1963b: 173.

Boss (1969) studied the genus *Strigilla* and found that *S. rombergii* Mörch, 1853, is a synonym of *S. carnaria*. The species considered *rombergii* by many authors should have a new name, for which Boss choose *S. pseudocarnaria*.

**\*Strigilla mirabilis** (Philippi, 1841)

*Tellina flexuosa* Say, Rijgersma list — Coomans, 1963b: 173.

**Macoma brevifrons** Say, 1834

Collected at St. Martin in 1955 by Wagenaar Hummelinck in the Freshwater Pond. — New to St. Martin.

## Family SEMELIDAE

**\*Semele bellestriata** (Conrad, 1837)

*Amphidesma cancellata* d'Orb., Rijgersma list — Coomans, 1963b: 173—174.

**\*Semele proficua** (Pulteney, 1799)

*Amphidesma reticulata* Lk., Rijgersma list — Coomans, 1963b: 174.

**\*Semele proficua forma radiata** (Say, 1826)

*Amphidesma subtruncata* Sby., Rijgersma list — Coomans, 1963b: 174.

Boss (1972) revised the Western Atlantic species of *Semele*. He considered *S. radiata* a synonym of *S. proficua*.

**\*Semele purpurascens** (Gmelin, 1791)

*Amphidesma variegata* Lk., Rijgersma list — Coomans, 1963b: 174.

## Family DONACIDAE

**\*Donax denticulata** Linnaeus, 1758

*Donax denticulatus* L., Rijgersma list — Coomans, 1963b: 174.

## Family SANGUINOLARIIDAE

**\*Asaphis deflorata** (Linnaeus, 1758)

*Sanguinolaria rugosa*, Rijgersma list — Coomans, 1963b: 174.

**\*Tagelus divisus** (Spengler, 1794)

*Tagelus bidentatus*, Rijgersma list. — New to St. Martin.

## Family MACTRIDAE

**\*Mactra fragilis** Gmelin, 1791

*Mactra Brasiliana*, Rijgersma list — Coomans, 1963b: 174.

## Family MESODESMATIDAE

**\*Ervilia nitens** (Montagu, 1806)

*Ervilia nitens* Turton, Rijgersma list. — New to St. Martin.

## Order MYOIDA

## Family CORBULIDAE

**\*Corbula caribaea** d'Orbigny, 1842

*Corbula Lavalleana*, Rijgersma list. — New to St. Martin.

**\*Notocorbula operculata** (Philippi, 1848)

*Corbula disparilis* d'Orb., Rijgersma list. — New to St. Martin.

## Family GASTROCHAENIDAE

**\*Gastrochaena hians** (Gmelin, 1791)

*Gastrochaena hians* Chemn., Rijgersma list. — New to St. Martin.

**\*Gastrochaena spec.**

*Gastrochaena dubia*, Rijgersma list.

*Gastrochaena dubia* (Pennant, 1777), syn. *G.*

*modiolina* Lamarck, 1818, is a species from European waters, not found in the West Indies.

## Order PHOLADOMYOIDA

## Family VERTICORDIIDAE

In his manuscript on the mollusks of St. Martin van Rijgersma placed the genus *Verticordia* (= *Trigonulina*) at the end of the family Cardiidae. He mentioned one species, *Trigonulina ornata* d'Orbigny from Jamaica, and gave three drawings of the shells, with these remarks:

"Not found in St. Martin, shell copied from de Moll de Cuba."

## Family LYONSIIDAE

**\*?Lyonsia spec.**

*Osteodesma*, Rijgersma list.

This species is unidentifiable.

## Class AMPHINEURA

## Subclass POLYPLACOPHORA

The Polyplacophora of the Caribbean region, and especially from the Netherlands Antilles, were recently studied by Kaas (1972). He mentioned six species from St. Martin.

In his list van Rijgersma named five species, in addition he mentioned four unidentified species of *Chiton*. For one of the unknown species he used the name "white long back". On St. Martin "long back" is the local name for polyplacophorans (cf. Coomans, 1970: 179).

## Order LEPIDOPLEURIDA

## Family LEPIDOPLEURIDAE

**\*Lepidopleurus spec.**

*Chiton lepidopleurus*, Rijgersma list.

## Order CHITONIDA

## Family CHITONIDAE

**\*Chiton marmoratus** Gmelin, 1791

*Chiton marmoratus* Chemn., Rijgersma list — Kaas, 1972: 111.

