

琉球大学学術リポジトリ

沿岸工事とサンゴ礁：
沖縄における人工護岸の伸長、生息地の消失、海洋生態系への影響

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令和2年2月3日

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論文審査委員

主査 氏名 James Davis REIMER

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副査 氏名 中村 崇



学位（博士）論文審査及び最終試験の終了報告書

学位（博士）の申請に対し、学位論文の審査及び最終試験を終了したので、下記のとおり報告します。

記

申請者	専攻名 海洋環境学 氏名 Masucci, Giovanni Diego 学籍番号 XXXXXXXXXX	
指導教員名	James Davis REIMER	
成績評価	学位論文 <input checked="" type="checkbox"/> 合格 <input type="checkbox"/> 不合格	最終試験 <input checked="" type="checkbox"/> 合格 <input type="checkbox"/> 不合格
論文題目	Coastal construction and coral reefs: extension of the artificial coastline, habitat loss, and effects of coastal armoring on the marine ecosystem of Okinawa, Japan (沿岸工事とサンゴ礁: 沖縄における人工護岸の伸長、生息地の消失、海洋生態系への影響)	
審査要旨 (2000字以内)	Coastal construction and development on Okinawajima Island have been ongoing for many years. While construction may benefit human inhabitants, the effects on surrounding ecosystems are little studied but presumed to be negative. However, almost no studies have examined this topic in Okinawa or other subtropical and tropical locations. Given the ongoing development of Okinawajima Island's coastline, and increasing pressures on surrounding coral reef ecosystems, studies on this topic are urgently needed.	

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審査要旨

In his thesis, the candidate examined the current status of the coastline of Okinawajima Island from the point of view of coastal construction, and then followed this with an examination of the effects of armoring on the marine environment, specifically on physical characteristics and mobile benthos (cryptofauna). His results showed many new findings. First of all, the coastline of Okinawajima Island was shown to be 63% artificial and highly fractured, with large tracts of natural coastline still remaining in the northeast area of the island (Chapter 2). As well, coastal armoring was shown to alter the physical characters of coral rubble and sand (Chapter 3), with apparent negative influences on abundance and diversity of cryptofauna, as well as a loss of the “uniqueness” of diversity of each individual site (Chapter 4).

These results are of academic importance as our understanding of the current state of Okinawan coastlines and the influence of coastal construction were almost completely unknown before this study despite ongoing development. The candidate’s work can therefore be judged as being of an excellent academic level.

The candidate’s publication history related to this thesis meets graduation requirements, with two first author peer-reviewed papers, both in international journals. The candidate gave a final thesis presentation (=final examination) on February 3, 2020, in the Science Collaborative Building Room 102, from 1:00 p.m. to 2:00 p.m. in front of all three members of the Committee. This presentation was open to the public, and attended by many people from both inside and outside the university. In his presentation he discussed his major results. Overall, the candidate talked for approximately 40 minutes, and then appropriately answered numerous questions related to his thesis and research field for 20 minutes. The Committee then met on February 3, 2020, from 4:10 p.m. to 4:45 p.m., and discussed and judged the candidate’s thesis, and his final presentation and answers to questions, as meeting graduation requirements. Thus, based on the above results, for these reasons, the Committee unanimously recommended “Pass” for the candidate.