

ANNUAL REPORT
FY2020



RESEARCH CORPORATION
OF THE UNIVERSITY OF GUAM





The photograph above was taken in connection with research authorized under the Andersen Air Force Base Recovery Permit TE-84876A-1 and funded by the Department of Navy on behalf of Joint Region Marianas.

BOARD OF DIRECTORS

The Research Corporation of the University of Guam is under the management and control of a ten-member Board of Directors. Board membership includes representation from the UOG Faculty Senate, the UOG Board of Regents, the UOG Research Council, UOG senior administrators, and members representing the community at large.

Dr. Thomas W. Krise

Chairperson/UOG President

Dr. Anita Borja Enriquez

Vice Chairperson/UOG Provost and Senior Vice President

Randall Wiegand

Treasurer/UOG Vice President of Administration and Finance & Chief Business Officer

Mari Flor Herrero (10/2019 - 6/2020)

UOG Board of Regents Representative

Agapito Diaz (9/2020 - Current)

UOG Board of Regents Representative

Lesley-Anne Leon Guerrero

UOG Board of Regents Representative

Dr. John Jenson

UOG Research Council Representative

Dr. Cheryl Sanguenza, Secretary

UOG Faculty Senate Representative

Joseph F. Ada

Community Member Representative

Dr. Artemio R.A. Hernandez

Community Member Representative

Ray Topasna

Community Member Representative

CREDITS

Photographs

Guam EPSCoR, G. Curt Fiedler, Kyle David Santos, and Laurie Raymundo

Layout

Kyle David Santos

Cover Photo

Graduate students outplanting fragments of *Heliopora coerulea* in two environments to test its efficacy for restoration.



RCUOG Core Team

Cathleen Moore-Linn
Executive Director

Gloria Travis
Chief Business Officer

Barbara Molarte
Accounting Specialist

Colleen Bamba
Human Resources Specialist II

Danica Batac
Accounting Analyst II

Sable Sablan
Grant Support Assistant III

Precious Nagallo
Grant Assistant I



FISCAL YEAR 2020 OPERATIONS

The Research Corporation of the University of Guam (RCUOG) marked several positive outcomes during Fiscal Year 2020 despite the turmoil caused by the global COVID-19 pandemic.

The University of Guam continues to experience record levels of grant activity with the award of a new five-year \$20M National Science Foundation funded Established Program to Stimulate Competitive Research (EPSCoR) grant, support for a new cycle of funding for the National Cancer Institute funded Pacific Island Partnership for Cancer Health Equity grant, and many other projects. The University of Guam’s grant activity exceeds that of its peer institutions and is remarkable for a small institution.

University of Guam faculty, the Office of Research and Sponsored Programs, the UOG Business Office and UOG Human Resources Office are RCUOG’s key partners and the Research Corporation could not function without effective collaboration with these units. The National Science Foundation and the Department of the Navy comprise approximately 50% of all grant funding in FY2020. However, the University of Guam continues to receive grants from U.S. Department of Agriculture, the National Institutes of Health, and many other federal agencies.

Notably, there were no findings regarding RCUOG operations in the University of Guam’s FY2019 audit under which RCUOG is reviewed as a component unit. RCUOG has had no questioned costs on any of the grants it services through five consecutive audits.

This report highlights the positive outcomes in FY2020 and the role RCUOG plays in supporting the University of Guam’s research projects while ensuring efficiency and compliance in daily operations.

Cathleen Moore-Linn
Executive Director



KEY PERFORMANCE INDICATORS

FY2020



6.8%

Increase in the number of grants supported



15.7%

Increase in grant expenditures which underscores efficiency



157

22% increase in the number of employees compared to the prior year



8

Travel grants awarded in FY2020. However, only one student was able to travel due to COVID-19 travel restrictions.

PURPOSE

The purpose of this report is to capture a snapshot of the organization after its 6th year of operation and to showcase how RCUOG supports research and outreach projects through its streamlined and efficient policies and processes.

