琉球大学学術リポジトリ

カイメン類：
センナリスナギンチャク科の系統と多様性の研究

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（様式第５－２号）課程博士

2015 年 8 月 11 日

琉球大学大学院
理工学研究科長　殿

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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　MONTENEGRO GONZALEZ, JAVIER ANDRES　学籍番号　128613H	
指導教員名	James Davis REIMER	
成績評価	学位論文　合格　不合格	最終試験　合格　不合格
論文題目	Diversity and phylogeny of the sponge-parazoanthid association (カイメン類ーセンナリスナギンチャク科の系統と多様性の研究)	

審査要旨（２０００字以内）

The candidate investigated the diversity of the family Parazoanthidae (Cnidaria: Anthozoa: Hexacorallia: Zoantharia), focusing specifically on the genus *Parazoanthus*. Species of this genus are widespread in the world's subtropical and tropical marine regions, and are characterized by their association (usually obligate) with sponges. Recent molecular phylogenetic research has shown the genus was not a monophyly, and the candidate set out to re-examine and re-organize the taxonomy of the group using molecular and morphological examinations.

審査要旨

The candidate pursued research along two main lines; molecular phylogeny and ecology. His work resulted in the re-organization of the genus into three genera, all of which are monophyletic. The candidate also used DNA barcoding to identify sponge hosts, and then examined patterns of specificity between sponges and parazoanthid species. As well, the candidate developed software to examine the ecological patterns of coloration of the host sponges and parazoanthids, and then used this software to demonstrate different strategies (camouflage vs. bright coloration) in two of the Parazoanthidae genera, *Parazoanthus* and *Umimayanthus*.

Overall, the candidate has completed a large body of work substantially advancing our knowledge of the family Parazoanthidae, and opening new lines of research combining molecular, morphological, and ecological investigations. Throughout his study, the candidate has demonstrated a high level of academic achievement, with two first-author publications in high-level international journals. His work has also received attention from local, domestic and international media. The candidate's results show how important it is to search for biodiversity in previously under-examined environments and locations. Finally, alpha taxonomy research is a critical first step towards a more complete understanding of coral reef ecosystems, allowing for more effective and accurate management and conservation. Thus, based on the above reasons, the downstream results of this research will be seen in various fields from basic zoology and biogeography to ecological studies, and to conservation-related themes.

The candidate's publication history related to this thesis more than meets graduation requirements, with 2 first author papers, both in international journals. The candidate gave a final thesis presentation (=final examination) on August 7, 2015, in the Science Collaborative Building Room 102, from 13:00 to 14:00 in front of all four 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, and the implications for future parazoanthid-sponge research. Overall, the candidate talked for 40 minutes, and then appropriately answered numerous questions related to his thesis and research field for 20 minutes. The Committee then met on August 7, 2015, at 18:00, and discussed and judged the candidate's thesis, and his final presentation and answers to questions, as demonstrating his hard work, results, and knowledge. Thus, based on the above results, for these reasons, the Committee unanimously recommended "Pass" for the candidate.