**\*Chiton squamosus** Linnaeus, 1764

*Chiton squamosus* Ln., Rijgersma list — Coomans, 1963b: 175; Kaas, 1972: 107.

**Chiton tuberculatus** Linnaeus, 1758

Collected at St. Martin in 1964 by Mrs. Bogart and Mrs. Ervin. — New to St. Martin.

**Chiton viridis** Spengler, 1797

Kaas, 1972: 114.

**\*"Chiton" spec.**

*Chiton*, Rijgersma list.

With these remarks:

"found on coral rock etc."

**\*"Chiton" spec.**

*Chiton* (white long back), Rijgersma list.

**\*"Chiton" spec.**

*Chiton*, Rijgersma list.

**\*Acanthopleura granulata** (Gmelin, 1791)

*Chiton piceus* Gml., Rijgersma list — Coomans, 1963b: 175; Kaas, 1972: 118.

## Family CRYPTOPLACIDAE

**\*Acanthochitona spec.**

*Acanthochiton*, Rijgersma list.

Kaas (1972) has not recorded any *Acanthochitona* from St. Martin.

## Family ISCHNOCHITONIDAE

**\*Ischnochiton pectinatus** (Sowerby, 1840)

*Chiton multicostatus* Ad., Rijgersma list. — New to St. Martin.

**Ischnochiton purpurascens** (C. B. Adams, 1845)

Kaas, 1972: 68.

**Calloplax janeirensis** (Gray, 1828)

Kaas, 1972: 60.

## Class SCAPHOPODA

The Scaphopoda were treated by van Rijgers-

ma in his manuscript on the mollusks of St. Martin. He probably was the collector of some new species, which were described later by Pilsbry & Sharp (1897).

## Family DENTALIIDAE

**\*Dentalium antillarum** d'Orbigny, 1842

*Dentalium Antillarum* d'Orb., Rijgersma list; *Dentalium Antillarum* D'Orb., Rijgersma manuscript with 4 drawings (pl. XV). — New to St. Martin.

For van Rijgersma's remarks see under *D. semistriatum*.

**\*Dentalium disparile** d'Orbigny, 1842

*Dentalium disparile* d'Orb., Rijgersma list; *Dentalium disparile* D'Orb., Rijgersma manuscript with 3 drawings (pl. XV). — New to St. Martin.

For van Rijgersma's remarks see under *D. semistriatum*.

**\*Dentalium semistriatum** Turton, 1819

*Dentalium translucidum* d'Orb., Rijgersma list; *Dentalium translucidum* Desh., *D. semistriatum* Guilding, Rijgersma manuscript with one drawing — Pilsbry & Sharp, 1897: 90.

"most of the specimen are not light yellow or ambre colored but pure white. When the shells become older and more solid the fissure at the apex disappears and nearly half of the shell becomes finely striated, those may be called the var. *semistriatum* Guilding, while others gradually become wholly striated with the apex ribbed the var *Antillarum* D'Orb. Moll. de Cuba No. 409.

Some again as in the case with the European *D. Entalis*, are entirely ribbed and beautifully marked with transparent squarish spot on the ribs, may not these constitute I believe an other var. the *Dent. Disparile* D'Orb. Moll. de Cuba. Spec. 406.

loc. St. Martin and other W. Indian Islands not common. St. Thomas & Martinique, D'Orb. Guadeloupe (Schramm.)"

Pilsbry & Sharp assigned their specimens to *E. Marie*. We suppose that they were collected on St. Martin by van Rijgersma.

**\*Dentalium liodon** Pilsbry & Sharp, 1897

Pilsbry & Sharp, 1897: 107—108, pl. 21, figs. 37—39; Coomans, 1963b: 175.

St. Martin is type locality for this species. The

type specimens were received from E. Marie, who may have obtained them from van Rijgersma.

**\**Dentalium liodon* var. *alloschismum* Pilsbry & Sharp, 1897**

Pilsbry & Sharp, 1897: 108, pl. 21, fig. 40; Coomans, 1963b: 175—176.

St. Martin is also the type locality of this variety, and likewise van Rijgersma is supposed to be the collector.

Family SIPHONODONTALIIDAE

**\**Cadulus dominguensis* (d'Orbigny, 1842)**

*Dentalium Dominguense* d'Orb., Rijgersma list; *Dentalium Dominguense* D'Orb., Rijgersma manuscript with two drawings. — New to St. Martin.

“St. Domingo. Martinique. Guadeloupe. St. Thomas. Cuba. D'Orb. St Martin mixed with small shells on the seabeach.”