POLICIES

The following policies were approved by the RCUOG Board of Directors to support efficiency within the organization, ensure RCUOG remains a competitive employer, and to support other activities of the Research Corporation:

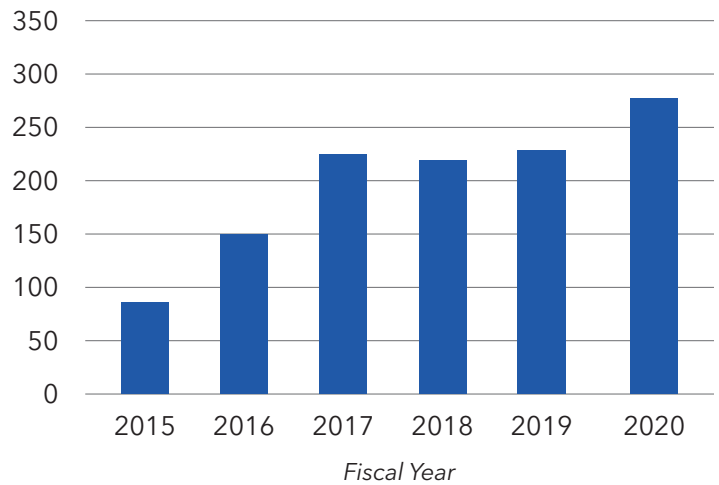
- Authorized the chairperson to establish a committee to negotiate and execute a public-private partnership and lease for the Guam Aquaculture and Development and Training Center
- Authorized the opening and closing of bank accounts or credit facilities
- Adopted an operating agreement between RCUOG and UOG
- Amended the administrative fee structure
- Approved a lease agreement and public private partnership for the Guam Aquaculture Development and Training Center
- Approved conducting Board of Directors meetings via video teleconferencing
- Approved a one-time rollover of up to 160 hours each of accrued annual leave and sick leave due to COVID-19
- Amended the chief business officer position description
- Amended the delegation of authority
- Amended the credit card threshold for RCUOG purchase cards.

HUMAN RESOURCES

RCUOG completed 279 personnel hiring actions in FY2020 compared to 231 hiring actions during the prior fiscal year. These hires include all temporary full-time and part-time positions based on availability of funds as well as summer salaries for UOG faculty for grant related work. At the end of FY2020, RCUOG employees numbered 157, with 75

full-time, 44 part-time, and 38 student employees. This marks an increase of 22% in the number of employees compared to the prior year.

RCUOG Personnel Actions Processed



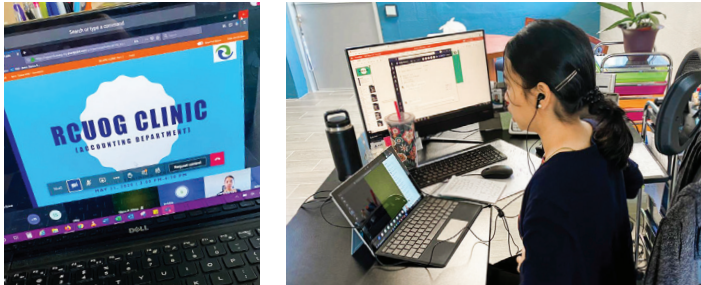
FINANCIAL TRANSACTIONS

The number of financial transactions, which includes purchase orders and contracts, decreased 24% in FY2020 compared to the prior year. This decrease is primarily due to the cancellation of a majority of travel authorizations due to COVID-19. Campus closure, split schedules, and teleworking slowed some business processes in FY2020, but most transactions were completed within 48 hours. RCUOG's streamlined procedures function in tandem with UOG systems in payroll, accounting, and human resources and these University offices are an instrumental part of RCUOG's efficiency.

RCUOG Financial Transactions



RCUOG utilized a core staff of five full-time employees and one part-time employee to support business processes and maintain efficiency. RCUOG staff also held workshops for various units to instruct users how to use RCUOG's digital business processes which enabled business to continue during the government shutdown.



