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October 11, 2024

TO: Advisory Committee on Plants and Animals

FROM: Jarett Lau
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SUBJECT: Request for: (1) A Finding that the Unrestricted Inter-Island Movement of Palm Plants in the Genera *Cocos*, *Livistona*, *Phoenix*, *Pritchardia*, *Roystonea*, and *Washingtonia*; Decomposing Plant Material Such as Compost, Wood or Tree Chips, and Mulch, Plant Propagation Media; and Other Items Comprised of Decomposing Organic Plant Material Such as Landscaping Material or Erosion Control Socks, to Prevent the Movement of Coconut Rhinoceros Beetle, *Oryctes rhinoceros*, From the Island of Oahu, Constitutes an Emergency Justifying Issuance of an Interim Rule; and

(2) A Finding that the Issuance of an Interim Rule to Restrict the Inter-Island Movement of Palm Plants in the Genera *Cocos*, *Livistona*, *Phoenix*, *Pritchardia*, *Roystonea*, and *Washingtonia*; Decomposing Plant Material Such as Compost, Wood or Tree Chips, and Mulch, Plant Propagation Media; and Other Items Comprised of Decomposing Organic Plant Material Such as Landscaping Material or Erosion Control Socks, is Required to Prevent the Spread of the Coconut Rhinoceros Beetle, *Oryctes rhinoceros*, From the Island of Oahu to Un-infested Areas Within the State.

I. Introduction

The Hawaii Department of Agriculture (HDOA) Plant Quarantine Branch (PQB) is proposing to issue an interim rule to establish a quarantine to restrict the inter-island movement of palm plants in the genera *Cocos*, *Livistona*, *Phoenix*, *Pritchardia*, *Roystonea*, and *Washingtonia*; decomposing plant material such as compost, wood or tree chips, and mulch; plant propagation media; and other items comprised of

decomposing organic plant material such as landscaping material or erosion control socks, to prevent the spread of the Coconut Rhinoceros Beetle (CRB), *Oryctes rhinoceros*, the Island of Oahu to other islands in the State.

II. Background

On November 15, 2013, an adult Coconut Rhinoceros Beetle (CRB) was collected on the international arrivals baggage floor of the Honolulu International Airport. Positive identification was obtained on November 20, 2013. At this time, it was thought that this was an isolated incident and that the CRB had hitchhiked on baggage or had been someone's pet.

On December 23, 2013, an adult beetle was collected in a trap setup to monitor for another palm pest, the Red Palm Weevil, at the Joint Base Pearl Harbor Hickam (JBPHH). Positive identification of the specimen collected was obtained on January 3, 2014.

On January 8, 2014, a large area containing coconut green waste on JBPHH was found to be heavily infested with all life stages of CRB.

Since the initial detection of Coconut Rhinoceros Beetle (CRB) on Oahu, its spread has continued from the initial site to Central and West Oahu, extending to the North Shore and the Windward side. CRB detections have also been reported on Maui, Kauai, and Hawaii Island. In late May 2023, CRBs were discovered on a golf course in Kauai. The first treatment was conducted in October 2023, followed by a secondary treatment in January 2024. In late August 2023, a single dead adult CRB and six larvae were found inside a dead tree trunk on Maui, prompting a treatment of the area in September 2023. Since that time, no new reports of CRB have been recorded on Maui. Lastly, in October 2023, an adult CRB was captured in a residential trap in Waikoloa. Trees in the area were treated in August 2024, and since then, only one additional adult has been captured in a residential trap in Waikoloa in. This capture was done in September of 2024.

PEST DESCRIPTION: CRB, *O. rhinoceros*, is a significant pest as adult beetles bore into the crowns of palm trees (mostly coconut palms) to feed on the sap produced by wounded trees. New unopened fronds are damaged in this way and when fully opened may break and fall from the tree unexpectedly. If the beetles kill or damage the growing point of the palm, the tree may die. Secondary fungal or bacterial pathogens may also attack the wounded area caused by the beetle, thereby killing the tree as well. Tree mortality after attack has been reported to be anywhere from 10% to 50%. Dead trees are a safety hazard as they may fall unexpectedly after the trunk rots causing bodily injury or property damage. Furthermore, dead trees also become preferred breeding sites for CRB once the top of the tree starts decomposing.

Adult beetles also use mulch, compost, or other similar decomposing plant material as breeding sites. CRB can spread inadvertently when infested mulch or compost is moved from one location to another, including interisland movement.

Any life stage (i.e. eggs, larvae, pupae, or adult beetles) may also be transported purposefully as adult beetles may be kept as pets (a practice common in Asia) and possibly bred for the pet trade.

CRB larvae may grow up to 3 inches in length and may measure more than a ½ inch wide. Larvae have 3 instars with each instar larger than the previous one followed by a molt. During its first two instars, CRB larvae may be easily confused with the larvae of a related species, the Oriental Flower Beetle, *Protaecia orientalis* (OFB). Larvae of the two species can be quickly differentiated in the field. CRB larvae have a larger head capsule than OFB and lack the raster (line of hair at by the tip of the abdomen) that OFB has. Larvae live in decomposing plant material such as mulch or compost piles, animal manure and even in the crowns or trunks of palm trees where enough plant material has been built up over time to support larval development.

