

琉球大学学術リポジトリ

スナギンチャク目（刺胞動物門、花虫綱）の海洋生物地理学、生態学、進化学的研究

メタデータ	言語: 出版者: 琉球大学 公開日: 2019-04-24 キーワード (Ja): キーワード (En): 作成者: Alves dos Santos, Maria Eduarda, アルヴェストス サントス, マリア エドゥアルダ メールアドレス: 所属:
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理工学研究科長 殿

論文審査委員
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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 ALVES DOS SANTOS MARIA EDUARDA 学籍番号 [REDACTED]	
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	Marine biogeography, evolution and symbioses: The order Zoantharia (Cnidaria: Anthozoa) (スナギンチャク目 (刺胞動物門、花虫綱) の海洋生物地理学、生態学、進化学的研究)	
審査要旨 (2000字以内) Although the order Zoantharia (Cnidaria: Anthozoa) is distributed worldwide, biogeographic patterns of zoantharians and their symbionts have been poorly known. In her thesis the candidate aimed to fill this gap with species' distributional data combined with ecological traits. In the first eight chapters, she explored Zoantharia diversity across the globe that included the investigation of several sibling species between ocean basins. In chapters 9 to 12, the candidate examined the evolution of traits in the order Zoantharia and their influence in species distribution. The candidate showed that endosymbioses with symbiodinians have flexible performances, which		

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審査要旨

may contribute to survival across environments. The candidate also revealed that sympatric *Palythoa* species evolved trophic niches with a distinct placement. Furthermore, ancestral reconstruction analyses indicated that traits such as symbioses and large polyp size were gain and lost multiple times. Lastly, she undertook global biogeographic analyses in chapter 13 and her results showed similar diversity centers for both Zoantharia and associated symbionts. The most notable patterns of Zoantharia zoogeography were that the majority of families/genera are widespread across shallow-water reefs and provinces of different oceans were grouped together.

These results are significant and of academic importance as our understanding of coral reef marine biodiversity and zoogeography has been limited to very few taxa, and more examples are needed from understudied groups such as Zoantharia. The candidate's work can therefore be judged as being of a high academic level.

The candidate's publication history related to this thesis more than meets graduation requirements, with three first author papers and two co-authored papers, all in peer-reviewed international journals. The candidate gave a final thesis presentation (=final examination) on February 7, 2019, in the Science Collaborative Building Room 102, from 10:00 to 11:00 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 her presentation she discussed her major results. Overall, the candidate talked for 40 minutes, and then appropriately answered numerous questions related to her thesis and research field for 20 minutes. The Committee then met on February 8, 2019, at 15:00, and discussed and judged the candidate's thesis, and her final presentation and answers to questions, as demonstrating her hard work, results, and knowledge. Thus, based on the above results, for these reasons, the Committee unanimously recommended "Pass" for the candidate.