FY2019 AUDIT

RCUOG is included as a component unit of the University of Guam with respect to the FY2019 audit. There were no findings regarding RCUOG activities in FY2019, which indicates that RCUOG continues to utilize strong internal controls which comply with federal regulations and its own policies. The FY2019 audit marked the fifth consecutive year of no questioned costs.

REVENUE

The Research Corporation is required by Public Law 32-114 to be self-sufficient. To achieve this, RCUOG relies on revenue generated through its share of indirect costs and administrative fees. In FY 2020, RCUOG received 18% of grant generated indirect cost revenue equating to \$251,611 and \$241,439 in administrative fees for a total of \$493,050.

Total grant expenditures for FY 2020 were \$10,336,779 which is an increase of 15.7% over the prior year's expenditures of \$8,931,300. Grant expenditures are a key performance indicator because the indirect costs generated through grant activity covers overhead associated with that activity both at UOG and RCUOG.

At the end of the fourth quarter, RCUOG provided support services to 125 different grants, an increase of 6.8% over the FY 2019 fourth quarter total of 117 grants.

GUAM AQUACULTURE DEVELOPMENT AND TRAINING CENTER

The enactment of Public Law 35-43, which transferred 1.5 acres of land from the Chamorro Land Trust Commission (CLTC) to the University of Guam, resolved the long-standing boundary issue affecting the Guam Aquaculture Development and Training Center (GADTC). In January 2019, the RCUOG Board of Directors leased GADTC to CoreSeed Aquaculture to support the development of Guam's aquaculture industry. CoreSeed invested approximately \$300K in GADTC facilities in FY2020. CoreSeed sold pathogen-free shrimp and red tilapia via the Fisherman's Coop to the local market. The COVID-19 pandemic affected exports of brood stock, but CoreSeed remains optimistic about future sales.

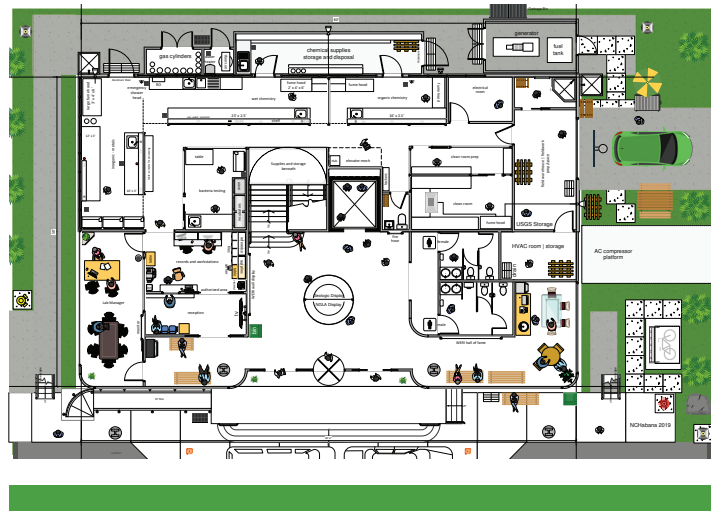


RCUOG has an outstanding obligation to the Chamorro Land Trust Commission to conduct phase II agriculture training. The pandemic and closure of government of Guam offices delayed training activities. Once the government resumes regular operations, Dr. Bob Barber and Mark Acosta, both of the College of Natural and Applied Sciences, will reengage with CLTC administration to complete the final step in the process.