Class CEPHALOPODA

The cephalopods were not discussed in any of van Rijgersma's papers. He had collected two species at St. Martin, these were sent to the Academy of Natural Sciences in Philadelphia (Leidy, 1869: 236). It is not known which species were collected, since the specimens are no longer in the collection of the Academy (Coomans, 1963b: 176), and they were not mentioned by Tryon (1879), although he had at his disposal the mollusk collection of the Academy.

Order DECAPODA  
Family SPIRULIDAE

***Spirula spirula* (Linnaeus, 1758)**

Coomans, 1963b: 176.

Family SEPIIIDAE

***Sepia* cf. *antillarum* d'Orbigny, 1842**

Coomans, 1963b: 176.

Family LOLIGINIDAE

***Sepioteuthis sepioidea* Blainville, 1823**

New to St. Martin. Many specimens were collected by Wagenaar Hummelinck at Great Bay in 1955.

DISCUSSION

In previous publications (Coomans, 1963b, 1967) we have compiled lists of the recent mollusk fauna of St. Martin. The species were known from the 19th century literature (Krebs, 1864; Mörch, 1875-1877; Mazé, 1890, and collecting trips in this century by Dr. P. Wagenaar Hummelinck, a few other collectors, and the present author. The numbers of mollusk species known from St. Martin were:

marine and brackish water	353 species
land and freshwater	47 species
	total 400 species

In the malacological literature of the last decade some more species from the island were mentioned: 6 species of Opisthobranchia by Marcus & Marcus (1963), *Echininus nodulosus* by Kristensen (1965), *Strigilla pseudocarnaria* Boss, 1969, and 6 species of Polyplacophora by Kaas (1972) of which four were new to the fauna of St. Martin.

From the present publication we can conclude that at least 550 species of recent Mollusca are to be found on and around St. Martin. Of this new total of 550 species, 136 are mentioned as new to the fauna. Most of these new records, i.e. 117 species, must be credited to van Rijgersma. Table II indicates the number of newly recorded species.

We figure that van Rijgersma, after 14 years of collecting on St. Martin, must have had an almost complete collection of shells from that island. From his manuscript, the list of shells which were to be sent to the Museum in Leiden, his correspondence, Mazé's publication (1890), and specimens collected by van Rijgersma which are present in several museums in the United States, we were able to trace 416 species. These are marked with an asterisk before the species name in this publication.

Table III shows the number of species known from St. Martin by van Rijgersma, and those mentioned in the literature.

During the last century some authors described new mollusks from St. Martin. Three species of Caecidae were described by L. de Folin with type locality St. Martin: *Caecum sculptum* de Folin, 1879: 14, pl.1, figs. 1-2; *Caecum tenuicostatum* de Folin, 1879: 15, pl.1, figs. 3-4; *Meioceras mariae* de Folin, 1879: 15, pl.1, figs. 5-6.

Pilsbry & Sharp described from St. Martin: *Dentalium liodon* Pilsbry & Sharp, 1897: 107, pl. 21, figs. 37-39; *Dentalium liodon* var. *alloschismum*

TABLE II

Number of species new to St. Martin, mentioned in this publication.

	Collected by van Rijgersma, 1863-1877	Collected by Mrs. J. Bogart & Mrs. T. Ervin in 1964	Other recent collectors	Total
Gastropoda	85	9	3	97
Pelecypoda	28	4	1	33
Amphineura	1	1	—	2
Scaphopoda	3	—	—	3
Cephalopoda	—	—	1	1
Mollusca	117	14	5	136

TABLE III

Numbers of mollusk species from St. Martin, known to several authors and compared with the present publication.

	Collected by van Rijgersma, 1863-1877 a)	Krebs (1864) b)	Mörch (1875-1877) b)	Mazé (1890) c)	Coomans (1958) d)	Coomans (1963b) (1967) e)	This publication
Gastropoda	300	115	58	47	82	298	402
Pelecypoda	99	3	—	1	—	96	130
Amphineura	9	—	—	—	—	2	9
Scaphopoda	6	—	—	—	—	2	6
Cephalopoda	2	—	—	—	—	2	3
Mollusca	416	118	58	48	82	400	550

- a) Indicated in this publication with an asterisk\*. The non-marine mollusks were published by Mazé (1890), mentioned by Vernhout (1914) and Schepman (1915), and discussed by Coomans (1967).  
 b) Collected by Krebs, discussed in Coomans (1963a).  
 c) Non-marine mollusks, collected by van Rijgersma, Kohlmann and Mazé.  
 d) Marine gastropods, collected by P. Wagenaar Hummelinck.  
 e) 1963b: marine mollusks, mainly collected by Coomans in 1959;  
 1967: non-marine mollusks.

