

State of Hawai‘i
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawai‘i 96813

December 9, 2022

Board of Land and Natural Resources
State of Hawai‘i
Honolulu, Hawai‘i

REQUEST FOR FORMAL BOARD ACTION PURSUANT TO SECTION 187A-5(b),
HAWAII REVISED STATUTES, TO APPROVE ADOPTION OF RULES EFFECTIVE
FOR AN INITIAL PERIOD OF TWO YEARS TO ESTABLISH A NEW CHAPTER
UNDER HAWAII ADMINISTRATIVE RULES AS TITLE 13, CHAPTER 60.41,
“WEST HAWAI‘I PĀKU‘IKU‘I REPLENISHMENT” THROUGH ADAPTIVE
MANAGEMENT RULEMAKING IN RESPONSE TO RAPIDLY DECLINING
POPULATION SIZE.

Submitted for your consideration and approval is a request to adopt rules temporarily establishing a new chapter under Hawaii Administrative Rules (HAR) Title 13, Chapter 60.41, “West Hawai‘i Pāku‘iku‘i Replenishment,” by formal action of the Board of Land and Natural Resources (Board) through adaptive management rulemaking pursuant to Section 187A-5(b), Hawaii Revised Statutes (HRS). The proposed rules would prohibit the take of any pāku‘iku‘i (Achilles Tang)¹ within the West Hawai‘i Regional Fishery Management Area (WHRFMA), Hawai‘i² to allow for replenishment of the dangerously depleted pāku‘iku‘i fish population in the area. The rules would be effective for not longer than two years.

ADMINISTRATIVE RULEMAKING AUTHORITY

In 2021, the Hawai‘i State Legislature passed House Bill 1020, House Draft 1, Senate Draft 2, which was later signed into law by Governor David Ige as Act 49 (2021); Act 49 (2021) amended HRS §187A-5 to provide the Department of Land and Natural Resources (Department) with adaptive management rulemaking authority to temporarily adopt, amend, and repeal certain natural resource rules by formal board action at a publicly noticed meeting if the board finds that such adoption, amendment, or repeal is “necessary to implement effective and adaptive management measures in response to rapidly changing resource conditions.” Section 1 of Act 49 (2021) states:

¹ The proposed rule defines pāku‘iku‘i as “any fish known as *Acanthurus achilles* or any recognized synonym. Pāku‘iku‘i are also known as Achilles Tang.” This definition is consistent with the definition for pāku‘iku‘i in HAR Chapter 13-60.10, “Miloli‘i Community-Based Subsistence Fishing Area, Hawai‘i.”

² HAR §13-60.4-2(a) defines the boundaries of the WHRFMA as the area “bounded by the west coast of Hawai‘i Island, from Ka Lae, Ka ‘ū (South Point) to ‘Upolu Point, North Kohala, and extending from the upper reaches of the wash of the waves on shore, seaward to the limit of the State’s police power and management authority.”

“The legislature finds that the department of land and natural resources is responsible for managing and administering the aquatic and terrestrial wildlife resources of the State. These natural resources are impacted by a variety of environmental and anthropogenic factors, some of which may change rapidly and frequently. To effectively manage these natural resources, the department needs the flexibility to quickly and efficiently implement temporary adaptive management measures that are based on the best available scientific information.

The legislature further finds that the administrative rule-making process prescribed by chapter 91, Hawaii Revised Statutes, serves the important function of providing opportunity for public review and input. However, it is not designed for implementation of adaptive management measures in response to rapidly changing resource conditions.

The legislature also finds that an alternative process with fewer procedural steps would enable the department of land and natural resources to quickly implement certain temporary adaptive management measures, while also providing opportunity for public review and input.”

Act 49 (2021) provided that any rule adopted pursuant to the new adaptive management authority under HRS §187A-5(b) shall be effective for a maximum of two years with an option for extension upon approval by the Board and the Hawai‘i State Legislature for up to one year at a time. Further, Act 49 (2021) outlined specific public notice requirements.³

NOTICE

Notice of this public meeting was published in the Legals/Public Notices section of both the Honolulu Star-Advertiser and the West Hawai‘i Today on Wednesday, November 9, 2022. The notice was subsequently published on the State Hawai‘i

³ HRS §187A-5(b)(2) requires that “[n]otice of the rulemaking shall:

- (A) Be given at least once statewide at least thirty days in advance of the public meeting;
- (B) Include a statement of the topic of the proposed rule to be adopted, amended, or repealed or a general description of the subjects involved;
- (C) Include a statement that a copy of the proposed rule to be adopted, the proposed rule amendment, or the rule proposed to be repealed will be mailed to any interested person who requests a copy and pays the required fees for the copy and the postage, if any, together with a description of where and how the requests may be made;
- (D) Include a statement of when, where, and during what times the proposed rule to be adopted, the proposed rule amendment, or the rule proposed to be repealed may be reviewed;
- (E) Include the date, time, and place where the public meeting will be held and where interested persons may be heard on the proposed rule adoption, amendment, or repeal; and
- (F) Be mailed to all persons who have made a timely written request of the board for advance notice of its rule-making proceedings[.]”