US EDA GRANT APPLICATIONS

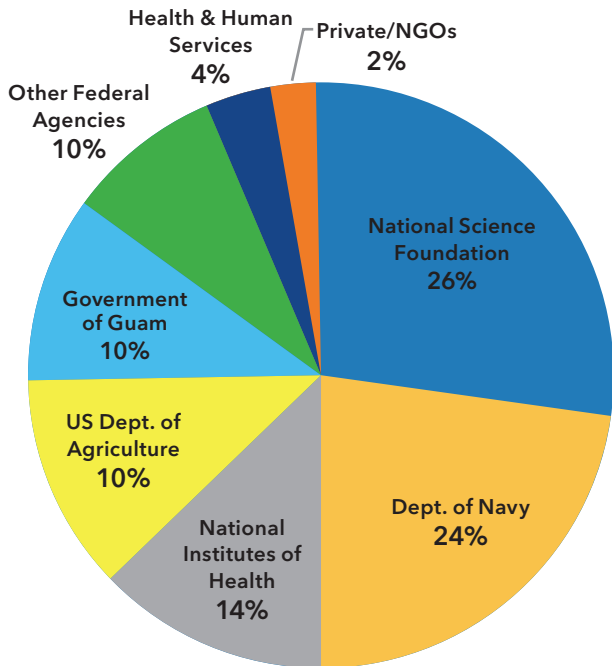
In FY2020, the RCUOG executive director, in collaboration with teams from the Water and Environmental Institute of the Western Pacific (WERI), the School of Health, the School of Engineering, Global Learning and Engagement and the Office of Research and Sponsored Programs, submitted four construction applications to the US Economic Development Administration. Of these, two projects were recommended for additional review and possible funding. A new WERI research facility and water quality testing laboratory and a nursing extension building, totaling \$8.5M in construction grant funding, are under final review by US EDA.



FOCUS ON RESEARCH

The chart below provides a breakdown of grants by funding agency. Federal agencies, Government of Guam agencies, and non-profit foundations partner with the University of Guam and RCUOG to produce research and service outcomes. The Research Corporation, with a focus on efficiency, provides support to scientists who pursue research projects that have a direct, positive, and lasting impact on Guam and the region.

FUNDING SOURCES

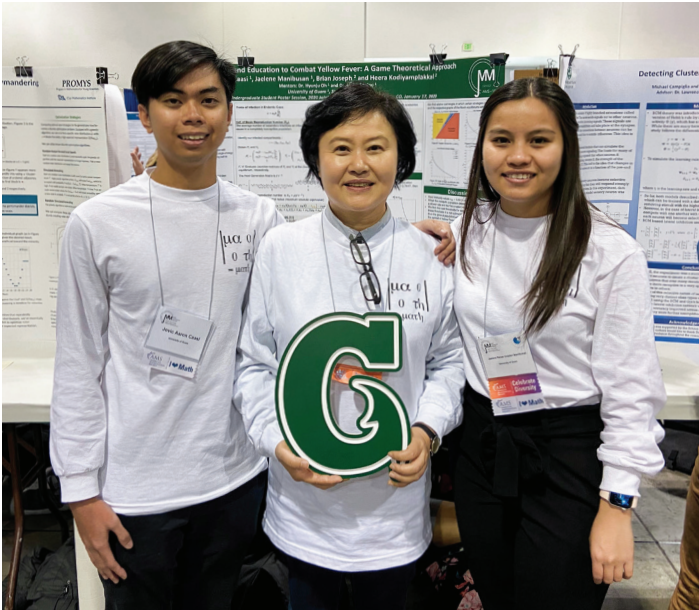


- National Science Foundation
- National Institutes of Health
- Dept. of Navy
- US Department of Agriculture
- Other Federal Agencies
- Private/NGOs
- Government of Guam
- Health & Human Services



TRAVEL GRANTS

RCUOG is able to offer travel awards to students using mileage accrued from purchases made with the RCUOG official credit card in accordance with Public Law 32-019. RCUOG management and staff are delighted to play a small part in supporting students' academic endeavors. RCUOG has supported a total of 34 awards since it first began offering the travel award in 2017.



Jovic Caasi, Dr. Hyunju Oh, and Jaelene Untalan Manibusan at the Mathematical Association of America conference.

Eight University of Guam students received RCUOG travel awards to support education related travel in 2020. Of the recipients, only Jovic Caasi, computer science and mathematics major, was able to use his travel award when he presented his research poster on Vaccination and Education to Combat Yellow Fever: a Game Theoretical Approach at the Mathematical Association of America conference in Denver, Colorado in January 2020.