Adult CRB are large, growing up to 2 inches in length. They are generally black in color and have a horn on the top of their head. Although female beetles generally have shorter horns, they are distinguishable from males by the presence of reddish hairs on the tip of their abdomen (Vargo, 1995).

III. Procedural Background

Pursuant to section 150A-9.5, Hawaii Revised Statutes (HRS), the HDOA may establish an interim rule governing the transport of flora and fauna into and within the State. Pursuant to §150A-9.5(b), HRS, an interim rule may be adopted in the event that the importation or movement of any flora or fauna, in the absence of effective rules, creates a situation dangerous to public health and safety or to the ecological health of flora or fauna present in the State which is so immediate in nature as to constitute an emergency. An interim rule cannot be adopted without a prerequisite finding by the Advisory Committee on Plants and Animals that the foregoing criteria is met. An interim rule shall not be effective for more than one year.

Once adopted by HDOA, an interim rule must be published within twelve days of issuance at least once in any newspaper of general circulation in the State.

IV. Authority

Chapter 4-72, Hawaii Administrative Rules (HAR), the HDOA's Plant and Non-Domestic Animal Quarantine, Plant Intrastate Rules, regulates the intrastate movement of plants, generally. Section 4-72-3, HAR, requires inspection of propagative plants and plant parts prior to being transported between islands of the State. Section 4-72-4, HAR, prohibits interisland movement of commodities infested with a pest unless treated with a pesticide that exterminates the pest. An interim rule provides the means for quarantine and safeguard measures to restrict or prohibit the movement of pests and their plant or commodity hosts to prevent the spread and establishment of pests that are detrimental to agriculture, horticultural industries, and forest lands on uninfested islands and in uninfested localities of the State.

V. Proposed Interim Rule

The proposed interim rule establishes a quarantine to restrict the movement of CRB host material, including palm plants in the genera *Cocos*, *Livistona*, *Phoenix*, *Pritchardia*, *Roystonea*, and *Washingtonia*; decomposing plant material such as compost, wood or tree chips, and mulch, plant propagation media; and other items comprised of decomposing organic plant material such as landscaping material or erosion control socks, from areas designated to be infested with CRB to other non-infested islands in the State.

An interim rule is necessary to prevent the further spread and establishment of CRB. This is an emergency situation because the Coconut Rhinoceros Beetle poses a severe and imminent threat to Hawaii's native ecosystems, agriculture, and tourism industries. If CRB continues to spread unchecked, it could lead to significant damage to palm species and other plants essential to Hawaii's landscape and economy. Immediate action is critical to prevent the beetle from infesting new areas, especially non-infested islands, where the cost and difficulty of containment and eradication would increase exponentially. The rapid implementation of this rule is crucial to halt the beetle's expansion and safeguard Hawaii's natural resources.

Impact of Quarantine: This quarantine is intended to prevent the spread of CRB from areas of infestation to other areas. CRB will severely impact the use of large palm plants, particularly coconut palms, which are used extensively for landscaping. With the recent wildfires on Maui and Hawaii Island, and subsequent restoration efforts for soil/water quality remediation, if effective measures are not taken immediately to control the spread of this pest, then CRB could spread statewide. If CRB spreads further, additional, and potentially significant, economic burdens will be placed on local landscaping industries. Further spread of CRB also threatens native palm species, many of which are found only in Hawaii.

Boundaries of Proposed Quarantine Zones: HDOA proposes to establish a quarantine to including the entire island of Oahu. To protect the rest of the State of Hawaii, restricting the inter-island movement of potentially infected material from Oahu and all other infested areas is crucial. Past quarantines utilized established, defined quarantine zones within a specific island (for example, Banana Bunchy Top and Coffee Berry Borer on Hawaii Island), however the established quarantine zones were quickly breached, and island-wide spread quickly occurred. Focusing the Department's limited resources at the ports of entry allows for much greater control of CRB spreading.

Quarantine exceptions: The proposed interim rule will allow the movement of regulated CRB host materials such as palm plants in the genera *Cocos*, *Livistona*, *Phoenix*, *Pritchardia*, *Roystonea*, and *Washingtonia*; decomposing plant material such as compost, wood or tree chips, and mulch; plant propagation media; and other items comprised of decomposing organic plant material such as landscaping material or erosion control socks, under permits issued by the PQB, subject to treatments and other mitigation measures to prevent the spread of CRB.

This interim rule does not impose additional restrictions on the movement of the following: approved nursery stock material, provided it is shipped directly from an infested area to a destination outside of the State and does not pass-through any part of the State; unsprouted seeds of palm plants in the genera *Cocos*, *Livistona*, *Phoenix*, *Pritchardia*, *Roystonea*, and *Washingtonia*; plant products intended for consumption, such as coconuts, fruits, nuts, edible leaves, leaves used for cooking, and spices; plant products preserved from decay by treatment or intended use, such as lumber, woven hats, wooden posts, wood carvings, and firewood; and cut flowers and foliage for decoration, such as lei, floral bouquets, or arrangements.

A copy of the proposed interim rule is attached at the end of this submittal.

ADVISORY COMMITTEE REVIEW: We request your recommendation (finding) to adopt this interim rule and for any comments at the next meeting of the Advisory Committee on Plants and Animals.