Legals/Public Notices webpage.⁴ Additionally, an announcement was posted on the Draft Rules and Public Notices page of the DAR website that included a link to the draft rules for viewing by interested parties. The public notice included a description of the proposed rule to be adopted and information on how the proposed rule can be viewed by interested parties.⁵ The public notice also provided the date, time, and location of the BLNR meeting where this proposal will be heard, as well as instructions on the various opportunities for interested parties to provide testimony.

BACKGROUND AND HISTORICAL DATA

Pāku‘iku‘i are medium-sized, bluish-black and orange surgeonfish found throughout the Hawaiian Islands. Adults of this species are readily identifiable by a striking orange teardrop shaped spot along each side of the body near the caudal fin. They are primarily found along shallow, wave exposed reefs, often amongst complex physical structure. The maximum reported size for this species is 25 centimeters (10 inches).

Pāku‘iku‘i are targeted as a food fish, particularly in West Hawai‘i, with the majority of take occurring via spearfishing. While pāku‘iku‘i often do not make up large portions of spear fishers’ overall catch, some fishers do target them specifically, preferring their taste over other surgeonfish. Pāku‘iku‘i are especially important for certain communities in West Hawai‘i where pāku‘iku‘i are highly sought after. Pāku‘iku‘i have also been a key component of the commercial aquarium fishery over the past several decades. In 2017, just prior to the closure of the West Hawai‘i aquarium fishery, pāku‘iku‘i was the fourth most collected species, though they represented only 1.7% of the total catch as their numbers were dwarfed by take of lau‘īpala (Yellow Tang) and kole (Goldring Tang) within the West Hawai‘i aquarium fishery.

Multiple lines of evidence in recent history have pointed to an alarming decline in the West Hawai‘i populations of pāku‘iku‘i. Commercial aquarium landings for the species peaked in 1990 and declined to roughly 25% of peak landings by the time the fishery was closed in 2017 (Shown as the bar graph within **Exhibit 1, Figure 1**). Concurrently, ex-vessel value of pāku‘iku‘i has increased dramatically during this time (Shown as a line plot within **Exhibit 1, Figure 1**). Taken together, this is strongly suggestive of overall declining abundance within the fishery.

The DAR – Kona office conducts multiple marine monitoring surveys across West Hawai‘i and has datasets tracking pāku‘iku‘i from the 1970s. Two of the most intensive surveys to date are the West Hawai‘i Aquarium Project (WHAP) and the Shallow Water Resource Fish (SWRF) surveys. WHAP surveys are conducted at 25 permanent, long-term monitoring sites across West Hawai‘i, ranging in depth from 10-18 meters (33-60 feet). WHAP data indicate population declines ranging from

⁴ <https://statelegals.staradvertiser.com/2022/11/09/0001393145-02/>

⁵ The public notice stated: “The proposed rules may be reviewed in person, by appointment only, at the Division of Aquatic Resources (DAR) office on Oahu at 1151 Punchbowl St. Room 330, Honolulu, Hawai‘i 96813 from 8:00 am to 3:30 pm, Monday through Friday, except holidays. To schedule an appointment to review the proposed rules in person, email dlmr.aquatics@hawaii.gov. The proposed rules can be reviewed online at <http://dlmr.hawaii.gov/dar/rules-and-public-notice/>. A copy of the proposed rules will be mailed to any interested person who requests a copy from DAR and pays the required fees for the copy and the postage. Requests may be made in person or to dlmr.aquatics@hawaii.gov or via postal mail to Division of Aquatic Resources, 1151 Punchbowl St. Room 330, Honolulu, Hawai‘i 96813.”

approximately 50 to 95% from 1999/2000 to 2020/2021 at particular sites; however, these were not statistically significant (Shown as line plots within **Exhibit 1, Figure 2**). More critically, only 62 individual pāku‘iku‘i juveniles have been observed on WHAP surveys from 1999-2021 with average annual densities ranging from 0 to <0.05 individuals per 100 square meters (m²) (Shown as the orange bar graph within **Exhibit 1, Figure 2**). For reference, lau‘īpala and kole juvenile densities in 2021 were 1.44 and 1.30 individuals per 100 m², respectively. The extremely low rate of juvenile pāku‘iku‘i observations may be a sign of local recruitment failure for the species, indicating a strong need for greater protections.

SWRF surveys, which take place along the shallow water habitats preferred by adult pāku‘iku‘i, have shown steep declines in density (**Exhibit 1, Figure 3**), biomass (**Exhibit 1, Figure 4**), and mean size (**Exhibit 1, Figure 5**) between 2008 and 2018. These results highlight that pāku‘iku‘i in West Hawai‘i are becoming much less numerous and those that remain are, on average, substantially smaller than they were previously.