All other awardees were not able to travel due to COVID-19 pandemic travel restrictions. Nevertheless, the following recipients are included in this report to document their selection and to recognize individual merit and faculty support required of all recipients.

Graduate student Mari Deinhart planned to travel to Chuuk, Pohnpei, Kosrae, and Majuro in April to collect samples of an ecological keystone coralline algae to further expand the DNA database of reef organisms in the western Pacific.

Kanna Seki, a UOG psychology major, planned to use the award to participate in an exchange program at Aoyama Gakuin University.

Jullian Briosos, Jun-Patrick Salalila, Prairie Garrido, Rahul Kirplani, and Sofia Meneses planned to travel to Australia to present their research projects at the International Conference on Business, Economics, and Information Technology in Sydney in March. Instead, students shared their presentations online and in person at the UOG School of Business and Public Administration before the University of Guam closed its campus.



RCUOG Team with travel award recipients (L-R): Gloria Travis (RCUOG Chief Business Officer), Jullian Briosos, Rahul Kirplani, Jun-Patrick Salalila, Kanna Seki, Jovic Caasi, Sofia Meneses, Prairie Garrido, and Cathleen Moore-Linn (RCUOG Executive Director).

RENOVATION OF HOUSE #24



RCUOG renovated Dean Circle House #24 in 2020 and moved into the new office space in April 2020. House #24 is larger and provides additional office space to support the RCUOG core team. It cost approximately \$37,700 to renovate the building and create a conducive work environment for the Research Corporation.

FINANCIAL STATEMENT

RCUOG REVENUE & EXPENSE/BALANCE SHEET

REVENUE & OTHER ADDITIONS

Federal Grants	8,424,661.39
GovGuam Grants	1,311,144.00
Private Grants	475,854.60
Miscellaneous	1,475,310.49
Transfer from UOG	10,000.00
Total Revenue & Other Additions	11,696,970.48

EXPENDITURES & OTHER DEDUCTIONS

Salaries	4,691,760.34
Fringe Benefits	481,481.36
Travel On/Off Island	278,238.71
Contracts	2,174,107.82
Supplies	653,050.01
Equipment	290,010.02
Capital Outlay	239,514.95
Miscellaneous	1,528,615.79
Total Expenditures	10,336,779.00

Increase/Decrease this Year	1,360,191.48
Fund Balance Beg.	1,629,545.91
Fund Balance, End	2,989,737.39

BALANCE SHEET

ASSETS

Cash in Bank	519,921.22
Account Receivables	2,416,995.20
Advances to Supplier	35,679.91
Advances to Traveler	-
Total Assets	2,972,596.33

LIABILITIES & FUND BALANCE

A/P Contracts	1,527.24
Accrued Payroll	6,381.79
Due to/fr Unrestricted	(25,050.09)
Fund Balance End	2,989,737.39
TOTAL LIABILITIES & FUND BALANCE	2,972,596.33



LIST OF GRANTS & CONTRACTS

In FY2020 RCUOG provided support services to the following grants:

AAFB Urban Brown Tree Snake Control

Abstinence Education

AECOM Fish Collection

Autonomous Control Technology for Unmanned Aerial Systems with Agricultural and Environmental Applications in the Central Pacific Islands

Biological Control Asian Citrus Psyllid, *Diaphorina citri*, in Guam

Biological Control of Coconut Rhinoceros Beetle

Biomonitor Support for Natural Resource Management JRM Areas of Responsibility

Building Coral Resilience and Facilitating Post Bleaching Recovery

Building Leadership Skills for Diverse Japanese Students

Butterfly & Snail Monitoring

Capacity Building of Clinical Trials

Capacity Improvement for Agricultural Biotechnology

CAPS- Citrus Pest-HLB

CAPS- Honey Bee

CAPS- Invasive Ants

CAPS- Nursery Survey

CC Network Design: Upgrading the UOG Network to Connect to Internet2 and Create a Science DMZ - OAC 1659182