Pilsbry & Sharp, 1897: 108, pl. 21, fig. 40.

These authors mentioned E. Marie as the collector of the five new species. Perhaps he was indeed the collector of these shells, of which one was named after him. But it is more likely that the specimens were collected by van Rijgersma, who was in contact with Marie.

St. Martin is the type locality for the following species of marine gastropods, described but not figured by Mörch (1874, 1875-1877). The specimens were collected by H. J. Krebs (cf. Coomans, 1963a: 78-83), not by van Rijgersma.

- *Scala Krebsii* Mörch, 1874 = *Epitonium krebsii*
- *Scala pretiosula* Mörch, 1874 = *E. foliaceicostum* (d'Orbigny)
- *Scala turritellula* Mörch, 1874 = *E. turritellu-*

*lum*

- *Scala filaris* Mörch, 1874, an unrecognizable species
- *Torinia* sp.n. Mörch, 1875 = ? *Heliacus cylindricus* (Gmelin)
- *Obeliscus niveus* Mörch, 1875 = *Triptychus niveus*
- *Cylichna Krebsii* Mörch, 1875
- *Alys Rüseana* "Dkr. mss" Mörch, 1875
- *Hipponyx antiquatus* Linné var. *minor* Mörch, 1877

For one new subspecies with type locality Oyster Pond, St. Martin, it is evident that van Rijgersma was the collector, since he was mentioned by the author: *Succinea approximans martiniana* Mazé, 1890: 28.



## SUMMARY

Hendrik Elingsz van Rijgersma was born on 5 January 1835 in the small town of Lemmer, province of Friesland, the Netherlands. His father was an apothecary. Van Rijgersma studied medicine at the Provincial Medical School at Haarlem, and in 1858 and 1859 received the degrees of physician and obstetrician respectively. For a few years he practiced medicine in Jisp and on the island of Marken in Holland. In 1863 he left for the Netherlands Antilles and became government physician on the island of St. Martin. There he remained for the rest of his life, with the exception of one year sick leave in the Netherlands (1873-1874). Van Rijgersma died on 4 March 1877, at the age of 42. In various publications on the history of the Netherlands Antilles his name is mentioned.

Hardly anything is known about his medical activities; however, for taking care of patients on the Swedish island of St. Barths, the King of Sweden and Norway decorated van Rijgersma in 1871 with a gold medal with the inscription "Illis quorum meruere labores".

Van Rijgersma was married and had seven children. Two sons emigrated from St. Martin to New York in 1887, his widow and the rest of the children followed in 1893. Descendants are still living in the United States; however, none of them carries the name van Rijgersma. These relatives were traced, and with them many documents, letters, manuscripts, the gold medal, and a portrait were discovered.

Van Rijgersma was interested in biology, therefore he collected plants and animals on St. Martin and nearby islands. He was in contact with the zoologist P. Harting in Utrecht, with the paleontologist E. D. Cope of the Academy of Natural Sciences in Philadelphia, and with the entomologist S. C. Snellen van Vollenhoven from the Rijksmuseum van Natuurlijke Historie in Leiden. Van Rijgersma sent insects to Leiden and in exchange he received shells. To the Academy in Philadelphia, of which van Rijgersma was a corresponding member, he sent recent and fossil vertebrates, and recent invertebrates. A number of American zoologists and paleontologists published on this material, it contained many new species. Two species were named after van Rijgersma.

Van Rijgersma was an excellent painter; in 1868 he made about 60 drawings of living plants of St. Martin. Since these plants were correctly identified, he must have had a knowledge of botany.

Since early age van Rijgersma was especially interested in mollusks, and during his stay on St. Martin he collected and studied land, freshwater and marine shells intensively. He was elected corresponding member of the Conchological Section of the Academy in Philadelphia, and he became a member of the Belgian Malacological Society. He was in contact with other malacologists who studied the Caribbean mollusks: E. R. Beadle and Th. Bland in the United States, R. Swift, A. Schramm, E. A.

Marie, H. P. Mazé, A. Bavay, and R. W. Rawson in the West Indies, G. B. Sowerby III in England, and H. J. Krebs in Denmark. They exchanged shells and data, and discussed their problems. The major part of van Rijgersma's correspondence is known, in most cases only from one side.