Data from three long-term studies also show broad declines in pāku‘iku‘i abundance since the 1970s at Ke‘ei, South Kona, Hawai‘i (**Exhibit 1, Figure 6**), Hōnaunau, South Kona, Hawai‘i (**Exhibit 1, Figure 7**), and Puakō and Pauoa, South Kohala, Hawai‘i (**Exhibit 1, Figure 8**).

Lastly, multiple West Hawai‘i communities have noted substantial declines in pāku‘iku‘i abundance in their areas and have begun incorporating this into proposed community-led management efforts. Most recently, DAR worked with the Miloli‘i community to establish rules for the Miloli‘i Community-Based Subsistence Fishing Area (CBSFA), Hawai‘i, which includes a five-year moratorium on taking any pāku‘iku‘i within the entire CBSFA and a Pāku‘iku‘i Rest Area subzone where taking of any pāku‘iku‘i is prohibited indefinitely; this strong management outcome was in response to observations of “severely depleted” pāku‘iku‘i population size within the CBSFA by Miloli‘i fishers and community members.

PURPOSE AND OVERVIEW OF PROPOSED RULE

Pāku‘iku‘i

<u>Current Rules:</u>	No take until July 1, 2027 within the Miloli‘i Community-Based Subsistence Fishing Area (CBSFA), Hawai‘i as defined in HAR §13-60.10-3(a) and no take indefinitely within the Pāku‘iku‘i Rest Area, a subzone of the Miloli‘i CBSFA, as defined in HAR §13-60.10-3(b)(3)
<u>Proposed Rules:</u>	No take within the entire WHRFMA while the rules are effective (a maximum of two years with the option to extend up to one year at a time upon approval by the Board and the Hawai‘i State Legislature)

A two-year moratorium of taking any pāku‘iku‘i across West Hawai‘i will allow for a short reprieve for the species while DAR collaborates with the broader West Hawai‘i community to develop long-term rules promoting the long-term sustainability of

pāku‘iku‘i. DAR is already working with coastal communities, the University of Hawai‘i at Hilo, the United States Geological Survey, and the National Oceanic and Atmospheric Administration to better understand pāku‘iku‘i life history traits that will support a more robust understanding of their stocks. Additionally, the DAR – Kona office has recently begun a new broad coverage monitoring program that should shed additional light on future population trends of pāku‘iku‘i in West Hawai‘i.

The proposed rules have been reviewed by the Attorney General’s Office and are attached as **Exhibit 2**.

RECOMMENDATIONS:

That the Board:

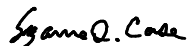
1. Adopt Hawaii Administrative Rules chapter 13-60.41, “West Hawai‘i Pāku‘iku‘i Replenishment” to be effective for two years, with the option to be extended for up to one year at a time upon approval by the Board and the Hawai‘i State Legislature.
2. Authorize the Chairperson to sign the final rules on behalf of the Board.

Respectfully submitted,



BRIAN J. NEILSON, Administrator
Division of Aquatic Resources

APPROVED FOR SUBMITTAL



SUZANNE D. CASE, Chairperson
Board of Land and Natural Resources

Attachments:

