CNMI DLNR Invasive Species Program

2024 CITIZEN CENTRIC REPORT

The Vision

To establish a resilient biosecurity framework that safeguards the people and natural resources of the CNMI, preventing and eliminating invasive threats with unwavering commitment and proactive measures.

The Mission

To lead proactive and effective measures to prevent, control, and eliminate invasive species, ensuring the protection and preservation of the CNMI's natural resources and communities.

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Invasive Species Program
Department of Lands & Natural Resources

About the Program

First funded in 2018 through grants from the U.S. Department of the Interior's Office of Insular Affairs (OIA)

The CNMI faces persistent threats from invasive species, which have the potential to severely impact our natural environment, native wildlife, public health, and way of life. These invasive species could devastate our food crops, harm pets and livestock, erode cultural traditions, and diminish the quality of life for our residents, including our vital tourism industry. It is crucial to detect and eradicate invasive species at the earliest stages before they have a chance to spread and cause widespread damage.

Our strategy centers on Early Detection and Rapid Response (EDRR)—a coordinated effort to confront and control the threat of invasive species before they gain a foothold. The CNMI upholds a strict zero-tolerance policy toward any invasive species; any pests discovered at our borders are immediately eliminated.

Under the Department of Lands and Natural Resources, the Invasive Species Program actively manages two high-priority projects: the Mucuna Pruriens Eradication Project on Saipan and the Coconut Rhinoceros Beetle (CRB) Detection, Prevention, and Eradication Program in Rota. Both initiatives are funded by the Department of Interior Office of Insular Affairs, reflecting our steadfast commitment to safeguarding our islands from invasive threats.

Meet the Team

PROGRAM ADMIN
Natashia N. Tomokane - *Invasive Species Coordinator*
Renee Celis - *Administrative Assistant*

MUCUNA PRURIENS PROJECT
Jesse Deleon Guerrero, *Invasive Species Technician*
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COCONUT RHINOCEROS BEETLE PROJECT
Mark Manglona - *CRB Field Supervisor*
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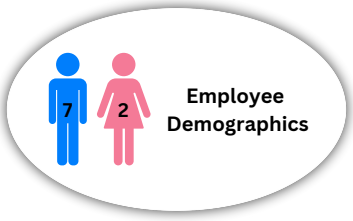


PROJECT DETAILS

What is the Coconut Rhinoceros Beetle?

The Coconut Rhinoceros Beetle (CRB) is a highly invasive and destructive species, known for its glossy brown or black shell and distinctive horn-like structure. This aggressive pest primarily targets coconut trees, a crucial component of island ecosystems. By burrowing into the crown of a palm, the CRB chews on fronds and feeds on the tree's nutrient-rich sap. This behavior causes significant damage over time, weakening the palm, stunting its growth, compromising its structure, and ultimately leading to its death.

The situation is especially concerning on the island of Rota in the Commonwealth of the Northern Mariana Islands (CNMI), where the CRB has become a serious threat. With no natural predators in the Pacific, the CRB has been able to spread across the island, endangering Rota's iconic coconut trees. Coconut trees are vital for Rota's coastal protection, soil stability, and cultural identity, making the beetle's presence particularly alarming. The loss of coconut trees not only affects the local ecosystem but also has far-reaching economic consequences, given the significance of these trees to Rota's tourism-based economy.

In regions like the CNMI, and particularly on Rota, coconut palms are more than just trees—they are a cornerstone of the island's natural and cultural landscape. The widespread destruction caused by the CRB could undermine the island's tourism industry, leading to substantial financial losses. The aesthetic appeal and ecological health of the region are closely tied to the survival of these palms.