Van Rijgersma had a large shell collection of about five to ten thousand specimens, and 1500 to 2000 species. It comprised a complete set of mollusks from St. Martin, many species from other Caribbean islands, and shells from other parts of the world, including type material from New Caledonia. After van Rijgersma's death his widow tried to sell the complete collection, without success. In 1885 the Rijksmuseum van Natuurlijke Historie in Leiden wanted to buy it. The transaction did not go through; however, together with the documents was discovered a list of "Shells from West-Indies selected for the Leyden Museum of Nat. Hist. from Dr. v. Rijgersma's Collection". The list mentioned 615 species of which 387 from St. Martin. These mollusks are not present in the Museum at Leiden. At their emigration to the United States in 1893, the collection was taken to America and sold to an unknown collector, so that it must be considered lost. Only a few species, collected by van Rijgersma on St. Martin, are present in various museums in the United States.

Van Rijgersma had a small private library of about 80 volumes, mainly medical works. From his manuscript and correspondence it is possible to find the titles of the malacological literature in his possession. He is mentioned in several malacological publications of the last century.

In 1875 van Rijgersma wrote a manuscript on the mollusks of the West Indies, especially those from St. Martin, and illustrated it with his own drawings in colour. It might have been his intention to publish this manuscript in the "Annales de la Société Malacologique de Belgique", as he was a member of this Society since 1874. The manuscript was not finished, 12 families were treated with over 80 species, belonging to the classes Gastropoda, Pelecypoda, and Scaphopoda. The descriptions of the species were copied from the literature, to which he added his observations and remarks. Data on the distribution and occurrence at St. Martin were given. Of most species the shell is figured from two sides, sometimes with the animal and the operculum.

From this manuscript, together with the list of mollusks for the museum in Leiden, and from van Rijgersma's correspondence, as well as from publications, we were able to determine which species of mollusks were collected by him at St. Martin. This publication mentioned 550 mollusk species from St. Martin, of which at least 416 were known to van Rijgersma. New to the fauna of that island are 136 species, of which 117 were collected by van Rijgersma.

## S A M E N V A T T I N G

Hendrik Elingsz van Rijgersma werd geboren op 5 januari 1835 te Lemmer in Friesland, alwaar zijn vader apotheker was. Hij doorliep de Provinciale Medische School te Haarlem en legde in 1858 en 1859 de examens af van respectievelijk „Heelmeester voor het platte land” en „Vroedmeester voor het platte land”. Na enkele jaren medische praktijk te Jisp en Marken vertrok hij in 1863 naar de Nederlandse Antillen, en werd gouvernements-arts op Sint Maarten. Hier verbleef hij tot zijn dood, met uitzondering van een jaar ziekteverlof in Nederland (1873-1874). Van Rijgersma overleed 4 maart 1877, op 42-jarige leeftijd. Slechts in enkele werken over de geschiedenis van de Nederlandse Antillen wordt hij genoemd.

Van zijn medisch werk is weinig bekend, maar voor het belangeloos helpen van patiënten op het toen Zweedse eiland St. Barths, verleende de Koning van Zweden en Noorwegen hem in 1871 een gouden medaille met de inscriptie „Illis quorum meruere labores”.

Van Rijgersma was gehuwd en had zeven kinderen. Twee zoons emigreerden in 1887 van St. Martin naar New York, de weduwe van Rijgersma en de andere kinderen volgden in 1893. Nakomelingen wonen heden nog in de Verenigde Staten, maar geen van hen heeft de naam van Rijgersma. Zij konden worden opgespoord, en tevens werden documenten, brieven, manuscripten, de gouden medaille, alsmede een portret in de Verenigde Staten achterhaald.

Van Rijgersma had veel belangstelling voor de biologie, derhalve verzamelde hij planten en dieren op St. Martin en omliggende eilanden. Hij stond in contact met de zoöloog Pieter Harting in Utrecht, met de palaeontoloog E. D. Cope van de „Academy of Natural Sciences” in Philadelphia, en met de entomoloog S. C. Snellen van Vollenhoven van het Rijksmuseum van Natuurlijke Historie te Leiden. Naar laatstgenoemde instelling stuurde van Rijgersma insecten, in ruil daarvoor ontving hij schelpen. Naar de Academie in Philadelphia, van welke instelling van Rijgersma corresponderend lid was, stuurde hij recente en fossiele vertebraten, alsmede recente evertebraten. Veel van dit materiaal werd door Amerikaanse zoölogen en palaeontologen bewerkt, waarbij een aantal nieuwe soorten werden beschreven en twee diersoorten naar van Rijgersma werden vernoemd.