Exhibit 1	Supplemental Figures
Exhibit 2	Proposed Rules

**“WEST HAWAI‘I PĀKU‘IKU‘I REPLENISHMENT”
HAWAII ADMINISTRATIVE RULES
CHAPTER 13-60.41**

SUPPLEMENTAL FIGURES

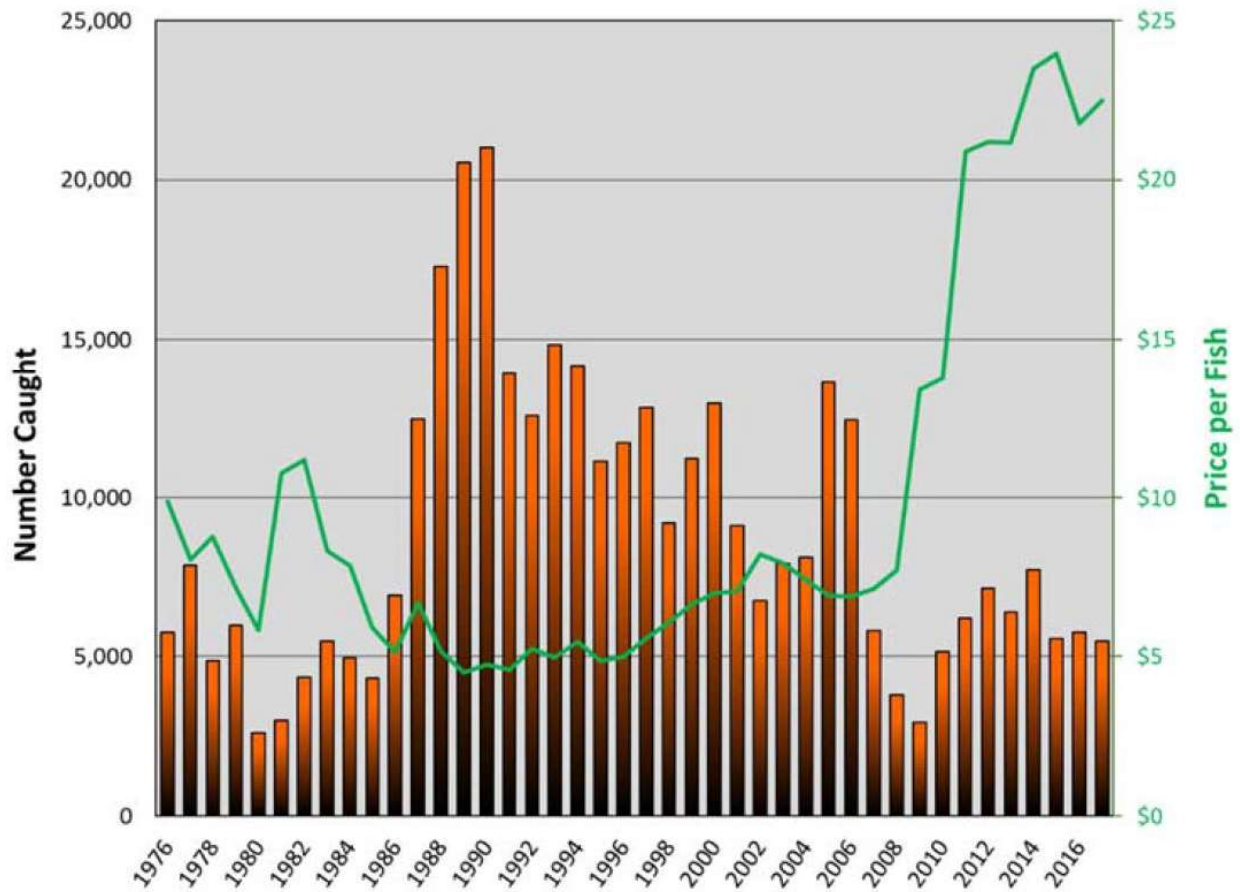


Figure 1: Commercial aquarium landings and value (in U.S. dollars) for pāku'iku'i (Achilles Tang, *Acanthurus achilles*) from 1976 to 2017.