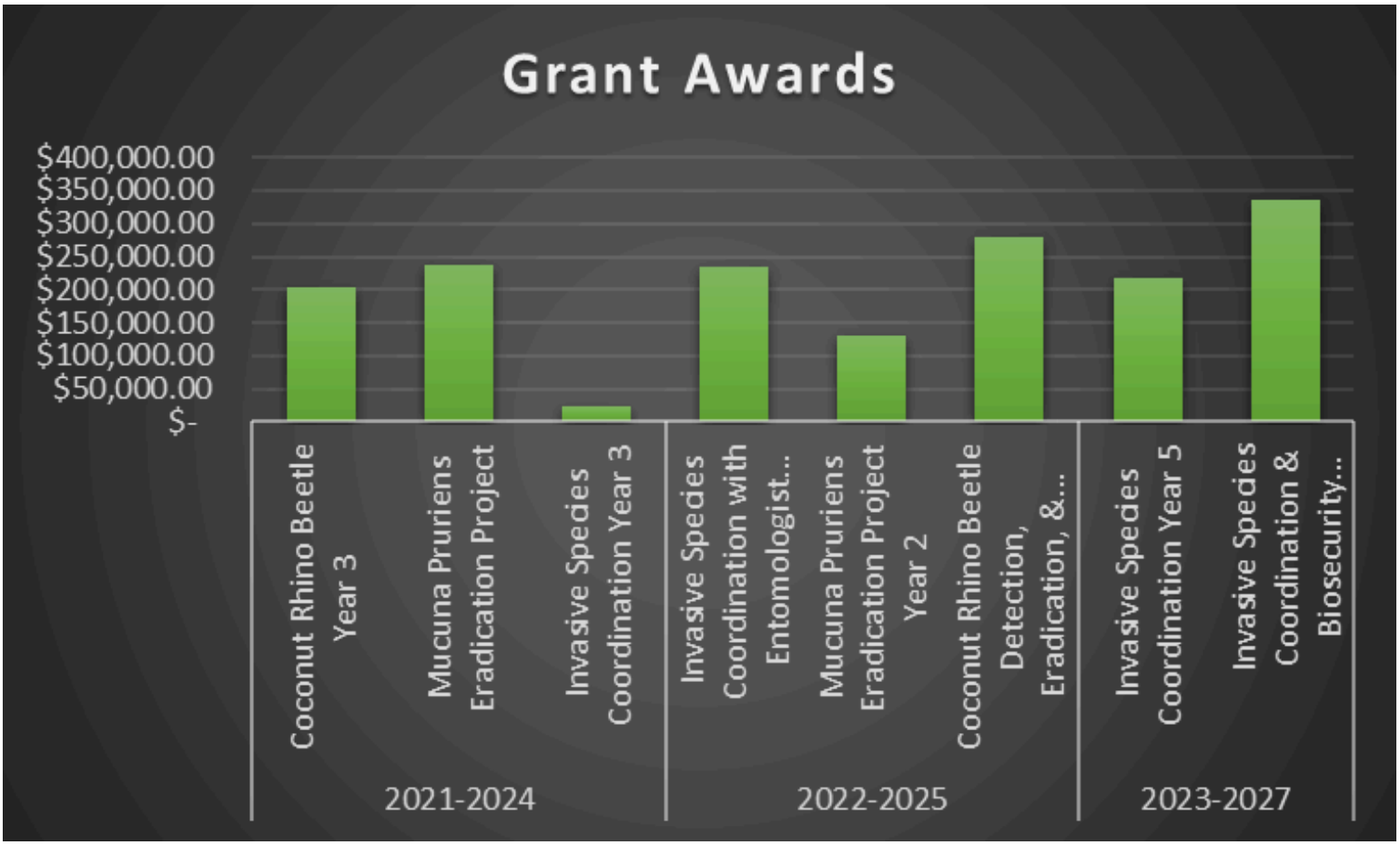
The presence of the Coconut Rhinoceros Beetle in the CNMI highlights the urgent need for comprehensive monitoring, early detection, and effective response strategies to prevent further damage. Implementing robust management measures is critical to protecting the biodiversity, natural beauty, and economic stability of Rota and other vulnerable island communities in the Pacific.

What is Mucuna Pruriens?

Mucuna pruriens, a non-native and highly invasive vine species, was unintentionally introduced to Saipan approximately 30 years ago, and it has since spread rapidly across the island. Known for its aggressive growth, Mucuna pruriens poses serious threats to Saipan's environment, infrastructure, and public health. This invasive plant thrives in tropical climates, often forming dense canopies that smother native vegetation and alter local ecosystems. The vine's rapid proliferation not only disrupts biodiversity by outcompeting native flora but also threatens agricultural lands, increases the risk of fire by contributing to a build-up of dry plant matter, and burdens infrastructure with its extensive, clinging growth.

One of the most concerning aspects of Mucuna pruriens is its production of toxic compounds—namely, serotonin and mucunain—upon maturation. These compounds can cause intense itching, severe skin irritation, and allergic reactions in humans. For those with preexisting skin conditions, such as eczema or psoriasis, exposure to the vine's tiny, barbed hairs (known as trichomes) can lead to severe reactions, with some cases even requiring hospitalization. This health hazard has led to widespread concern, particularly in populated areas and places where community members frequently interact with vegetation, like parks, hiking trails, and agricultural zones.

PROGRAM FUNDING



The CNMI faces a persistent challenge in managing invasive species that threaten its unique ecosystems, agricultural productivity, and public health. Recognizing the gravity of this issue, the CNMI has launched a series of invasive species management and eradication projects aimed at addressing the most pressing threats, including Mucuna pruriens, the Coconut Rhinoceros Beetle, and other harmful non-native species.

These crucial initiatives are made possible through generous grant funding provided by the U.S. Department of the Interior's Office of Insular Affairs (OIA). The OIA has designated a portion of its resources to specifically support the CNMI's invasive species efforts under its Invasive Species Coordination Grant program. This grant is pivotal in helping local teams coordinate eradication efforts, increase community engagement, and monitor invasive populations effectively.

Further, the Coconut Rhinoceros Beetle Eradication Grant targets the beetle's devastating impact on coconut palms and agricultural stability. Coconut palms are central to both CNMI's ecosystem and economy, and the beetle's presence has created severe ecological and economic strain. This grant enables focused eradication and containment efforts, protecting one of the island's most valuable natural resources.

Lastly, the Mucuna Pruriens Eradication Grant is directed at controlling the spread of this hazardous vine species, which has proliferated across Saipan. The funds provided through this grant support the manual and chemical removal efforts of Mucuna pruriens, as well as ongoing public education and preventative measures to curb its future spread.

Together, these grants from the Office of Insular Affairs have fortified CNMI's ability to respond proactively to the threats posed by invasive species, enhancing the resilience of local ecosystems, promoting biodiversity, and supporting public health. Through the continuous partnership with OIA, CNMI remains committed to safeguarding its environment and community from invasive threats, building a foundation for a sustainable and thriving future.

BIOSECURITY & PUBLIC AWARENESS EFFORTS

Biosecurity Training Planning

Regional Invasive Species Council

Partnership Meeting with CNMI Customs

Debriefing & Update Meeting with Rota Mayor Aubry Hocog

OIA Visit to the CNMI

Outreach Program with Rota PSS Students

26th Annual Micronesian Islands Forum

RISC Stakeholder Debriefing Meeting