CESU Water Quality Monitoring

Cetti Bay Watershed Monitoring

CNAS-USDA Control of Coconut Rhino Beetle

CNAS-USDA CRB Harmonic Radar

Consortium for Sustainability Outcomes Seed Funding for the Solar Spell

Continued HMU Eradication Evaluation

Coral Mitigation Plan for the GTA Conduit Installation and SEA-US Cable Landings, Piti

Course in Tropical Forest Ecology of the Mariana Islands



Cycad Monitoring and Management on Anderson Air Force Base

Data Analysis Post-Doctoral Fellowship

Development of Reef Restoration

Develop a comprehensive implementation plan for Phase I of the North Finegayan Forest Enhancement Site located within JRM AOR

Developing a Simple Genetic Toolkit to Assess and Predict Stress Levels in Guam Corals

Developing Chamoru Language Infrastructure

Development of a Skilled Workforce for Orchid Nurseries on Guam

Don't Pack a Pest Outreach

Eight Spot Butterfly

Enhance the Health and Resilience of Natural and Agroforests

Enhancing Awareness of Coconut Rhino Beetle and Little Fire Ants in Micronesia

Enhancing Local Knowledge to Sustain a Forest Inventory and Monitoring Program through the

Pacific Islands

Enhancing Marine Science Capacity in the Western Pacific through Science Internships at UOG

Environmental Education Outreach Awareness on Naval Base Guam

Establishment of self-sustaining Biological Control of Coconut Rhino Beetle

Estimate the Amount of Nest and Nestling Predation that Reintroduced Native Bird Species Could withstand while Maintaining Stable or Growing Populations of Native Birds.

Evaluate the Potential Utility and Nontarget Hazards of Toxic Bait use in Response to Potential Future Discoveries of incipient Populations of Invasive Brown Tree Snakes in the CNMI

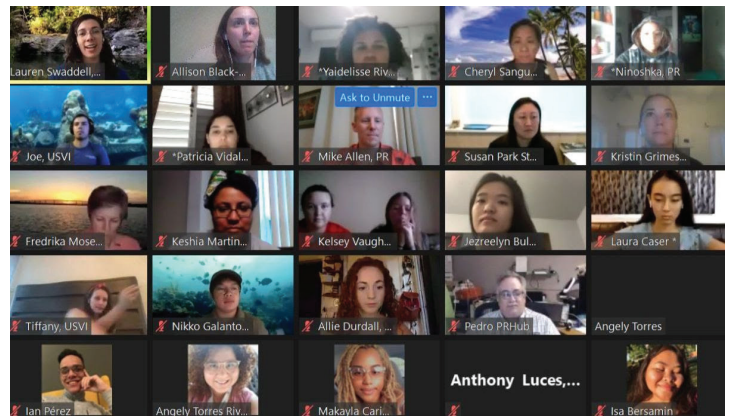
FIA Regional

Forest Bird Monitoring & Assessment on Tinian Joint Region Marianas Leased Lands

Forest Inventory

Fruit Bat Monitoring on Guam

Fruit Fly Survey



G3 GEDA Circular Economy

Geocore: Geospatial Studies of Reef Ecology and Health using Satellite and Airborne Data

Geotechnical Investigation of Rainfall-induced Landslides in Piti-Asan

Geriatrics Workforce Enhancement Program

Getting Guam Healthy MOU with DPHSS "Walk to Wellness Program"

GROW GUAM

GU 20 UOG PPA Solanaceous Survey

Guam Cancer Registry

EPSCoR Guam Ecosystems Collaboratorium

EPSCoR Guam Ecosystems for Corals and Oceans

Guam Health Providers Cancer Symposium

Guam Mollusk Survey

Guam Restoration of Watersheds: GROW Ugum

Geriatrics Workforce Enhancement Program - COVID Response

Hawaii Space Grant Consortium 2020-2024

Herbarium Improvement

Hyperucicaemic Trail

Identifying key Reef Sites for the Management and conservation of Coral Genetic Diversity and Resilience