Acanthurus achilles

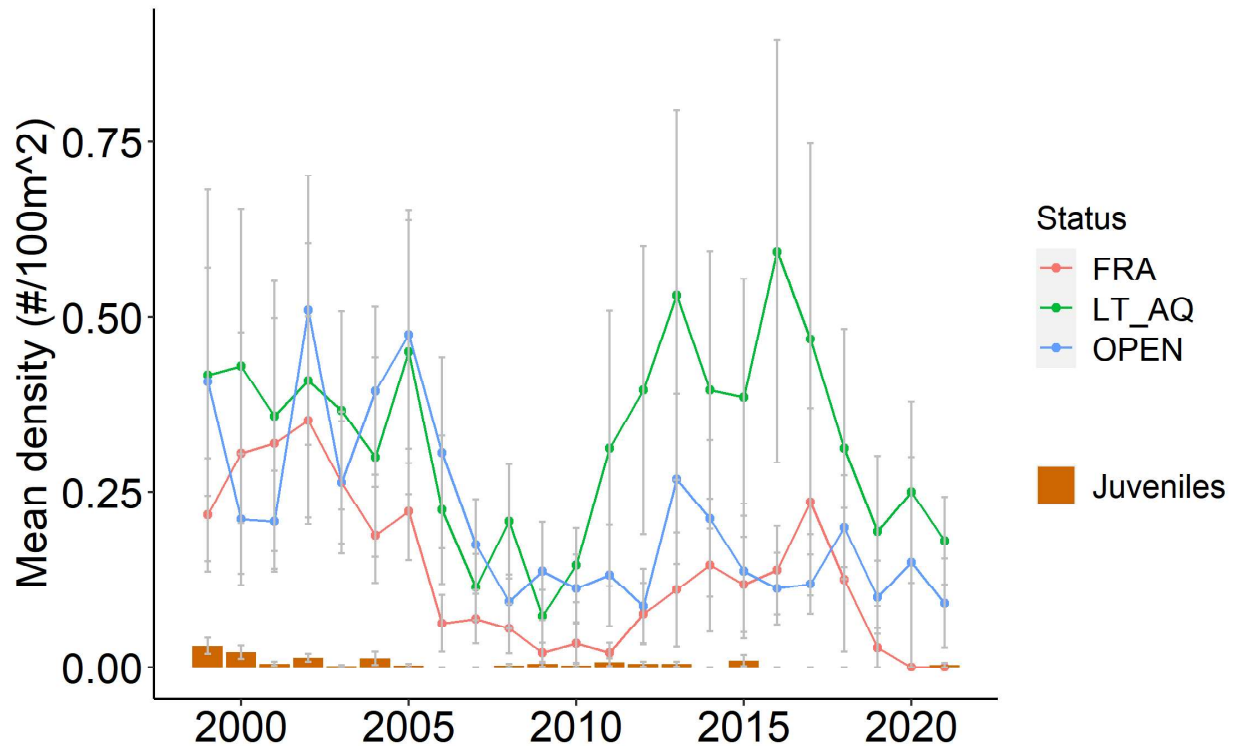


Figure 2: West Hawai'i Aquarium Project (WHAP) data for pāku'iku'i from 1999 to 2021. Lines are mean densities measured within areas that have been closed to aquarium fishing prior to 1999 (LT_AQ, green), areas that have been closed to aquarium fishing since 1999 (FRA, red), and areas open to aquarium fishing (OPEN, blue). Orange bars are the mean annual density of pāku'iku'i juveniles across all WHAP sites.

SWRF - *Acanthurus achilles*



Figure 3: Mean density of pāku'iku'i from Shallow Water Resource Fish (SWRF) surveys from 2008-2018.

SWRF - *Acanthurus achilles*



Figure 4: Mean biomass of pāku'iku'i from Shallow Water Resource Fish (SWRF) surveys from 2008-2018.

SWRF - *Acanthurus achilles*

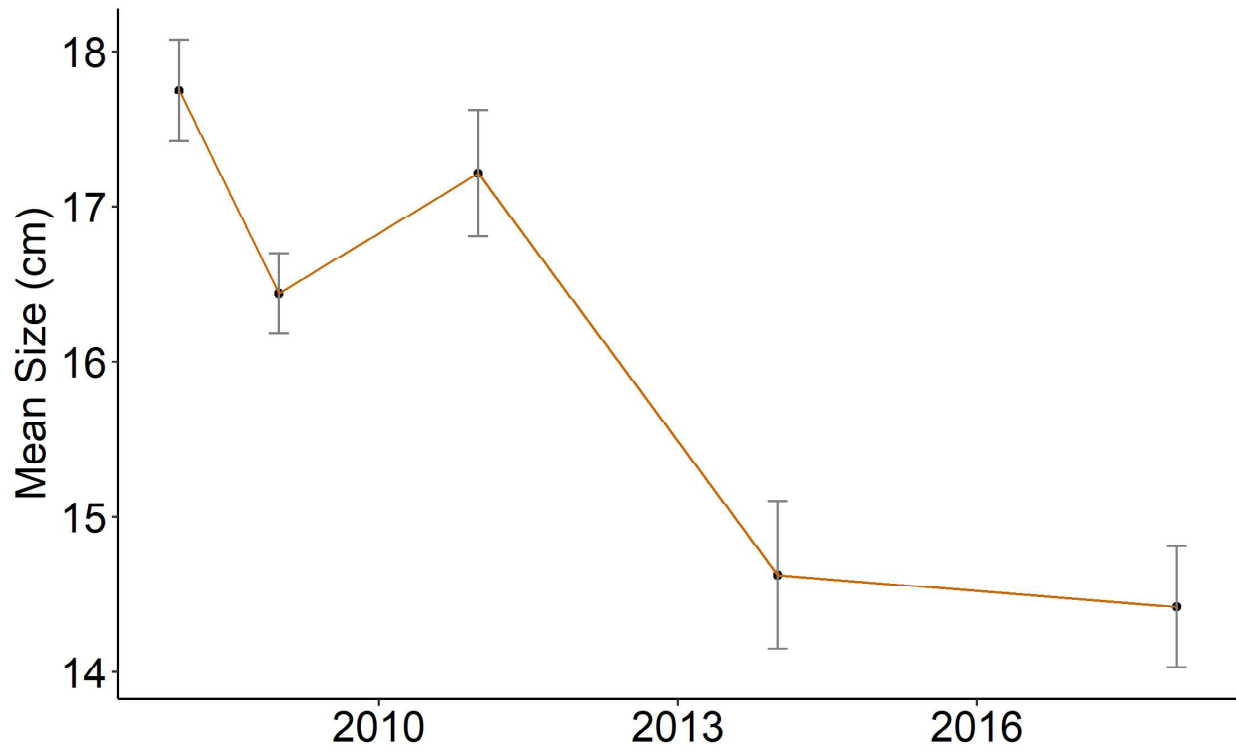


Figure 5: Mean size of pāku'iku'i from Shallow Water Resource Fish (SWRF) surveys from 2008-2018.

