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Quantifying the role of marine phytoplankton (DMS) in the present day climate system

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**QUANTIFYING THE ROLE OF MARINE PHYTOPLANKTON (DMS)
IN THE PRESENT DAY CLIMATE SYSTEM**

Mtinkheni Gondwe

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IN THE PRESENT DAY CLIMATE SYSTEM**

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te Blantyre, Malawi

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University of Groningen

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IN THE PRESENT DAY CLIMATE SYSTEM**

A Ph.D Thesis

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University of Groningen, The Netherlands, in fulfilment of the requirements for the degree of
Doctor of Philosophy (Ph.D)

And to be publicly defended on Monday, 15 November 2004 at 16:15

by

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ISBN: 90-367-2162-8

For my husband

Victor

and children

Tipani and Nathan

who were born during the 5 years of my PhD study.

Wat kunnen jullie heerlijk knuffelen! You're definitely the best part of my life!

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In Boulogne was onze eerste gang naar de haven. Mattia had nog nooit de zee gezien. Gedurende enige minuten staarde hij in de nevelige diepte van de verre horizon. Toen klakte hij met zijn tong en verklaarde mij rustig, dat hij de zee lelijk, somber en vuil vond.

"Maar Mattia, hoe is het mogelijk?" riep ik uit, "De zee, dat is het mooiste, wat er is op de wereld!".

"Toen je er vroeger zo van vertelde," zei Mattia, "geloofde ik dat ook. Dat was zeker de blauwe zee te Cette onder een blauwe hemel, maar deze zee is geel en groen onder een sombere hemel. Neen, deze zee nodigt niet uit om er over te gaan."

Maar ik dacht er anders over. Ik vond de zee wel mooi met haar groene tinten, haar nevelig verschiet onder de geweldige wolkenkoepel.

"Ik vind deze zee nog mooier dan die te Cette," verzekerde ik met vuur.

"Dat komt, omdat jij Engelsman bent," antwoordde Mattia, "Jij houdt van deze lelijke zee, omdat zij de zee van je vaderland is."

De boot naar Londen zou de volgende morgen om vier uur vertrekken

(Gesprek tussen Remi en Mattia over de kleuren van Het Kanaal)

Uit "*Alleen op de Wereld*" ("*Sans Famille*") door Hector Malot [1878].

The first thing we did when we arrived in Boulogne was go to the harbour. Mattia had never seen the sea before. He stared into the misty depths of the far horizon for a while. Then he clicked his tongue and calmly told me that he found the sea dull, ugly and dirty.

"But Mattia, how is that possible?" I exclaimed, "The sea is the most beautiful thing in the world!".

"Well, when you used to tell me that before," said Mattia, "I used to believe you. But you were probably talking about the beautiful blue sea in Cette, under a blue sky. *This* sea is yellow and green under a gloomy sky. It doesn't look inviting at all".

But I didn't agree with him. I found the sea definitely still beautiful with its green hues, its misty look under an incredibly cloud-filled sky.

"I find this sea even more beautiful than the one in Cette!" I enthusiastically assured him.

"That's because you're an Englishman," Mattia answered, "You like this ugly sea because it's the sea of your fatherland."

The boat to London would leave the next morning at four o'clock

(Conversation between Remi and Mattia over the hues of the English Channel)

Excerpted from "*The Adventures of Remi*" ("*Sans Famille*") by Hector Malot [1878].