Improvement of Seed Distribution System of Heirloom Plants

Improvement of Tropical Agriculture and Food Science Research at UOG

Invasive Plant Control within Joint Region Marianas Area of Responsibility

LFA Survey, Perimeter Monitoring and Eradication at Anderson South

Little Fire Ant Management in Cotal Conversation Forest

LRS 2018 Guam Forestry Watershed Restoration Project

Micronesian Conservation Trust Advancing Science

MGT-Invasive Vegetation (Ironwood), Wake Island Cooperative Agreement

Micropropagation of Guam's Native Trees

Building Staghorn Coral Community

MOA Between LMS and UOG

Montana State University - WSARE Development of Alternative and Sustainable Farming Methods Compatible with Sustained Human and Environmental Wellbeing.

Montana State University - WSARE Sustainable Agriculture and Education

NASA EPSCoR Research Infrastructure Development Program

NASA RID 2020

Northern Marianas Community College Insect Collection

Northern Guam Lens Aquifer Monitoring System

NRMP Hammerhead Shark in Apra Harbor and Orote Point

NSF Inclusion Across the Nation of Communities of Learners in Underrepresented Discoverers in Engineering and Science (INCLUDES): Supporting Emerging Aquatic Scientists Island Alliance

NSF INCLUDES DDLP: STEM Engagement and Participation in Native Pacific Islander communities

Oryctes rhinoceros nudivirus for biocontrol of the Guam biotype of the coconut rhinoceros beetle.

Outreach and Education to Inform Public on How to Reduce the Impact of the LFA Invasive Species

Pacific Island Climate Science Center Graduate Scholars and Summer Undergraduate Research Fellowship programs

Pacific Island Partnership for Cancer Health Equity (PIPCHÉ)

PFM Contract- Granite Obayashi, Hensel Phelps, SWCA, Granite Obayashi, and EA Engineering.

Phylogenetic Study of *Serianthes nelsonii*

Plant and Invertebrate Surveys JRM Area of Responsibility as Specified on Guam and CMNI

Postdoctoral Entomologist to Develop Biological Control of the CRB

PRCCR

Project Launch

Promoting Beginning Farmer Training

RCUH PACIOOS

Reducing Tree Decline of *Casuarina equisetifolia* in Guam Through Replacement of Bacterial Wilt Infected Trees and Research into the Bacterial Microbiomes of Trees and Associated Termites.

Removal of Dead Coconut Trees (CRB breeding sites) Surrounding AB Won Pat Int'l Airport and Jose D. LG Port Authority

Research and Rapid Response to Control the Brown Tree Snake on Guam

Resident Instruction Grants Program for Institutes of Higher Education in Insular Areas

Restoring Staghorn Corals and Ecosystem Services on Reef Flats in Guam

Sea Turtle Aerial Surveys in Farallon De Medinilla

Sea Turtle Monitoring, Protection, and Educational Outreach on AAFB

Serianthes nelsonii Monitoring AAFB

Soil Bioengineering Techniques

STEM Pathways and Research Alliance: Islands of Opportunity

Sub Award UOG/UH Cancer Center Partnership

Subaward UH Children's Health Living Center of Excellence to Collect Child Health Data on Guam and support CHL Intervention Training

Tasi Guides Program

The Guam Terrestrial Snail Inventory

Training & Technical Support for UOG Faculty Developing STEM Courses for On-line Delivery

Training Capacity for the Guam Cultural Repository (Guam Technical Assistance Program)

Treating LFA infested forest and utilize drone technology to assist in eradication efforts

U24 Cardiometabolic Diseases

University of Guam Sea Grant Omnibus Proposal 2018-2022

Vegetation Restoration for the Habitat Management Unit AAFB

Wetlands Protection Development - Guam Watershed

BUILD EXITO with Portland State University

WSARE Adapting New Farmer

WSARE Implementation 2020 for Guam

WSARE Training Network





RESEARCH CORPORATION
OF THE UNIVERSITY OF GUAM

ANNUAL REPORT FY2020