Van Rijgersma was een begaafd tekenaar, in 1868 maakte hij ongeveer 60 tekeningen van planten die op St. Martin voorkomen. Gezien de correcte determinaties moet hij tevens voldoende botanische kennis gehad hebben.

Reeds in zijn jeugd had van Rijgersma speciale belangstelling voor de weekdieren, en tijdens zijn verblijf op St. Martin heeft hij zich intensief met deze diergroep bezig gehouden. Hij verzamelde zowel land, zoetwater, als mariene mollusken. De „Conchological Section” van de Academie in Philadelphia benoemde hem tot corresponderend lid, en hij sloot zich aan bij de „Société Malacologique de Belgique”. Van Rijgersma hield contact met andere malacologen die de Caraïbische weekdieren bestudeerden: E. R. Beadle en Th. Bland in Amerika, R. Swift, A. Schramm, E. A. Marie, H. P. Mazé, A. Bavay en R. W. Rawson in West Indië, G. B. Sowerby

III in Engeland, en H. J. Krebs in Denemarken. Zij ruilden schelpen, wisselden gegevens uit, en discussieerden over hun problemen. Veel van van Rijgersma's correspondentie kon worden achterhaald, in de meeste gevallen is zij slechts eenzijdig bekend.

Van Rijgersma had een aanzienlijke schelpencollectie, geschat op vijf- tot tienduizend exemplaren met 1500 tot 2000 soorten. Zij omvatte, naast een complete verzameling mollusken van St. Martin, veel materiaal van andere Caraïbische eilanden, en schelpen uit andere gebieden, waaronder typemateriaal uit Nieuw Caledonië. Na het overlijden van van Rijgersma trachtte zijn weduwe tevergeefs de collectie te verkopen. In 1885 deed F. A. Jentink, directeur van het Rijksmuseum van Natuurlijke Historie te Leiden, een poging om de collectie te kopen. Hoewel de transactie geen doorgang vond, werd wel een lijst met namen aangetroffen: „Shells from West-Indies selected for the Leyden Museum of Nat. Hist. from Dr. v. Rijgersma's Collection”. Deze lijst vermeldt 615 soorten waarvan 387 van St. Martin. Dit materiaal is niet aanwezig in het museum te Leiden. In 1893, met de emigratie naar Amerika, werd de schelpencollectie meegenomen en aldaar verkocht aan een onbekende verzamelaar. Sindsdien is de collectie zoek. Slechts een gering aantal soorten, door van Rijgersma op St. Martin verzameld, is aanwezig in enkele Amerikaanse musea.

Van Rijgersma's bibliotheek was zeer bescheiden, ongeveer 80 banden, de meeste betreffende geneeskunde. Uit zijn correspondentie en manuscripten kon worden afgeleid welke malacologische werken hij tenminste bezat. In diverse malacologische publicaties uit de vorige eeuw wordt van Rijgersma genoemd.

In 1875 begon van Rijgersma aan een manuscript over de weekdieren van West Indië, in het bijzonder die van St. Martin, geïllustreerd met eigen tekeningen in kleur. Wellicht was het zijn bedoeling om dit te publiceren in de „Annales de la Société Malacologique de Belgique”, van welke vereniging hij in 1874 lid geworden was. Het manuscript werd niet afgemaakt, doordat van Rijgersma in 1876 de plantage „Little Bay” kocht, ziek werd, en in 1877 overleed. In het manuscript worden 12 families behandeld, met totaal meer dan 80 soorten, behorende tot de Gastropoda, Pelecypoda, en Scaphopoda. De beschrijvingen van de soorten zijn overgenomen uit de tot zijn beschikking staande literatuur, waaraan eigen waarnemingen en opmerkingen werden toegevoegd. Verspreidingsgegevens en voorkomen op Sint Maarten zijn vermeld. Meestal is de schelp van elke besproken soort van twee zijden afgebeeld, soms met het dier in de schelp, en met het operculum.

Uit dit manuscript, tezamen met de lijst van naar Leiden te zenden mollusken, alsmede uit zijn correspondentie en enkele publicaties, was het mogelijk om te bepalen welke soorten weekdieren door van Rijgersma waren verzameld op St. Martin. Het aantal soorten bedraagt 416 (aangeduid met een sterretje \* in deze publicatie). Hiervan blijken 117 soorten nieuw te zijn voor de fauna van St. Martin.

Tot op heden was het malacologisch werk van van Rijgersma onbekend.

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