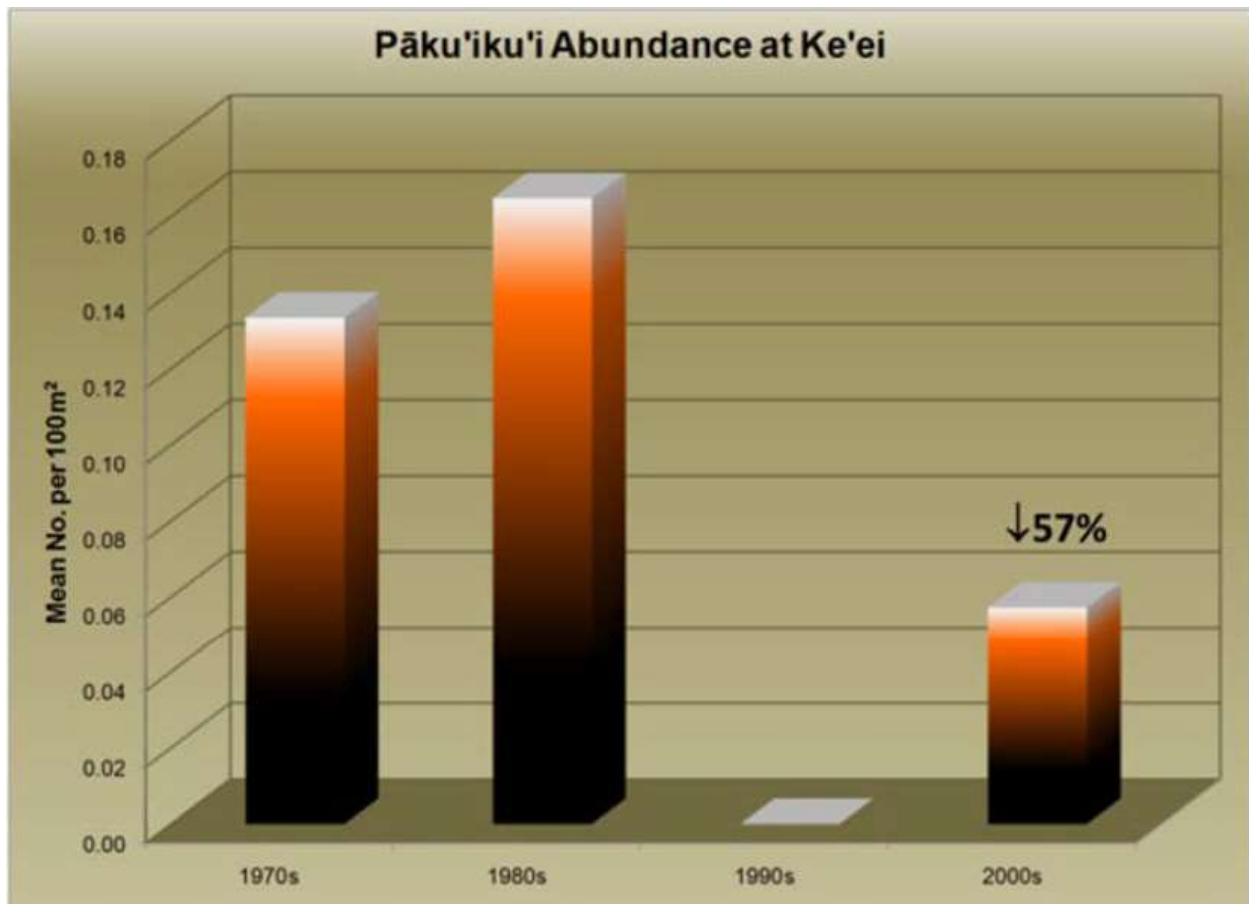


Figure 6: Long-term changes in pāku'iku'i density at Ke'ei, South Kona, Hawai'i.

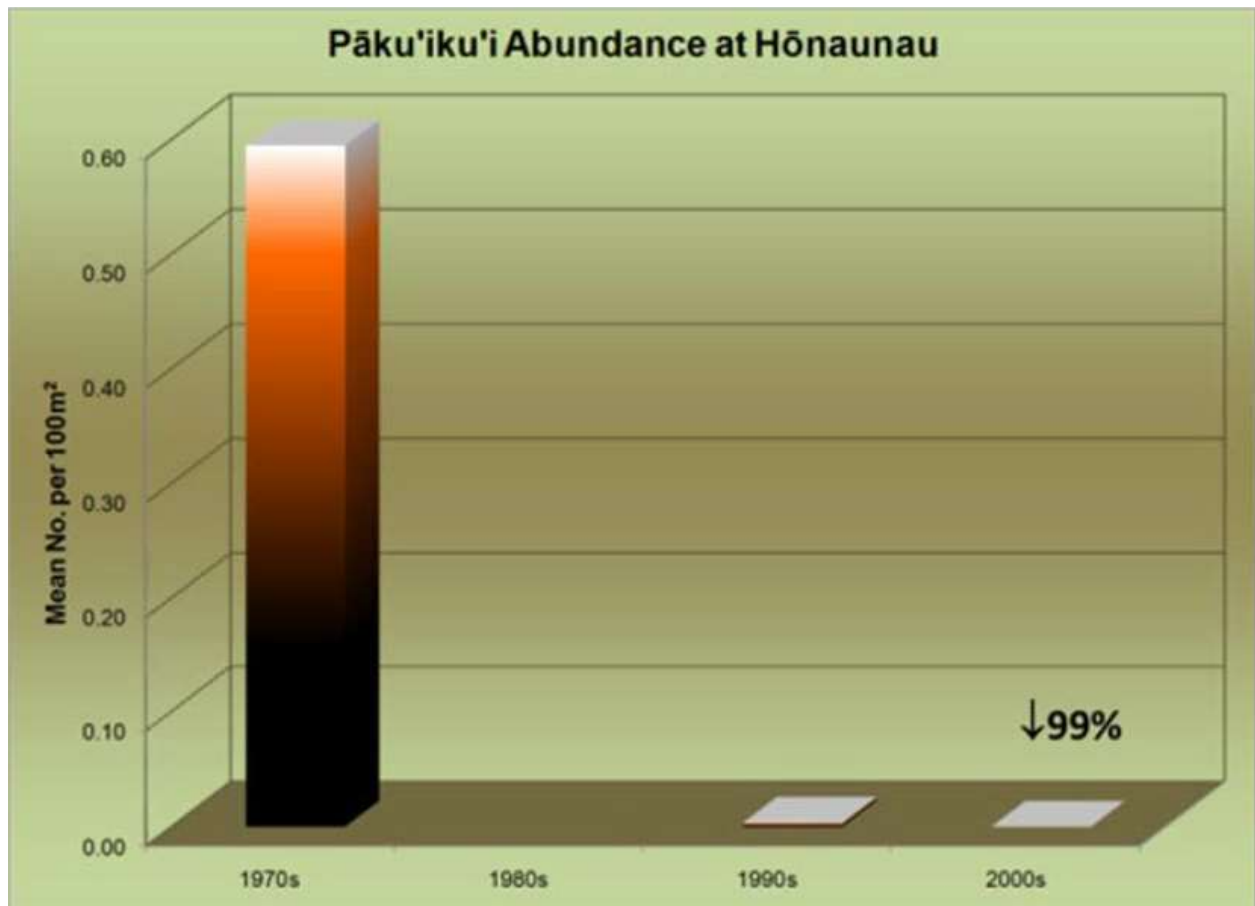


Figure 7: Long-term changes in pāku'iku'i density at Hōnaunau, South Kona, Hawai'i.

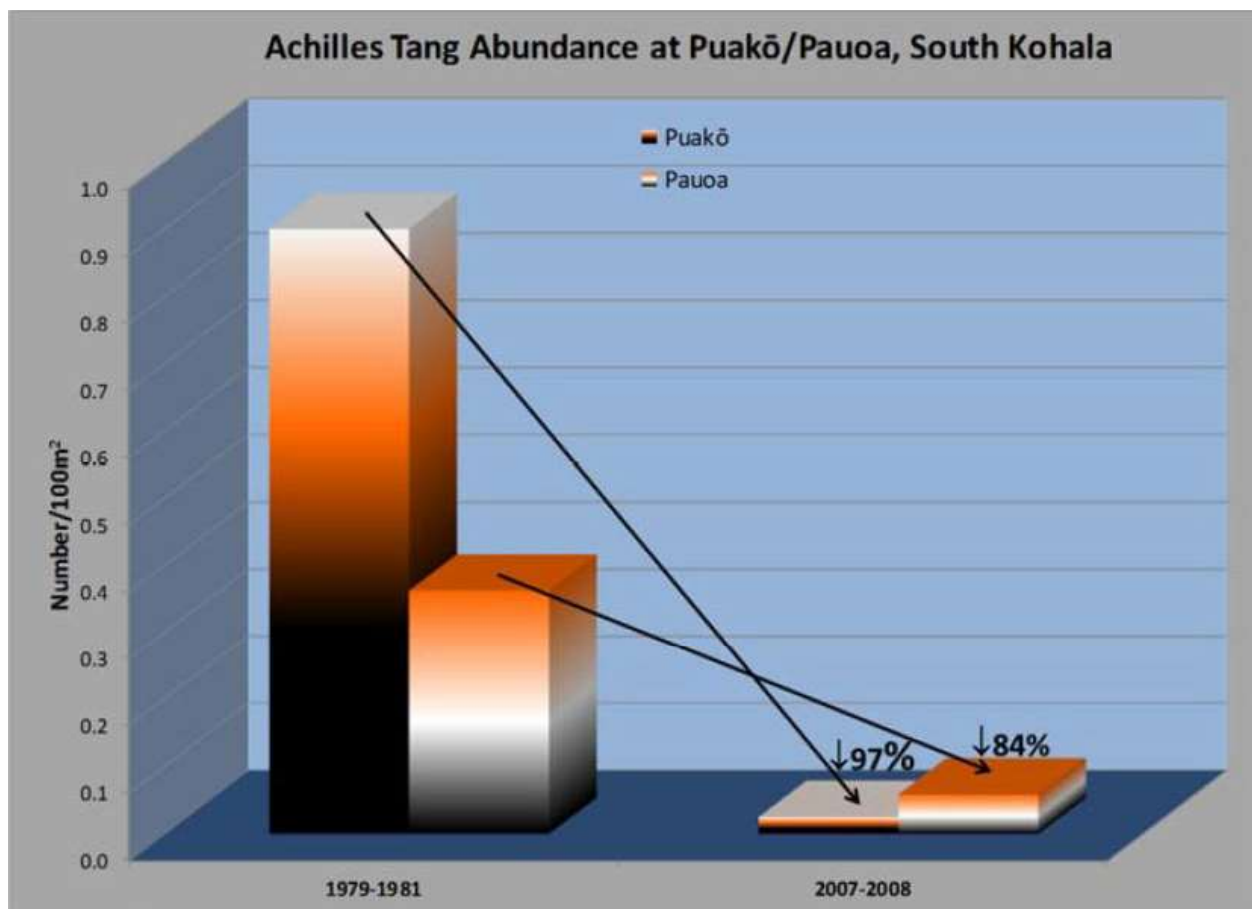


Figure 8: Long-term changes in pāku'iku'i density at Puakō and Pauoa, South Kohala, Hawai'i.

**“WEST HAWAI’I PĀKU’IKU’I REPLENISHMENT”
HAWAII ADMINISTRATIVE RULES
CHAPTER 13-60.41**

PROPOSED RULE

DEPARTMENT OF LAND AND NATURAL RESOURCES

Adoption of Chapter 13-60.41
Hawaii Administrative Rules

(date of adoption)

SUMMARY

Chapter 13-60.41, Hawaii Administrative Rules,
entitled "West Hawai'i Pāku'iku'i Replenishment", is
adopted.

HAWAII ADMINISTRATIVE RULES

TITLE 13

DEPARTMENT OF LAND AND NATURAL RESOURCES

SUBTITLE 4 FISHERIES

PART II MARINE FISHERIES MANAGEMENT AREAS

CHAPTER 60.41

WEST HAWAI'I PĀKU'IKU'I REPLENISHMENT

§13-60.41-1	Definitions
§13-60.41-2	Permitted and prohibited activities
§13-60.41-3	Penalty

§13-60.41-1 Definitions. As used in this chapter, unless otherwise provided:

"Board" means the board of land and natural resources.

"Department" means the department of land and natural resources.

"Fishing" or "to fish" means catching, taking, or harvesting, or attempting to catch, take, or harvest, aquatic life. The use of a pole, line, hook, net, trap, spear, or other gear which is designed to catch,

§13-60.10-1

take, or harvest aquatic life, by any person who is in the water, or in a vessel on the water, or on or about the shore where aquatic life can be caught, taken, or harvested, shall be deemed to be fishing.

"Pāku'iku'i" means any fish known as *Acanthurus achilles* or any recognized synonym. Pāku'iku'i are also known as Achilles tang.

"Take" means to fish for, catch, injure, kill, remove, capture, confine, or harvest, or to attempt to fish for, catch, injure, kill, remove, capture, confine, or harvest.

"West Hawai'i regional fishery management area" means the area defined in section 13-60.4-2. [Eff
] (Auth: HRS §187A-5(b)) (Imp: HRS
§187A-5(b))

§13-60.41-2 Permitted and prohibited activities.

(a) Nothing in this chapter shall be construed as abridging traditional and customary native Hawaiian rights.

(b) Within the West Hawai'i regional fishery management area, it is unlawful to take or possess any pāku'iku'i. [Eff
] (Auth: HRS
§187A-5(b)) (Imp: HRS §187A-5(b))

§13-60.41-3 Penalty. (a) Any person who violates any provision of this chapter shall be subject to administrative penalties as provided by section 187A-12.5, HRS. [Eff
] (Auth:
HRS §187A-5(b)) (Imp: HRS §§187A-5(b), 187A-12.5)

DEPARTMENT OF LAND AND NATURAL RESOURCES

Chapter 13-60.41, Hawaii Administrative Rules, was adopted pursuant to the requirements of section 187A-5(b), Hawaii Revised Statutes, on December __, 2022, following the public meeting of the Board of Land and Natural Resources held on December __, 2022, after public notice was given in the Honolulu Star-Advertiser on November __, 2022, at least thirty days prior to the public meeting.

The Board of Land and Natural Resources found that the timely adoption of this chapter is necessary to implement effective and adaptive management measures in response to the ongoing rapid decline in pāku'iku'i population size within the West Hawai'i regional fishery management area.

The adoption of chapter 13-60.41, Hawaii Administrative Rules, shall take effect ten days after this formal action by the Board of Land and Natural Resources, and shall be effective for no longer than two years, subject to legislative approval and renewal by the Board of Land and Natural Resources; provided that renewal by the board shall extend for up to one year at a time. The rules shall be posted on the Department of Land and Natural Resources website, where they will remain for the duration of time that the rules are in effect.

SUZANNE D. CASE
Chairperson
Board of Land and Natural
Resources

APPROVED AS TO FORM:



Deputy Attorney General